

The Eurotower Strikes Back: Crises, Adjustments and Europe's Austerity Strikes*

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Abstract

The 2008 global financial crisis came with fears — and, for some, hopes — of a new wave of public mobilization in industrialized countries. Large protests were particularly expected in the epicenter of the crisis, the European Union (EU). Yet, the force with which social groups garnered their calls for strikes ebbed quickly away. This article provides new evidence for why this was the case. We claim that strikes, and particularly political strikes, are ‘bad weather’ phenomena and crises exacerbate them. In monetary unions, where currency adjustments are difficult, fiscal changes are not supported by easing monetary measures and should unchain social unrest unless supranational actors get involved. We then argue that the political actions of the European Central Bank (ECB) have countered the potential for strikes in the Eurozone. We provide evidence for our theory with yearly panel data and a new original dataset of monthly strikes between 2001 and 2013. Our analyses support the thesis that the EU institution was successful at attenuating social indignation over the Eurocrisis and its political fallout.

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1 Introduction

In 2010, at the height of the Eurozone crisis, the retired French diplomat Stéphane Hessel published *Indignez-Vous!*, a 32 page-long pamphlet that called on the people of Europe to revolt against the injustices of the capitalist world. The former *Résistance* fighter and concentration camp survivor bemoaned, among other things, the “international dictatorship of financial markets that threatens peace and democracy” (p. 11, our translation). The booklet became an unlikely international bestseller and inspired several protest groups, including the *Occupy* movement and the *Spanish Movimiento 15-M*, which tried to counter through demonstrations, sit-ins and other forms of political opposition the austerity measures debt-ridden governments were to impose following the global financial crisis.

Despite the world-wide attention protesters have received, mobilization has failed to galvanize long-term support and stop the contested fiscal adjustments. While varying considerably among the Eurocrisis countries, strikes differed marginally within each state following the crisis. If one looks at *economic* strikes, defined as protests related to work conditions and employment reforms, one sees no particular increase between the first half of the 2000s and the late 2000s in any European country but Greece. Even the more sensitive *political* strikes, defined as organized endeavors of the general public to protest against economic policies, were less ambitious than one would expect as a response to the fiscal consolidation the European Union (EU), some member states and the International Monetary Foundation (IMF) advocated at this time. Whereas political protests in Greece and Spain became at some point more frequent, most crisis-ridden Eurozone members, including states such as Italy or Ireland, experienced far less overt indignation over the failures of the financial industry and their governments.

This article confronts this puzzle and proposes a theory for the short-lived increase of austerity strikes during the Eurocrisis. Our theory focuses on the role of fiscal and monetary policies in shaping social discontent when a crisis hits. We predict that if public debt is low, trade unions and other social forces have difficulties mobilizing the masses, as

the potential losers of reforms can count on plausible compensatory measures.¹ However, if public debt is high, the potential losers are much more willing to take their fears to the streets as they know that the government faces severe constraints. The anticipation of financial pain should therefore increase strikes *unless* monetary institutions intervene to compensate national fiscal policies. We expect that strikes in non-EMU countries were prevented with quantitative easing and currency floating. By contrast, we conjecture that social protests in the Eurozone would have continued unless EU institutions had not forcefully proposed a new line of crisis management.

We identify the actions of the European Central Bank (ECB), which culminated in President Draghi's famous 'whatever it takes' reassurance note in July 2012,² as the mechanism that ultimately increased credibility in European policies among the publics. Citizens' reluctant acceptance of the ECB direction, we argue, buffered the ongoing social crisis. Our theoretical contribution is then consistent with classical models of social conflict in times of economic stress,³ but also stands in contrast with theories that see an undermining impact of EU integration on European welfare states.⁴ Despite the undoubted pain suffered in the months after September 2008, we believe that the Euro and its masters have overall sheltered the losers of the crisis from the uncertain adaptation costs they would have faced without the single currency.

Our study also presents, to the best of our knowledge, the first comparative analysis of European strikes beyond 2008 – this year marking not only the beginning of the Eurocrisis but also the ending point of the most up-to-date statistical databases on strikes. We analyze two sets of data. We first present yearly data on strikes that we assembled for EU countries using first and secondary sources. In a second step we evaluate a new dataset of EU monthly strikes between January 2001 and December 2013, which we match to information on ECB interventions and political announcements. The results lend strong

¹'Low' debt can be intended as a debt level below the Maastricht criteria. We expand on this type of definitions below.

²BBC. 2012. *ECB will act to save euro, says Mario Draghi*. July 26, 2012. <http://www.bbc.com/news/business-18998083,228/2014>. Accessed on September 6, 2014.

³Alesina and Drazen 1991.

⁴Streeck 2011, 2013.

support to our theoretical conjecture, showing how international policy makers have avoided the upsurge of large-scale public protests in Europe. We conclude by discussing how the steps taken by policy makers may significantly affect the protest potential within the EU in the long run.

2 The Argument: Linking Crises, Policy and Strikes

Strikes are a popular object of research in political science, and especially among political economy scholars, because they provide elicited information on political preferences for or against the state of the economy. Historical and cross-national evidence has shown that strikes vary according to political events such as referenda and electoral cycles. Political strikes in particular are a barometer of the changing interests of voters, because they engage representative subsets of the adult population.⁵ In this article, we consider strikes as a measure of collective discontent that has not only electoral consequences but general repercussions on the credibility of crisis management of national and international institutions.⁶

Our main focus is on politically motivated strikes. In other words, we are interested in understanding the incentives that bring active and non-active workers – so generally, citizens – to voice their complaints to the government when faced with the consequences of a financial shock. Political strikes have been said to follow different mechanisms than economic strikes, which hinge on employer–employee relations and working conditions.⁷ While we think these different mechanisms are warranted and may be in place in ordinary times, our theory applies to both economic and political strikes in the context of a crisis. Thus, we follow the literature that argues that economic and political strikes reinforce each other when economic welfare is threatened.⁸

⁵For a diverse selection of studies, see Ahlquist 2010, Kelly and Hamann 2009, Levi *et al.* 2009, and Visser 1992.

⁶We will touch upon the electoral cycle, but will only indirectly discuss elections in relation to strikes.

⁷See Ahlquist and Levi 2013, and Hamann, Johnston and Kelly 2013a and 2013b. For example, while unionization decrease the costs of collective action against employers, hence increasing economic strikes, bureaucratization is generally believed to explain large strikes against governments, increasing political strikes.

⁸For instance, Luxemburg 1971 notes that struggles that start with economic demands spill over

In what follows we present our theory of the drivers of strikes during a crisis. We first review the terms in which we should expect crises to affect social stability before examining the circumstances in which different types of political intervention may exacerbate or mitigate strikes.⁹

2.1 Public and Policy Reactions to Crises

Collective action theory suggests that, if social frustration rises, citizens capitalize on discontent and mobilize vis-à-vis their government.¹⁰ In the area of economic policies and strikes, several studies have argued that drastic economic pressure evokes public frustration due to experienced welfare loss. The anticipation of further losses eventually translate into social unrest.¹¹ Thus, contingent on unexpected financial shocks such as the Lehman Brothers bankruptcy of 2008, strikes should become an instrument through which civil groups try to win the conflict over who should shoulder economic adjustments.

Alesina and Drazen’s war-of-attrition game illustrates the dynamics of this distributive conflict. According to their model, at times of high financial stress competing social groups advance far-reaching demands to their representatives, aiming to ensure that the other side carries the larger part of the adjustment burden. As no party has an incentive to give in, reforms are delayed, the crisis is deepened, and social friction increases.¹²

into the political terrain, and vice versa. Similarly, Franzosi 1995 indicates that rates of strike participation were high in the 1970s as unions (economic actors), students and political parties (political actors) merged together in protests against budget decisions that influenced working rights. Moreover, there is evidence from recent events indicating the merge of economic and political forces during the Eurocrisis. As an example, the 2010 strikes in Austria’s metalworking industry coincided with political protests against the Austrian government because “the employer side demanded an increased flexibilisation of working time, arguing that this way, they could retain international competitiveness after the crisis.” See European Industrial Observatory. 2014. *Austria: Impact of the crisis on industrial relations*, available at <http://www.eurofound.europa.eu/eiro/studies/tn1301019s/at1301011q.htm>. Accessed September 6, 2014.

⁹The intent of our paper is to explain strikes in the course of relevant economic crises, but of course, strikes can also occur in the absence of crises. We come back to this point below.

¹⁰Tilly 1978, Olson 1965.

¹¹Savun and Tirone 2012, Midtgard *et al.* 2014.

¹²Alesina and Drazen 1991. Of course, strikes could constitute one of different kinds of off-equilibrium outcomes. For example, Ponticelli and Voth 2011 conclude that the link between austerity measures and different types of social unrest is strong and possibly causal. See also Hartzell *et al.* 2010: 353, and Midtgård *et al.* 2014, who also identify a civil conflict effect for structural adjustment programs, arguing that “the IMF-guided process of liberalization generates new losers at a rate with which a state with weakening powers is incapable of contending.”

These behavioral considerations are in line with research that, focusing on structural characteristics of labor unions across industrialized countries, shows that strikes are a symptom of recession rather than prosperity.¹³

One problem with many of the studies on the nexus between crisis and social unrest is that they leave the preventing role of the government unexplored. As Franzosi noted, “[a] strike is the result of the strategic interactions among several social actors with specific interest and specific capacities.”¹⁴ Recent research has taken up this recommendation, analyzing the way workers, employers and governments interact. For example, Ahlquist shows that executives in EU countries have strong incentives to conclude policy agreements with unions and employers when important political events occur. He concludes that “pacts are more likely during times of high unemployment and in countries aspiring to comply with the Maastricht criteria.”¹⁵ Consistent to what other authors have demonstrated, the consequence for failing to close a social pact is a growing risk of mass strikes and a loss of votes at the ballot box.¹⁶

Obviously, social pacts are not the only instrument that governments have at their disposition to counter the negative electoral effects of economic adjustments. For instance, the controversial car-scrap bonus and banks’ guarantees that the German government invoked during the recent financial crisis positively increased public support for the governing parties.¹⁷ While these are endogenous measures through which struggling governments address the interests of key voters, we will focus on open-economy interventions, and specifically the macroeconomic instruments national and supranational policy makers can manipulate to preserve social welfare in times of crisis.

In international economy terms, financial stress corresponds to a significant change in confidence in an economic system. The recent Eurocrisis was determined by bank runs

¹³Although they do not directly focus on crises, the work of Kennan 2008, and Hamann *et al.* 2013a and 2013b suggests that unions react strongly when the income of their members is severely threatened. As the economy deteriorates, strikes should then increase proportionally. Additionally, as Ahlquist and Levi 2014, 6 indicate, union members believe that “their fate is intertwined not only with their associates in the organization but also with a larger population; by helping others, they are helping themselves.”

¹⁴Franzosi 1995, 17.

¹⁵Ahlquist 2010, 585

¹⁶Hamann *et al.* 2013a and 2013b.

¹⁷Goerres and Walter 2010.

and liquidations, but we may generally think of crises as a sudden drop of risk appetite in international markets that halts capital inflows. Under these circumstances, policy makers can respond in two ways: on the one hand, they can increase welfare spending and enact expansionary fiscal policies, and on the other hand, they can evoke money supply and manipulate exchange rates. Canonical macroeconomic theories make clear that together fiscal and monetary instruments can improve confidence in the economy among domestic consumers as well as international creditors.¹⁸ Consequently, finding the right combination of these two policies is of fundamental importance for governments to signal to the electorate that the economy will be taken care of.¹⁹ However, the successful calibration of fiscal and monetary decisions is complicated if policies are inefficient or governments are constrained, like in the case of the European Monetary Union.

Understanding the peculiarities of the EU monetary regimes is then a crucial part of the puzzle that we need to unravel in order to understand the mechanisms behind strikes in Europe. Moreover, we need to explore the role of the ECB, the major lender in the Eurozone, in combination with how governments decide to bail out banks and readjust public debts. In what follows we will consider the link between crises, fiscal policies and social outcomes first in floating and then in pegged currency regimes. The former correspond to the non-EMU member states that we use as control cases in our empirical investigation. The latter represent the group of Euro countries where EU institutions should have weighed the most during the recent crisis.²⁰

¹⁸Mundell 1968; Fleming, 1962.

¹⁹Of course, citizens do not always consent to the ways governments manage a crisis, but as long as the crisis is strong enough and governments can halt mass unemployment and government insolvency, we assume that people should refrain from protesting.

²⁰One may object that currency regimes *per se* are selection processes that have an impact on the nature of financial crises. This is certainly in the spirit of the macroeconomic theories that we use in the paper. However, one must be sure that the timing and probability of recent financial crises was never significantly different between non-EMU and EMU countries. The ‘interest rate defense’ crises of the early 1990s hit both Sweden, an independent currency, and Italy, which was preparing for the Euro. Similarly, the 2008 crisis hit the Eurozone as well as the United Kingdom and Hungary, which are not in the EMU. While we cannot exclude selection altogether, we make sure to control as much as possible in our empirics so to warrant the implications of our analyses.

2.2 Crises in Independent Regimes: the Role of Flexible Currencies

We start by considering the effects of crises on social discontent in a regime with an independent currency. To keep the discussion simple, we follow the Mundell-Fleming model of macroeconomic policy interactions and illustrate how the equilibrium of exchange rates, interest rates, and national output relates to social unrest during a recession.

According to the model, the story of financial adjustments in an open economy is based on three key elements: investment savings, which depend on a country's interest rate and levels of net exports; money supply, which is a function of the interest rate and income; and the balance of payments, which corresponds to the capital inflows that depend on the interest rate and the exchange rate. In the absence of a crisis, real income and interest rates are stable because investors' confidence is constant. In this scenario, people may want their government to implement policies that increase income and exports while maintaining low interest rates.²¹ Strikes should only start if economic growth slows down or if the government gets involved in costly endeavors, such as counter-cyclical public spending. In other words, we should observe strikes when people realize that a government's investments start hinging heavily on public debt.²²

In a crisis, however, investors' confidence drops and public preferences change, because people should want financial buffering and wage protection. Note that a crisis is equivalent to a sharp decline in capital inflow, which is a function of interest rates. Thus, the crisis should drive up the cost of borrowing (the interest rate) while shrinking liquidity. An effective policy solution is to let the currency depreciate while engaging in welfare sheltering and banking sector restructuring. The crucial mechanism is the volatility of exchange rates, because this quickly boosts net exports and income. Increasing investments savings would then release the public from some financial pain.²³

²¹Broz 2002.

²²See Korpi and Shalev 1979.

²³The 'fear of floating' research generally supports this point in the instance of a large financial crisis. Accordingly, we should still expect a significant currency change even in regimes with reluctance to adjust exchange rates. See Calvo and Reinhart 2000.

Of course, an expansionary fiscal policy combined with depreciation could still negatively affect the most vulnerable parts of society with high inflation. But a powerful lesson from the ‘impossible trinity’ framework of macroeconomic policies is that under a floating exchange rate regime countries that pursue free capital movement can feature an independent central bank.²⁴ Hence, the central banker could move the interest rate to counteract inflation. At minimum, it could signal its willingness to do so as growth picks up and capital starts flowing back into the country. This is a particularly important implication for our study of strikes, because sending this type of messages can at least nominally decrease fears that the economy is out of control.²⁵

Recent cases of financial crises suggest that these considerations are qualitatively sound. For example, when the Scandinavian banking system imploded in 1993, Sweden’s government became fiscally involved, which led the sovereign debt to GDP ratio to a 31–percentage points increase. However, the consequence was not a significant rise in social tension, because the tough seizure of the banking sector was combined with the depreciation of the Swedish krona, which allowed the governments to inject significant funds in job insurance and ultimately prevented mobilization.²⁶ In sum, we expect that fiscal stimuli in combination with an expansionary monetary policy and, in urgent instances, exchange rate manipulations can mitigate the costs of adjustments and preserve the social status quo. Our first proposition is then, *conditional on a financial crisis, increasing debt decreases the occurrence of strikes in independent monetary regimes.*

2.3 Crises in Monetary Unions: the Role of International Institutions

In the previous section we noted that although austerity measures can have negative social effects, potential losers of the adaptation process have at least a reassurance that governments can ease the adjustment burden by changing money supply and depreciating

²⁴Obstfeld 2004.

²⁵Baerg 2014.

²⁶New York Times. 2008. *Stopping a Financial Crisis, the Swedish Way*. Accessed 25 May 2014.

the currency. Here we discuss how the mechanism is different in the setting of a monetary union.

Back to the ‘impossible trinity’ introduced in the previous section, countries that want to pursue free capital mobility have to sacrifice either central bank independence or fixed exchange rates. It is clear that systems like the EMU, which take away the possibility of states to enforce dramatic currency changes, also ‘tighten the hands’ of central bankers. Absent a crisis, a non-independent monetary system is still bound to the same concerns previously discussed: high interest rates and an increasing public debt are unpopular and citizens should not approve fiscal extravagance. Still, strikes should be under control if foreign investors remain confident in the economy and the currency peg is credible. However, the politics of policy adjustments are significantly different in the instance of a crisis, which reduces capital inflows at any given interest or exchange rate.²⁷

Using once again the Mundell-Fleming framework, it is easy to understand that the decline in capital inflows drives up domestic interest rates. However, in this case, the system has no lender of last resort. Governments can only try to offer investors more incentive to buy domestic bonds, or increase net exports by reducing import demand. This is a problematic new equilibrium, since the economy is slowing and governments have no international confidence. To make things worse, higher interest rates and lower income reduce the demand for money, so the money supply contracts to maintain equilibrium.²⁸ A country’s borrowing costs drive so far up to provoke the very default investors fear. Evidently, in these circumstances we should expect a significant rise in strikes, *ceteris paribus*.

Note, however, that this discussion lacks an important actor that can offer loans to banks while also changing confidence in the Euro area. This actor is the European Central Bank.

To understand what role the ECB could have played to preserve stability in the European

²⁷It should be clear that, in the international money market, the Euro continued floating during the crisis, reaching a volatility of 3 standard deviations from the United States Dollar. However, for our purposes it is important to remember that the Euro is the peg of national EMU countries.

²⁸Hicks 1937.

Union during the recent crisis, one must understand the nature of the ECB. The Bank was conceived in 1994 as a politically independent body under the Maastricht Treaty umbrella, and started its mandate in 1999. It was shaped on the model of the German Bundesbank, whose overriding aim since the 1960s is to ensure price stability. Additionally, the ECB is in charge of administrative responsibilities, including the supervision of the Exchange Rate Mechanism (ERM) that prepares new member countries to the adoption of the single currency. All ECB decisions are made in the context of the Executive Board, the organ that implements monetary policy in the Eurozone countries.

Much of how the ECB behaved up to 2008 changed with the outbreak of the global financial crisis. Few months after the Lehman's collapse and just as the Greek parliament released a 'revised' forecast for the 2009 budget deficit, the ECB found itself at a bivion. On the one hand, President Trichet recognized that the ECB role did not allow him to engage bond markets. After all, Article 127 of the Treaty on the Functioning of the European Union (TFEU) explicitly sets out that the "principle objective of the ECB shall be to maintain price stability." On the other hand, it became clear that nation states had no capacity to reverse the signal that the Euro was losing credibility. The markets thought the 200-billion euros Fiscal Stimulus Plan of December 2008 was necessary but not sufficient. Meanwhile, the EU Council seemed to take too long to arrange a meeting on economic governance.²⁹ Investors became particularly worried in 2010 about the possible expulsion of Greece from the monetary union. As the difference between German and Greek bonds hit nearly 60 percentage points in the summer of 2011, Greece had seen more than 10 massive political strikes.

We argue that the moment in which European leaders decided for a more political ECB to emerge, mass protests across Europe started declining. This is in part because the ECB decreased deposit facility rates to stimulate investments and induce import demand. While not all people in Europe accepted this, most people found it to be a very decisive and clear resolution. Moreover, in 2012 the new head, Mario Draghi, pledged that the

²⁹EU Observer. 22 September 2010. *Van Rompuy defends economic task force against critics*. See <http://euobserver.com/institutional/30864>. Accessed on September 6, 2014.

ECB would have bought government bonds from member states that were finding it hard to fund their borrowing. This announcement led to the start of the Outright Monetary Transactions program, which economist Martin Feldstein assessed to be a much more relevant and effective reform than the parallel Fiscal Stability Treaty.³⁰

We also think it is plausible that European social mobilization halted as soon as the ECB took a more political role for other two reasons. The ECB actions were crucial for government bond spreads in the Eurozone to go down even before the actual buying program was put in place.³¹ Therefore, people's confidence in the economy could also have changed simply because the ECB *signaled* a reform.³² Secondly, while Draghi's political preference for crisis management upset a number of German ECB board members, most national representatives in the European Council believed it to be the right move. Hence, the fact that most countries supported the ECB's direction suggests that this was probably representative of the 'median voter' position on the crisis, and therefore an overall accepted policy by the masses.³³

This discussion leads us to expect that the costs of public debt adjustments could be mediated by the ECB actions. Our main proposition is then, *conditional on a financial crisis, ECB interventions that signal its active role in crisis management decrease the occurrence of strikes in the EMU.*

3 Crises, Debt and Strikes before and after the Euro

We start the empirical evaluation of our argument by first investigating the strike patterns of countries with different monetary systems. We take a longitudinal perspective and focus on the period between 1980 and 2013, for which we have high quality data for the

³⁰This is the Treaty that replaced the 1997 Stability and Growth Pact. See Feldstein 2013.

³¹De Grauwe 2011.

³²Note that this is in contrast to the views of those that see an increase of ECB as a sign of democratic deficit in the EU. We think ECB decisions were generally in the spirit of the same TFEU text we mentioned above, which allows the ECB to act unilaterally and unconstrained by external factors when it comes to issues that fall within its remit (Article 130).

³³For a similar argument, see Alesina and Grilli 1992.

fifteen EU member countries prior to the 2004 enlargement.³⁴

3.1 Data

Our main outcome of interest is the occurrence of strikes at the national level. We care specifically about political events. However, as we have argued, the economic strikes at the time of a crisis are equally informative. Thus, we include information for economic strikes as well.

Political Strikes are the number of general strikes against a government's national policies related to pensions, labor laws, welfare and economic reforms. These events come from the dataset presented in Hamann *et al.* 2013a and 2013b, who elaborated their data from the Review of the European Industrial Relations Observatory and the European Protest and Coercion Database.³⁵ The variable ranges from zero to a maximum of six events per year. *Economic Strikes* is a measure of days not worked as disclosed by national statistics bureaus to the International Labour Organization (ILO). We use the ILO's Yearbook of Labour Statistics Database, which covers not only the EU states but generally more than 100 countries. Note however that this information is only available up to 2008, due to a mixture of delays in ILO data collection and poor reports of national authorities.³⁶ In order to compensate these missing observations at the end of our series, we updated the ILO information until 2010 with working days figures available from the European Trade Union Institute country notes.³⁷ For Germany, Greece, Ireland, Italy, Spain and the UK

³⁴Historical work on social protests is on the rise, but there is still no good refined data for our purposes. The most sophisticated research in a long-run perspective has focused on the Cross-National Time-Series Data Archive. See, e.g., Ponticelli and Voth 2011, and Funke *et al.* in this Special Issue.

³⁵See Hamann *et al.* 2013a and 2013b. Most recent years' information was also collected through the UK Labour Research Department and was checked with selected BBC news reports. The authors shared the raw data that supplements their published series, which in the current version ranges up to 2013. We report further information about the dataset in the Appendix.

³⁶In fact, ILO is not the only agency that has had problems providing data on strike activities. The Eurostat, for example, does not have any figures available from 2008 onwards. Similarly, the Comparative Political Data Sets by Armingeon et al 2011 stops at 2008. Note also that in crisis-hit like Greece and Portugal, collection is said to be 'postponed.' For more about the progress of strike data collection, see the ETUI report *Strikes in times of crisis: no increase or no data?* at <http://www.etui.org/News/Strikes-in-times-of-crisis-no-increase-or-no-data> (accessed on September 6, 2014).

³⁷ETUI reports go from 2000 to 2010, and some country notes even to 2013 (see <http://www.etui.org/Topics/Trade-union-renewal-and-mobilisation/Strikes-in-Europe-infographic>). More

we further aggregated figures that we manually collected from strike-related news reports of the *New York Times* (NYT) and the *British Broadcasting Company* (BBC) that we discuss in the next section of the paper. Note that we transform the absolute number of days not worked, because its scale is a function of the size of a country's population. We dichotomize the continuous measure and assign the value of 1 to economic strikes with a number of lost days higher than the within-country median, and 0 otherwise.

Banking Crisis is a binary variable that indicates with a value of 1 whether a country is under significant financial pressure, and 0 otherwise. We rely on International Monetary Funds reports, specifically the systemic banking crises data of Laeven and Valencia.³⁸ The definition of a banking crisis is a financial distress in the banking system as indicated by significant bank runs, losses in the banking system, and banking policy intervention measures in response to significant losses in the banking system.³⁹

The variable *Debt* corresponds to the IMF public debt to GDP ratio, which we updated with Eurostat data for the years 2012 and 2013.⁴⁰ Since we focus on events around 2008, one may object that the real focus of the Eurocrisis policies was the balance of payments rather than sovereign debt.⁴¹ However, it can also be argued that the ratio of gross government debt and the cumulative current account deficit as a share of GDP are not off to each other, and that countries with high current account deficits generally had high debt ratios, especially countries above the 60 percent threshold. Put aside other minor considerations,⁴² our IMF debt measure ranges from 11.5 percent in Finland 1981 to 175.1 in Greece 2013.

information on this data is in the Appendix.

³⁸Laeven and Valencia 2008 and Laeven and Valencia 2012 identify different types of crises from liquidity shocks to currency depreciations. In this paper, we focus on banking crises, but the general inferences hold if we use currency crises, as we show below.

³⁹Note that we use Laeven and Valencia's updated dataset as of 2012. We also included what the authors define as 'borderline' crises, namely the cases of France 2008, Italy 2008 and Sweden 2008. Our empirical implications are not sensitive to this different definition. Moreover, Laeven and Valencia's (2010) discussion on the significant market valuation of financial institutions in France and Italy leaves up to interpretation whether these can be interpreted as crisis cases (p. 21).

⁴⁰Abbas *et al.* 2011.

⁴¹Krugman 2013.

⁴²We recognize, for example, that this data is not cyclically adjusted. As Alesina and Ardagna 2010 have explained, this means that our debt variable may measure more short-term effects than other debt measures corrected for other policy decisions. Below we demonstrate that the results still show a strong effect in favour of the long-term effects of fiscal stress.

Graphical illustrations help us elaborate a preliminary interpretation of the data. Figure 1 reports the plots that combine the trends in the three variables by country. It is easy to see that, although crises are not too common events, they are also not very rare. We observe the 1980-82 crisis of Spain's savings banks as well as the 1990s crisis in Finland and Sweden. For the 2008-2013 period, only Finland is the country that, according to Laeven and Valencia, did not suffer from significant banking distress.

Debt seems to react as we would expect: in the absence of banking crises, the levels are contained, while in the aftermath of banking crises, the variable shoots up. It is worth noting that debt among EMU countries shows a decreasing trend between 1980 and 1999, because members were trying to meet the 60 percent target dictated by the Maastricht Treaty. However, notice that debt levels were also decreasing in Denmark, Sweden and the United Kingdom, which are the non-EMU countries in our sample. This consideration is relevant because to a certain extent it allows us to assume parallel trends between EMU and non-EMU countries. Theoretically, this strengthens our intuition that, if strikes decreased in non-EMU countries after significant debt increases, it is due to mechanisms in the monetary regime.

In terms of strikes, it is worth pointing out some patterns. One should easily notice the massive series of political events in Greece, which is clearly the most strike-prone country in our sample. Italy, Spain and Portugal also present a significant density of strikes, followed by France and Belgium, which are however not equivalent for the 2008-2013 period. A striking fact is that we do not observe any large general strikes for neither of the non-EMU countries. This carries important weight for our theory, because it is already evidence that in these countries strikes are not quite triggered by expansionary fiscal policies when governments of Denmark, Sweden and the UK could prevent them before and after the Eurocrisis.⁴³

Figure 2 presents analogous plots with the days not worked statistics, which we dichotomize in our following analyses. As the literature has already strongly suggested,

⁴³Note also that these countries have no special characteristics with respect to legal constraints on strikes or union density. Sweden presents as high levels of constraints as Germany, while the UK has virtually no constraints.

we find that economic strikes have generally decreased or ‘flattened out’ in the years between 1980 and the early 2000s. But, as we expected, there is a noticeable upward shift of strikes starting in 2008, especially in countries that went through the Eurocrisis like Greece, Italy and Spain. Denmark, Sweden and the UK show what seems to be small variation. Because it is hard to interpret from the descriptive plots, we leverage these additional observations on the non-EMU states in the statistical analyses that follow.⁴⁴

3.2 Estimation Strategy

Our theory is centered on the difference that the Euro makes on strikes for countries that, at the time of a crisis, fiscally stimulate the economy. A possible set-up for this type of empirical test is a time-series cross-sectional analysis where strikes are a function of the treatment (a crisis) interacted with the time-varying conditions for more strikes (fiscal expansion) by treated group (EMU or non-EMU).⁴⁵ However, as it is true of many time series in the social sciences, we cannot really assume that strikes nor its determinants are stationary, since the political and economic processes discussed in this paper are most likely to share common trends. This happens to be the case for our specific data: the Fisher-type coefficient based on the Augmented Dickey-Fuller test for stationarity informs that our debt variable and several other covariates that we may want to estimate as confounders contain unit roots.

The econometric literature has suggested the use of Error Correction Models (ECMs) as a solution to co-integrated time series in cross-national panels.⁴⁶ Estimating the ECM functional form is different from running common long-run (static) analyses: while the latter estimates correlations over levels, ECM estimates the ‘speed’ at which a dependent variable returns to equilibrium after long- and short-run changes in an independent variable. Some scholars have asserted that ECM is commendable with both non-stationary

⁴⁴Qualitatively, the same type of picture emerges if we use national interest rates to illustrate the macroeconomic dynamics. See Figure A.1 in the Appendix.

⁴⁵This would technically constitute a difference-in-difference-in-differences estimation, because of the double treatment caused by crisis and EMU membership. Angrist and Pischke 2009.

⁴⁶DeBoef and Keele 2008

and stationary data, because political variables have a ‘long memory’, and it is possible that even without clear evidence of unit roots the time series may still be cointegrated.⁴⁷ Of course, the ECM does not come without trade-offs. Firstly, the interpretation of the results is more involved than a simple fixed effects estimation. Secondly, ECMs impose a lagged dependent variable, which is a topic of heated debate in applied research. Still, we follow the suggestion in the literature⁴⁸ and prefer as our main model a linear ECM estimation that, in the full specification, looks like equation (1). We ran this model by different subsamples, but for our purposes we present results that generally separate the EMU and the non-EMU countries. Also, while we ran different permutations and the results are generally consistent across model specifications, we will primarily concentrate on the regressions on the years between 1995, which marked the beginning of the Euro discussions following the Maastricht Treaty, and 2013.

$$\begin{aligned} \Delta Strikes_{it} = & \alpha + \alpha_1^* Strikes_{it-1} + \beta_1^* \Delta Crisis_{it} + \beta_2^* Crisis_{it-1} + \beta_3^* \Delta Debt_{it} + \beta_4^* Debt_{it-1} \\ & + \beta_5^* \Delta Crisis_{it} * Debt_{it-1} + \beta_6^* \Delta \mathbf{X}_{it} + \beta_7^* \mathbf{X}_{it-1} + u_{it} \quad (\text{eq. 1}) \end{aligned}$$

In our notation, *Strikes* constitutes our outcome variables of *Political Strikes* and *Economic Strikes*, alternatively. The suffix i indexes each country, and t indicates each year. The parameter α denotes the unknown intercept for each country i , while u is the error term. The parameter β_1 corresponds to the effect of the occurrence of a banking crisis, while β_2 corresponds to the effect of the long-term persistence of a crisis. Note that, although these parameters are written with a $t - 1$ suffix, our short- and long-term indicators of *Banking Crisis* are measured with a two-year lag, to evade the concern that banking crises may in fact follow (rather than cause) a sovereign debt bubble.⁴⁹ This approach allows us to make causal inference on the effect of a crisis before a debt spike.

The parameters β_3 and β_4 denote the coefficients of change in debt and debt levels, respectively. The interaction parameter β_5 is the coefficient of interest, because it indicates the effect of high debt levels conditional on the occurrence of a crisis. If our theory is

⁴⁷DeBoef and Keele 2008.

⁴⁸Freeman 2002; Beck and Katz 2011.

⁴⁹Reinhart and Rogoff 2011, although Laeven and Valencia (2012) claim that sovereign debt crises tend to follow banking crises, while the opposite is not often the case.

correct, this parameter should be different across estimations for EMU and non-EMU countries. We expect β_5 to be negative for countries with independent monetary policies, since a crisis followed by Keynesian fiscal policies and central bank activity should reassure the masses and decrease strikes. By contrast, we expect this interaction to be mixed for EMU states. According to our theory, strikes should increase rapidly as the crisis hits countries with little macroeconomic flexibility. However, we also suggested that international institutions should mitigate the fears in the Eurozone, hence blocking the crisis to fully erupt. If we found this parameter to be significantly different than zero, we would need to cast doubt on our hypothesis on the role of the ECB.

We also estimate the coefficients of a set of indicators, \mathbf{X}_i , that the literature identifies as alternative explanations for strikes. We control for *Inflation*, under the assumption that a sustained increase in the price level of goods increases economic uncertainty and decreases the terms of collective agreements, hence incentivizing citizens to protest. We collected also the rate of *Unemployment*, under the consideration that this is the main labour market variable that could trigger more or less labor mobilization. However, in our main analyses we report estimations that exclude this variable, since we find that debt and unemployment rate are too highly correlated ($\rho = .55$) to make us confident about our coefficients. Both variables come from the World Bank Indicators Database. Finally, we include the variable *Government Ideology*, which measures the partisanship of the incumbent executive. We use the Schmidt Index of cabinet composition, which is a scalar that goes from 1 to 5. A strong majority of right-wing parties is coded as 1, while a majority cabinet of left-wing parties is coded as 5.⁵⁰ In the ECM context, this variable estimates the persistence of a government (long-term effect) and the change of government (short-term effect), which means that we implicitly capture the effect of elections and parliament dissolutions. In robustness tests we include additional control variables, such as legal constraints and union density, which however do not alter the implications of our results (see below).

⁵⁰Armingeon *et al.* 2011.

3.3 Findings

We start by evaluating the correlations between the two explanatory variables of interest – *Banking Crisis* and *Debt* – and our main outcome variable, *Political Strikes*. The first model in Table 1 reports the estimates for the whole sample between 1980 and 2013. We find that the short- and long-run effects of debt on political unrest is positive and statistically significant, while banking crises have a weak association with strikes. The coefficients for debt are relatively small, but note that debt to GDP ratios can easily move by 10 percentage points a year. So, raising debt by that amount increases the chance of political strikes by roughly 20 percentage points in the long-run.⁵¹ The additional covariates are also well-behaved, pointing to the exacerbating effects of inflation and right-wing government orientation on change in strikes.

Since we are particularly interested in understanding whether trends in strikes changed before and after the Euro, in our second model we limit our focus to the years between the ratification of the Maastricht Treaty and today. Remember that Denmark, Sweden and the UK do not present years with significant political strikes across our timeline; therefore, Model 2 focuses on EMU countries. We again find that debt has both short- and long-term positive effects on the occurrence of political strikes. In addition, we find that banking crises has a positive and statistically significant impact on the number of political strikes, confirming that strikes were particularly sensitive to the 2008 crisis.⁵²

Theoretically, the most interesting question is whether, conditional on the eruption of a crisis, a country's level of debt can predict the beginning of political strikes. In order to engage this question, we estimate our full model with the multiplicative term in equation (1). According to model 3 in Table 1, the interaction of debt and crisis is positive but statistically insignificant. In other words, we reject the hypothesis that, conditional on a

⁵¹This is easy to calculate summing the short-term effect (.019*10 points) and the long-term effect (.004*10 points) of debt from Model 1.

⁵²It is worth noting that the coefficient of the change in banking crisis is negative, but this should not be understood as a negative 'net' effect of crises on strikes. Rather, the coefficient indicates that, in the immediate short-term, the impact of a crisis outbreak is not conducive to strikes *per se*. However, one needs to interpret these short-term effects in the context of the broader equilibrium relationship of the ECM. Based on the long-term component, a crisis has positive and substantial effect on strikes.

crisis, EMU countries with higher debt experienced on average more strikes than countries with lower debt. Figure 3 illustrates the same result but from a different angle. The left plot shows the marginal effects of debt in the absence of a crisis, while the right plots shows the marginal effect after a crisis. The slope of the regression line in the instance of crisis is marginally steeper. However, the difference that debt makes compared to the countries that did not experience a crisis is very marginal.

These results confirm our qualitative observation that citizens in EMU countries are concerned about fiscal exuberance, but that fiscal expansion during the 2008 crisis did not generate a new equilibrium of strikes altogether. Since debt is not correlated neither with more nor with less strikes, these findings suggest that there may be a missing factor that contributes to the story of political strikes in the EMU. Of course, there is something to be said about the relation between banking crises and debt levels for political strikes in the peripheral EMU states, namely the PIIGS countries (Figure A.2). Nonetheless, the analyses of the EMU sample without Greece (Figure A.3) confirm that, for the average EMU country, there is no significant effect of debt conditional on the 2008 crisis.

To corroborate our inferences, we need to compare these results to the EU member states outside of the EMU, where – according to our argument – citizens should refrain from protesting after a crisis, because the monetary infrastructure supports fiscal policy the case of emergency. Although there were no large political strikes in Denmark, Sweden and the UK in the past years, we can leverage variation on *Economic Strikes*. We then estimate equation (1) for this alternative outcome variable.

Table 2 shows the estimates for the EMU and non-EMU countries respectively. First, notice that the EMU models are consistent with the political strikes models from Table 1. Although the coefficients are insignificant at the canonical confidence levels, debt and crises generally increase social indignation. More importantly, the coefficient of the interaction remains virtually zero. What is instead significant is the multiplicative term in Model 3 for non-EMU countries. According to this estimation, and in line with ‘bad weather’ interpretations of social discontent, long-run debt is a strong positive predictor of strikes. However, the instance of a crisis alters this effect: the negative and statistically

significant interaction indicates that, together, a change in banking crisis and a high debt level decrease labor mobilization in the short-run. To fix ideas, we plotted these two different relationships in Figure 4. It is easy to see the different slopes of the two functions, which indicate that debt without crises is positively correlated with strikes, while debt in the instance of crises is negatively correlated with strikes.⁵³

Qualitatively, these effects tell a lot about the interactions between publics and government outside of the EMU. For example, Denmark has had no significant wave in economic strikes since the late 1980s, because in these prosperous times the Danish government was able to decrease debt by about 30 percentage points while pushing trade with low interest rates. Although the 2008 crisis has had economic implications, it seems that the Danish government could leverage the fiscal power gained in the 1990s and the Danish central bank's capacity to back up its currency.⁵⁴ Similarly, the UK government spending in the midst of the global financial crisis increased to a historically high level of 48 percent as result of bank bailouts, and still we did not see massive protests, possibly because of the significant actions taken by the Bank of England. In sum, the statistical evidence confirms the expected differences in strikes between independent currency regimes and monetary union countries during crises.

Note that our findings are overall robust to a number of alternative specifications and measures. Our outcome variables can be thought of ordinal outcomes, so we re-estimated our models with logistical regressions. The results from Table A.2 and Table A.3 show that the general picture from the linear regressions holds, and that the most sensitive finding is the one for non-EMU countries, where the interactions of crises and debt is still negative and statistically significant. We also estimated the regression in a standard fixed effects framework. The coefficients in Table A.4 confirm that, while debt equally worries citizens in both EMU and non-EMU countries, the occurrence of crises has different implications for strikes in the two groups of countries. The inferences are also virtually

⁵³At the tails of the debt distribution the estimation is weak and somewhat misspecified, due to the fact that there are no cases around zero nor 150 percent of debt. One should concentrate on the implications of the results for cases between 25 and 100 percent of debt to GDP.

⁵⁴See Krugman 2013, 6.

identical if we dichotomize the debt variable and estimate the effect of ‘high debt’ on political and economic strikes (Table A.5).

One may object that Denmark, Sweden and the UK are too small of a control sample and that the short non-EMU data may generate spurious results. To address this concern, we evaluated the trends in strikes in the post-2004 enlargement EU members, under the assumption that they should use monetary and fiscal policies similarly to the non-EMU countries, despite the fact that eventually some of them entered the Eurozone. We use the ILO’s not working days variable, which is available for eight Eastern European countries between 1990 and 2008. All independent variables come from the same described sources.⁵⁵ Figure A.4 shows the data. In these countries the effect of a crisis seems to have more important implications than the short- and long-term effect of debt levels, probably because the transition crisis after the fall of the Soviet Union was aggravated by a leadership that did not respond to citizens’ preferences (all these countries were scoring low on democratic rights until the mid-1990s). The plot also illustrates that fiscal contractions characterized the political economy of Eastern European countries. Despite these important differences with Western European countries, our logistic model’s interaction between debt and crises is negative and statistically significant (Table A.6). In other words, we find that on average these countries changed monetary policies before reaching high levels of public discontent. This is consistent with our conjecture on independent monetary regimes.

One may also worry whether banking crisis is the right measure for the type of financial stress that we want to measure. Some have argued that currency attacks have to do specifically with how investors think about a country and are more targeted than banking crises. In Table A.7 we report our results where we substitute Laeven and Valencia’s binary currency variable to the banking crisis variable. Our results are overall consistent with what we have shown so far. The currency crises in Finland and Italy in the mid-1990s were certainly sources of social concern. However, only the crises in the non-EMU

⁵⁵The Eastern European countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and the Slovak Republic.

countries (e.g., in Sweden) together with fiscal policies have a statistically significant negative impact on strikes.

Finally, we investigated whether our data also shows that strikes are sensitive to changing independence of central banking. This would confirm that there are true systemic differences between the EMU, where central bank independence is fixed, and other countries, which can give or take away power from the hands of central bankers at any year. We collected up-to-date Central Bank Independence data⁵⁶ and substituted it to the debt data. Our results (Table A.8) show that increasing central bank independence in non-EMU countries decreases strikes. This confirms that citizens prefer monetary institutions that can freely maneuver interest rates and influence inflation. However, conditional on a financial crisis, they want less independence in the short-run. This finding is particularly interesting because it suggests that people want a central bank to be more responsive to the government when the economy is bad. In the next section we elaborate precisely on this logic in the context of the ECB and the Eurocrisis.⁵⁷

4 Austerity Strikes and the Eurocrisis

In the previous section we have proposed robust evidence of the differences between strikes in EMU and non-EMU countries conditional on crises. We have also shown that fiscal deficits in the EMU have mixed effects on strikes when a crisis breaks out. Following our argument, strikes in the Eurozone may be explained by the reaction of international institutions, and specifically the actions of the ECB. In this section we directly test our expectation looking at fine-grained data for the Eurocrisis.

⁵⁶Bodea and Hicks 2013. See also Genovese and Schneider 2014.

⁵⁷As a final note, our results are not sensitive to whether our analyses start at 1992, the original year in which Maastricht was signed, or 1999, the year the Euro was introduced in the world financial markets (Table A.9). Including a control variable for union density as the net union membership (a proportion of wage and salary earners in employment, data from Visser 2013) also does not change the implications of our findings (Table A.10).

4.1 Data

We compiled a new dataset that includes a number of original variables. We first collected monthly strikes information from a large corpus of newspaper articles published between January 2001 and December 2013. Because our interest lays in national strikes, we identified six countries for which we could collect strikes data. The countries are Germany, Greece, Ireland, Italy, Spain and the United Kingdom. These cases are different while still featuring some important similarities. Namely, they were all subject to the 2008 crisis, they scored similarly (at least in pairs) on macroeconomic variables, and are all sufficiently covered in international newspapers.⁵⁸

The two news databases where the articles were found are the online archives of the *New York Times* (NYT) and the *British Broadcasting Company* (BBC). We retrieved and scraped all texts tagged with the words *strikes*, *general strikes*, *work stoppages*, *lockout*, *protests* in combination with the name of one of the six countries under consideration.⁵⁹ After obtaining the articles, we coded a range of variables based on the content of the texts. For example, we coded the number of working days lost in strikes and the number of workers involved in these strikes, which we aggregated and used for our previous yearly analyses. For the purposes of this section, the most important variables are *Political Strikes*, which refers to all political strikes organized against the government, and *Economic Strikes*, which refers to strikes organized in one sector or industry against employers. In preparation to our analyses we transformed each of these two indicators into binary variables that take the value of 1 if a month featured at least one of each respective type of strikes, and 0 otherwise.⁶⁰

⁵⁸Our country selection approach is spelled out in detail in the Appendix. In a nutshell, we focused on countries that, based on our yearly dataset, pair on the following specific variables: debt to GDP, government ideology, banking crisis, unemployment rate, and inflation. Qualitatively, we know that the six selected countries have had similar trends in inflation control and debt to GDP adjustments in the past ten years. Moreover, we know that newspapers cover these countries regularly, and therefore that the quality of the information on these countries is relatively high. Quantitatively, we use a new matching algorithm by Nielsen 2014 to make sure that these countries are in fact comparable based on the independent variables. See Appendix for more information.

⁵⁹The data collection took place in the spring of 2014. We employed a Python script to manually scrape the articles. See the Appendix for a description of the procedure.

⁶⁰In alternative analyses we cumulated the number of strikes per month, letting the variables range from 0 to a maximum of 3. Note however that Greece is the only country where several strikes were

Figure 5 shows the political and economic strikes in our dataset. We contrast these with each country’s long-term interest rate (ten-year yield on government bonds), a common measure of financial stress in short-term time series. Several patterns emerge. As we already found in the yearly data, Greece represents the most strike-prone EU country. Moreover, we find that throughout this decade most gatherings were political, despite some significant economic strikes.⁶¹ Our data shows that the countries that experienced higher financial pressure after 2008 – Greece, Ireland, Italy and Spain – did see an awakening of strikes, but with mixed magnitudes. Ireland, for example, shows an average of zero political strikes before 2008 and five political strikes afterwards. By contrast, Italy moved from seven to eight strikes. We also see little variation in strikes after 2012. The UK, which is our only non-EMU country in this sample, experienced as many political strikes as Spain between July 2012 and December 2013.

We have argued that the explanation for this mixed scenario is that national governments did not manage to credibly back up their fiscal policies during the crisis, and that at some point international monetary institutions intervened. In order to test this empirically, we need measurements of ECB action during these years. We use two indicators. The first measure is *ECB Press Release*, which corresponds to the volume of press announcements that the ECB has made with regard to the Euro and the financial crisis in Europe. We collected all ECB press releases categorized under the topic ‘Financial Stability’, which we found on the Bank’s official website.⁶² For the statistical analyses we coded the date of an announcement with a 1, and 0 otherwise. Note however that we also read the texts, and found that the press releases are all relevant for the purpose of our analysis, as we will discuss at the end of this section. The second measure of ECB activity is the *ECB Deposit Rate*. This indicator measures the interest that national banks earn after depositing excess funds in the ECB overnight. It reflects the type of monetary stimulus that the ECB may have given at different times during the crisis to incentivize national banks to keep circulating money.

organized within one month at different points in time.

⁶¹Note, for example, the metalworkers’ protests in the spring of 2002 in Germany and Italy.

⁶²See ECB Press Releases here: <https://www.ecb.europa.eu/press/pr/activities/prud/html/index.en.html>.

Figure 6 illustrates the ECB action data for the months between September 2008 and December 2013. We show the level of the deposit facility interest rate, a selection of ECB announcements, and the aggregate strikes for our countries excluding the UK. It is noticeable that strikes followed the drop of the ECB rate in early 2009, perhaps also because President Trichet noted that risks “persisted as banks have to absorb further asset valuation write-downs in an environment where wholesale funding costs remains elevated.”⁶³ This wave of protests, however, stops with the establishment of the EU Risk Board in December 2010. Only one political event occurred in Europe in the first half of 2011, until the summer Banking Stress Test, which possibly triggered strikes because by artificially devising an adverse economic scenario banks artificially halted lending to households and business. Draghi’s July 2012 ‘whatever-takes’ speech seems to set an end to the increase in strikes, beside the last coordinated European-wide strike of November 2012.⁶⁴ While this picture suggests confidence in our theory, we now resort to econometric analyses in order to systematically evaluate such a rich series of events.

4.2 Estimation Strategy

We stay consistent with the methodological discussion from the previous section and estimate linear Error Correction Models for our monthly strikes. The full model follows equation (2), although we also run separate regressions with each of the two main independent variables, namely *ECB Press Release* and *ECB Deposit Rate*.

$$\Delta Strikes_{it} = \alpha + \alpha_1^* Strikes_{it-1} + \beta_1^* \Delta Press_{it} + \beta_2^* Press_{it-1} + \beta_3^* \Delta Deposit_{it} + \beta_4^* Deposit_{it-1} + \beta_5^* Press_{it-1} * Deposit_{it-1} + \beta_6^* \Delta \mathbf{X}_{it} + \beta_7^* \mathbf{X}_{it-1} + u_{it} \quad (\text{eq. 2})$$

The suffix i indexes each of the six selected countries, and t indicates each month. *Strikes* constitutes each of our outcome variables, *Political Strikes* and *Economic Strikes*, alternatively. The parameter β_1 corresponds to a change in ECB press releases, while β_2 corresponds to the long-term issuing of ECB press releases. The parameter β_3 is the

⁶³ECB Press Release of 15 December 2008. <http://www.ecb.europa.eu/press/pr/activities/prud/html/index.en.html>. Accessed on May 31, 2014.

⁶⁴These strikes were however announced to protest against international disagreements over shared liability and the German veto to EU bonds. We will return to this at the end of the paper.

effect of a change in the ECB deposit interest rate, while parameter β_4 is the effect of persistent levels of the deposit interest rate, which captures the enduring level of fiscal stress. Finally, β_5 is the interaction term of the long-run effect of ECB announcements and ECB deposit rates. We expect this interaction to be negative. Moreover, because we believe ECB measures to be more salient in EMU countries, we also expect the ECB variables to be more statistically and substantively significant for this subset of countries (i.e. excluding the UK).

Note that we estimate the equation controlling for a number of counterfactuals, \mathbf{X} . *Unemployment* is the monthly average unemployment rate, and *Inflation* is the monthly rate of price stability, both of which come from the Eurostat. *Government ideology* is the yearly cabinet composition measure that we recode based on the month when governments changed.

4.3 Findings

Although we ran different permutations of equation (2) that show consistent results across political and economic strikes, we focus on the findings for political strikes. Model 1 and Model 2 in Table 3 report the estimates for the full sample, which includes both EMU countries and the UK. We first calculated coefficients without the interaction term: one can see that the short- and long-run effects of ECB press releases is negative, although it does not reach statistical significance. Similarly, the ECB deposit rate has a negative impact on strikes in the long-run, but it is also not statistically significant. Including the interaction term, however, improves the coefficients. In Model 2 we find that ECB press releases are overall negative and statistically significant, which means that an increase in ECB announcements has substantively decreased the occurrence of strikes. Moreover, we find that, conditional on a decreasing deposit rate, more ECB press releases have a negative and statistically significant effect on strikes. In other words, both the behavioral and the economic actions of the ECB mitigated strikes across Europe during the recent crisis.

This finding confirms our theoretical prediction, but remember that we expect this effect to hold for EMU countries in particular. In order to evaluate whether this is true in the data, we re-estimated the regressions without the United Kingdom, our one and only non-EMU country for which we have refined monthly strikes data. Model 3 and Model 4 report these results. The estimation without the interaction is similar to what we found in the full sample, although the ECB press release effects are clearly stronger. In the interaction model we find that EMU countries are more sensitive to ECB interventions. The effects of ECB press releases are generally large, and the ECB deposit rates variable also becomes significant in explaining a decrease in strikes. For EMU countries, we find that the combination of one ECB public announcement and a decrease of deposit rates by one percent decreases strikes by roughly 8 percentage points.

Table 4 further shows how EMU countries are particularly sensitive to the ECB press releases. We report the coefficients of ECB press releases first for all countries, and then only for EMU countries.⁶⁵ The results indicate that, although negative, the press release coefficient for the full sample has large standard errors. In contrast, dropping the UK makes the short- and long-term coefficients of ECB press releases all significant. In short, we find that the ECB actions, and in particular the Bank's announcements to the press, affected especially citizens in the EMU countries.

Note that our results are even stronger if we estimate the effect of the aggregate of economic and political strikes (Table A.12). Moreover, separate regressions based only on the effect of the ECB deposit rate indicate that this is not as strong of a predictor of decreasing strikes as the ECB announcements (Table A.13). In other words, public pronouncements seem to be a particularly useful channel to understand how the ECB could have decreased the fears in the European masses during the financial crisis. Finally, it is worth pointing out that the EMU-based results are robust to excluding the most polarized cases of our sample. On the one hand, Germany did not experience any particular strike after 2008, possibly because as of this year it was below the Maastricht

⁶⁵We use quarterly data, because the quarter is slightly more appropriate for how disperse the ECB press release variable is. However, monthly measures work similarly.

threshold levels and could use fiscal policy to implement programs such as the car-scrap bonus. On the other hand, Greece experienced a radical increase in strikes due also to the loss in international reputation after the gimmicky disclosure and the IMF intervention. Table A.14 shows that our claims hold even if we do not consider Germany and Greece. This provides further support to our theoretical argument for the effect of the ECB crisis management on strikes across the Eurozone.

4.4 Interpretation: The Future of Austerity Strikes in Europe

Our empirical results indicate that currency regimes matter a great deal in determining the likelihood of strikes after a financial shock. Furthermore, we have shown that signals from international monetary institutions have a major impact in mitigating the political conflict that emerges in fixed currency systems in the aftermath of a crisis. In this section we rationalize these findings in light of the ongoing discussion on EU economic integration, linking this consideration to a prediction of future strikes.

Since the outbreak of the 2008 crisis, much of the political debate on the European Union, and the Monetary Union in particular, has been centered on the issue of ‘democratic deficit.’ This debate deplores the wish to bring Europe to a state-based polity, because of the inefficiencies in the ‘top-down’ decision making model that allegedly borders autocratic tones.⁶⁶ In particular, this perspective is concerned about the risks of future fiscal burden sharing given the unaccountability of the ECB.

We think that, in view of our study, these concerns are at least partly flawed. The ECB is certainly supposed to rise above base politics, but our evidence suggests that, without its pronouncements, the social crisis would have been deeper than it turned out to be. One interpretation of our findings is that the social problems of the Eurozone are in fact rooted in the policy making of nation states rather than in the technocratic institutions in place at the moment. After all, the ECB does not officially negotiate with the European

⁶⁶See the “Manifesto for re-building Europe from the bottom-up” which called for “a European Year of Volunteering for Everyone,” <http://manifest-europa.eu/?lang=en>, 13/9/2012, accessed on 26 April 2014.

leaders. Moreover, while it is technically an independent institution, it certainly has limitations based on the say of the Executive Board and the European Council.

Of course, this does not mean that since the beginning of the Eurocrisis the ECB has not entered uncertain political terrains. To start with, since the first forceful drop of lending rates in 2009, the Bank started setting conditions on its monetary actions. Following the line of President Trichet, in 2011 Mario Draghi spoke of the need for a ‘fiscal compact.’⁶⁷ In 2012, he also made clear that bonds could be bought if rescue funds under the European Financial Stability Facility had entered into force. Nonetheless, we think the dependence that citizens developed on the ECB’s actions is not a function of hopes of grandeur of the ECB, which justifies the market intervention as part of the Bank’s mandate. Rather, it is a function of national politicians prevaricating their proposals on fiscal decision making.

One needs to be clear that the disagreements on fiscal integration among member states are not merely driven by southern countries’ preference for the status quo. Although southern politicians have obviously contrasted austerity politics, there have been real changes in the periphery of Europe. Since 2009 primary deficits have significantly narrowed in these countries. In 2013 Italian and Irish current accounts have even returned to surplus. Similarly, one should not think that the northern countries survived the crisis without breaking any agreement over fiscal responsibility. As of 2010, Germany and France had both breached the golden rule of 60 percent debt to GDP. Some have argued that this single fact let many EMU countries to lose trust in the Stability and Growth Pact.⁶⁸

At the same time, as of 2014 the south of Europe has seen virtually no new wave of economic growth, while northern populations have had easier access to banking services. This has influenced the indignation that we have observed in the South, but also a malaise in the North, which is skeptic of helping the European counterparts with more credit but without guarantees. In sum, the current evolution of the post-2008 crisis indicates that the democratic deficit, if at all, is really a function of classical problems related to state

⁶⁷The Economist. 7 September 2012. *The ECB and the euro: Too central a banker?*, <http://www.economist.com/blogs/charlemagne/2012/09/ecb-and-euro>. Accessed on 7 September 2014.

⁶⁸Hallett and Hougaard Jensen 2012.

sovereignty and national credibility, and not the rise of the EU institutions. In this light, the case of Greece fits very well our argument: strikes were in part magnified because of the Troika intervention, but certainly also because the national policy makers breached transparency and accountability to their own people.⁶⁹

In conclusion, we have reasons to believe that Europeans trusted the direction of the ECB leadership more than their national leaders because the ECB is a credible and convincing actor. Firstly, it could promise active money supply and currency protection as the crisis evolved. But words mattered a lot as well. Figure 7 shows the weighted volume of key words that we found in the ECB Press Releases before and after September 2008. As one can see, before the Eurocrisis the Bank was concentrated on ‘*risk*’ and ‘*stability*.’ However, in the aftermath the discourse turned into a message of ‘*European-ism*.’ ‘*Governance*’ also became a much more cited word than it used to be beforehand. While this is only suggestive evidence of a possible preference change, it indicates how the Bank has been well-disposed at speaking a language that could to some extent comfort the masses.

This leads us to consider the prospect of austerity politics and social mobilization in the long-run. What level of strikes should be expect in the European Union in the next future? To answer this question, we put our model to test in a forecasting exercise. Using our monthly dataset, we estimated the model in equation (2) using in-sample data from January 2005 to December 2011. Subsequently, we took the estimated parameters to the out-of-sample window in order to generate predictions on strike outputs for the remaining months, i.e. January 2012 to December 2013, which we compared to the observed data for our six countries. Figure 8 reports our results. As one can see, the model performs really well in the out-of-sample prediction, scoring a mean squared prediction error of roughly .08. Our theory predicts most of the 2011 and 2013 strikes, but fails to predict the fall 2012 protests. Note however that this coordinated set of strikes was announced against the national leaders, and in particular German and British leaderships, which halted the discussions on European bonds and common liability. Thus, our model indicates that, in the short-run, the ECB political involvement will likely keep large political strikes at

⁶⁹Featherstone 2011.

bay. Whether further fiscal and monetary integration will be achieved before other crises threaten Europe, however, it is something that our model cannot predict.

5 Conclusion

The recent global financial crisis has sent shock waves across Europe, threatening the collapse of the Economic and Monetary Union. Although the economic recession is still evolving, concerns over the disruptive social consequences of the Eurocrisis have soon become reality. Yet, while there was an initial wave of intensive protests against the austerity measures some member state governments proclaimed to be indispensable, most opposition movements died away relatively quickly.

We have argued that monetary policy interventions and especially the unorthodox policy making of the European Central Bank in the Eurozone quelled the strikes that trade unions, civil organizations and public intellectuals had called for. Distinguishing between decision making in sovereign states and crisis management in incomplete economic unions like the EMU, we have claimed that the ECB intervened in order to prevent mass mobilization in the course of the crisis timidly in the beginning and much more decisively from 2012 onwards.

Empirical tests relying on both yearly and monthly strike data lend considerable support to our conjecture that, somehow ironically, the very institution behind the currency that symbolically stands for the deep financial troubles of several member states stopped the struggling economies from tipping over into social anarchy. Of course, our results are far from suggesting that the ECB rescue measures are economically efficient. Some experts have indeed argued that they have prolonged the crisis. Our analysis, however, suggests a political rationality of the ‘whatever it takes’ policies. The investigation indicates that top-down crisis management can sometimes appease contending social forces that struggle over which side should shoulder the burden of fiscal consolidation.

Undoubtedly, the Eurocrisis will continue to shape the agenda of the European Union

and Western Europe in the years to come. Exploring the short-run impact of the crisis on social mobilization, our study suggests that politically sensitive crisis management could prevent the supranational organization from drifting further apart.

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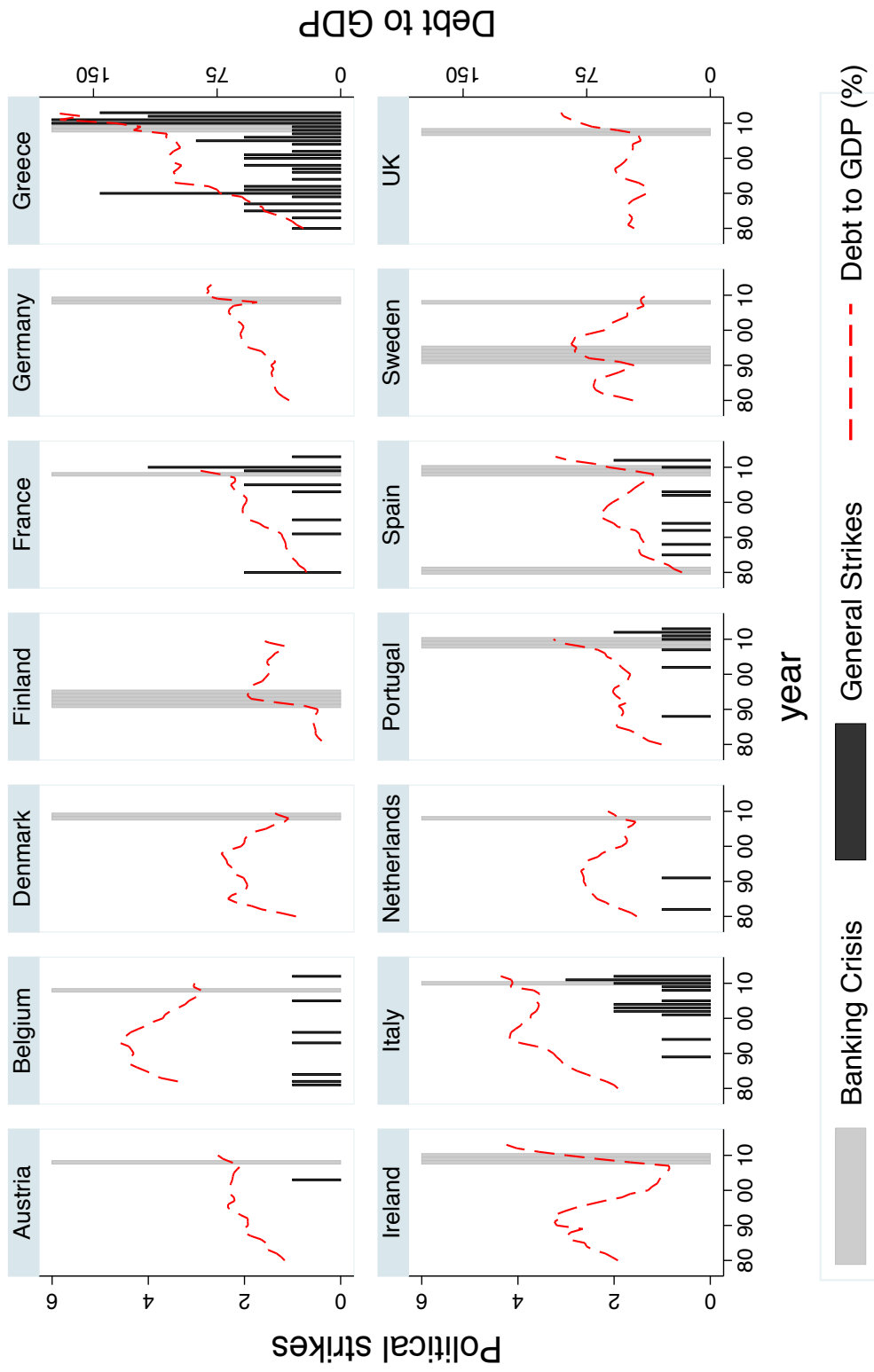
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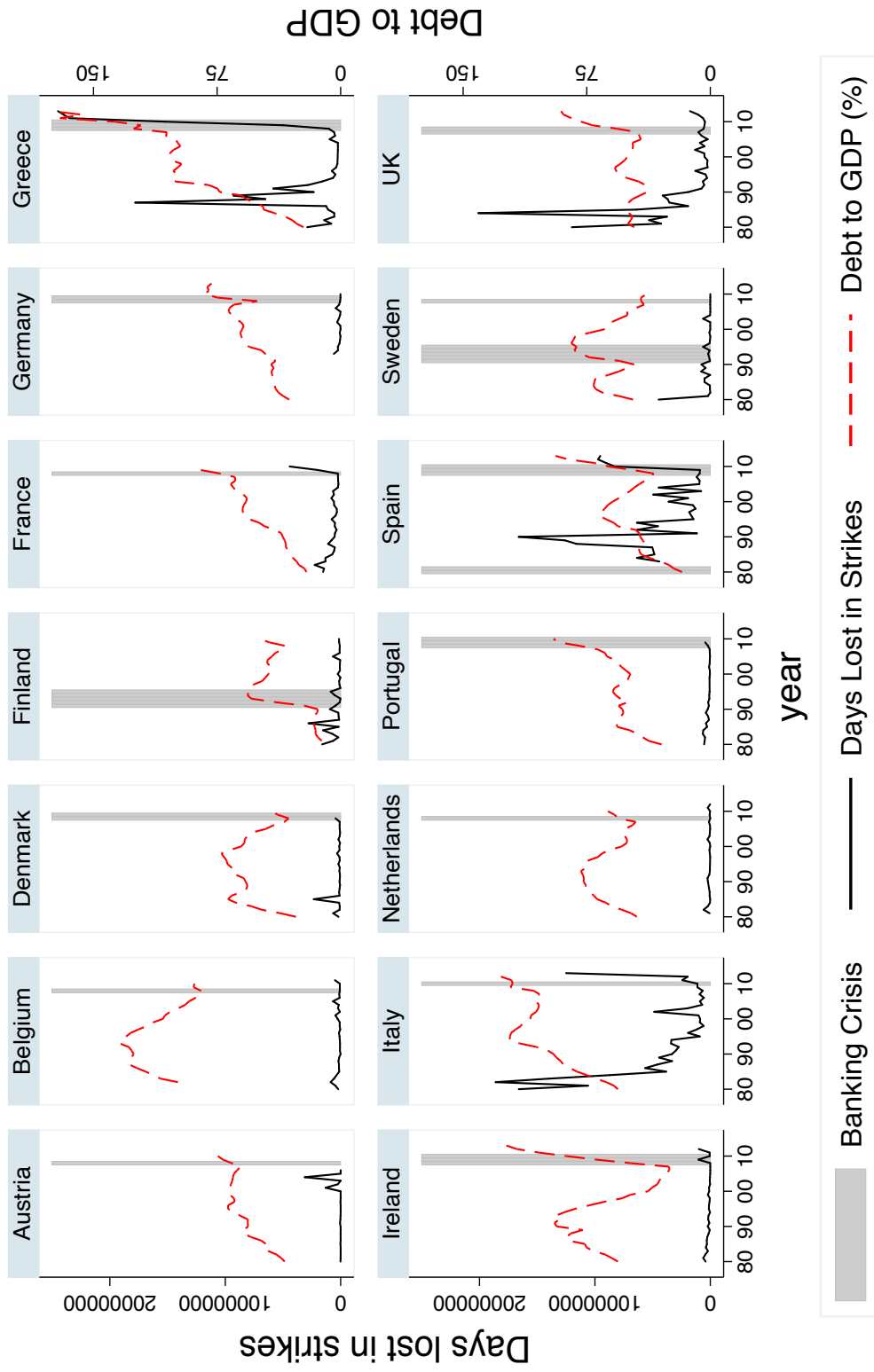
Figures

Figure 1: *Banking Crises, Debt and Political Strikes: Yearly Events*



Yearly general strikes (measure of political strikes) by country. See main text for data sources.

Figure 2: *Banking Crises, Debt and Economic Strikes: Yearly Events*



Yearly days not worked (measure of economic strikes) by country. See main text for data sources.

Marginal Effect of Banking Crisis on Political Strikes

Dependent Variable: Change in Political Strikes
EMU countries

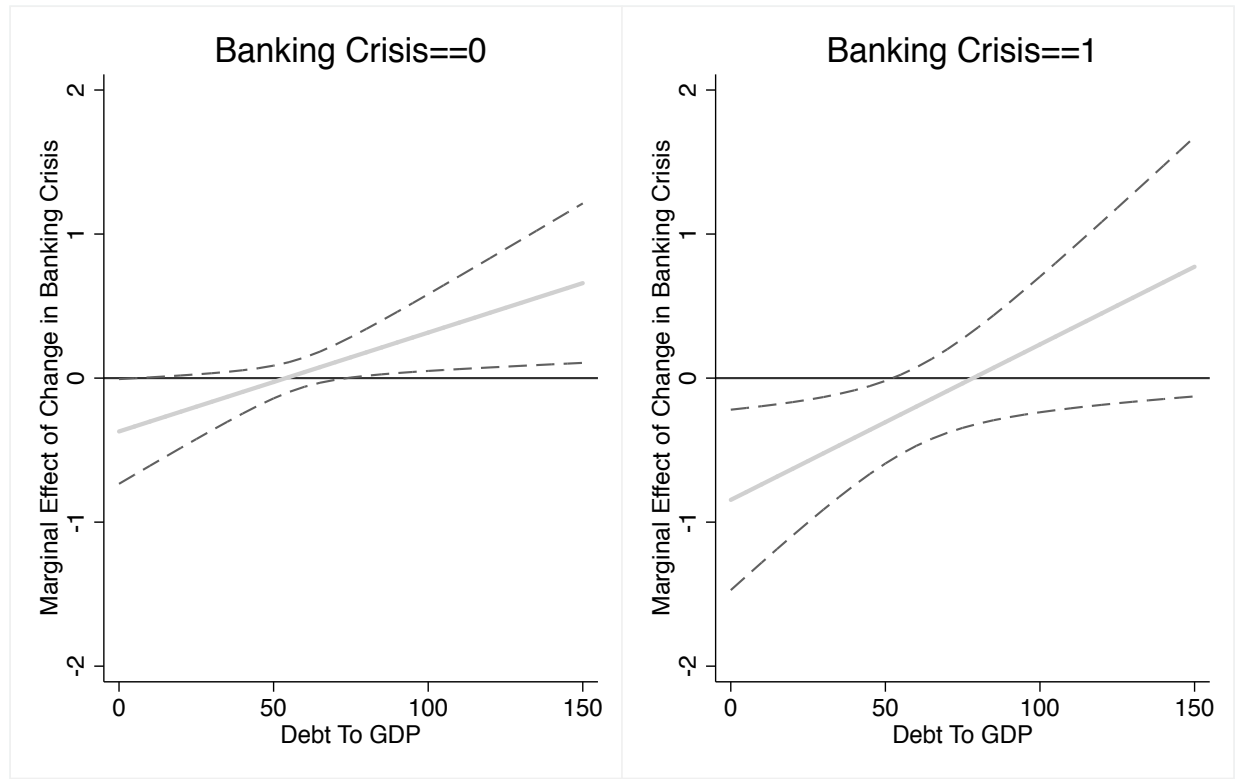


Figure 3: *Banking Crises, Debt Levels and Political Strikes in EMU countries, 1995-2013*. This plot shows the marginal effects of Change in Banking Crises (two lags) on Political Strikes in 12 EMU countries. Estimations are based on the relevant interaction model in Table 1.

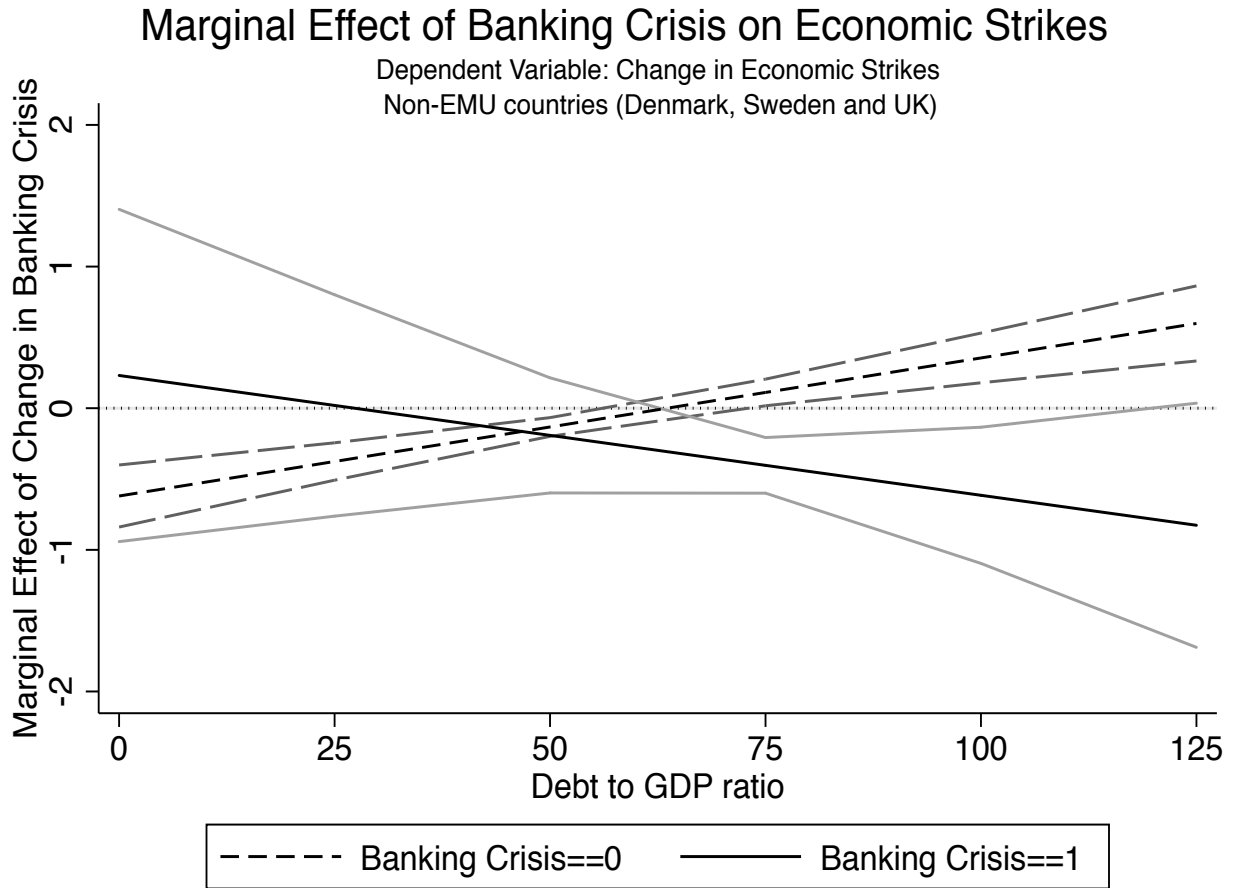
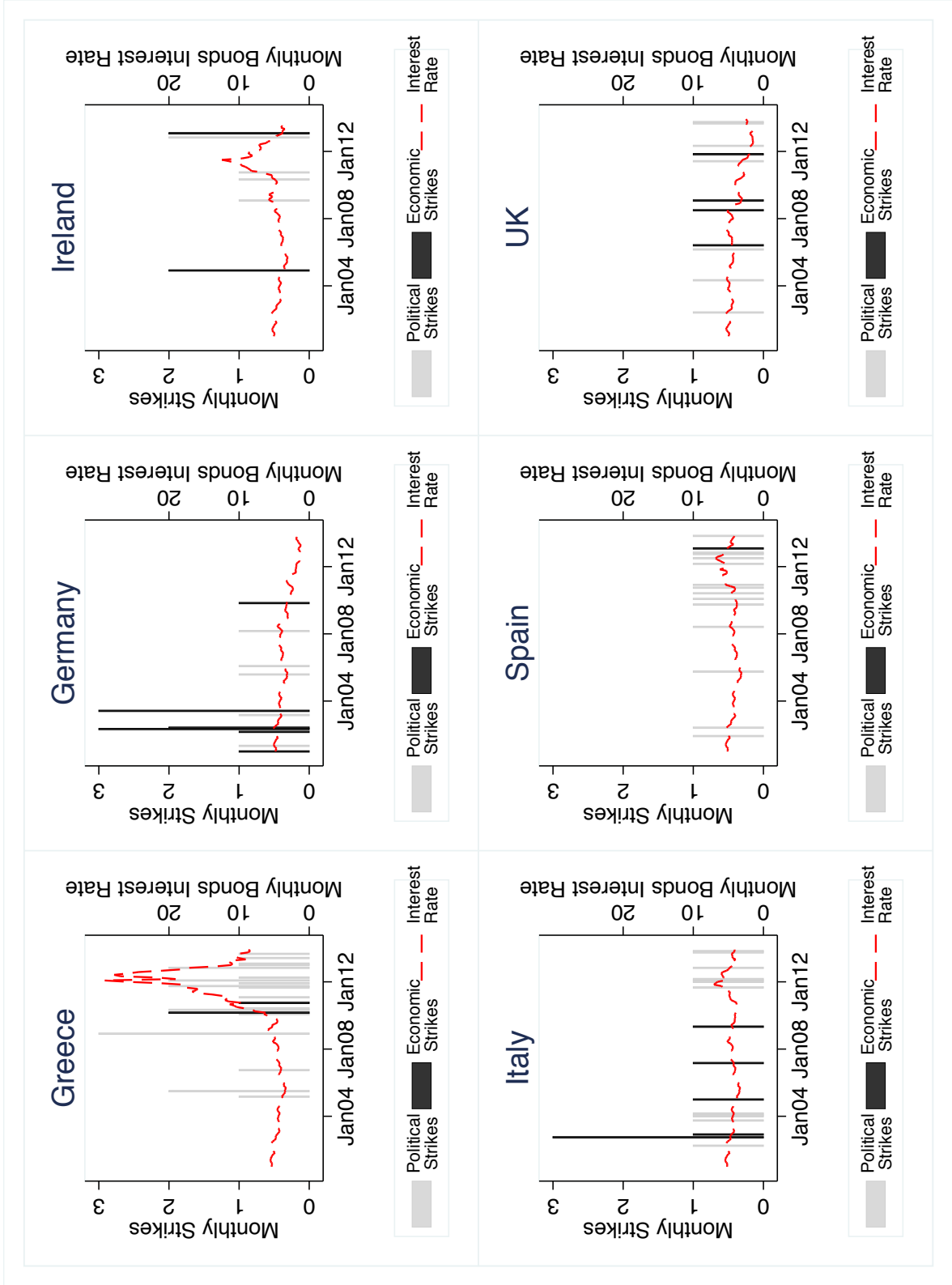


Figure 4: *Banking Crises, Debt Levels and Economic Strikes in non-EMU countries, 1995-2013.* This plot shows the marginal effects of Change in Banking Crises (two lags) on Economic Strikes in Denmark, Sweden and the United Kingdom. Estimations are based on the relevant interaction model in Table 2.

Figure 5: Strikes before and after the Eurocrisis: Monthly Trends in Selected EU Countries.



Strikes data comes from our original dataset. Monthly yields on government bonds (long-term interest rates) were collected from the Eurostat (2014).

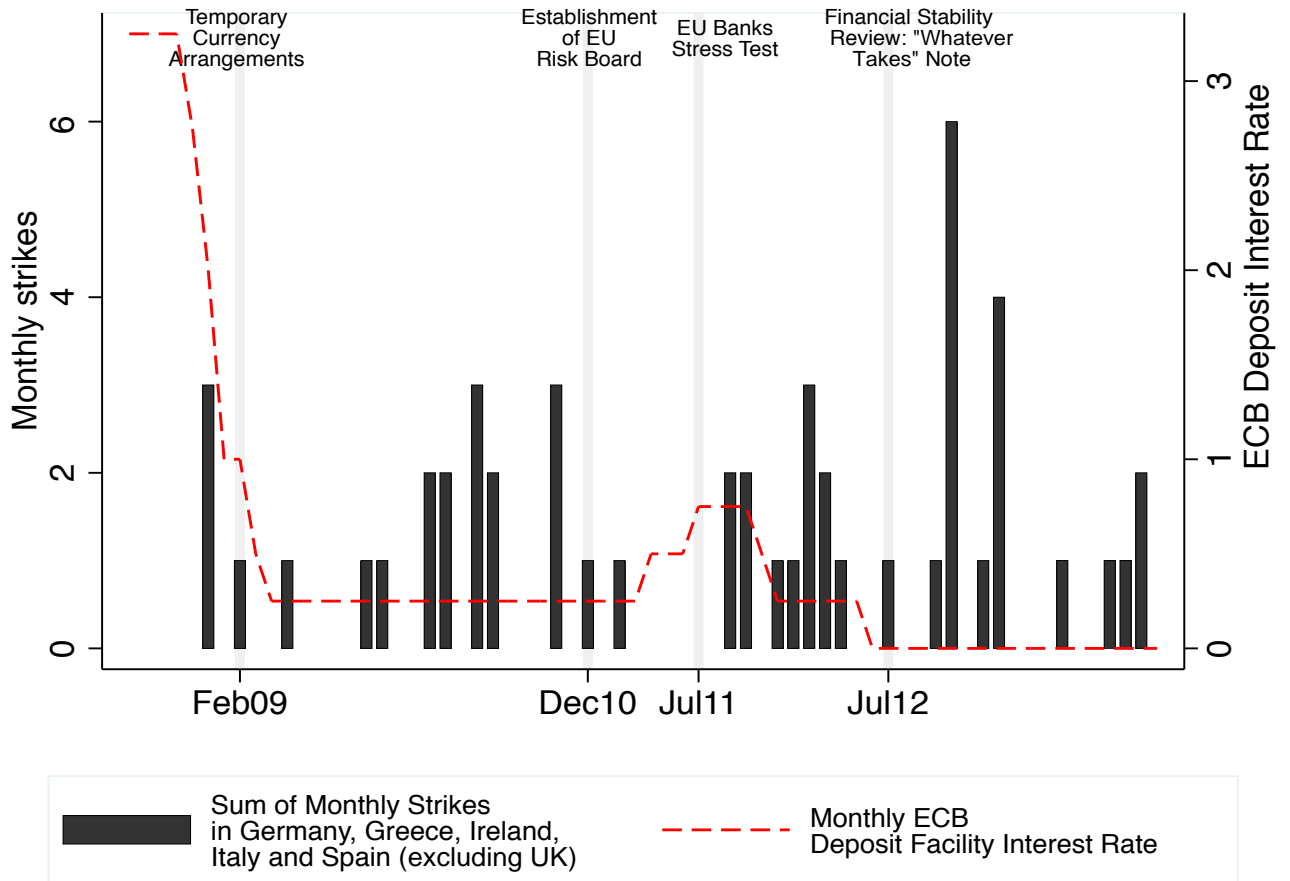


Figure 6: *The Eurocrisis and the Role of European Institutions: Monthly ECB Deposit Rates and Strikes.* The strikes data includes political and economic strikes and is aggregated for the five selected EMU countries

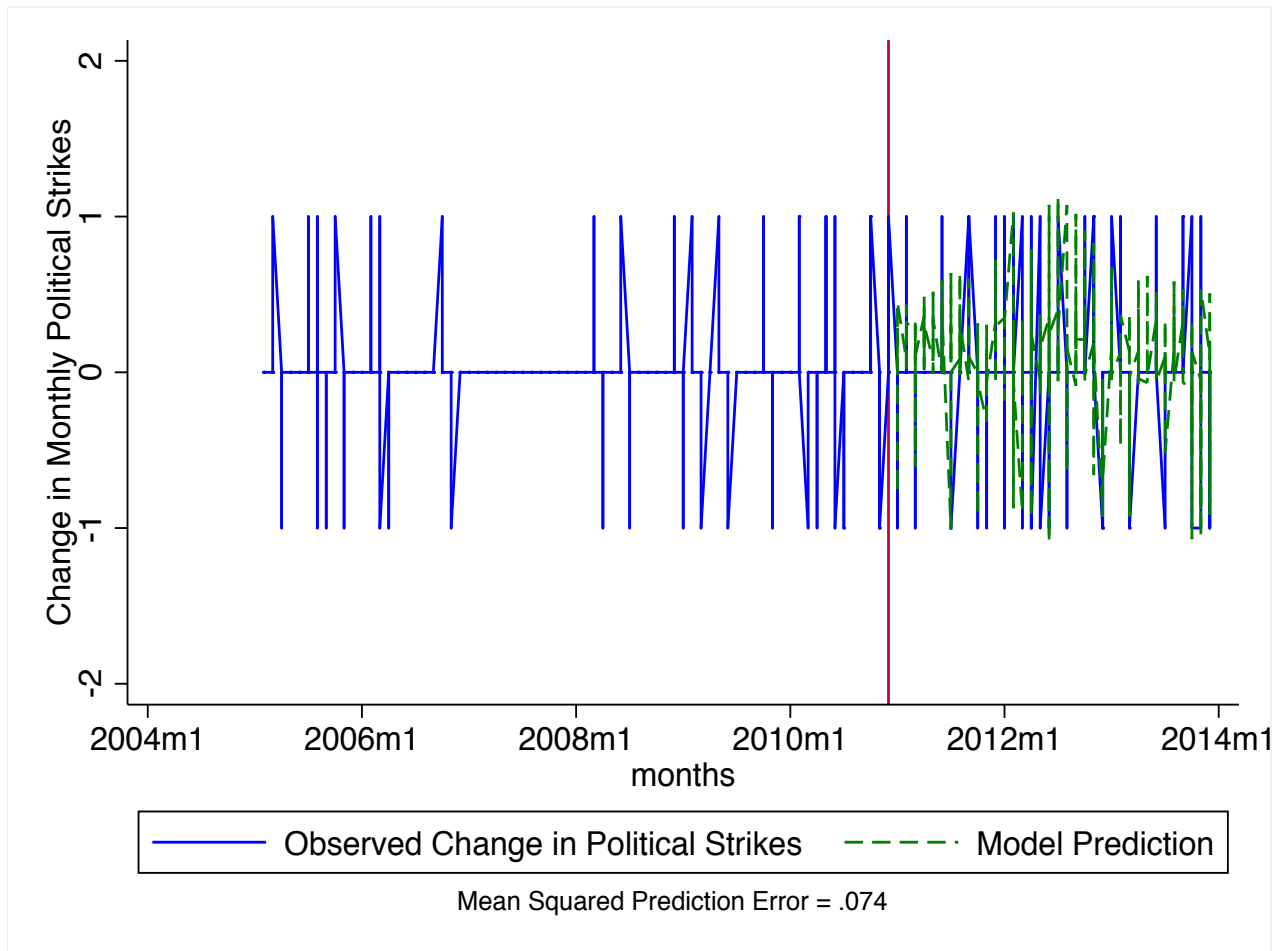


Figure 8: *Theoretical Model and Prediction: Monthly Events in the Selected EU Countries, 2005-2013.* This plot shows the observed (solid line) and predicted (dashed line) values of the full model of *Political Strikes* regressed on *ECB Deposit Rate*, *ECB Press Releases*, and the rest of the covariates in Table 3. The vertical line denotes January 2011, the month from which we estimated the out-of-sample predictions.

Tables

Dependent variable:	<i>Political strikes δ</i>		
	All countries	EMU countries	EMU countries
	1980-2013	1995-2013	1995-2013
	(1)	(2)	(3)
<i>Political strike</i> $t-1$	-0.61*** (0.086)	-0.53*** (0.11)	-0.54*** (0.11)
<i>Banking crisis</i> $t-1$	0.20 (0.18)	0.67* (0.38)	0.68* (0.39)
<i>Banking crisis</i> δ	-0.064 (0.066)	-0.21 (0.16)	-0.48 (0.30)
<i>Debt</i> $t-1$	0.004* (0.002)	0.007** (0.003)	0.007** (0.003)
<i>Debt</i> δ	0.019* (0.011)	0.029** (0.013)	0.028** (0.013)
<i>Banking Crisis</i> δX <i>Debt</i> $t-1$			0.004 (0.005)
<i>Inflation rate</i> $t-1$	0.019 (0.015)	0.14** (0.060)	0.14*** (0.054)
<i>Inflation rate</i> δ	0.084* (0.050)	0.18* (0.10)	0.17* (0.097)
<i>Gov't ideology</i> $t-1$	-0.001 (0.019)	-0.046* (0.027)	-0.046* (0.027)
<i>Gov't ideology</i> δ	-0.051** (0.024)	-0.002 (0.086)	0.001 (0.084)
Constant	-0.23 (0.20)	-0.48* (0.26)	-0.49* (0.25)
N	405	179	179
Countries	15	12	12
Within R^2	0.37	0.35	0.35
Overall R^2	0.27	0.30	0.30

Table 1: *Crisis, Political Strikes and Fiscal Policy*. Error correction OLS models. Dependent variable is Change in Political Strikes. Banking Crisis is measured with two lags. All other variables are measured with one lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Economic strikes δ</i>		
	All countries	EMU countries	Non-EMU countries
	1980-2013	1995-2013	1995-2013
	(1)	(2)	(3)
<i>Economic Strike</i> t_{-1}	-0.78*** (0.080)	-0.84*** (0.073)	-1.21*** (0.11)
<i>Banking Crisis</i> t_{-1}	0.024 (0.083)	0.080 (0.18)	0.25 (0.34)
<i>Banking Crisis</i> δ	-0.072 (0.085)	-0.038 (0.27)	0.85 (0.64)
<i>Debt</i> t_{-1}	0.001 (0.001)	0.001 (0.001)	0.009*** (0.001)
<i>Debt</i> δ	0.004 (0.004)	0.005 (0.004)	-0.022 (0.018)
<i>Banking crisis</i> δ X <i>Debt</i> t_{-1}		-0.001 (0.003)	-0.018* (0.009)
<i>Inflation Rate</i> t_{-1}	0.024*** (0.006)	-0.050*** (0.013)	0.093*** (0.033)
<i>Inflation Rate</i> δ	0.004 (0.015)	-0.012 (0.042)	0.085** (0.035)
<i>Gov't Ideology</i> t_{-1}	0.003 (0.018)	0.033** (0.016)	0.027*** (0.002)
<i>Gov't Ideology</i> δ	0.042* (0.023)	0.001 (0.057)	0.016 (0.077)
Contant	0.95*** (0.14)	1.00*** (0.14)	0.67*** (0.13)
N	343	145	57
Countries	14	11	3
Within R^2	0.42	0.49	0.64
Overall R^2	0.40	0.46	0.64

Table 2: *Crisis, Economic Strikes and Fiscal Policy*. Error correction OLS models. Dependent variable is Change in Economic Strikes. Banking Crisis is measured with two lags, and all other variables are measured with one lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political strikes δ</i>			
	All countries		EMU countries	
	Jan 2001 - Dec 2013		Jan 2001 - Dec 2013	
	(1)	(2)	(3)	(4)
<i>Political Strikes</i> t_{-1}	-0.95*** (0.069)	-0.95*** (0.068)	-0.98*** (0.073)	-0.98*** (0.072)
<i>ECB Press Release</i> t_{-1}	-0.014 (0.056)	-0.063** (0.027)	-0.039 (0.069)	-0.083*** (0.019)
<i>ECB Press Release</i> δ	-0.035 (0.028)	-0.030** (0.015)	-0.047 (0.035)	-0.038*** (0.014)
<i>ECB Deposit Rate</i> δ	0.035 (0.047)	0.008 (0.013)	0.035 (0.062)	0.020* (0.011)
<i>ECB Deposit Rate</i> t_{-1}	-0.028 (0.031)	-0.035 (0.0073)	0.024 (0.038)	-0.010* (0.006)
<i>ECB Deposit Rate</i> t_{-1} X		-0.062**		-0.073**
<i>ECB Press Release</i> t_{-1}		(0.030)		(0.035)
<i>Unemployment</i> t_{-1}	0.009** (0.003)	0.066* (0.0007)	0.007** (0.003)	0.000 (0.001)
<i>Unemployment</i> δ	0.066* (0.034)	0.091** (0.020)	0.091** (0.037)	0.078** (0.022)
<i>Inflation</i> t_{-1}	0.028*** (0.009)	0.028* (0.003)	0.030** (0.012)	0.030** (0.025)
<i>Inflation</i> δ	0.020** (0.0094)	0.003 (0.016)	0.022** (0.010)	-0.0001 (0.017)
<i>Gov't party</i> t_{-1}	0.002 (0.011)	-0.001 (0.0042)	0.003 (0.008)	0.014* (0.005)
<i>Gov't party</i> δ	0.010 (0.016)	0.0024 (0.007)	0.012 (0.021)	0.004 (0.015)
Constant	0.002 (0.036)	-0.009 (0.019)	0.002 (0.040)	-0.013 (0.044)
N	384	384	320	320
Countries	6	6	5	5
Overall R^2	0.48	0.48	0.49	0.50

Table 3: *Crisis, ECB and Strikes: Interaction of Deposit Rate and Press Releases*. Error correction OLS models. Data aggregated at the monthly level. Dependent variables are Change in Political Strikes and Change in Economic Strikes for all the six countries and only the five EMU countries, respectively. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political strikes</i> δ <i>Economic strikes</i> δ		<i>Political strikes</i> δ <i>Economic strikes</i> δ	
	All countries Q3/2008-Q4/2013		EMU countries Q3/2008-Q4/2013	
	(1)	(2)	(3)	(4)
<i>Political Strike</i> t_{-1}	-1.06*** (0.092)		-1.10*** (0.100)	
<i>Economic Strike</i> t_{-1}		-1.06*** (0.039)		-1.03*** (0.043)
<i>ECB Press Release</i> t_{-1}	-0.073 (0.095)	-0.057 (0.067)	-0.13* (0.077)	-0.099* (0.053)
<i>ECB Press Release</i> δ	-0.011 (0.052)	-0.066** (0.027)	-0.055 (0.037)	-0.082*** (0.020)
<i>Unemployment</i> t_{-1}	0.037*** (0.007)	-0.003 (0.004)	0.035*** (0.008)	0.001 (0.001)
<i>Unemployment</i> δ	0.26*** (0.066)	-0.013 (0.051)	0.27*** (0.066)	-0.015 (0.061)
<i>Inflation Rate</i> t_{-1}	0.85** (0.39)	0.18 (0.19)	1.07** (0.44)	0.17 (0.24)
<i>Inflation Rate</i> δ	0.54*** (0.19)	0.25*** (0.093)	0.66*** (0.20)	0.24* (0.13)
<i>Gov't Ideology</i> t_{-1}	-0.041 (0.035)	0.012 (0.023)	-0.019 (0.046)	-0.009 (0.022)
<i>Gov't Ideology</i> δ	0.035 (0.061)	-0.032 (0.067)	0.039 (0.12)	-0.10 (0.100)
Constant	-0.077 (0.13)	0.13 (0.088)	-0.046 (0.16)	0.19*** (0.072)
N	132	132	110	110
Countries	6	6	5	5
Years	0.57	0.01	0.60	0.01
Overall R^2	0.54	0.58	0.57	0.59

Table 4: *Crisis, the ECB Press Releases and Strikes.* Error correction OLS models. Data aggregated at the quarterly level (government ideology at the quarterly median). Dependent variables are Change in Political Strikes and Change in Economic Strikes for all the six selected countries and only the five EMU countries, respectively. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Appendix

This online Appendix includes:

1. A data memo with description of data sources and methods of data collection
2. Supplementary figures referred in the text
3. Supplementary tables referred in the text
4. Supplementary analyses we conducted for further validation

Data

Yearly Strikes: Data Sources

Political Strikes: These strikes are defined as organized endeavors of active and non-active workers to protest against economic and/or social policies. These strikes events come from the dataset presented in Hamann et al. 2013. This data is based mainly on the European Industrial Relations Review of the European Industrial Relations Observatory (EIRO) and the European Protest and Coercion Database.⁷⁰ Most recent years' information was also collected through the UK Labour Research Department and was checked with selected BBC news reports. The authors shared the raw data that supplements their published series, which in the current version ranges up to 2013. Their dataset looks at general strikes directed at governments in their role as legislators for five major issues: pension reform, labor law reform (rules governing centralized bargaining, dismissals and redundancy, etc), wages (this includes national wage freeze, changes to the minimum wage, and rules governing overtime pay at the national level only, not for the public sector), welfare (social insurance reform outside of pensions) and economic policy (cuts in discretionary spending – i.e. social services, public housing, health care – and privatization). The data captures only the frequency, i.e. the general counts, of political strikes, because it is not easy to find information on number of workers involved or working days lost for general strikes as these forms of protest may also involve non-union workers, informal workers, and de facto other non-employed people.⁷¹

Economic Strikes: These strikes are defined as active refusal by active workers to protest against economic and/or social conditions of work, including adjusting wages, changing benefits, and general working practices. Our proxy for economic strikes is the average number of days (as aggregation of daily shifts or hours) lost in lock outs and strikes per 1,000 employees. Our main source for the years from 1980 to 2000 is the International Labour Organization online database, which reports data up to 2008. For the years between 2001 and 2013, we rely on a number of different sources, given that ILO presents lost of missing series and has not updated the website since 2008. We use the adjusted average days not worked from the national statistical offices from the 'Strikes in Europe' iconographic report produced by the European Trade Union Institute (ETUI).⁷² This data project covers all the European Union countries, and is particularly useful to update the ILO series up to 2010. Note that some countries we have a particular interest studying remain problematic: the government of Greece, for example, has not published strikes data since 1999 with the exception of a report of 2003.⁷³ Similarly, Italy has published no strikes data since 2010, and Portugal has no information since 2009. Thus, for the missing recent years of these countries we use (approximate) numbers of workers from the monthly news reports we collected (see description below). We report here the

⁷⁰See <http://web.ku.edu/ronfran/data/>.

⁷¹The authors excluded four strikes from their original collection as they did not fit in the general theme of social policy and labor market reform that they discuss in their papers. Excluding these strikes however does not change our main inferences.

⁷²See <http://www.etui.org/Topics/Trade-union-renewal-and-mobilisation/Strikes-in-Europe-infographic>.

⁷³See EIRO report by authors Katsoridas and Kollas at <http://www.eurofound.europa.eu/eiro/2003/02/feature/gr03021>

websites where the country-specific information on days not worked between 2008 and 2013 (if available) can be found.

- Austria: Economic and Statistics Yearbook (2012), http://statistik.arbeiterkammer.at/tbi2012/streikstatistik_12139.html
- Belgium: National Office of Social Security (2013), <http://www.onssrszls.fgov.be/nl/statistieken/publicaties/gelijkgestelde-periodes/>
- Denmark: Statistics Denmark, Work stoppages by unit (2013), <http://www.statistikbanken.dk/ABST1>
- Finland: Statistics Finland, Labour Force Survey (2013), http://tilastokeskus.fi/til/tyti/index_en.html
- France: Le Portail de la Fonction Publique (2010), <http://www.fonction-publique.gouv.fr/statistiques-20>
- Germany: Statistics of the Federal Employment Agency (2012), <http://statistik.arbeitsagentur.de/Navigation/Statistik/Statistik-nach-Themen/Beschaeftigung/Streik/Streik-Nav.html>
- Greece: Eurofond Europe (2002), <http://www.eurofound.europa.eu/eiro/2003/02/feature/gr0302102f.htm>
- Ireland: StatBank Ireland – Industrial Disputes (2011), <http://www.cso.ie/en/databases/>
- Italy: Italian National Institute of Statistics (2010), <http://www.istat.it/en>
- Netherlands: Central Statistics Bureau (2013), <http://statline.cbs.nl/>
- Portugal: Office of Strategy and Statistics (2008), <http://www.gep.msess.gov.pt/estatistica/greves/>
- Spain: Ministry of Employment and Social Security (2012), <http://www.empleo.gob.es/estadisticas/hue/welcome.htm>
- Sweden: National Mediation Office (2013), <http://www.mi.se/medling-konflikt/>
- United Kingdom: Office of National Statistics (2013), <http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Days+Lost+Due+to+Industrial+Action>

Monthly Strikes: Countries Selection

Our goal is to focus on a subset of EU countries that can provide us a good group for ‘most similar’ cases where we can observe the patterns derived from our theory. We want to leverage the distinction between EMU and non-EMU countries to evaluate whether this characteristic generates significant differences across strikes. At the same time, we need high-quality information that - we realize - is not retrievable for all EU countries.

Qualitatively, we are interested in gathering information for countries that went through the 2008 banking crisis, and that presented similar macroeconomic trends around this event. This should automatically exclude Finland, which did not go through the crisis, and possibly also France and Portugal, which constitute marginal crisis cases according to Laeven and Valencia (2012).⁷⁴ Countries with a too parsimonious debt before the crisis are also excluded, since we are also interested in seeing how fiscal policy can refrain strikes but also be constrained during the crisis. In other words, it is unclear whether we should select countries like Ireland and Spain, which had gone through high deficit restructuring and high growth period during the 1990s, or Sweden and Denmark, which as of 2005 had debt to GDP ratios of 42 and 31.5 percent, respectively. Note however that we still want to have a representative case for the non-EMU countries. It is then in our interest to at least select the UK, which had both a rising debt and a busting banking sector around these years.

Regarding the EMU countries, Greece is an important candidate given its relevance in the course of the Eurocrisis. Italy matches Greece because of the high guarantees on bank liabilities and the significant debt levels they featured even before the crisis. Spain was also one of the critical countries in the midst of the Eurocrisis, and similarly to Ireland went through a period of high economic growth while still maintaining an average level of yearly unemployment above 10 percent. Finally, Germany matches the UK on general banking status and inflation records, despite being an EMU member.

Of course, these are different other pairs that may be worth examining in the context of the EU15. For example, Austria, Belgium and the Netherlands are also interestingly similar countries with comparable economic sizes, mid-range deficits (especially Austria and the Netherlands), and all went through the 2008 crisis. Despite these evident similarities that could enrich our inferences on the Eurocrisis, we decided to restrict the monthly strike data selection to Germany, Greece, Ireland, Italy, Spain, and the United Kingdom. This is in part due to the fact that in the process of data collection we realized that we could not access enough news on these countries to not bias our estimations. Moreover, it was a compelling decision based on a quantitative selection of cases. We followed the causal inference research that attempts to study observational data *as if* at random. In other words, we quantitatively constructed a subsample of our dataset in which the countries vary meaningfully on key variables of interest (e.g. fiscal and monetary policies) but are similar in all other ways. Nielsen 2014 has proposed a parametric model to estimate causal quantities of interest in a pre-matched sample. Matching is a technique that helps create samples of units that are ‘close’ to each other in a dimensional space defined by a set of covariates. More specifically, Nielsen’s method finds the closest possible matched pairs in terms of specified covariates. We use this algorithm because it allows us to generate matches without the need to specify a ‘treatment’ variable. In sum,

⁷⁴Laeven and Valencia argue that for France and Portugal, the funds allocated for bank restructuring purposes were not used, so it is unclear how much they were needed.

the method maximizes the variance in countries of interest while ignoring the outcome variable – strikes.

We identify the most similar cases based on a generalized pairwise distance called the Mahalanobis distance. This distance is calculated for the EU15 countries between 1980 and 2013 after selecting certain particular cases that the software requires to start the matching. Given our qualitative reasoning, we selected Greece, Spain, Ireland and – separately – the United Kingdom. We run the algorithm conditioning on five co-variates: debt to GDP ratio, banking crisis, inflation rate, unemployment, and ideology of the ruling government. Table A.1 shows the first matched pairs in order of match quality, which provide further support to our case selection. Clearly Italy is a good match for Greece, and we can use it to understand the different dynamics that led Greece to loan from the IMF while Italy did not. Ireland seems to constitute a whole different case, despite the heavy impact of the crisis: according to the matching calculations, it is comparable to a non-EMU country like Denmark. While we would have liked to code data for Denmark, we realized that it was hard to find Danish strikes data at the monthly level, and that generally the country provides too little empirical variation. However, we still include Ireland in our subsample because it would allow us to possibly understand a counterfactual, i.e. a case that almost works as a non-EMU despite being in the Euro. Spain matches the Netherlands, which means that we can keep either for the sake of our empirical tests. Note also that our intuition that Germany and the UK would match each other is confirmed, so we collected data for those two countries as well.

Mahalanobis distances	Unit matched	Debt to GDP (%)	Government Ideology	Banking crisis onset	Unemployment rate	Inflation rate
0.004	Greece	89.56	4	1	8.88	10.52
	Italy	101.88	3	1	9.81	5.55
0.056	Ireland	68.08	2	1	10.83	4.54
	Denmark	54.95	2	1	6.95	3.54
0.066	Spain	49.52	4	1	16.66	5.58
	Netherlands	62.66	2	1	6.35	2.36
0.005	Germany	54.64	2	1	7.585	1.92
	UK	53.14	3	1	7.730	2.75

Table A.1: *The best matched pairs to pre-identified EU members, based on Mahalanobis distance calculated on the variables in the table with Nielsen’s (2014) ‘case.match’ algorithm. The cases that we ultimately selected for data collection are in bold. Figures on the co-variates are average values for the period 1980-2013 except for government ideology and banking crisis, which are at the median. Results based on 94830 possible matches.*

Monthly Strikes: Data Sources and News Collection

We concentrated on strikes at the monthly level for which we could find enough information in broad interest English-speaking newspapers. Our countries of interest are Germany, Greece, Ireland, Italy, Spain and the United Kingdom (see case selection above).

We collected strikes monthly data from all newspaper reports stored in the online archives of the New York Times and The British Broadcasting Company and dated between 2001 and 2013. The collection was computer-facilitated. We first performed a key-search of the archives of each of the two newspaper websites, using relevant compound words: “*protest*”, “*strike*”, “*mobilization*”, “*industrial action*”, and “*labor/labour*”, combined with “*EU*” and the name of each of the six countries (e.g. “*Germany*”).⁷⁵ We then generated urls specific to the lists that corresponded to the chronological list of displayed articles. We used a Python script to extract the content of each that extracted each parse HTML file corresponding to each electronic article page (i.e. the article ‘body’). Then we extracted all the paragraphs of the HTML tag starting at the root of each article (in Python language, ‘p’), clean them from spaces and collapsed into one-string files.⁷⁶ We collected roughly 380 newspaper articles released between 01 January 2001 and 31 December 2013.

More than 50 percent of the collected newspaper articles were discarded, because they did not centrally focus on the politics or economics of strikes (e.g. strikes on the US with broad reference to movements in Europe). Moreover, of the remaining articles we removed the opinion eds and commentary notes that did not actually report factual information on strike events. Finally, we only selected articles that focused on strikes on a large national scale, and not strikes that were recorded only for one city (e.g. London). These decisions led us to focus on strike events reported in 142 singular newspaper articles. Breaking down the articles by strikes in each of our six country, we have 21 articles on Germany, 29 on Greece, 18 on Ireland, 29 on Italy, 23 on Spain and 22 on the United Kingdom.

We coded a variety of information from the articles. We recorded the date of the report, the date in which the strike(s) took place, as well as the date in which – according to the reporter – the strike was announced. Since our data is aggregated at the month level but it is possible that several strikes are reported, announced or evolving on the same month, we also record these additional information. Some articles also note whether the strike had a time line and how many days it would take, so we coded the amount of strike days if included. Similarly, some articles indicate the (often approximate) number of people involved in the strikes, which we tracked throughout the coding exercise.⁷⁷

Finally, in an additional variable we distinguish whether the identified strikes into economic and political strikes. The definitions of economic and political strikes come from the British Encyclopedia. The former is intended as active refusals by employees to work under the conditions required by employers, and arise principally in response to economic conditions (e.g. deterioration of wages and work benefits) and labor practices. Political strikes instead refer to stoppages and protests by a substantial proportion of active and non-active workers in the endeavour to achieve political objectives. These involve more

⁷⁵We limited the search to the years from January 2001 to May 2014, although we then truncated the coding to 2013.

⁷⁶We use the Python package *BeautifulSoup* to scrape the content of the links. For some articles that resulted in invalid links we manually cut and pasted the content.

⁷⁷If it was reported that ‘thousands’ of people strike, we coded this with a number of 1000).

directly public activities and services (e.g. shutting down public transportation, hospitals, and other public utilities), and can also take the meaning of ‘general’ strikes.

Monthly Strikes: ECB Announcements

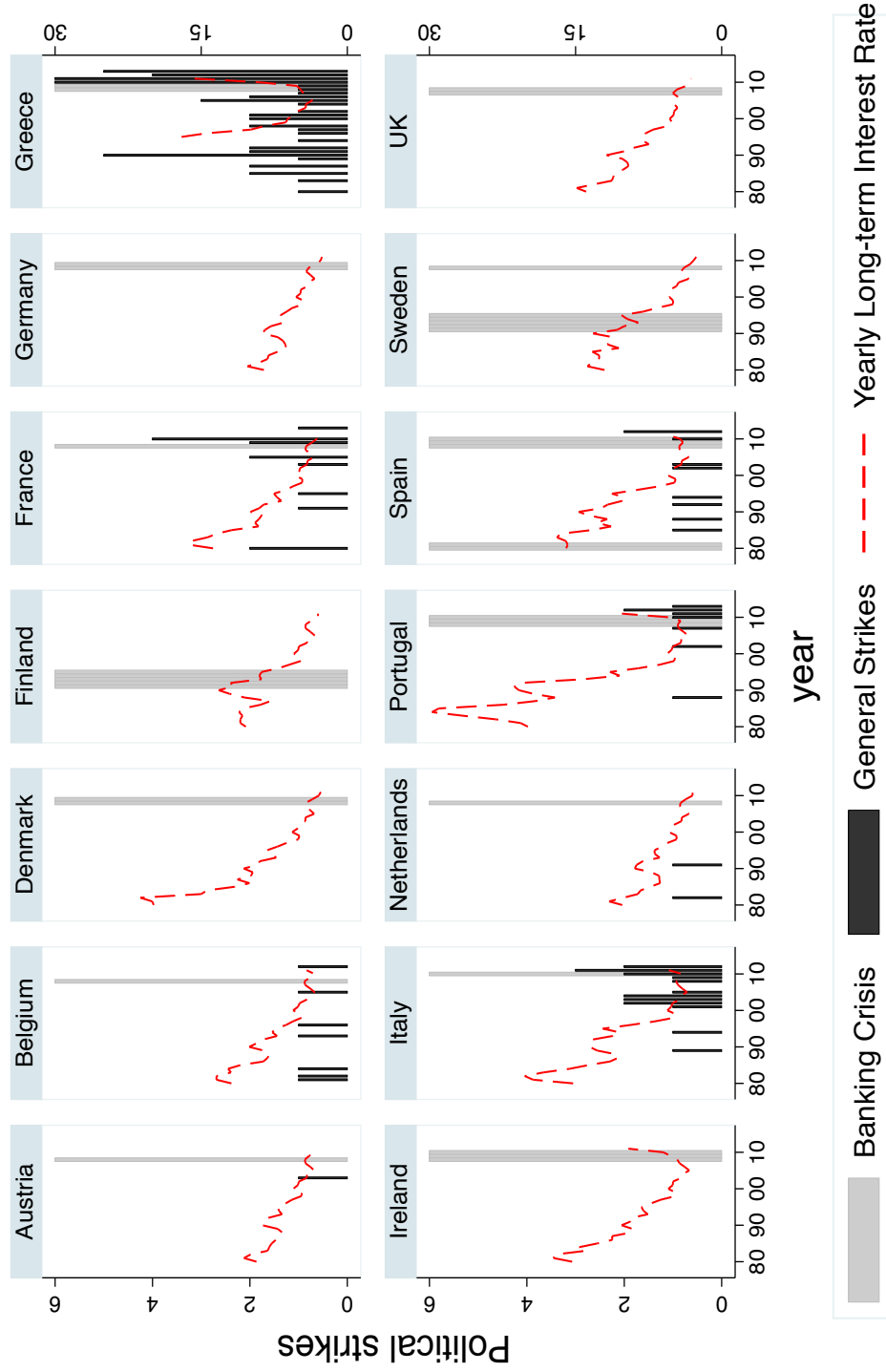
Our monthly data for announcements of EU institutions is based on press news releases by supranational institutions in charge of EU affairs. In particular, we concentrate on the press releases of the European Central Bank (ECB). The ECB has released notes and announcement to the press since its establishment in 1999. These are available on the ECB website, and are categorized into topics. We concentrate on the press releases assigned to the topic ‘Financial Stability.’ The ECB press releases sum up to 78 announcements distributed across 45 months. These are all generally relevant for the purpose of our analysis, especially because the ECB itself categorizes them as ‘relevant’ information on financial stability. So, we rely on all the press releases in our investigation.

We additionally collected reports from the the European Council (EC) Newsroom and the European Monetary and Economic Affairs Commissioner’s Speeches between 2001 and 2013. Regarding the EC press releases, these are available since 1958 on the Press Release database at www.europa.eu. We key-searched releases and announcements that included the words ‘Fiscal Stability’, ‘Fiscal Agreement’, ‘Fiscal Pact’, and ‘Fiscal Growth’. We cross-checked the outcome files with statements and news released by the Eurozone Portal of the EC. However, since the EC news releases are rather heterogenous and do not stick to one style (some are more opinion-based, some are not) we only relied on these news as additional empirical material.

The dates of the ECB press releases we analyze in this paper are available here: <https://www.ecb.europa.eu/press/pr/activities/prud/html/index.en.html>.

Appendix Figures

Figure A.1: *Banking Crises, Interest Rates and Strikes*



Yearly general strikes (measure of political strikes) by country. see main text for data sources.

Marginal Effect of Banking Crisis on Political Strikes

Dependent Variable: Change in Political Strikes
PIIGS countries

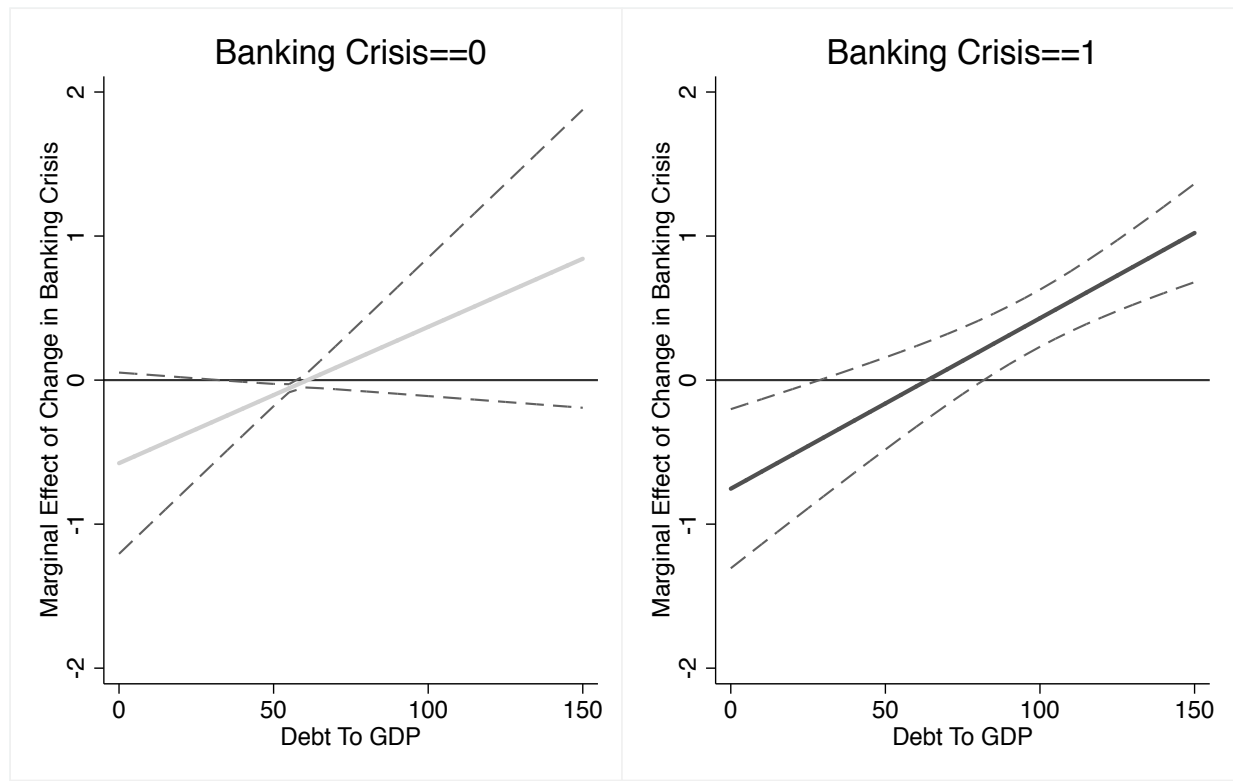


Figure A.2: *Debt Levels and Economic Strikes in PIIGS countries, 1995-2013*. This plot shows the marginal effects of Change in Banking Crises (two lags) on Political Strikes in Greece, Ireland, Italy, Portugal, and Spain between 1995 and 2013.

Marginal Effect of Banking Crisis on Political Strikes

Dependent Variable: Change in Political Strikes
EMU without Greece

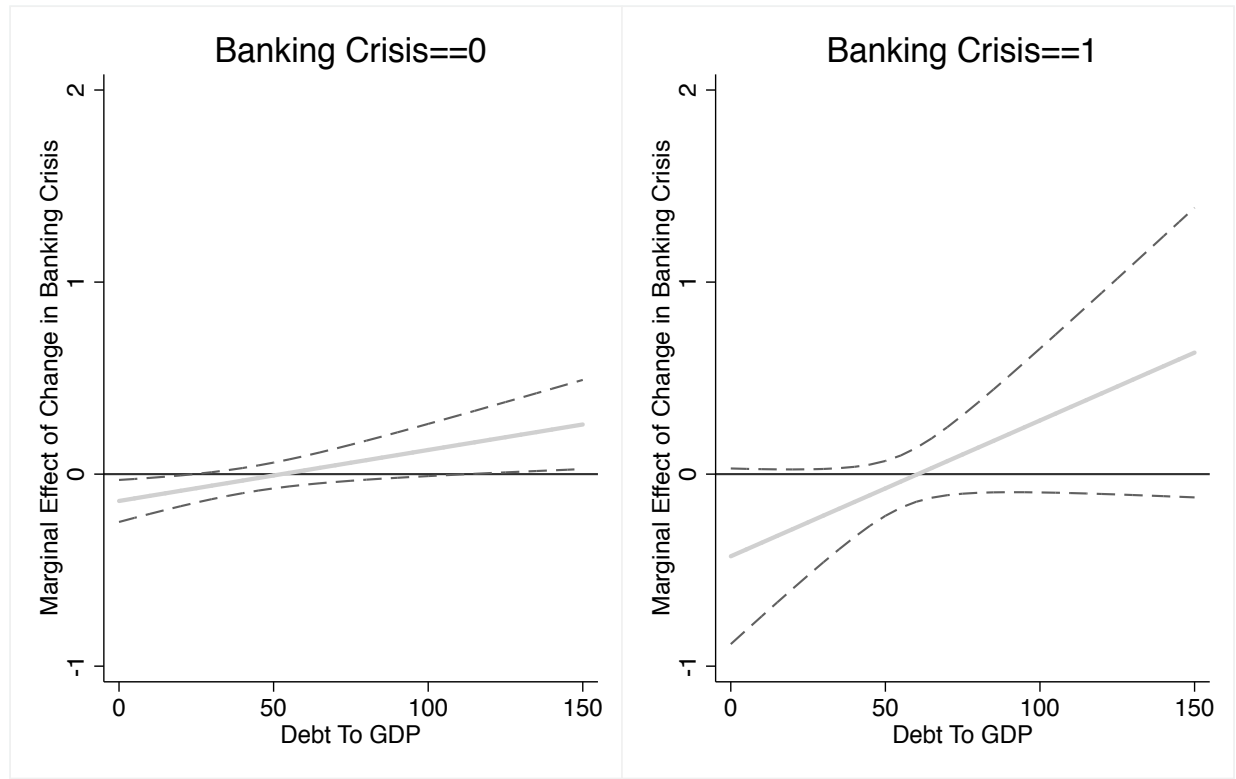
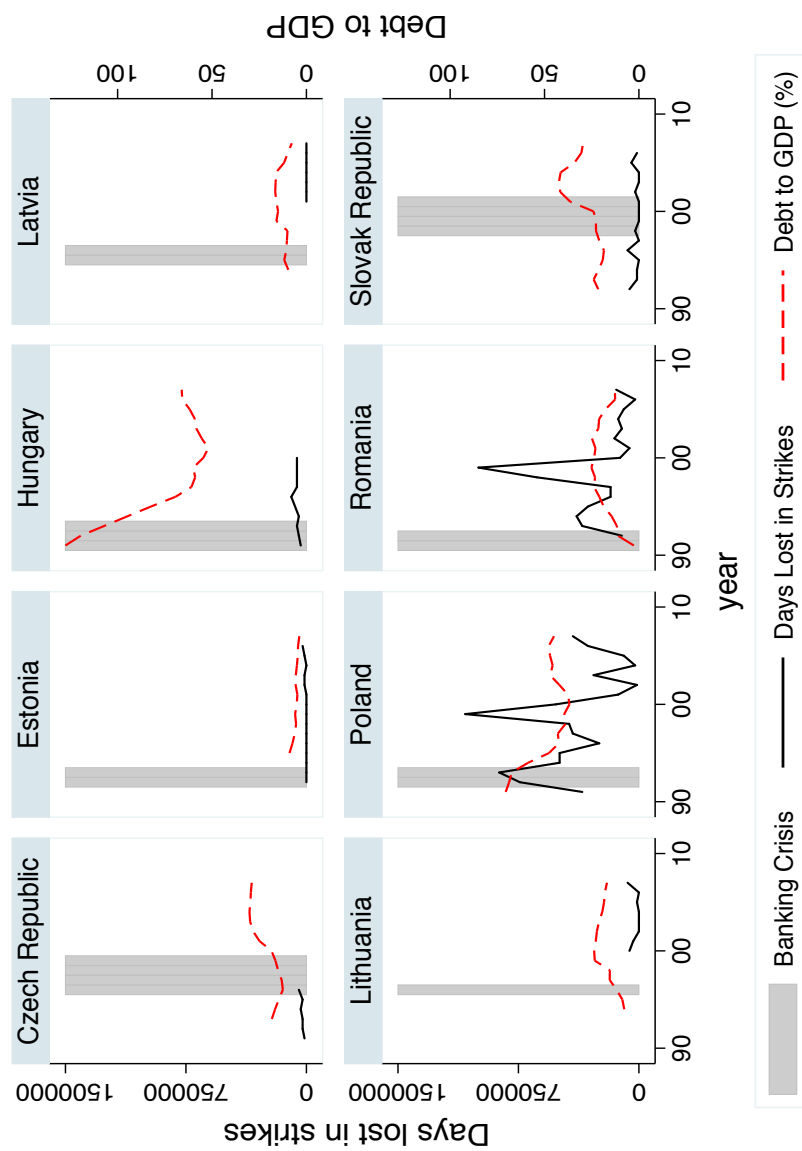


Figure A.3: *Debt Levels and Economic Strikes in EMU countries excluding Greece, 1995-2013.* This plot shows the marginal effects of Change in Banking Crises (two lags) on Political Strikes in Austria, Belgium, Finland, France, Ireland, Italy, Germany, the Netherlands, Spain and Portugal between 1995 and 2013.

Figure A.4: *Banking Crises, Debt and Strikes: Yearly Trends in New EU Members, 1990-2008*



Yearly economic strikes for new EU members by country. See main text for data sources.

Appendix Tables

Yearly Strikes

Dependent variable:	<i>Political Strikes</i> δ		
	All countries 1980-2013	EMU countries 1995-2013	EMU countries 1995-2013
	(1)	(2)	(3)
<i>Political Strike</i> t_{-1}	-3.75*** (1.09)	-3.06*** (0.61)	-3.09*** (0.60)
<i>Banking Crisis</i> t_{-1}	0.44 (0.38)	1.78** (0.75)	1.82** (0.77)
<i>Banking Crisis</i> δ	-0.27 (0.22)	-0.70 (0.50)	-2.30 (1.65)
<i>Debt</i> t_{-1}	0.024*** (0.0073)	0.033*** (0.0071)	0.033*** (0.0069)
<i>Debt</i> δ	0.048*** (0.018)	0.10*** (0.032)	0.100*** (0.035)
<i>Banking crisis</i> δX <i>Debt</i> t_{-1}			0.023 (0.029)
<i>Inflation Rate</i> t_{-1}	0.082* (0.048)	0.53*** (0.10)	0.54*** (0.082)
<i>Inflation Rate</i> δ	0.26*** (0.060)	0.60*** (0.23)	0.59*** (0.23)
<i>Gov't Ideology</i> t_{-1}	-0.0063 (0.11)	-0.23** (0.100)	-0.24** (0.10)
<i>Gov't Ideology</i> δ	-0.40*** (0.14)	-0.46* (0.28)	-0.45 (0.28)
N	405	179	179
Countries	15	12	12
Log likelihood	-223.1	-106.5	-105.9

Table A.2: *Crisis, Political Strikes and Fiscal Policy: Error Correction Logit Models.* Dependent variable is Change in Political Strikes. Banking Crisis is measured with two years lags, all other variables are measured with one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Economic Strikes δ</i>			
	All countries 1980-2013	EMU 1995-2013	EMU 1995-2013	Non-EMU 1995-2013
	(1)	(2)	(3)	(4)
<i>Economic Strike</i> t_{-1}	-18.3*** (0.42)	-19.9*** (0.51)	-19.9*** (0.48)	-23.3*** (2.83)
<i>Banking Crisis</i> t_{-1}	0.13 (0.38)	-0.61 (1.06)	-0.63 (1.03)	1.50 (1.87)
<i>Banking Crisis</i> δ	-0.33 (0.38)	-0.78 (0.47)	-0.099 (1.53)	1.54** (0.71)
<i>Debt</i> t_{-1}	0.0034 (0.004)	0.0086 (0.008)	0.0084 (0.008)	0.073* (0.037)
<i>Debt</i> δ	0.022 (0.020)	0.026 (0.027)	0.029 (0.028)	-0.16 (0.13)
<i>Banking crisis</i> δX <i>Debt</i> t_{-1}			-0.009 (0.021)	-0.19* (0.10)
<i>Inflation Rate</i> t_{-1}	0.13** (0.051)	-0.33*** (0.094)	-0.34*** (0.11)	0.61** (0.31)
<i>Inflation Rate</i> δ	0.024 (0.084)	-0.088 (0.22)	-0.088 (0.23)	0.48* (0.25)
<i>Gov't Ideology</i> t_{-1}	0.0076 (0.083)	0.19* (0.097)	0.19** (0.095)	0.15*** (0.042)
<i>Gov't Ideology</i> δ	0.20* (0.12)	0.0050 (0.31)	-0.0031 (0.30)	-0.036 (0.52)
N	343	145	145	57
Countries	14	12	12	3
Log likelihood	-207.0	-76.2	-76.1	-25.0

Table A.3: *Crisis, Political Strikes and Fiscal Policy: Error Correction Logit Models.* Dependent variable is Change in Economic Strikes. Banking Crisis is measured with two years lags, all other variables are measured with one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variables:	<i>Political strikes</i>	<i>Economic strikes</i>	
	EMU countries 1995–2013	EMU countries 1995–2013	Non-EMU countries 1995–2013
	(1)	(2)	(3)
<i>Banking crisis</i> δ	-0.41 (0.27)	-0.086 (0.23)	0.96* (0.54)
<i>Debt</i> t_{-1}	0.008 (0.007)	0.006* (0.003)	0.012** (0.004)
<i>Banking crisis</i> δX <i>Debt</i> t_{-1}	0.006 (0.004)	-0.000 (0.003)	-0.018** (0.007)
<i>Inflation rate</i> t_{-1}	-0.070 (0.059)	-0.009 (0.028)	0.039*** (0.012)
<i>Government ideology</i> t_{-1}	-0.10** (0.046)	0.032 (0.033)	0.015 (0.022)
Constant	-0.19 (0.47)	0.97*** (0.25)	0.00 (0.00)
N	179	150	60
Countries	12	11	3
Fixed Effects	yes	yes	yes
Within R^2	0.11	0.064	0.18
Overall R^2	0.44	0.16	0.22

Table A.4: *Crisis, Strikes and Fiscal Policy: Fixed Effect OLS Models*. Models without autoregressive control. Dependent variables are Political Strikes and Economic Strikes, as indicated. All lagged variables are measured with one year lag. Standard errors clustered on country in parentheses. Country fixed effects not reports. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political Strikes</i> δ		<i>Economic Strikes</i> δ		
	All countries	EMU	All countries	EMU	Non-EMU
	1980-2013	1995-2013	1980-2013	1995-2013	1995-2013
	(1)	(2)	(3)	(4)	(5)
<i>Political Strike</i> t_{-1}	-0.59*** (0.075)	-0.53*** (0.13)			
<i>Economic Strike</i> t_{-1}			-0.78*** (0.081)	-0.83*** (0.080)	-1.15*** (0.062)
<i>Banking Crisis</i> t_{-1}	0.28 (0.22)	0.85* (0.47)	0.034 (0.085)	-0.075 (0.21)	0.066 (0.25)
<i>Banking Crisis</i> δ	-0.089 (0.071)	-0.31* (0.17)	-0.082 (0.081)	-0.16 (0.12)	0.077 (0.25)
<i>Debt: High</i> t_{-1}	0.31** (0.16)	0.46* (0.25)	0.053 (0.073)	0.032 (0.089)	0.39** (0.20)
<i>Debt: High</i> δ	0.14 (0.13)	0.052 (0.37)	0.049 (0.13)	0.19 (0.26)	-0.47*** (0.086)
<i>Banking crisis</i> δX		0.38 (0.34)		0.079 (0.19)	-0.65** (0.26)
<i>Inflation Rate</i> t_{-1}	0.022 (0.017)	0.11** (0.057)	0.025*** (0.0070)	-0.047*** (0.014)	0.079*** (0.010)
<i>Inflation Rate</i> δ	0.072 (0.048)	0.12 (0.095)	0.0047 (0.017)	-0.023 (0.041)	0.095*** (0.016)
<i>Gov't Ideology</i> t_{-1}	-0.0044 (0.018)	-0.037 (0.033)	0.0043 (0.019)	0.037* (0.019)	0.053*** (0.0082)
<i>Gov't Ideology</i> δ	-0.067** (0.027)	0.013 (0.091)	0.040* (0.023)	0.0097 (0.058)	0.034 (0.089)
Constant	-0.0089 (0.078)	-0.13 (0.11)	0.99*** (0.13)	1.05*** (0.15)	1.12*** (0.17)
N	414	179	350	145	61
Countries	15	12	14	11	3
Within R^2	0.34	0.35	0.42	0.48	0.64
Overall R^2	0.25	0.28	0.40	0.46	0.62

Table A.5: *Crises, Political Strikes and High Debt*. Error Correction OLS models. Dependent variables are Change in Political Strikes and Change in Economic Strikes, as indicated. Banking Crisis is measured with two years lags, all other variables are measured with one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Economic strikes δ</i>			
	New member states (non-EMU)			
	1990-2008			
	(1)	(2)	(3)	(4)
<i>Economic Strike</i> t_{-1}	-0.92*** (0.11)	-0.92*** (0.11)	0.51*** (0.524)	0.53*** (0.31)
<i>Banking Crisis</i> t_{-1}	-0.13 (0.16)	-0.14 (0.15)	0.95 (0.083)	0.87 (0.083)
<i>Banking Crisis</i> δ	0.49** (0.061)	0.32*** (0.060)	2.12*** (0.49)	3.96*** (1.80)
<i>Debt</i> t_{-1}	0.001 (0.002)	0.002 (0.003)	-0.010 (0.009)	0.014** (0.006)
<i>Debt</i> δ	0.019 (0.016)	0.019 (0.016)	0.003 (0.073)	-0.030 (0.064)
<i>Banking crisis</i> δX <i>Debt</i> t_{-1}		0.005*** (0.002)		-0.10*** (0.19)
<i>Inflation Rate</i> t_{-1}	-0.004*** (0.001)	-0.004*** (0.001)	-0.033*** (0.009)	0.022*** (0.009)
<i>Inflation Rate</i> δ	0.008 (0.005)	0.009 (0.005)	-0.0081 (0.022)	-0.003 (0.027)
<i>Gov't Ideology</i> t_{-1}	0.49*** (0.040)	0.32** (0.056)	-0.20*** (0.02)	-0.12 (0.10)
<i>Gov't Ideology</i> δ	-0.16*** (0.060)	-0.18*** (0.064)	0.026 (0.02)	-0.097 (0.10)
Contant	1.92*** (0.38)	1.99*** (0.31)		
N	55	55	55	55
Countries	8	8	8	8
Within R^2	0.62	0.63		
Overall R^2	0.62	0.63		
Log-likelihood			-23.5	-15.4

Table A.6: *Crisis, Economic Strikes and Fiscal Policy: Non-EMU New Member States.* Error correction models. Dependent variables is Change in Economic Strikes (lost working days δ). Models 1-2 are OLS estimations, Model 3-4 are logit estimations. Banking Crisis is measured with a two-year lag, all other variables are measured with one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Economic Strikes δ</i>			
	All countries	EMU	EMU	Non-EMU
	1980-2013	1980-2013	1980-2013	1999-2013
	(1)	(2)	(3)	(4)
<i>Political Strike</i> t_{-1}	-0.63*** (0.11)	-0.65*** (0.12)	-0.64*** (0.11)	
<i>Economic Strike</i> t_{-1}				-1.17*** (0.095)
<i>Currency Crisis</i> t_{-1}	-0.31 (0.19)	-0.46** (0.20)	-0.45** (0.21)	0.62*** (0.095)
<i>Currency Crisis</i> δ	-0.033 (0.034)	-0.044 (0.043)	-0.27 (0.17)	1.85*** (0.34)
<i>Debt</i> t_{-1}	0.005* (0.002)	0.005* (0.003)	0.005* (0.003)	0.007* (0.004)
<i>Debt</i> δ	0.010 (0.012)	0.027** (0.013)	0.027** (0.012)	-0.013** (0.005)
<i>Currency crisis</i> δ X <i>Debt</i> t_{-1}			0.004 (0.002)	-0.022*** (0.004)
<i>Inflation Rate</i> t_{-1}	0.036* (0.019)	0.041** (0.018)	0.041** (0.017)	0.10*** (0.031)
<i>Inflation Rate</i> δ	0.11* (0.058)	0.14** (0.065)	0.14** (0.068)	0.080** (0.033)
<i>Gov't Ideology</i> t_{-1}	-0.0022 (0.018)	0.0012 (0.025)	-0.0011 (0.025)	0.015 (0.038)
<i>Gov't Ideology</i> δ	-0.043 (0.032)	-0.051 (0.044)	-0.048 (0.046)	0.062 (0.11)
Constant	-0.27 (0.19)	-0.27 (0.21)	-0.26 (0.20)	0.78*** (0.23)
N	367	298	298	52
Countries	15	12	12	3
Within R^2	0.37	0.38	0.39	0.57
Overall R^2	0.29	0.31	0.32	0.57

Table A.7: *Currency Crises, Political Strikes and Fiscal Policy*. Error Correction OLS models. Dependent variable is Change in Economic Strikes, as indicated. Currency crises are measured with a five-year lag, all other lagged variables are measured with one lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variables:	<i>Economic Strikes δ</i>	
	Non-EMU 1995-2013	New EU members 1990-2007
	(1)	(2)
<i>Economic Strike</i> $t-1$	-1.24*** (0.092)	-0.90*** (0.21)
<i>Banking Crisis</i> $t-1$	0.38 (0.26)	1.02*** (0.33)
<i>Banking Crisis</i> δ	-0.41 (0.40)	0.061 (0.18)
<i>Central Bank Independence</i> $t-1$	-0.013*** (0.004)	-0.002 (0.006)
<i>Central Bank Independence</i> δ	-0.010*** (0.002)	0.009 (0.008)
<i>Banking Crisis</i> $t-1$ X	0.011*** (0.002)	-0.022 (0.018)
<i>Unemployment</i> $t-1$	-0.012* (0.007)	-0.031*** (0.008)
<i>Unemployment</i> δ	-0.041*** (0.015)	-0.076 (0.063)
<i>Inflation</i> $t-1$	0.013 (0.032)	-0.002 (0.002)
<i>Inflation</i> δ	0.010 (0.030)	-0.008** (0.0041)
<i>Gov't Ideology</i> $t-1$	0.069 (0.051)	-0.10* (0.056)
<i>Gov't Ideology</i> δ	0.037 (0.069)	-0.068* (0.036)
Constant	2.32*** (0.44)	2.32*** (0.48)
N	59	53
Countries	3	5
Within R^2	0.66	0.55
Overall R^2	0.64	0.54

Table A.8: *Crises, Political Strikes and Alternative Measures: Sensitivity to Monetary Institutions*. Error Correction OLS models. Dependent variable is Change in Economic Strikes. All lagged variables including CBI measured with a one-year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political Strikes</i> δ		<i>Economic Strikes</i> δ	
	All countries 1980-1999	EMU 1999-2013	EMU 1999-2013	Non-EMU 1999-2013
	(1)	(2)	(3)	(4)
<i>Political Strike</i> t_{-1}	-0.85*** (0.061)	-0.53*** (0.13)		
<i>Economic Strike</i> t_{-1}			-0.82*** (0.080)	-1.17*** (0.075)
<i>Banking Crisis</i> t_{-1}	-0.025 (0.058)	0.86* (0.47)	0.023 (0.21)	0.19 (0.36)
<i>Banking Crisis</i> δ	-0.0074 (0.047)	-0.22 (0.17)	-0.083 (0.26)	0.88 (0.69)
<i>Debt</i> t_{-1}	0.011*** (0.0038)	0.029* (0.015)	0.0012 (0.0041)	0.020 (0.019)
<i>Debt</i> δ	0.002* (0.0015)	0.008** (0.003)	0.002 (0.001)	0.011*** (0.003)
<i>Banking crisis</i> δX <i>Debt</i> t_{-1}		0.004 (0.004)	-0.001 (0.003)	-0.019* (0.010)
<i>Inflation Rate</i> t_{-1}	0.029 (0.021)	0.18* (0.092)	-0.050* (0.026)	0.087*** (0.033)
<i>Inflation Rate</i> δ	0.076* (0.041)	0.18* (0.11)	-0.025 (0.041)	0.083** (0.032)
<i>Gov't Ideology</i> t_{-1}	0.029* (0.017)	-0.046 (0.035)	0.049** (0.022)	0.023*** (0.002)
<i>Gov't Ideology</i> δ	-0.074 (0.069)	0.008 (0.12)	-0.005 (0.055)	0.009 (0.082)
Constant	-0.23 (0.15)	-0.68* (0.39)	0.90*** (0.16)	0.58*** (0.11)
N	242	132	113	55
Countries	15	12	11	3
Within R^2	0.55	0.39	0.50	0.62
Overall R^2	0.45	0.31	0.46	0.62

Table A.9: *Crises, Political Strikes and Fiscal Policy: Post- and pre-1999*. Error Correction OLS models. Dependent variables are Change in Political Strikes and Change in Economic Strikes, as indicated. Banking Crisis is measured with two years lags, all other lagged variables are measured with a one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political Strikes</i> δ		<i>Economic Strikes</i> δ	
	All countries	EMU	EMU	Non-EMU
	1980-1999	1999-2013	1999-2013	1999-2013
	(1)	(2)	(3)	(4)
<i>Political Strike</i> t_{-1}	-0.67*** (0.085)	-0.53*** (0.094)		
<i>Economic Strike</i> t_{-1}			-0.86*** (0.071)	-1.21*** (0.11)
<i>Banking Crisis</i> t_{-1}	0.12 (0.14)	0.36 (0.32)	-0.15 (0.17)	0.25 (0.37)
<i>Banking Crisis</i> δ	-0.032 (0.043)	-0.090 (0.096)	-0.21 (0.24)	0.91 (0.69)
<i>Debt</i> t_{-1}	0.004** (0.001)	0.005*** (0.002)	0.0004 (0.001)	0.014*** (0.001)
<i>Debt</i> δ	0.0072* (0.004)	0.014** (0.006)	0.003 (0.005)	-0.028 (0.024)
<i>Banking crisis</i> δ X <i>Debt</i> t_{-1}		0.006 (0.004)	0.001 (0.002)	-0.020* (0.011)
<i>Union Density</i> t_{-1}	-0.004*** (0.001)	-0.003 (0.002)	-0.002 (0.001)	-0.003 (0.002)
<i>Union Density</i> δ	0.024* (0.013)	-0.011 (0.030)	-0.018 (0.041)	-0.033 (0.022)
<i>Inflation Rate</i> t_{-1}	0.023 (0.016)	0.076** (0.036)	-0.068*** (0.015)	0.11** (0.045)
<i>Inflation Rate</i> δ	0.063* (0.033)	0.082* (0.044)	-0.032 (0.043)	0.081** (0.039)
<i>Gov't Ideology</i> t_{-1}	-0.014 (0.019)	-0.045 (0.029)	0.037** (0.016)	0.021*** (0.006)
<i>Gov't Ideology</i> δ	-0.12** (0.054)	-0.12** (0.058)	-0.034 (0.047)	-0.001 (0.078)
Constant	0.024 (0.12)	-0.16 (0.17)	1.17*** (0.19)	0.61*** (0.057)
N	401	175	143	57
Countries	15	12	11	3
Within R^2	0.41	0.34	0.50	0.65
Overall R^2	0.33	0.28	0.48	0.65

Table A.10: *Crises, Political Strikes and Fiscal Policy: Union Characteristics*. Error Correction OLS models. Dependent variables are Change in Political Strikes and Change in Economic Strikes, as indicated. Banking Crisis is measured with two years lags, all other lagged variables are measured with a one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variables:	<i>Political Strikes</i> δ	<i>Economic Strikes</i> δ
	EMU 1980-2013	EMU 1980-2013
	(1)	(2)
<i>Political Strike</i> $t-1$	-0.62*** (0.15)	
<i>Economic Strike</i> $t-1$		-0.74*** (0.062)
<i>Banking Crisis</i> $t-1$	0.20 (0.21)	0.013 (0.12)
<i>Banking Crisis</i> δ	-0.29 (0.21)	-0.014 (0.34)
<i>Debt</i> $t-1$	0.002*** (0.000)	0.001 (0.001)
<i>Debt</i> δ	0.007* (0.004)	0.008* (0.004)
<i>Banking crisis</i> δX	0.004	-0.001
<i>Debt</i> $t-1$	(0.003)	(0.004)
<i>Inflation Rate</i> $t-1$	0.0001 (0.004)	0.031*** (0.006)
<i>Inflation Rate</i> δ	0.025** (0.0099)	0.001 (0.019)
<i>Gov't Ideology</i> $t-1$	-0.016 (0.023)	0.025* (0.015)
<i>Gov't Ideology</i> δ	-0.072** (0.036)	0.039 (0.034)
Constant	0.0014 (0.072)	0.81*** (0.12)
N	301	247
Countries	11	10
Within R^2	0.31	0.40
Overall R^2	0.26	0.39

Table A.11: *Crises, Political Strikes and Fiscal Policy: Greece Excluded*. Error Correction OLS models. Dependent variables are Change in Political Strikes and Change in Economic Strikes, as indicated. Banking Crisis is measured with two-year lags, and all other lagged variables are measured with a one year lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Monthly Strikes

Dependent variable:	<i>All Strikes</i> δ		<i>All Strikes</i> δ	
	All countries		EMU countries	
	Q1/2001 - Q4/2013		Q1/2001 - Q4/2013	
	(1)	(2)	(3)	(4)
<i>All Strikes</i> t_{-1}	-0.93*** (0.038)	-0.94*** (0.034)	-0.92*** (0.042)	-0.93*** (0.038)
<i>ECB Press Release</i> t_{-1}	-0.088 (0.062)	-0.087 (0.065)	-0.13*** (0.047)	-0.14*** (0.045)
<i>ECB Press Release</i> δ	-0.060 (0.043)	-0.061 (0.042)	-0.085* (0.044)	-0.089** (0.041)
<i>Unemployment</i> t_{-1}	0.028*** (0.0074)	0.021*** (0.0063)	0.029*** (0.0094)	0.020** (0.0096)
<i>Unemployment</i> δ	0.24* (0.12)	0.21* (0.11)	0.26* (0.14)	0.22* (0.13)
<i>Inflation</i> t_{-1}	0.11 (0.23)	0.10 (0.24)	0.14 (0.32)	0.11 (0.34)
<i>Inflation</i> δ	0.15 (0.15)	0.15 (0.17)	0.14 (0.20)	0.14 (0.22)
<i>Gov't party</i> t_{-1}	-0.003 (0.034)	-0.007 (0.036)	0.003 (0.053)	0.006 (0.054)
<i>Gov't party</i> δ	0.009 (0.016)	0.007 (0.016)	0.002 (0.023)	0.003 (0.022)
<i>Bonds interest rate</i> t_{-1}		0.027* (0.014)		0.031* (0.017)
<i>Bonds interest rate</i> δ		-0.001 (0.028)		0.002 (0.026)
Constant	0.087 (0.11)	0.040 (0.11)	0.090 (0.11)	0.040 (0.13)
N	306	306	255	255
Countries	6	6	5	5
Overall R^2	0.48	0.48	0.48	0.48

Table A.12: *Crisis, ECB Press and All Strikes*. Error correction OLS models. Data aggregated at the quarterly level. Dependent variables are Change in Political Strikes and Change in Economic Strikes for all the six countries and only the five EMU countries, respectively. All lagged variables are measured with a one quarter lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Dependent variable:	<i>Political strikes</i> δ <i>Economic strikes</i> δ		<i>Political strikes</i> δ <i>Economic strikes</i> δ	
	All countries Jan 2001-Dec 2013		EMU countries Jan 2001-Dec 2013	
	(1)	(2)	(3)	(4)
<i>Political Strike</i> t_{-1}	-0.96*** (0.066)		-0.97*** (0.077)	
<i>Economic Strike</i> t_{-1}		-0.97*** (0.042)		-0.96*** (0.050)
<i>ECB Deposit Rate</i> t_{-1}	-0.017** (0.007)	-0.004 (0.004)	-0.016 (0.009)	-0.007* (0.003)
<i>ECB Deposit Rate</i> δ	0.031 (0.041)	-0.004 (0.028)	0.023 (0.048)	-0.028 (0.019)
<i>Unemployment</i> t_{-1}	0.007*** (0.0020)	-0.001 (0.000)	0.007*** (0.002)	0.001* (0.001)
<i>Unemployment</i> δ	0.057* (0.032)	-0.001 (0.008)	0.060* (0.034)	-0.007 (0.006)
<i>Bonds Interest Rate</i> t_{-1}	0.006** (0.002)	-0.000 (0.001)	0.006** (0.002)	0.000 (0.001)
<i>Bonds Interest Rate</i> δ	0.035*** (0.012)	-0.009*** (0.002)	0.036*** (0.012)	-0.008*** (0.001)
<i>Gov't Ideology</i> t_{-1}	-0.000 (0.004)	0.002 (0.003)	0.000 (0.006)	0.0031 (0.005)
<i>Gov't Ideology</i> δ	0.012** (0.005)	0.002 (0.004)	0.012* (0.007)	-0.000 (0.005)
Constant	-0.007 (0.033)	0.028** (0.013)	-0.016 (0.042)	0.032* (0.017)
N	930	930	775	775
Countries	6	6	5	5
Overall R^2	0.48	0.50	0.49	0.50

Table A.13: *Crisis, ECB Deposit Rates and Strikes*. Error correction OLS models. Data aggregated at the monthly level. Dependent variables are Change in Political Strikes and Change in Economic Strikes for all the six countries and only the five EMU countries, respectively. All lagged variables are measured with a one month lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

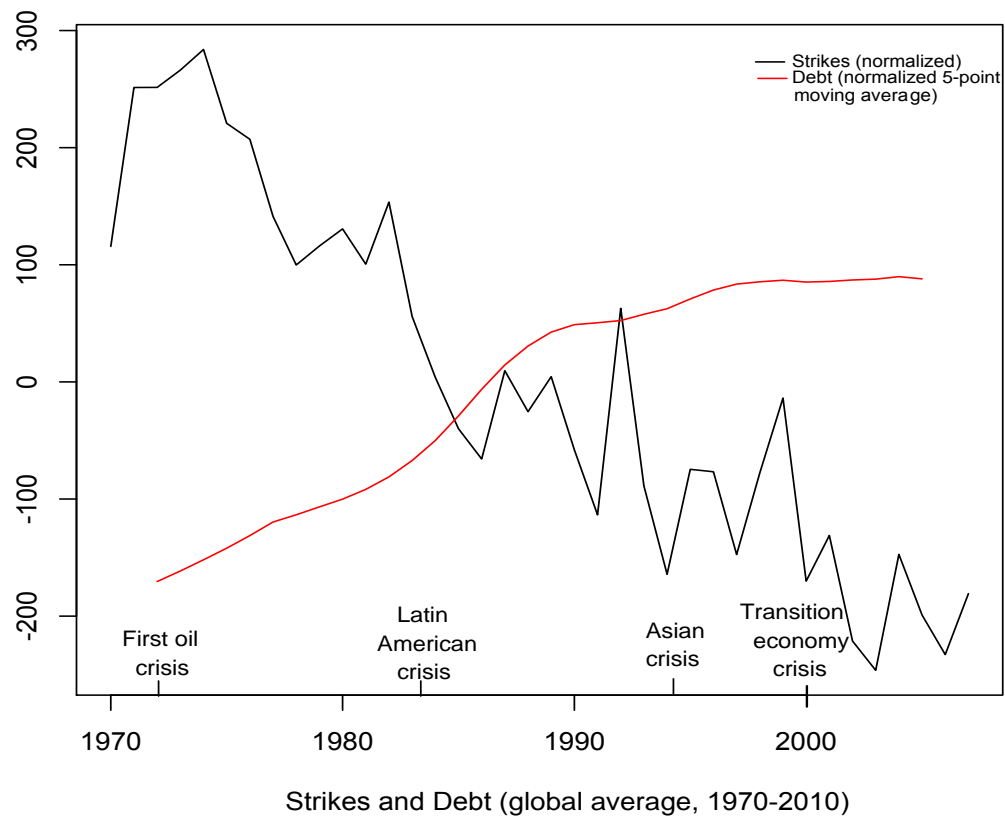
Dependent variable:	<i>Political strikes</i> δ <i>Economic strikes</i> δ	
	EMU without Greece and Germany	
	2001 - 2013	2001 - 2013
	(1)	(2)
<i>Political Strikes</i> t_{-1}	-0.94*** (0.11)	
<i>Economic Strikes</i> t_{-1}		-1.03*** (0.006)
<i>ECB Deposit Rate</i> t_{-1}	-0.026*** (0.007)	-0.011*** (0.003)
<i>ECB Deposit Rate</i> δ	0.089* (0.012)	-0.003 (0.011)
<i>Unemployment</i> t_{-1}	0.004*** (0.001)	0.000 (0.001)
<i>Unemployment</i> δ	0.11*** (0.006)	-0.029* (0.014)
<i>Inflation</i> t_{-1}	0.030** (0.018)	-0.025*** (0.010)
<i>Inflation</i> δ	0.028*** (0.011)	-0.007 (0.018)
<i>Gov't party</i> t_{-1}	0.001 (0.009)	0.000 (0.006)
<i>Gov't party</i> δ	-0.014 (0.012)	0.041** (0.016)
Constant	-0.004 (0.048)	0.025*** (0.008)
N	465	192
Countries	3	3
Overall R^2	0.48	0.52

Table A.14: *Crisis, ECB Deposit and Strikes: Greece, Germany and UK Excluded*. Error correction OLS models. Data aggregated at the monthly level. Dependent variables are Change in Political Strikes and Change in Economic Strikes for all the six selected countries. All lagged variables are measured with a one month lag. Standard errors clustered on country in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Further Validation: Analyses of Global Data

The empirical implications of our theory do not need to stop at the EU. As a validation test, we replicate the error correction model outlined in the paper for the global sample between 1970 and 2007. Here we focus on the ILO economic strikes data, which we correlated with the IMF debt to GDP and banking crises variables described in our text.

Figure B.1: Global historical trends in workers' strikes and debt to GDP



Sources: strikes data from ILO (2014); debt to GDP ratio from Abbas et al (2011).

As it is evident from the estimated coefficients, both the interaction term of debt level and financial crisis as well as the interaction term of debt changes and financial crisis have a positive and statistically significant effect on the strikes outcome. The main implication of these results lays in the positive coefficient of debt to GDP ratio interacted with the occurrence of a crisis. This finding supports the EU results that financial crises that are accompanied by high levels of fiscal stress increase the incidence of strikes.

Dependent variable:	Economic Strikes δ	
	(1)	(2)
<i>Economic strikes</i> t_{-1}	-0.389*** (0.041)	-0.371*** (0.039)
<i>Banking crisis</i> t_{-1}	-0.058 (0.064)	-0.057 (0.061)
<i>Banking crisis</i> δ	-0.042 (0.093)	-0.033 (0.094)
<i>Debt</i> t_{-1}	0.001 (0.001)	0.001 (0.001)
<i>Debt</i> δ	0.001 (0.001)	0.001 (0.001)
<i>Debt</i> t_{-1} X	0.007* (0.002)	0.004* (0.002)
<i>Banking crisis</i> t_{-1}		
<i>Debt</i> δ X	0.001** (0.000)	0.001* (0.000)
<i>Banking crisis</i> δ		
Constant	2.401*** (0.282)	2.317*** (0.275)
N	1971	1876

* $p < .1$, ** $p < .05$, *** $p < .01$.

Table B.1: *Crises, Debt and Strikes: Global Analyses*. Error Correction OLS models. Dependent variable is Change in logged number of strikes we retrieved from the ILO databases, 1970–2007. Robust standard errors clustered on countries in parentheses. Model 2 includes polity score and logged population (estimates not reported). All lagged variables are measured with one year lag.