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The impact of fiscal policy announcements by the Italian government on the sovereign spread: a comparative analysis

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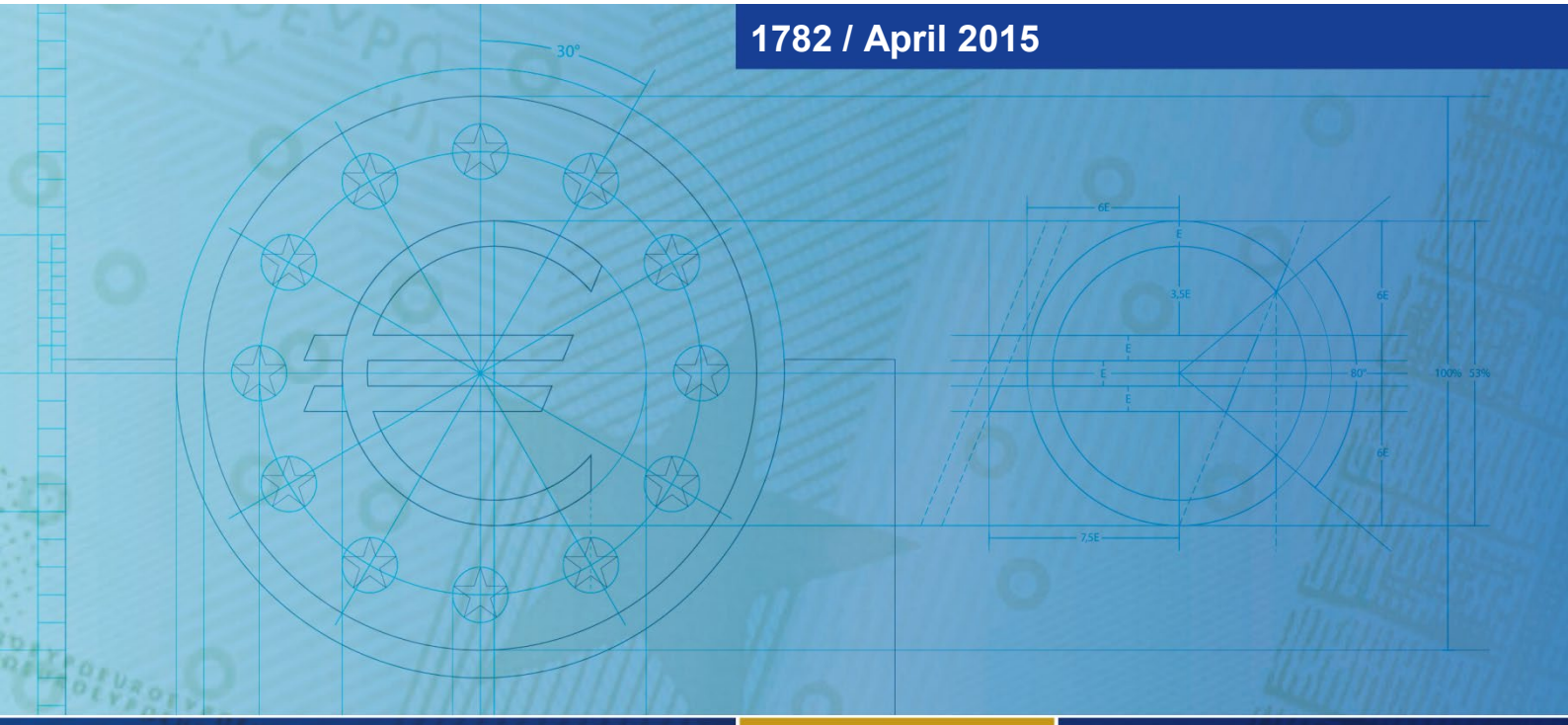

Abstract

This paper attempts to evaluate the impact of fiscal policy announcements by the Italian government on the long-term sovereign bond spread of Italy relative to Germany. After collecting data on relevant fiscal policy announcements, we perform an econometric comparative analysis between the three administrations that followed one another during the period 2009-2013. The results indicate that only fiscal policy announcements made by members of Monti's cabinet had a significant impact on the Italian spread. We argue that these findings may be partly explained by a credibility gap between Monti's technocratic administration and Berlusconi's and Letta's governments.

JEL codes: E43, E62, G01, G12

Keywords: Fiscal policy announcements, political communication, sovereign debt crisis, interest rate spread, GARCH models

Non-Technical Summary

The recent economic crisis challenged the ability of national governments to guarantee economic stability and the sustainability of sovereign debt. There is empirical evidence that countries that do not have sound public finance, such as substantial fiscal deficit or an excessively high debt level, are likely to face higher risk premia required by financial market participants. Since 2009 the spread between long-term government bond yields of some euro area countries vis-à-vis the German ones experienced not only a dramatic increase, but also an augmented differentiation among countries. Recent contributions show that the determinants of the widening of sovereign bond premia in euro area countries during the debt crisis were related to both general factors, such as liquidity risk, international risk aversion, negative market sentiments and contagion effects, and country-specific factors, such as fiscal positions and macroeconomic fundamentals.

A factor that may play an important role in driving sovereign spread movements is political communication. The provocative article "*Loose lips sink the euro?*" published in The Economist on the 16th of September 2011 increased the attention on the effects of political communication in the context of the euro area sovereign debt crisis.

This paper intends to study the impact of political announcements by the Italian government on the Italian sovereign bond spread, i.e. the differential between the benchmark Italian 10-year government bond yield and the German one. The recent Italian political experience motivates an intriguing comparison among the three administrations that followed one another during the period 2009-2013: Berlusconi's cabinet, in office until the 12th of November 2011, Monti's cabinet, in office until the 27th of April 2013, and Letta's cabinet. Our definition of *announcement* includes policy-makers' public pronouncements on fiscal policy and public finance. In order to collect announcements, we rely on the ECB Real Time Information System, which includes public news media releases from the following agencies: Bloomberg, Reuters, Dow Jones Newswires and Market News International. Fiscal policy announcements are classified according to their signalling-content about future budget developments. Overall, our dataset consists of 201 announcements by Italian government members. We examine their effects on spread movements by us-

ing GARCH models to control for time-varying volatility. The results indicate that only fiscal policy announcements made by members of Monti's cabinet had a significant impact on the Italian spread in the expected direction. In particular, we find that Monti's administration statements were effective when they signalled both budget improvements and budget deteriorations, while announcements made by members of Berlusconi's and Letta's cabinets are found not statistically significant, even when their signalling-content pointed to budget deteriorations. We report some anecdotal evidence that suggests that these results may be partly related to a credibility gap between Monti's technocratic administration and Berlusconi's and Letta's governments.

1 Introduction

The recent economic crisis challenged the ability of national governments to guarantee economic stability and the sustainability of sovereign debt. There is empirical evidence that countries that do not have sound public finance, such as substantial fiscal deficit or an excessively high debt level, are likely to face higher risk premia required by financial market participants (Schuknecht et al., 2009). Since 2009 the spread between long-term government bond yields of some euro area countries vis-à-vis the German ones experienced not only a dramatic increase, but also an augmented differentiation among countries. Recent contributions show that the determinants of the widening of sovereign bond premia in euro area countries during the debt crisis were related to both general factors, such as liquidity risk, international risk aversion and contagion effects, and country-specific factors, such as fiscal positions and macroeconomic fundamentals (Attinasi et al., 2011; Gerlach et al., 2010; Arghyrou and Kontonikas, 2012; De Santis, 2012; Giordano et al., 2013). De Grauwe and Ji (2012) argue that the recent movements of government bond yield differentials cannot be explained only using economic and financial determinants. They show that the surge in the spreads of Portugal, Ireland, Greece and Spain in the period 2010-2011 was not linked to the underlying increases in the debt-to-GDP ratios, but was connected to negative market sentiments.

A factor that may play an important role in driving sovereign spread movements is political communication. Although a formal definition seems to be difficult to provide, Denton and Woodward (1990) and McNair (2011) define political communication in a broad sense, as a discussion about the allocation of public resources with a particular emphasis on the purpose and intentionality of political actors in affecting the political environment. This includes discussions that are public and, therefore, could be related to public speeches, interviews and press releases. Clearly, mass media play an important role in transmitting political communication and thus making them public knowledge (Gade et al., 2013). The provocative article "*Loose lips sink the euro?*" published in The Economist on the 16th of September 2011 increased the attention on the effects of political communication in the context of the euro area sovereign debt crisis.

The financial market effects of statements made by policy-makers have been the objective of many recent studies. Carmassi and Micossi (2010) analyse critical changes in the 10-year government bond spread of Portugal, Italy, Greece, Spain and France versus Germany between December 2009 and June 2010, pointing out that communications by governments fuelled the financial turmoil. In particular, the messages by policy-makers were not able to convince the markets about their ability to effectively address economic imbalances. Mohl and Sondermann (2013) consider news agency reports from May 2010 to June 2011, finding that a higher level of statements' frequency from different euro area governments generated an increase in the bond spreads. In addition, they show that statements from AAA-rated countries' politicians had a significant impact on sovereign bond spreads. Goldbach and Fahrholz (2011) assess whether political events that worsened the credibility of the Stability and Growth Pact generated a shared default risk premium for euro area countries. They show that the European Commission played an important role in affecting investors' evaluations. The effects of the European Central Bank (ECB) communications about unconventional monetary policy measures on the sovereign spread of stressed euro area countries have been studied by Falagiarda and Reitz (2015). They find that the announcements of these operations reduced the long-term government bond yield spread of these countries during the recent euro area sovereign bond crisis. Gade et al. (2013) investigate the extent to which political communication, defined as "policy-makers' pronouncements on fiscal policy and public finance", had an impact on the sovereign bond spreads in euro area countries, showing that this effect is evident in Greece, Ireland and Portugal. Büchel (2013) analyses the effects of public statements by ECB Governing Council members, EU officials and national representatives on the GIIPS' CDS and bond yield spreads. Using an EGARCH framework, he finds that communication by representatives of Germany, France, and the EU as well as ECB Governing Council members had an immediate impact on both types of securities. The study by Ehrmann et al. (2014) on the determinants of the euro exchange rate during the European sovereign debt crisis shows that financial markets were not so much reactive to public statements by policy makers. Nevertheless, they find that the exchange rate volatility was increasing in re-

sponse to news on days when several politicians from AAA-rated countries went public with negative statements.[1]

This paper intends to study the impact of political announcements by the Italian government on the Italian sovereign bond spread, i.e. the differential between the benchmark Italian 10-year government bond yield and the German one. As depicted in Figure 1, the Italian spread experienced very high volatility between 2009 and 2013, increasing from around 140 basis points at the beginning of 2009 to more than 500 basis points at the peak of the sovereign bond crisis in 2011. It then declined to about 220 basis points at the end of 2013. As already mentioned, the volatility of sovereign risk is potentially connected to the ability of governments to address their duties in terms of sound public finance and debt obligations, and to provide credible long-term prospects. The recent Italian political experience motivates an intriguing comparison among the three administrations that followed one another during the period 2009-2013: Berlusconi's cabinet, in office until the 12th of November 2011, Monti's cabinet, in office until the 27th of April 2013, and Letta's cabinet. Therefore, it seems natural to conduct a comparative econometric analysis to assess the effects of the announcements by members of the three different administrations.

[Figure 1 about here]

Our definition of *announcement* is consistent with Gade et al. (2013) and includes policy-makers' public pronouncements on fiscal policy and public finance. In order to collect announcements, we rely on the ECB Real Time Information System, which includes public news media releases from the following agencies: Bloomberg, Reuters, Dow Jones Newswires and Market News International. Fiscal policy announcements are classified according to their signalling-content about future budget developments. Overall, our dataset consists of 201 announcements by Italian government members. We examine their effects on spread movements by using GARCH models to control for time-varying volatility. The results indicate that only fiscal policy announcements made by members of

[1] Beetsma et al. (2013) do not restrict the analysis to political communication, and investigate the effect of "news" on sovereign bond spreads. They find that more news on average raised the interest spread of GIIPS countries since September 2009. They also report evidence of spillover effects among these countries and from GIIPS countries to non-GIIPS countries.

Monti's cabinet had a significant impact on the Italian spread in the expected direction. In particular, we find that Monti's administration statements were effective when they signalled both budget improvements and budget deteriorations, while announcements made by members of Berlusconi's and Letta's cabinets are found not statistically significant, even when their signalling-content pointed to budget deteriorations. Moreover, we check the robustness of the results by changing the set of controls and by using both the Italian 10-year government bond yield and the Italian credit default swap (CDS) spread as dependent variables. We report some anecdotal evidence that suggests that our findings may be partly related to a possible lack of credibility for Berlusconi's and Letta's governments relative to Monti's technocratic administration.

The remainder of the paper is structured as follows. Section 2 presents the dataset and the empirical methodology. Section 3 discusses the results. Robustness checks are conducted in Section 4. Section 5 concludes.

2 Empirical Analysis

2.1 A Fiscal Policy Announcement Indicator for Italy

Data on fiscal policy communications are obtained through the ECB Real Time Information System, which includes public news media releases from the following agencies: Bloomberg, Reuters, Dow Jones Newswires and Market News International. In particular, we collect all the announcements from Italian government members regarding fiscal policy and public finance from 2009 to 2013. Fiscal policy announcements are classified according to their signalling-content about future budget developments, and then coded on a numerical scale as follows:

$$DomGov_t = \begin{cases} +1 & \text{if the announcement signals a future budget deterioration} \\ 0 & \text{if the announcement is budget-neutral} \\ -1 & \text{if the announcement signals a future budget consolidation} \end{cases} \quad (1)$$

Negative (positive) values are assigned to announcements that signal a budget improvement (deterioration), whereas a zero is assigned to announcements that are considered as budget-neutral.[2] In particular, whenever an announcement goes in the direction of additional fiscal consolidation, we classify it as budget-improving, and vice-versa. Since this approach of classifying fiscal policy announcements is necessarily subjective, several double checks from the authors are performed separately to avoid misclassification.

To give some examples, the following announcements are classified as budget-improving, as they reveal government's intention to pursue budget consolidation:

> " [...] *the Italian government is working on adding an article to the country's constitution requiring a balanced public budget.*" (Giulio Tremonti, Ministry of Finance, 4 August 2011)

> " [...] *there are many proposals aimed at cutting Italy's towering 1.9 trillion Euro in government debt, and our priority is to stabilize current public finances.*" (Mario Monti, Prime Minister, 29 December 2011)

> " [...] *Italy's exit from the European Union's excessive deficit procedure is a priority for the country and will give more leeway in pushing forward growth-boosting measures.*" (Enrico Letta, Prime Minister, 21 May 2013)

The following announcements are instead classified as budget-worsening:

> " [...] *I am not concerned about increasing Italy's already large public debt to help the rising numbers of unemployed hit by the global economic downturn.*" (Silvio Berlusconi, Prime Minister, 31 March 2009)

> "*Letta's administration suspended all key economic decisions pending a clear backing from the parties in the governing coalition.* [...] *There is no guarantee of government and parliamentary continuity.*" (Letta's office, 28 September 2013)

[2] On days when no announcement is made, the $DomGov_t$ variable takes the value of zero. Therefore, days with no announcements and days with neutral announcements are treated in the same way.

Overall, our fiscal policy announcement indicator includes 201 announcements from Italian government members over the period 2009-2013: 23 in 2009, 26 in 2010, 84 in 2011, 33 in 2012 and 35 in 2013. As reported in Table 1, we identify 118 announcements by members of Berlusconi's cabinet (1.11 announcements per week), 57 by members of Monti's cabinet (1.05 announcements per week), 26 by members of Letta's cabinet (1.03 announcements per week). For all the three administrations the number of budget-improving announcements is substantially higher than the number of budget-worsening announcements. Lastly, we also collect relevant announcements related to Italy's fiscal policy and public finance stemming from domestic sources other than the government (Italian parliament, Bank of Italy, trade unions, industrial associations, etc.) and external sources (European Commission, European Council, ECB, foreign governments, International Monetary Fund, rating agencies, etc.). These statements are also obtained via the ECB Real Time Information System. They are classified as in Ehrmann et al. (2014), i.e. depending on whether they contain "positive" (coded -1), "negative" (coded $+1$) or "neutral" (coded 0) news about the Italian fiscal stance. They are used as control variables in the estimation exercises.

[Table 1 about here]

2.2 Econometric Model

In order to investigate the effect of fiscal policy announcements on the Italian spread, we need a tool capable of modelling the high time-varying volatility of the spread shown in Figure 1. Therefore, a standard Generalized Autoregressive Conditional Heteroskedastic (GARCH) model, originally proposed by Bollerslev (1986), is adopted. The conditional mean of the model is an augmented autoregressive process:

$$\Delta S_t = \alpha + \beta \Delta S_{t-1} + \gamma DomGov_t + \boldsymbol{\delta} \Delta \mathbf{X_t} + \boldsymbol{\eta} \mathbf{W_t} + \varepsilon_t, \tag{2}$$

where ΔS_t is the first difference of the spread between Italian and German 10-year government bond yields (Gerlach et al., 2010; Attinasi et al., 2011; Arghyrou and Kontonikas,

2012), $DomGov_t$ is our fiscal policy indicator, calculated as explained in the previous subsection, and $\mathbf{X_t}, \mathbf{W_t}$ are vectors of controls. One lag of the dependent variable is added to remove autocorrelation. Let the error process be such that $\varepsilon_t = \nu_t\sqrt{h_t}$, where ν_t is an i.i.d. sequence with zero mean and $\sigma_\nu^2 = 1$. The conditional variance of ε_t is modelled as an ARMA(1,1) process:

$$h_t = c + a\varepsilon_{t-1}^2 + bh_{t-1}. \tag{3}$$

Consistently with previous works on the determinants of sovereign spreads, the vector of control variables $\mathbf{X_t}$ contains: a) A volatility index for the euro area ($EuroVIX_t$) to control for financial turmoil, as in Arghyrou and Kontonikas (2012) and Glick and Leduc (2012). We expect a positive relationship between ΔS_t and $\Delta EuroVIX_t$. b) The *total stock market index* for the EU ($EUDS_t$) to control for market-wide business climate changes in the EU, as in De Bruyckere et al. (2013). We expect a negative sign for the coefficient of $EUDS_t$ in the model. c) The TED spread (TED_t), calculated as the three-month LIBOR rate less the US Treasury bill rate, to control for perceived credit risk in the global economy, as in Gerlach et al. (2010). The expected sign of the coefficient of this variable is positive. d) The CDS of Greece ($CDSGreece_t$) to control for the turbulences due to the Greek sovereign debt crisis. We expect a positive relationship between this variable and the Italian spread. The vector of controls $\mathbf{W_t}$ includes: a) A dummy variable to control for ECB non-standard monetary policy measures, extending the list of events reported in Falagiarda and Reitz (2015). b) Weekday dummies to control for seasonality. c) Any announcement related to the Italian fiscal policy situation coming from domestic sources other than the government, and external sources, such as the European Commission, the ECB, foreign governments, international institutions and rating agencies.

Parameters are estimated by (quasi-) maximum likelihood using the Broyden, Fletcher, Goldfarb and Shanno (BFGS) numerical algorithm with robust standard errors. The model is estimated using daily data, collected for the period 01:01:2009-31:12:2013. Details on the data are reported in the Appendix.

Issues of reverse causality potentially arising in equation (2) are partially tackled by construction of the data, as in Gade et al. (2013). While the data on yield spread are collected as end-of-day, the fiscal policy indicator is constructed on the basis of announcements made during the day, with news released in the evening recorded in the next trading day and news released during weekend days reported in the following Monday. Thus, announcements made on a specific day always occur before the recording of the Italian sovereign yield spread.

3 Results

The goal of the paper is to check whether the effect on the Italian spread of fiscal policy announcements by the three cabinets that followed one another during the period 2009-2013 differs. To this purpose, the estimation is carried out over three different periods: a) 1 January 2009 - 12 November 2011 (Berlusconi's cabinet); b) 13 November 2011 - 27 April 2013 (Monti's cabinet); c) 28 April 2013 - 31 December 2013 (Letta's cabinet).

Table 2 reports the parameter estimates of the GARCH model as in equation (2) and (3). For each administration, we specify four different models by adding progressively additional control variables. Ljung-Box (LB) Q-statistics are computed to test for autocorrelation in standardised and squared standardised residuals. The p-values of the calculated LB-Q values show that, in most cases, the null hypothesis of no-autocorrelation up to five and ten orders cannot be rejected. Moreover, the estimated coefficients of the variance equation are statistically significant at conventional levels, revealing clustering and long memory of the spread volatility. Therefore, the GARCH model is reasonably specified.[3]

[Table 2 about here]

Turning to the estimates of the mean equation, we find that the sign of the control variables is generally as expected and their coefficients are, in most cases, statistically

[3]The coefficients of the additional control variables in the vector $\mathbf{W_t}$ as well as the estimates of the variance equation are not reported here, but are available upon request.

significant. For example, changes in the European volatility index $EuroVIX_t$ are always positively and significantly (at the 1% percent level) correlated to the Italian government bond spread during Berlusconi's and Letta's administrations, whereas during Monti's administration the coefficient is significant only in the first two specifications. The results also suggest some contagion effects from the Greek government debt crisis during the years of Berlusconi's administration. There seems to be no influence from Greece during the other two periods, confirming the view that the Greek sovereign crisis played only a minor role in the transmission of financial stress in the euro area (González-Hermosillo and Johnson, 2014). In contrast, an improved business climate ($EUDS_t$) is associated with a significant reduction of the Italian spread, at least during the first two administrations considered. Lastly, the Italian spread reacts positively to changes in the global risk measure TED_t only under Letta's cabinet.

When considering our fiscal policy indicator ($DomGov_t$), we observe that the coefficients during Berlusconi's administration are found not statistically significant. This may not be surprising, given the deteriorated markets' confidence that forced Berlusconi to resign from office in 2011. By contrast, the announcements made by members of Monti's cabinet seem to have had a significant impact (at the 1 percent level) on the Italian spread in the expected direction in all the model specifications. The magnitude of this effect is around 5 basis point changes. Lastly, the coefficients of the fiscal policy indicator under Letta's period are not statistically significant. Our results clearly indicate that announcements by members of Monti's cabinet had a significant effect on the Italian spread in the expected direction, while announcements made under the other two governments are found to be ineffective.

The observed difference between Monti's administration and the other two cabinets can be attributed to different factors. In fact, a fiscal policy announcement impacts financial markets in the expected direction if it is credible and if it conveys new information. Consequently, there may be two reasons why a fiscal policy announcement does not have an effect on the spread: either because the government is not credible in the eyes of market participants or because the information communicated to the public is already common

knowledge. According to the latter view, the observed gap may be attributable to differences in the information value (surprise component) of announcements. To what extent announcements are informative to the public depends on the communication strategy of the government, e.g. the frequency, timing, consistency, etc. As shown in Table 1, the frequency and the type of announcements are similar across the three administrations. Moreover, there is no reason to believe that the three administrations moved away from the institutionalised and well-established communication practices followed by the Italian governments in the recent years.

As we confidently rule out a significant role for the differences in the information value of announcements, we suspect that the credibility of the government is a key factor for explaining our results. However, circumstances may have been different. Thus, for example, it is possible that announcements made by Monti's administration would not have been effective, had he been prime minister in the same period as Berlusconi and Letta. Given the difficulties to conduct such a counterfactual exercise, we report some anecdotal evidence that indicates that our findings may be partly due to a credibility gap between Monti's technocratic administration and Berlusconi's and Letta's governments.

First of all, political administrations tend to gain public consensus to seek reelection and, therefore, budget-consolidating measures may be inhibited. By contrast, a technocratic administration, such as Monti's one, can be more prone to launching budget-consolidating measures, since it is less concerned about public approval. Therefore, the credibility perceived by the markets is likely to be higher for technocratic governments.

Second, we look at the public trust and confidence in the government, as it represents a good indicator of credibility. Survey data from Demos & Pi (Figure 2) show that the trust in the government was very low for Berlusconi's administration, especially in 2010 and 2011, while was remarkably high for Monti's administration, particularly during the first months of his mandate. Regarding Letta's cabinet, the public trust remained stable at a relatively high level, albeit on average lower than for Monti.

[Figure 2 about here]

Third, partially following the analysis by Naert and Goeminne (2011), we report the

actual and announced structural budget balance for the years 2009-2013 (Figure 3). The idea behind this exercise is that the deviations between the actual and the target budget balances, as well as the distance of the actual structural net borrowing from zero, provide a measure for the credibility of fiscal policies. Although no conclusion can be drawn from the difference between the realised and targeted structural budget balances, the level of the realised budget deficit decreased dramatically at the end of 2012, as a result of the severe budget-consolidating measures undertaken by Monti's administration. The actual level of the structural budget deficit was even slightly lower in 2013, suggesting that Letta may have benefitted from the fiscal consolidation carried out by his predecessor.

[Figure 3 about here]

Overall, we have shown that the different effectiveness of fiscal policy announcements by the three administrations can be at least partly ascribed to different degrees of credibility, which is likely to have been higher for Monti's cabinet.

3.1 Split the Sample Period

To capture potential heterogeneity of announcements' effectiveness under the same cabinet over time, we identify two sub-periods for each government. Berlusconi's cabinet is evaluated over the periods 1 January 2009 - 5 May 2010 and 6 May 2010 - 12 November 2011. The cut-off date represents the first big surge in spread volatility in the mid of 2010 observable in Figure 1. Monti's cabinet is assessed over the periods 13 November 2011 - 6 December 2012 and 7 December 2012 - 27 April 2013, whereas Letta's cabinet over the periods 28 April 2013 - 28 September 2013 and 29 September 2013 - 31 December 2013. In both cases, the cut-off date indicates Berlusconi's decision to withdraw the support he was giving to Monti's and Letta's governments. In such a way, we test whether the effect of the announcements by these two cabinets on the spread changed after Berlusconi's decision to leave the majority. Operationally, in equation (2) we introduce one fiscal policy announcement indicator for each sub-period ($DomGovPeriod1_t$ and $DomGovPeriod2_t$). Table 3 reports the estimation results.

[Table 3 about here]

The response of the Italian spread to announcements made by members of Berlusconi's cabinet does not change moving from the first to the second sub-period, remaining statistically not significant. Therefore, the increase in the Italian sovereign spread volatility experienced in the mid of 2010 did not alter the ineffectiveness of government's fiscal policy announcements. Interestingly, the coefficients of the second sub-period of Monti's cabinet are larger and, in the last two specifications, even more significant than those relative to the first sub-period. However, a Wald test reveals that the two coefficients are not statistically different in all four specifications. Regarding Letta's government, we observe that the coefficients are not statistically significant in both periods, indicating that Berlusconi's decision to leave the majority did not generate any change in the effectiveness of the announcements for that government.

3.2 Split into Positive and Negative Announcements

Equation (2) is then estimated distinguishing positive and negative values of our fiscal policy indicator $DomGov_t$ to check whether announcements perceived as budget-improving ($DomGovPos_t$) and those perceived as budget-worsening ($DomGovNeg_t$) had a different impact on the Italian sovereign spread. The findings, shown in Table 4, indicate that for Berlusconi's and Letta's government (in the latter case only in the last two specifications) the split into positive and negative announcements does not matter, as both $DomGovPos_t$ and $DomGovNeg_t$ are never statistically significant. Looking at Monti's cabinet, the coefficients of both budget-improving and budget-worsening announcements are statistically significant in all specifications and their sign is as expected. Therefore, both components contribute to the statistically significant estimates of the baseline regression shown in Table 2.

[Table 4 about here]

4 Robustness Checks

The results discussed in Section 3 turned out to be robust to different model specifications. To further check the robustness of the results, we estimate the model using the Italian 10-year government bond yield (Y_t) as dependent variable in place of the spread. Six lags of the regressand are now added to remove autocorrelation of the residuals.[4] The results, displayed in Tables 5-7, confirm what we found in Section 3. More specifically, only announcements by Monti's government are effective in influencing Italian long-term bond yields over the entire period (Table 5) and over both sub-periods (Table 6). However, when splitting positive and negative announcements (Table 7), budget-worsening announcements made by members of Monti's cabinet are no longer significant at conventional levels in three specifications, suggesting that budget-improving announcements were probably more influential in affecting sovereign bond yields. A further robustness exercise with the Italian CDS spread as regressand is performed. The results are broadly in line with those found for the sovereign spread and the long-term bond yield.[5]

[Table 5 about here]

[Table 6 about here]

[Table 7 about here]

5 Conclusions

The study carried out in this paper highlights the importance of political communication in influencing sovereign bond spreads. Specifically, we focus on Italian policy-makers public pronouncements on fiscal policy and public finance, relying on news media releases from major news agencies. We perform an econometric comparative analysis between the three Italian cabinets that followed one another during the period 2009-2013, assigning a

[4] For the sake of brevity, only the coefficient of the first lag is reported in Tables 5-7.

[5] These estimation results are not reported here, but are available upon request from the authors.

negative (positive) values to announcements that signal future budget consolidation (deterioration), whereas a zero is assigned to announcements that are considered as budget-neutral. We show that under Berlusconi's and Letta's administrations the effect of fiscal policy announcements is not statistically significant. By contrast, the announcements made by members of Monti's cabinet had a significant impact on the Italian spread in the expected direction. We report some anecdotal evidence that suggests that these results may be partly related to a credibility gap between Monti's technocratic administration and Berlusconi's and Letta's governments.

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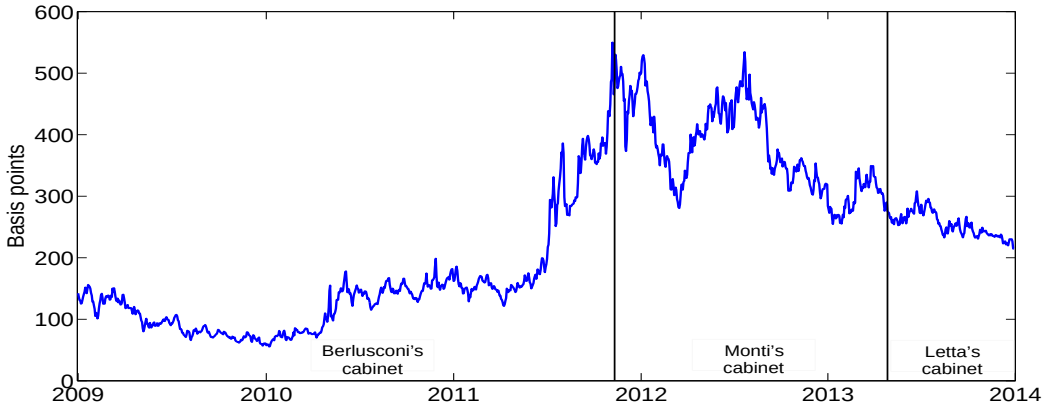
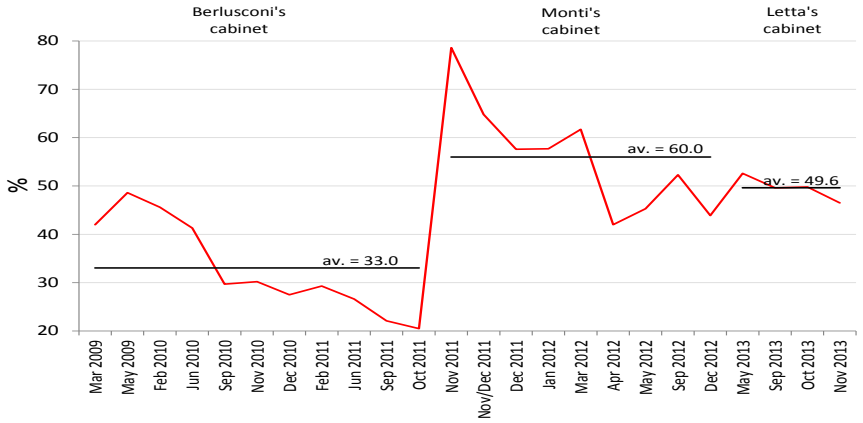
Figures and Tables

Figure 1: Evolution of the Italian spread vis-à-vis Germany (2009-2013)



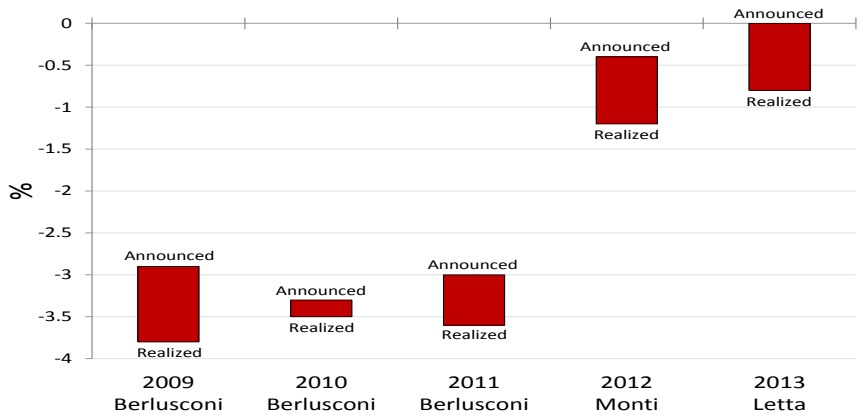
Notes: Italian sovereign bond yield spread vis-à-vis Germany in basis points. **Source:** Data from Thomson Reuters-Datastream.

Figure 2: Trust in the government



Notes: Percentage of positive answers to the question: *How much trust do you have in the government?* **Source:** Demos & Pi surveys.

Figure 3: Structural net borrowing (as a % of GDP)



Source: Documento di Economia e Finanza, April 2009 - April 2014, Italian Ministry of Economy and Finances.

Table 1: Number of fiscal policy announcements by type and administration

	Administration		
Type of announcement	Berlusconi	Monti	Letta
Budget-improving (-1)	93	50	22
Budget-deteriorating (+1)	22	6	3
Budget-neutral (0)	3	1	1
Total number of announcements	118	57	26
Announcements per week	1.11	1.05	1.03

Source: Authors' elaboration on news from the ECB Real Time Information System, which includes public news media releases from the following agencies: Bloomberg, Reuters, Dow Jones Newswires and Market News International (2009-2013).

Table 2: Parameter estimates - Italian sovereign spread vis-à-vis Germany (baseline regression)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGov_t$	−0.026	0.043	−0.132	−0.159	5.779***	5.765***	4.712***	4.622***	−1.161	−1.088	−1.203	−1.372
Constant	0.013	0.009	0.068	0.015	0.060	0.091	0.135	0.122	−0.252	−0.221	−0.152	−0.114
ΔS_{t-1}	0.232***	0.215***	0.209***	0.214***	0.142***	0.147***	0.160***	0.162***	0.099	0.101	0.103	0.122*
$\Delta EuroVIX_t$	1.167***	1.066***	0.665***	0.672***	4.594***	4.578***	0.652	0.674	2.543***	2.548**	2.034***	1.952***
$\Delta CDSGreece_t$	–	0.016***	0.014***	0.014***	–	0.000	0.000	0.000	–	−0.000	−0.000	−0.001
$\Delta EUDS_t$	–	–	−0.043***	−0.043***	–	–	−0.464***	−0.464***	–	–	−0.076*	−0.059
ΔTED_t	–	–	–	−0.070	–	–	–	−0.168	–	–	–	0.876**
Log-Likelihood	−2237.31	−2221.15	−2212.66	−2211.48	−1425.71	−1428.63	−1375.80	−1375.61	−525.51	−525.39	−523.57	−520.70
$Q(5)$	0.275	0.058	0.080	0.082	0.602	0.632	0.375	0.352	0.259	0.266	0.268	0.165
$Q(10)$	0.605	0.181	0.176	0.179	0.604	0.664	0.413	0.427	0.574	0.579	0.439	0.348
$Q^2(5)$	0.912	0.842	0.881	0.851	0.773	0.772	0.832	0.796	0.807	0.809	0.799	0.867
$Q^2(10)$	0.580	0.586	0.659	0.615	0.879	0.871	0.653	0.634	0.773	0.760	0.980	0.954
Observations	747	747	747	747	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian sovereign bond spread vis-à-vis Germany. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Table 3: Parameter estimates - Italian sovereign spread vis-à-vis Germany (split the sample period)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGovPeriod1_t$	−0.035	0.137	−0.039	−0.066	5.211**	5.221**	3.404**	3.301*	−0.554	−0.363	−0.888	−0.866
$DomGovPeriod2_t$	−0.010	−0.125	−0.297	−0.323	6.757**	6.705*	7.156***	7.132***	−1.597	−1.589	−1.720	−2.060
Constant	0.043	0.075	0.022	0.187	−0.040	0.055	0.085	0.106	−0.219	−0.149	−0.056	−0.243
ΔS_{t-1}	0.232***	0.215***	0.209***	0.214***	0.141***	0.146***	0.158***	0.159***	0.100	0.102	0.103	0.124
$\Delta EuroVIX_t$	1.167***	1.068***	0.667***	0.674***	4.594***	4.580***	0.622	0.648	2.537***	2.538***	2.033***	1.962***
$\Delta CDSGreece_t$	–	0.016***	0.014***	0.014***	–	0.000	0.000	0.000	–	−0.001**	−0.001*	−0.001*
$\Delta EUDS_t$	–	–	−0.043***	−0.043***	–	–	−0.467***	−0.467***	–	–	−0.076*	−0.058
ΔTED_t	–	–	–	−0.070	–	–	–	−0.179	–	–	–	0.892**
Log-Likelihood	−2237.30	−2221.10	−2212.61	−2211.43	−1425.93	−1425.61	−1374.98	−1374.98	−526.16	−526.01	−523.50	−520.52
$Q(5)$	0.276	0.055	0.077	0.080	0.591	0.621	0.324	0.301	0.276	0.284	0.288	0.182
$Q(10)$	0.605	0.177	0.175	0.178	0.574	0.634	0.332	0.348	0.603	0.614	0.462	0.381
$Q^2(5)$	0.912	0.825	0.866	0.832	0.776	0.775	0.794	0.749	0.810	0.812	0.802	0.873
$Q^2(10)$	0.579	0.582	0.655	0.608	0.889	0.881	0.652	0.631	0.768	0.743	0.980	0.947
Observations	747	747	747	747	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian sovereign bond spread vis-à-vis Germany. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Table 4: Parameter estimates - Italian sovereign spread vis-à-vis Germany (split into positive and negative announcements)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGovPos_t$	−0.178	−0.196	−0.027	0.009	−4.778**	−4.791**	−3.788**	−3.721**	1.692*	1.628	1.529	1.640
$DomGovNeg_t$	−0.745	−0.478	−0.592	−0.604	10.460*	10.338*	9.512**	9.388**	12.493**	12.436**	9.511	8.418
Constant	0.045	0.019	0.019	0.023	−0.082	−0.056	0.192	0.074	−0.294	−0.417	−0.137	−0.274
ΔS_{t-1}	0.231***	0.214***	0.208***	0.213***	0.147***	0.151***	0.163***	0.164***	0.088	0.089	0.092	0.112*
$\Delta EuroVIX_t$	1.167***	1.066***	0.666***	0.674***	4.580***	4.566***	0.627	0.649	2.451***	2.452***	2.013***	1.924***
$\Delta CDSGreece_t$	–	0.016***	0.014***	0.014***	–	0.000	0.000	0.000	–	−0.000	−0.000	−0.00
$\Delta EUDS_t$	–	–	−0.043***	−0.043***	–	–	−0.464***	−0.464***	–	–	−0.073	−0.059
ΔTED_t	–	–	–	−0.070	–	–	–	−0.156	–	–	–	0.872**
Log-Likelihood	−2236.92	−2220.95	−2212.47	−2212.47	−1425.29	−1425.00	−1374.89	−1374.72	−524.61	−524.54	−523.16	−520.27
$Q(5)$	0.284	0.062	0.084	0.087	0.622	0.647	0.423	0.399	0.166	0.164	0.172	0.106
$Q(10)$	0.609	0.187	0.180	0.183	0.606	0.660	0.437	0.450	0.559	0.570	0.411	0.299
$Q^2(5)$	0.922	0.853	0.889	0.865	0.769	0.768	0.794	0.757	0.981	0.980	0.871	0.910
$Q^2(10)$	0.565	0.583	0.648	0.608	0.915	0.907	0.707	0.691	0.837	0.826	0.989	0.952
Observations	747	747	747	747	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian sovereign bond spread vis-à-vis Germany. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Table 5: Parameter estimates - Italian 10-year government bond yield (baseline regression)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGov_t$	0.047	0.053	0.048	0.027	4.640***	4.641***	3.790***	3.723***	−0.083	0.076	−0.176	−0.324
Constant	0.050	−0.007	0.016	0.002	−0.097	−0.056	0.019	−0.048	0.187	0.217	0.452	0.329
ΔY_{t-1}	0.109***	0.107***	0.107***	0.105***	0.114**	0.116**	0.138***	0.139**	0.073	0.073	0.100	0.098
$\Delta EuroVIX_t$	0.057	−0.051	−0.090	−0.048	3.341***	3.340***	0.588	0.620	2.908***	2.923***	1.065*	1.064*
$\Delta CDSGreece_t$	–	0.014***	0.014***	0.014***	–	0.000	0.000	0.000	–	−0.002	−0.002***	−0.002**
$\Delta EUDS_t$	–	–	−0.004	−0.001	–	–	−0.327***	−0.327***	–	–	−0.173***	−0.172***
ΔTED_t	–	–	–	0.107	–	–	–	−0.123	–	–	–	0.417
Log-Likelihood	−2228.24	−2216.16	−2216.13	−2214.02	−1369.74	−1369.54	−1339.93	−1339.81	−534.15	−533.59	−525.74	−524.59
$Q(5)$	0.799	0.899	0.907	0.874	0.678	0.677	0.507	0.497	0.645	0.679	0.772	0.668
$Q(10)$	0.819	0.857	0.863	0.867	0.561	0.574	0.494	0.502	0.708	0.777	0.705	0.650
$Q^2(5)$	0.425	0.705	0.710	0.769	0.369	0.372	0.357	0.337	0.374	0.379	0.906	0.914
$Q^2(10)$	0.615	0.560	0.570	0.640	0.524	0.527	0.362	0.345	0.024	0.016	0.377	0.650
Observations	744	744	744	744	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian 10-year government bond yield. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Table 6: Parameter estimates - Italian 10-year government bond yield (split the sample period)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGovPeriod1_t$	0.419	0.630	0.619	0.694	4.200*	4.209*	3.039*	2.943*	0.715	0.982	0.374	0.234
$DomGovPeriod2_t$	−0.372	−0.508	−0.506	−0.609	5.315**	5.304*	4.985***	4.963***	−1.196	−1.160	−0.859	−1.174
Constant	−0.011	0.038	0.006	0.037	−0.091	−0.064	−0.029	0.247	0.207	0.193	0.327	0.389
ΔY_{t-1}	0.112***	0.111***	0.111***	0.114**	0.113**	0.115**	0.133**	0.134***	0.076	0.076	0.101	0.101
$\Delta EuroVIX_t$	0.067	−0.033	−0.065	0.027	3.340***	3.340***	0.592	0.627	2.924***	2.944***	1.109	1.260**
$\Delta CDSGreece_t$	–	0.014***	0.014***	0.013**	–	0.000	0.000	0.000	–	−0.002**	−0.002**	−0.002**
$\Delta EUDS_t$	–	–	−0.003	0.001	–	–	−0.327***	−0.327***	–	–	−0.171***	−0.185***
ΔTED_t	–	–	–	0.117**	–	–	–	−0.137	–	–	–	0.549
Log-Likelihood	−2227.55	−2214.82	−2215.07	−2212.75	−1369.70	−1369.51	−1339.78	−1339.64	−533.98	−533.83	−525.70	−524.54
$Q(5)$	0.816	0.877	0.884	0.803	0.649	0.648	0.478	0.466	0.665	0.711	0.790	0.853
$Q(10)$	0.819	0.827	0.832	0.802	0.539	0.551	0.469	0.479	0.725	0.806	0.738	0.747
$Q^2(5)$	0.425	0.708	0.712	0.864	0.370	0.373	0.361	0.340	0.395	0.407	0.910	0.889
$Q^2(10)$	0.652	0.651	0.658	0.883	0.528	0.530	0.376	0.360	0.023	0.014	0.376	0.016
Observations	744	744	744	744	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian 10-year government bond yield. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Table 7: Parameter estimates - Italian 10-year government bond yield (split into positive and negative announcements)

	Berlusconi's cabinet				Monti's cabinet				Letta's cabinet			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
$DomGovPos_t$	0.363	0.421	0.440	0.418	−3.681*	−3.687**	−3.098**	−3.039**	0.926	0.775	0.926	1.038
$DomGovNeg_t$	1.263	1.602	1.651	1.555	9.084	9.065*	7.484	7.403	10.109	9.944	10.237	9.437
Constant	0.029	−0.001	0.024	0.045	−0.158	−0.169	0.066	−0.103	0.102	0.146	0.262	0.223
ΔY_{t-1}	0.112***	0.110***	0.110***	0.108***	0.119**	0.121**	0.137**	0.137***	0.075	0.075	0.099	0.097
$\Delta EuroVIX_t$	0.063	−0.040	−0.099	−0.061	3.313***	3.312***	0.593	0.624	2.790***	2.805***	0.967	0.960*
$\Delta CDSGreece_t$	–	0.014***	0.014***	0.014***	–	0.000	0.000	0.000	–	−0.001	−0.001	−0.002**
$\Delta EUDS_t$	–	–	−0.006	−0.003	–	–	−0.325***	−0.324***	–	–	−0.171***	−0.170***
ΔTED_t	–	–	–	0.100	–	–	–	−0.124	–	–	–	0.357
Log-Likelihood	−2227.45	−2214.82	−2214.75	−2212.89	−1368.45	−1369.30	−1339.07	−1338.94	−533.13	−533.07	−525.74	−523.63
$Q(5)$	0.820	0.869	0.881	0.834	0.673	0.672	0.501	0.490	0.639	0.667	0.766	0.647
$Q(10)$	0.827	0.827	0.835	0.839	0.544	0.554	0.505	0.513	0.765	0.813	0.763	0.696
$Q^2(5)$	0.314	0.636	0.642	0.686	0.350	0.353	0.345	0.323	0.415	0.448	0.982	0.960
$Q^2(10)$	0.608	0.693	0.713	0.729	0.591	0.594	0.383	0.364	0.073	0.059	0.466	0.351
Observations	744	744	744	744	381	381	381	381	177	177	177	177

Notes: GARCH(1,1) regressions of daily basis point changes in the Italian 10-year government bond yield. *** (**, *) indicates statistical significance at the 1 (5, 10) percent level. Robust standard errors are used. The coefficients of the control variables in the vector $\mathbf{W_t}$ are not reported. $Q(5)$ and $Q(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the standardized residuals up to the 5th and 10th order, respectively. $Q^2(5)$ and $Q^2(10)$ is the statistical significance of the Ljung-Box Q test for the autocorrelations of the squared standardized residuals up to the 5th and 10th order, respectively. Berlusconi's cabinet: 1 January 2009 - 12 November 2011. Monti's Cabinet: 13 November 2011 - 27 April 2013. Letta's cabinet: 28 April 2013 - 31 December 2013.

Appendix: The Data

Data on fiscal policy communications are obtained through the ECB Real Time Information System, which includes news media releases from the following agencies: Bloomberg, Reuters, Dow Jones Newswires and Market News International.

Financial daily data are obtained from the Thomson Reuters-Datastream database:

- Italian 10-year bond yield: Italy Benchmark Bond 10 YR - Redemption Yield (Datastream mnemonic: ITBRYLD)
- German 10-year bond yield: Germany Benchmark Bond 10 YR - Redemption Yield (Datastream mnemonic: BDBRYLD)
- EuroVIX: VSTOXX volatility index (Datastream mnemonic: VSTOXXI)
- Greek CDS: Greece Senior 10 Year Credit Default Swap (Datastream mnemonic: GRGVTSX)
- Total stock market index for the EU: EU-DS Market (Datastream mnemonic: TOTMKEU)
- TED spread: TED spread rate - middle rate (Datastream mnemonic: TRTEDSP)
- Italian CDS: Italy Senior 10 Year Credit Default Swap (Datastream mnemonic: ITGVTSX)

Data on ECB non-standard monetary policy events are collected using the dataset in Falagiarda and Reitz (2015), which has been extended to include measures announced in 2013. In particular, we collect announcements about ECB non-standard measures (obtained from press conferences, press releases and speeches), including special long term refinancing operations, unlimited provisions of liquidity through fixed rate tenders with full allotment for the main refinancing operations and for long term refinancing operations, extensions of the list of collateral assets, special liquidity provisions in foreign currencies

through swap lines with other central banks, the Covered Bond Purchase Programmes, the Securities Market Programme, the Outright Monetary Transactions, and forward guidance.

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