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Political Voice on Monetary Policy: Evidence from the Parliamentary Hearings of the European Central Bank

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Abstract

Previous scholarship on central bank accountability has generally focused on monetary authorities' deeds and words while largely ignoring the other side of the accountability relationship, namely politicians' voice on monetary policy. This raises a fundamental question: what are central banks held accountable for by elected officials? To answer this question, we employ structural topic models on a new dataset of the Monetary Dialogues between the Members of the European Parliament (MEPs) and the President of the European Central Bank (ECB) from 1999 to 2019. Our findings are twofold. First, we uncover differences in how MEPs keep the ECB accountable for its primary, price stability objective. We show that European politicians also attempt to keep the central bank accountable for a broader set of issues that are connected with, but distinct from, the central bank's primary goal. Second, we show that unemployment is a key explanatory variable for the political voice articulated by individual MEPs in accountability settings. In particular, higher rates of domestic unemployment lead MEPs to devote less voice on issues related to the ECB's primary mission. These findings reveal the existence of a "political" Phillips curve reaction function, which enriches our understanding of the principal-agent accountability relationship between politicians and central bankers.

Keywords: accountability; central bank independence, European Central Bank; politicians; European Parliament.

JEL classification: E50, E52, E58.

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1 Introduction

Over the past decade, central banks worldwide have significantly expanded the policy toolkit through which to achieve their price stability objective. Among the several consequences of the expansion of monetary policy tools, central banks' recent actions have revived the debate about the relationship between independence and accountability (de Haan et al., 2008; McPhilemy and Moschella, 2019; Tucker, 2019). Indeed, central banks' responses to the financial and economic crises of 2008 and 2020 have raised important questions on whether central banks' accountability frameworks "are well adapted to the new era of highly interventionist central bank policies" (Braun and Hoffmann-Axthelm, 2017) and adequate to the challenge of ensuring that independence does not stand in the way of "the normal public conflict and institutional checking before policy is made" (Jacobs et al., 2021).

The debate on the relationship between independence and accountability is not new in central banking scholarship. Given the consolidated and still growing literature on central bank independence (see Hayo and Hefeker, 2002; Demertzis et al., 2004; Berger and Kißmer, 2013; Reinsberg et al., 2021, among others), the recognition of accountability as the "moral corollary" of independence has been one of the hallmarks of modern central banking and the basis upon which central banks have increased disclosure and accountability to the public (de Haan, 1997; Blinder, 1999; Masciandaro et al., 2008). While an extensive literature in economics and political science exists on the procedures and mechanisms through which central banks account for their actions (see Morris et al., 2004; de Haan et al., 2005, 2007; Crowe and Meade, 2008; Hasan and Mester, 2008; Waller, 2011; Masciandaro and Quintyn, 2016; Moschella et al., 2020), far less attention has been devoted to the other side of the accountability relationship, namely the political voice through which policymakers keep the central bank accountable (notable exceptions are Schonhardt-Bailey 2013; Collignon and Diessner 2016; Fraccaroli et al. 2020; AUTHORS1 THIS ISSUE). In other words, while the literature has extensively focused on the agent's accountability practices, a systematic examination of the principals' behavior in keeping the agent accountable has thus far eschewed systematic attention.[1]

This neglect is not without consequences. A limited understanding of the standards against which policymakers consider the central bank accountable risks obscuring the infor-

[1] Although we use the terminology of 'principals' and 'agents', the paper does not rely on formal principal-agent models for the purposes of the analysis but only to shed light on the theoretical contribution to the literature on central bank accountability.

mal channels through which politics exerts influence on monetary policy despite the de jure statutory arrangements in place to safeguard central bank independence. This is especially the case at a time when independence looks particularly vulnerable because of populist politics, rising public debt, and dwindling public support for central banks, at least in advanced economies (Goodhart and Lastra, 2018; Rodrik, 2018; Jones and Matthijs, 2019; Masciandaro, 2019; Peia and Romelli, 2019). In fact, it has been argued that the rise of populism is likely to be negatively correlated with the consensus in favor of central bank independence (see Buiter, 2014; de Haan and Eijffinger, 2017; Agur, 2018; Goodhart and Lastra, 2018; Masciandaro and Passarelli, 2019, among others). This paper contributes to the existing scholarship on central bank governance and accountability by asking a key question: what are central banks held accountable for by elected officials? This question calls for a systematic examination of politicians' voice as articulated in formal settings and over a long-time span. In carrying out this examination, the article sheds light on the salience attributed to different policy issues by the elected officials responsible for holding central banks accountable. Our analysis uncovers the domestic macroeconomic roots of issue salience in articulating political voice on monetary policy.

In order to investigate politicians' voice on accountability, the analysis focuses on the hearings of the European Central Bank (ECB) before the European Parliament in the framework of the quarterly Monetary Dialogues between the Committee on Economic and Monetary Affairs (ECON) and the President of the ECB. Studying elected officials' accountability practices towards the ECB offers a number of important empirical advantages for the purposes of the analysis. First, as a supranational central bank, the ECB performance is subject to the scrutiny of politicians whose preferences vary along different country and political dimensions. Thus, zooming on the political voice articulated within the European Parliament allows us to address the blind spots in the scholarship on accountability by studying a setting characterized by high economic heterogeneity among the different constituencies represented by elected officials. A further advantage of studying the ECB stems from the fact that the institution has a primary mandate that singles out price stability as the central bank's primary objective and subordinates the pursuit of other objectives. These governance features allow us to clearly ascertain whether politicians emphasize the principal or secondary objectives in keeping the central bank accountable.

Our empirical analysis of political voice relies on a novel dataset of the ECB's Monetary Dialogues and state-of-the-art quantitative text analysis techniques. Two major findings

derive from the analysis. First, we show that political voice on central bank accountability significantly varies over time and across policymakers. In particular, we find that Members of the European Parliament (MEPs) do not always keep the central bank accountable for the primary objective of price stability that has been delegated to the ECB. European politicians also attempt to keep the central bank accountable for a broader set of issues that are connected with, but distinct from, the central bank's primary goal. Second, employing panel data, we provide evidence that MEPs react to differentials in unemployment in their constituencies: the higher is the domestic unemployment rate in the country where they have been elected, the lower is policymakers' attention to price stability. These results reveal the existence of a "political" Phillips curve reaction function that enriches our understanding of the principal-agent accountability relationship between politicians and central bankers. Specifically, our results suggest that elected policymakers are less likely to hold the central bank accountable for its primary objective of price stability when labor market conditions are worse in their home country.

The paper develops as follows. In the following section, we review the debate on central banks' accountability to shed light on the contribution of the paper, namely its focus on politicians' voice in keeping the central bank accountable. In Section 3, we present the data and method employed in the analysis. In Section 4, we provide a systematic examination of MEPs' voice on monetary policy between 1999 and 2019 and analyze its macroeconomic determinants. In Section 5, we perform several robustness tests. Finally, we conclude by exploring the implications of our findings for the future of central bank independence.

2 Literature review

For a very long time, central banks used to live by the motto "never apologize, never explain" attributed to Montagu Norman, the longest-serving Governor of the Bank of England (Haldane, 2014). It is thus not surprising that several books about central banks bear titles such as Secrets of the Temple (Greider, 1989), Lords of Finance (Ahamed, 2009) and The Alchemists (Irwin, 2013), reflecting the mystique and impermeability to outside audiences that central banks had carefully cultivated. Indeed, at least until the late 1990s, limited transparency was regarded as instrumental for central banks to increase the efficacy of monetary policy by limiting political interference and facilitating frank exchanges in internal deliberations (see Mishkin, 2004; Eijffinger and Geraats, 2006; Eijffinger and Tesfaselassie, 2007; James and Lawler, 2010; Shambaugh and Shen, 2018).

Today's central banks have literally turned upside-down the motto they have long lived by. Over the past twenty years, central banks have gone through a "quiet revolution" (Blinder, 2004) characterized by a general trend towards greater disclosure and accountability. This shift has been motivated by at least two sets of factors. First, a growing theoretical work and empirical evidence have shown the benefits of increased disclosure, clarity and transparency for effectively managing economic expectations (for reviews, see Blinder et al., 2008; Baerg, 2020) (AUTHORS2 THIS ISSUE). Second, the shift away from secrecy has been underpinned by the recognition that, in democratic societies, independence must be accompanied by procedures to help prevent and detect the arbitrary exercise and abuse of public authority. From this perspective, accountability is a "moral corollary" of independence because central banks should be held accountable for the pursuit of its objectives, the instruments to achieve them, and the procedures of decision-making (Blinder, 1999).

The relationship between independence and accountability has thus become one of the key issues in the scholarship on central bank governance (Morris et al., 2004; de Haan et al., 2005; Berger et al., 2008; Crowe and Meade, 2008; Hasan and Mester, 2008; Waller, 2011; Khan, 2016; Romelli, 2018; Ireland, 2020), extending to the analysis of the supervisory responsibilities of central banks (Masciandaro and Quintyn, 2016; Masciandaro and Romelli, 2018). The argument about the benefits of independent central banks' accountability ties with the broad literature on non-majoritarian institutions, like independent regulatory agencies. A key insight of this scholarship is that accountability is required because the traditional standards of (input) legitimacy do not apply to independent agencies (Majone, 1998). Absent the possibility to control the agent *ex ante*, multiple *ex post* controls are required, including reporting duties, judicial reviews, and transparency. In other words, independence creates its own demand for accountability.

Building on these insights, most of the literature on accountability, including the one on central banks, has largely focused on examining the procedures and mechanisms through which the agent provides information and explanations of its conduct to its political principals. Put differently, overwhelming attention has been paid to how central banks provide information and justify their decisions before national legislatures in oversight committees (Schonhardt-Bailey, 2013) and to the general public by way of transparency, among the other means (Geraats, 2002; Van der Cruijsen and Eijffinger, 2010; Crowe and Meade, 2008; Hansen et al., 2018).

This focus on the modalities through which central banks account for their decisions

has been extremely important to assess central banks' behavior. The adoption of this perspective has also led to the conclusion that central banks are "formally accountable to politicians to the extent that politicians can require the agency to provide information on, and explanation of, its conduct on the basis of statutory provisions" (Koop and Hanretty, 2018). This conclusion implies that elected officials hold the central bank accountable against the mandate they delegated to it in the first place.

In practice, however, this might well not be the case. Politicians can voice accountability concerns that are not necessarily based on the statutory goals that a central bank is expected to pursue. For instance, recent evidence indicates that, among other technocratic actors, central banks are subject to scapegoating, with policymakers publicly blaming them for negative economic conditions, especially in the aftermath of crises (Traber et al., 2020). Thus, it is plausible to expect policymakers to hold central banks accountable not just for maintaining price stability, but also for creating the conditions that might favor their re-election.

Evidence of this pattern can be found in populist attitudes towards central banks following the 2007-08 global financial crisis. Indeed, a growing number of politicians, most notably the former US President Donald Trump, had since then made central banks the target of public criticisms for their alleged failures in sufficiently supporting economic growth (Bianchi et al., 2019). This trend is by no means foreign to Europe. The legality and legitimacy of the ECB's measures to tackle the European sovereign debt crisis has been increasingly questioned by key policymakers (Stark, 2012; Varoufakis, 2017) and influential scholars (Sinn, 2014; Charles, 2015). This trend has continued well after the financial crisis. Politicians and observers have violently attacked the ECB, and some of them have blamed its expansionary policies for the rise of radical right-wing parties (Financial Times, 2016) and the "expropriation" of European savers (Bild, 2020).

Notwithstanding the increasing amount of political challenges to independent central banks, previous studies in economics have largely ignored the behavior of the political principals in the formal accountability relationship central banks are subject to. In other words, little systematic analysis has been carried out on the voice of politicians on monetary policy, i.e. on the voice articulated by elected officials in the act of holding the central bank to account for its policies and behavior.

A few studies constitute interesting exceptions in this regard. First, Schonhardt-Bailey (2013) uses quantitative text analysis to investigate the content and quality of hearings of

the Fed's Monetary Policy Report in the US Congress from 1976 to 2008. Her analysis shows that members of Congress have little interest in engaging with technical aspects of monetary policy, and have greater appetite to steer the discussion in a way that allows them to look good in the eyes of their constituencies. Second, Collignon and Diessner (2016) make use of evidence from a survey conducted with MEPs to argue that the Monetary Dialogues between the ECB and the European Parliament play a significant role in informing and involving MEPs on monetary policy issues.

Closer to this study, Fraccaroli et al. (2020) analyze the textual content of central bank parliamentary hearings in a comparative perspective, considering the euro area, the UK and the US. Based on dictionary-based approach to text analysis, they aggregate all speeches in each parliamentary hearing and provide evidence that policymakers' sentiment towards central banks is more negative when economic uncertainty is higher and when inflation is more distant from the central bank's inflation aim. Moreover, they show that the salience attributed to price stability issues is lower when unemployment in the euro area, the UK and the US is higher. Finally, AUTHORS1 (THIS ISSUE) provide evidence that party ideology drives the sentiment of MEPs' speeches in the Monetary Dialogues. Their results are based on sentiment dictionaries and show that MEPs belonging to party groups that are more in favor of the European integration are more likely to use a positive language when addressing the ECB.

While the results of our paper appear consistent with part of the evidence offered by Fraccaroli et al. (2020), we extend the analysis in two important aspects. Methodologically, rather than relying on dictionary-based approaches to distinguish among specific accountability issues, our study employs state-of-the-art topic modelling techniques to provide a more complete picture of the issues discussed by MEPs in their efforts to hold the ECB accountable to the European public. Substantively, compared to previous studies, we investigate the economic determinants of MEPs' voice on monetary policy at a different level. Focusing on the ECB's hearings before the ECON Committee of the European Parliament, we analyze MEPs' speeches at the individual level, rather than aggregating them across all politicians in each parliamentary hearing, as in Fraccaroli et al. (2020). Moreover, our assessment is centred on country-level macroeconomic determinants, rather than aggregate euro area values. This allows us to better explore the reaction function of individual MEPs and study its sensitivity to cross-country macroeconomic heterogeneity within the EU, something that is not possible when aggregating speeches at the hearing

level and when focusing on determinants at the euro area level. In the next section, we present the data and method we make use of in our analysis.

3 Data and Method

3.1 Transcripts

To investigate political voice on monetary policy and its potential drivers, we analyze MEPs' speeches as articulated in the Monetary Dialogues that take place before the ECON Committee of the European Parliament. The Monetary Dialogues between MEPs and the ECB, which occur on a quarterly basis, are a key component of the accountability framework through which the ECB explains its actions to its principals. In particular, the Monetary Dialogues are the pillars of the formal accountability relationship between the ECB and the European Parliament and provide MEPs with the opportunity to voice the concerns they might have with regard to the exercise of the ECB's mandate.[2] Hence, the Monetary Dialogues do not only offer a privileged perspective to examine the extent to which the ECB, notwithstanding its independence, accounts for its decisions, but also to systematically analyze politicians' voice on monetary policy over a long time-span.

We collected all the transcripts of the parliamentary hearings of the ECB President from 1999 to 2019.[3] Our sample comprises 81 meeting dialogues (hereafter referred to as "dialogues"). With only one exception, all dialogues are available in English.[4] However, 33 of the analyzed documents also contain speeches in the native language of the MEPs that delivered the speeches. To overcome this data limitation, we made use of Google Translate to obtain an English translation of all speeches given in a different language. The appropriateness of this strategy is supported by the findings of De Vries et al. (2018), who show considerable overlap in the set of features generated from human-translated documents (delivered by professional translators) and machine-translated texts (using Google Translate) based on the corpus of multi-language debates in the European Parliament.

For each dialogue, we proceeded as follows: 1) we removed the speeches given by the ECB President and the Chair of the ECON Committee of the European Parliament, and

[2] As the Treaty on the Functioning of the European Union reads: 'The President of the European Central Bank and the other members of the Executive Board may, at the request of the European Parliament or on their own initiative, be heard by the competent committees of the European Parliament' (Art. 284).

[3] As only the 2020 and 2019 transcripts are available on the European Parliament website, we extract all the remaining dialogues using the Wayback Machine by the Internet Archive.

[4] The exception is the meeting of 18th February 2013, whose transcript was only available in French.

2) we divided the document into individual speeches.[5] This procedure resulted in 1,911 unique speeches by 221 Members of the European Parliament.

3.2 Information on MEPs

We also collected information on the nationality, European political party affiliation and terms of office of all the members of the Committee on Economic and Monetary Affairs from 1999 to 2019 using the Archives of the European Parliament and the Citizens' Enquiries Unit of the European Parliament.

Table 1 shows the summary statistics on the nationality of the MEPs and distribution of speeches by country.

Germany is the country with the highest number of both speeches and intervening speakers during the Monetary Dialogues, followed by France and the United Kingdom. With the exception of Estonia, at least one of the MEPs of all EU countries delivered a speech during the ECON Committee meetings with the ECB President.

Table 2 shows the distribution of speeches based on party affiliations, where the ordering is based on the left-right positions proposed by McElroy and Benoit (2012). The most active MEPs are those affiliated to the Christian Democratic party (EPP), followed by the Socialists and the Liberals. Overall, these three parties make up for 75% of speeches delivered during the Monetary Dialogues.

3.3 Text pre-processing

To study the content of the MEPs' political voice as detected in their speeches, we followed a burgeoning literature employing machine learning-based text analysis to study communication in the field of central banking (Baerg and Lowe, 2020; Cross and Greene, 2020; Diessner and Lisi, 2020; Ferrara, 2020), and resorted to an unsupervised machine learning approach. To this end, we started with two necessary pre-processing steps.[6]

First, we converted the text corpus of the speeches into a structured form. We relied on the classic "bag-of-words" approach (Grimmer and Stewart, 2013) and transformed each speech into a vector $[t_0, t_1, \ldots, t_j, \ldots, t_n]$ that contains all of the n unique words, i.e. features, in the sample. t_j denotes the number of times word j is mentioned in the speech.

[5] We removed the introductory statement and answers of the ECB President as the focus of the paper is on political voice on monetary policy. We also removed the speeches given by the ECON Chair because they mostly consist of procedural remarks, providing little value added to the substantive issues raised by the MEPs in the exercise of their oversight prerogatives.

[6] We make use of the Quanteda package in R (Benoit et al., 2018) to carry out all the text pre-processing operations.

Table 1: Distribution of Monetary Dialogue Speeches and Intervening MEPs by Country, 1999-2019

Country	% of Speeches	Nr of MEPs	Country	% of Speeches	Nr of MEPs
Austria	2.3%	4	Latvia	0.63%	1
Belgium	3.56%	10	Lithuania	5.55%	3
Bulgaria	0.37%	3	Luxembourg	0.78%	3
Croatia	0.05%	1	Malta	0.78%	4
Cyprus	0.52%	1	Netherlands	6.17%	19
Czech Republic	0.84%	3	Poland	1.62%	3
Denmark	0.94%	3	Portugal	5.13%	10
Finland	1.31%	5	Romania	0.68%	4
France	11.98%	20	Slovakia	4.24%	8
Germany	18.68%	27	Slovenia	0.16%	2
Greece	7.06%	19	Spain	7.54%	14
Hungary	1.05%	4	Sweden	0.1%	1
Ireland	2.98%	5	United Kingdom	10.31%	22
Italy	4.66%	22			

Table 2: Distribution of Monetary Dialogue Speeches by Party Group, 1999-2019

Political party orientation	Number of speeches%	Percentage
Far Left	99	5.18%
Greens	109	5.7%
Socialists	542	28.36%
Liberals	243	12.72%
Christian Democrats	652	34.12%
Conservatives	134	7.01%
Far Right	94	4.92%
Not Attached	38	1.99%

We used this vector to build a document-feature matrix, $df(M, n)$, where M is the number of speeches and n is the number of features. Thus, each cell ij in the document-feature matrix indicates $t_{i,j}$, i.e. the number of times feature j that occurs in document i.

Second, we implemented a set of standard pre-processing decisions. To reduce the complexity of the matrix, we applied lowercasing (i.e. removing capitalization and converting in lowercase letters), stemming (i.e. reducing inflected words to their root form) and we removed punctuations, numbers and a standard set of stop words (i.e. very common words that do not convey meaning but primarily serve grammatical functions, such as articles and prepositions). Furthermore, we reduced the size of document-frequency matrix by removing very uncommon words: we considered only words that appear at least twice in the speeches. This choice is intended to discard information that is likely to be unhelpful, ancillary, or too complex for use in machine learning analysis (Grimmer and Stewart, 2013) as well as to improve the estimation efficiency of the model described in the next section (Proksch and Slapin, 2009). These two text pre-processing steps allowed us to build a document-feature matrix of 1,911 documents and 3,860 features, which we used as an input for the structural topic model analysis.

3.4 Structural Topic Model

We used a Structural Topic Model (STM) to identify the presence of relevant word clusters in MEPs' speeches. Topic models are increasingly employed to systematically investigate and interpret human discourse in large collections of texts (Jacobs and Tschötschel, 2019). STM was developed by Margaret E. Roberts and co-authors (Roberts et al., 2014, 2019). This method is very similar to Latent Dirichlet Allocation (LDA), but differs from other families of topic models inasmuch as it allows users to incorporate document-level covariate information in the estimation of word clusters from the textual corpus. The inclusion of covariates is particularly helpful for conducting hypothesis testing and may improve the inference and qualitative interpretability of the word clusters. STM has been successfully applied to study a broad array of textual documents, ranging from Twitter feeds and religious statements (Lucas et al., 2015) to macroeconomic news and central bankers' speeches (Moschella and Pinto, 2019; Moschella et al., 2020; Ferrara and Angino, 2021). In this paper, we use STM to estimate the main issues addressed by the MEPs in their questions to the ECB in the context of the Monetary Dialogues.

STM assumes a fixed user-specified number of topics. Thus, the first step in the analysis consisted in defining the number of topics to be estimated in our topic model. There is not a "right" answer to the number of topics that are appropriate for a given corpus (Grimmer and Stewart, 2013). Following Roberts et al. (2019), we focus on topic exclusivity (Bischof and Airoldi, 2012; Airoldi and Bischof, 2016) and semantic coherence (Mimno et al., 2011). In general, topic exclusivity is easier to obtain with higher numbers of topics, while reaching high semantic coherence is easier in the presence of a few topics dominated by common words (Roberts et al., 2014). Hence, there appears to be a trade-off between exclusivity and semantic coherence (see Roberts et al., 2014). We selected a model reaching a good balance between these two metrics and proceeded as follows.

First, we estimated twenty-five different topic models containing a number of topics ranging from 5 to 30. Each model included covariates for the nationality of the speaker, her partisan affiliation and year in which the speech was given. Second, we calculated the exclusivity and semantic coherence of each of the twenty-five models. Appendix Figure A.1 plots the results of our evaluation. The trade-off between exclusivity and semantic coherence emerges quite clearly, as exclusivity appears to be an increasing function of STM topic number, while semantic coherence decreases as the number of topics increases. The models in the upper right quadrant of Appendix Figure A.1, namely those containing a topic

number ranging from 9 to 12, offered the best balance between exclusivity and semantic coherence. We then visually inspected the topic content of each of the four models in the upper right quadrant and chose the number of topics based on interpretability (Chang et al., 2009). A model with 11 topics generated word clusters that we found easiest to interpret. Thus, our baseline model specification in the paper makes use of 11 topics. However, in the robustness checks, we validate our results by considering model specifications with 10 and 12 topics, respectively.

The output of the model is shown by Table 3, which presents an overview of the topics generated by the selected model. Each topic shows the stemmed words with "highest probability", namely a measure that indicates which words are the most likely to co-occur within the word cluster. Important for our work are also "exclusive" words, i.e. those that are highly likely in one topic and unlikely in other topics based on the FREX metric (Bischof and Airoldi, 2012; Airoldi and Bischof, 2016).

Table 3: Top Words from the Structural Topic Model of MEPs' Speeches in the Monetary Dialogues (11 Topics)

Topic 1: Economic Policy and Outlook	
Highest Probability:	polici, monetari, econom, can, fiscal, object, question
FREX:	polici, fiscal, monetari, object, coordin, econom, japan
Topic 2: Euro Area Membership	
Highest Probability:	euro, countri, area, state, member, currenc, zone
FREX:	zone, sweden, enlarg, euro, currenc, candid, area
Topic 3: Financial Stability and Regulation	
Highest Probability:	market, financi, crisi, risk, problem, credit, sector
FREX:	financi, smes, credit, sector, market, hedg, crisi
Topic 4: Banking Supervision and Macroprudential Policy	
Highest Probability:	ecb, question, issu, second, first, whether, concern
FREX:	supervis, supervisori, issu, address, role, topic, separ
Topic 5: Monetary Policy / Money Growth and Unconventional Policies	
Highest Probability:	ecb, question, draghi, bond, programm, purchas, govern
FREX:	quantit, qe, program, purchas, eas, programm, sheet
Topic 6: Institutional Issues	
Highest Probability:	mr, presid, parliament, council, like, ask, commiss
FREX:	council, board, democrat, parliament, vote, decid, transpar
Topic 7: Sovereign Adjustment Programs	
Highest Probability:	bank, greec, debt, greek, mr, fund, govern
FREX:	troika, greek, greec, irish, eurobond, resolut, deposit
Topic 8: Fiscal Policy and Structural Reforms	
Highest Probability:	reform, stabil, growth, structur, state, pact, countri
FREX:	reform, structur, pact, deficit, flexibl, budget, budgetari
Topic 9: Euro Coins and Banknotes	
Highest Probability:	say, go, think, now, us, one, peopl
FREX:	get, lot, peopl, coin, go, note, sort
Topic 10: Euro Area Governance	
Highest Probability:	bank, european, central, presid, union, question, like
FREX:	central, european, feder, bank, union, treati, mister
Topic 11: Monetary Policy / Interest Rate Policy and Inflation Outlook	
Highest Probability:	rate, inflat, interest, price, growth, increas, economi
FREX:	inflat, wage, rate, price, oil, rise, inflationari

We validated and labelled each of the estimated topics by considering the "highest probability" and FREX words from each topic. We also considered the most represen-

tative speeches that characterise each topic. For each estimated topic, we report two representative speeches in Appendix B. For example, Topic 11 consists of keywords such as "inflation", "interest", "prices" and "rate", thereby indicating that this topic is about conventional monetary policy, focusing specifically on interest rate policy and the inflation outlook. Topic 5 consists of keywords such as "bond", "purchases", "quantitative" and "easing", thereby indicating that this topic is connected to unconventional monetary policy. The rest of the topics can be similarly identified based on representative speeches and keywords. We identified topics about: banking supervision and macroprudential policies (e.g. Single Supervisory Mechanism); economic policy and outlook (e.g. fiscal policy and policy coordination); financial stability and regulation (e.g. market risk); sovereign adjustment programs (e.g. involvement in the Troika and support to crisis-stricken countries); fiscal policy and structural reforms (e.g. Stability & Growth Pact); euro area governance (e.g. Treaty provisions and euro area's institutional framework); euro area membership (e.g. accession to euro area/EU); institutional issues (e.g. voting procedures); and a topic consisting of rhetorical expressions.

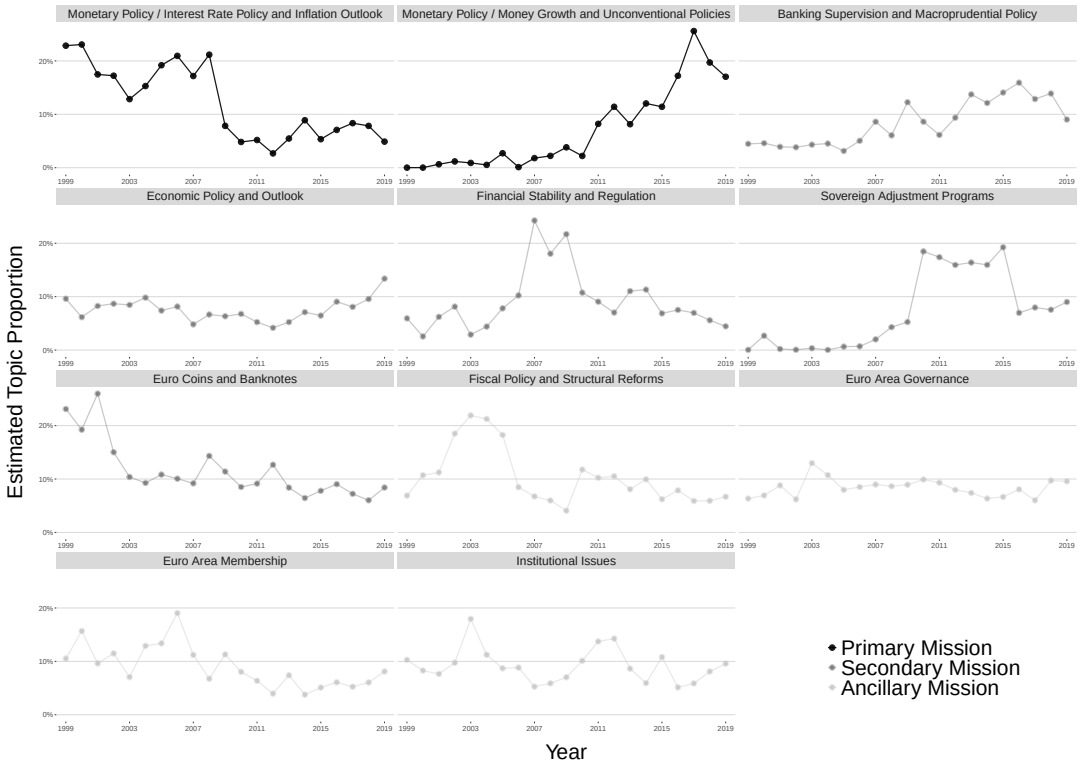
Next, following the approach adopted by Moschella and Pinto (2019), we cluster these topics into three theoretically relevant categories. Specifically, we grouped topics according to whether they refer to the primary, secondary and ancillary missions of the ECB. The "primary mission" group comprises the topics pertaining to issues that fall within the ECB's primary objective of price stability, including issues related to interest rate policy, inflation outlook and unconventional monetary policies.[7] The topics classified as "secondary mission" are related to the implicit secondary objectives of the ECB, that is, to support the other economic policies and, in doing so, to contribute to economic growth, and to reach a high level of employment and social protection (see Solans, 1999). Finally, the "ancillary mission" cluster includes all topics pertaining to policy issues that lie outside the ECB's mandate, including issues related to euro area governance and membership, as well as fiscal policies and structural reforms.[8]

Figure 1 shows the over-time evolution of the salience attributed to the 11 estimated

[7] *Article 105 of the Maastricht Treaty states that "the primary objective of the ESCB shall be to maintain price stability" and adds that "without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community with a view to contributing to the achievement of the objectives of the Community as laid down in Article 2". Among others, these Community objectives are, in accordance with Article 2, "sustainable and non-inflationary growth respecting the environment" and "a high level of employment and of social protection"* Solans (1999).

[8] As just discussed, the allocation of topics to the primary mission category has been based on whether the topic in question is *directly* related to the central bank's price stability mandate. However, we recognize that some topics (such as fiscal policy or labour market), even if not primary mission-related per se, have an impact on inflation and thus on the ability to deliver on the primary mandate.

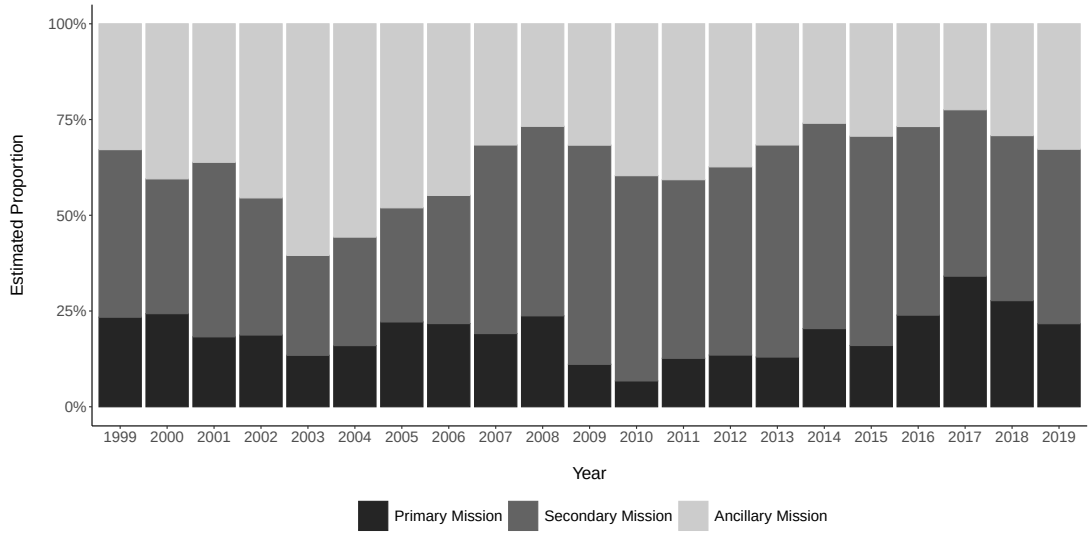
Figure 1: Estimated Proportion of Topics in MEPs' Speeches over Time (1999-2019)



topics in MEPs' Monetary Dialogue speeches. Each topic is assigned to one of the three categories related to the ECB's mandate. The time series of the estimated topics offers further information to validate the labels assigned to each topic. For instance, the "Money Growth and Unconventional Policies" topic peaks up after the ECB's activation of the Asset Purchase Programme (APP) in 2015, while the "Sovereign Adjustment Program" topic is virtually non-existent before 2010.

After aggregating these topics by category and computing their estimated share by year, Figure 2 shows the salience devoted by MEPs' voice to, respectively, the primary, secondary and ancillary mandate of the ECB over time. The figure shows how the MEPs' voice on issues related to the ECB's primary mission was relatively more dominant in the first years after the creation of the ECB, it remained persistent during the 2007-08 global financial crisis and returned to be prominent only after the launch of the ECB's APP in 2015. The onset of the European sovereign debt crisis is instead associated with the increased share of MEPs' speeches dedicated to the secondary missions during the period 2009-2015, in a reflection of the growing financial instability of the period. Finally, MEPs' voice on issues related to the ancillary mission of the ECB reached their peak between 2003 and 2004, around the time of the EU Enlargement to Central and Eastern Europe, and when France

Figure 2: Political voice on ECB Primary, Secondary and Ancillary Mission (1999-2019)

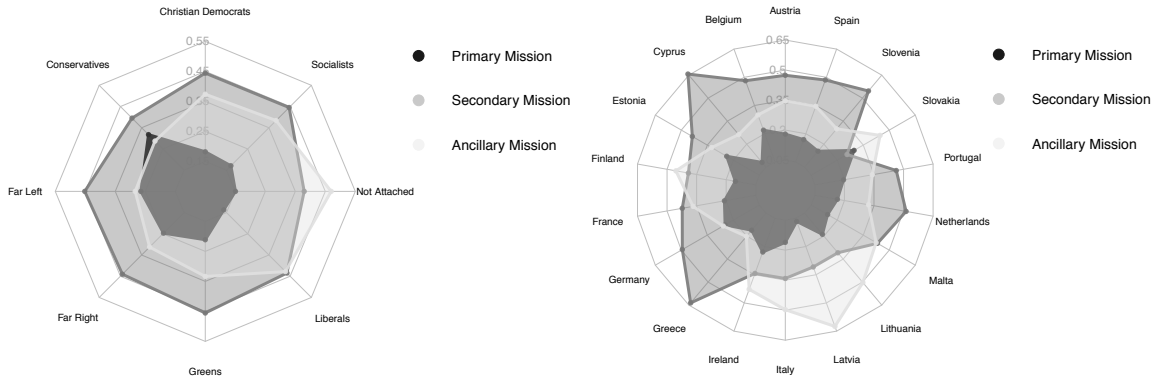


and Germany breached the Stability and Growth Pact.

Figure 3: Political Voice on ECB Primary, Secondary and Ancillary Mission

(a) by Political Affiliation

(b) by Country



We also provide descriptive evidence about the relative importance of partisanship in relation to the voice that MEPs devote to different aspects of the ECB's mission. In particular, as Figure 3a shows, there is relatively little variation in the degree of attention that MEPs devote to issues pertaining to the ECB primary, secondary or ancillary missions across party affiliations. This is especially so for politicians affiliated to the most active political groups discussed in Table 2, i.e. the Christian Democrats, the Liberals and the Socialists. In contrast, a higher degree of heterogeneity emerges when considering the share of political voice across categories by country (see Figure 3b). That is to say, MEPs tend to vary more across national lines than party lines in the emphasis they attribute to different aspects of the ECB's mission when enforcing central bank accountability in the European

Parliament.

These important national differences motivate the ensuing empirical analysis. In particular, in what follows, we examine whether the variation in MEPs' voice, as captured by the variation of topics discussed in the monetary dialogues, can be attributed to the macroeconomic conditions of their domestic constituencies.

4 Empirical results

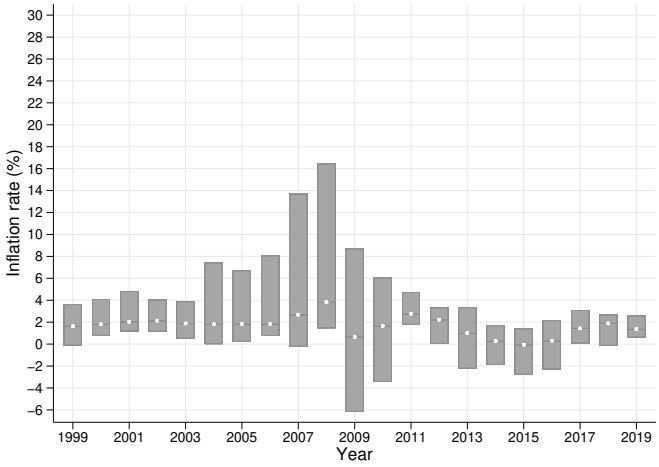
What drives politicians' voice on monetary policy? As anticipated, this question has thus far eschewed systematic attention in the literature on central bank accountability. We address our research question by focusing on the potential macroeconomic determinants of elected officials' reaction function when holding central banks accountable. In particular, we investigate whether inflation and unemployment have an impact on the political voice articulated in accountability settings.

Several reasons lead us to start our investigation from macroeconomic conditions. The trade-off between inflation and unemployment - the so-called Phillips curve - is one of the cornerstones of macroeconomics and the task of balancing these two variables stands at the core of central banking practices. Thus, it is plausible to expect that politicians' voice is shaped by the trade-off between inflation and unemployment and that central banks manage it through the use of their monetary policy tools. The importance of inflation and unemployment to explain political voice on monetary policy, at least in Europe, is further supported by empirical evidence showing that higher levels of inflation and unemployment are associated with lower social welfare (Di Tella et al., 2001) and greater public distrust towards the ECB (see Armingeon and Guthmann, 2014; Foster and Frieden, 2017; Roth et al., 2014).

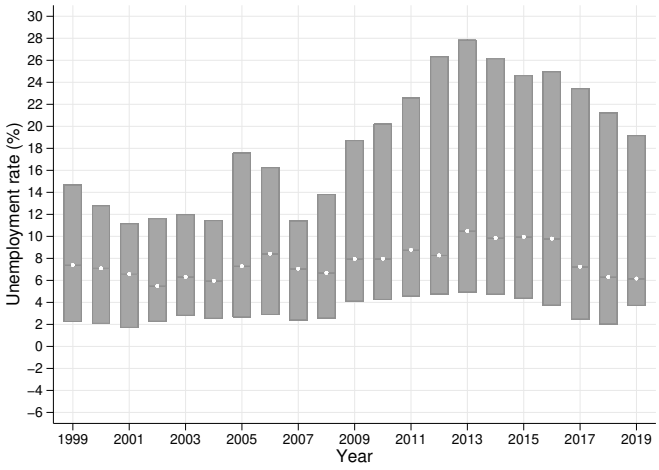
Therefore, these findings suggest that MEPs might be particularly sensitive to these macroeconomic factors in an attempt to respond to the grievances of their constituencies and ensure re-election. Finally, starting an analysis of the determinant of political voice with a focus on inflation and unemployment is further justified by the cross-country heterogeneity in the distribution of these two macroeconomic variables. As Figure 4 shows, the dispersion of national inflation and unemployment rates among European Union countries is indeed significant. In particular, Figure 4 reports the minimum and maximum values of inflation and unemployment rate experienced in the countries of the MEPs who expressed their opinions in the Monetary Dialogues over the 1999-2019 period. While the median values of

Figure 4: Inflation and unemployment rate differential across countries (1999-2009)

(a) Inflation



(b) Unemployment rate



both inflation and unemployment rates do not diverge much over time (white dots inside the bar graph), relevant differences between these two variables emerge by looking at their minimum and maximum values.

In what follows, we thus test empirically whether inflation and unemployment rates influence politicians' voice on monetary policy in the European Parliament. Formally, the baseline model tested is as follows:

$$\text{Primary Mission}_{i,m} = \alpha + \beta_1 \pi_{i,c,t-1} + \beta_2 u_{i,c,t-1} + \theta' X_{c,m} + \gamma' Z_i, \tag{1}$$

where $\text{Primary Mission}_{i,m}$ is the share of the speech dedicated by an individual policymaker i on the primary mission of the ECB at meeting m; $\pi_{i,c,t-1}$ is the level of inflation in the

constituency c of policymaker i, at time $t-1$ and $u_{i,c,t-1}$ is the unemployment rate in the constituency c of policymaker i, at time $t-1$. We include the lagged values of both inflation and unemployment to capture the fact that policymakers might have access to these country-specific data with a lag. In our baseline specification, we use quarterly data obtained from the IMF's International Financial Statistics, but our results are not systematically different when considering annual macroeconomic data. $X_{c,m}$ is a vector of control variables that includes country and meeting fixed effects, while Z_i is a vector of dummies for the European Parliament political party of policymaker i.

A potential source of concern is the possibility of omitted variable bias, which might be generated by some background factor directly and simultaneously shaping both domestic macroeconomic conditions and MEPs' voice in the policy dialogues. We address this issue by employing an array of fixed effects. In particular, we introduce three types of fixed effects in our analysis. First, country fixed effects account for time-invariant economic and institutional factors at the domestic level, such as the tendency of policymakers from certain countries to dedicate a higher attention to price stability. Second, we include meeting fixed effects to account for time-variant factors common to all countries, such as Europe-wide crisis episodes and European Parliament elections. Third, we add European party group fixed effects to account for systematic differences in issue attention and ideology across different political parties inside the European Parliament. The presence of these fixed effects allows us to control for important unobserved variation and reduces concerns of omitted variable bias. In the next section, we also test the robustness of our results to the inclusion of additional macroeconomic variables.

The results from the baseline specification in Eq. (1) are presented in Table 4. In column (1), we regress the individual share of speeches dedicated to the primary mission of the ECB in each Monetary Dialogue speech on the lagged level of inflation in the country of the MEP who gave the speech. While the sign of the coefficient is positive, nonetheless, it is not statistically significant. Next, in column (2), we include the domestic unemployment rate. The negative and statistically significant coefficient of the unemployment rate variable indicates that elected policymakers tend to dedicate a relatively smaller share of their 'voice' to price stability when the level of the unemployment rate in their country is higher. The coefficient of the inflation rate remains positive and not statistically significant. To control for time-invariant domestic factors, column (3) introduces country fixed effects. With the introduction of country fixed effects, the coefficient for the level of unemployment

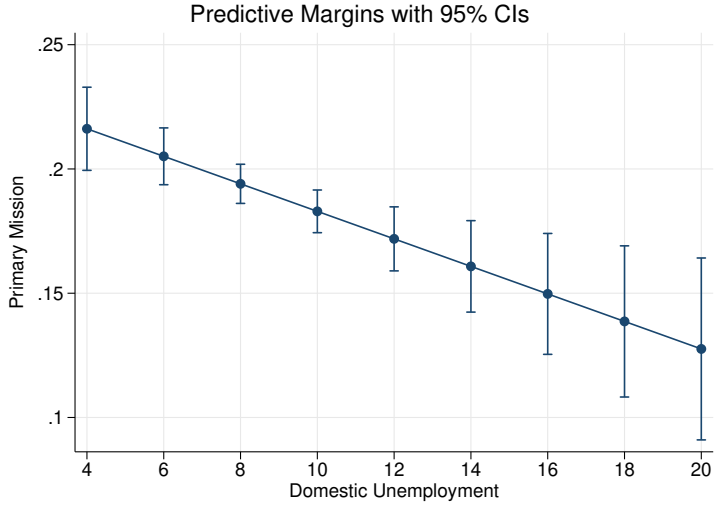
Table 4: Macroeconomic Determinants of MEPs' Voice on Primary Mission

	Share of speeches dedicated to Primary Mission				
	(1)	(2)	(3)	(4)	(5)
Inflation$_{t-1}$	0.0019	0.0006	-0.0031	0.0066	0.0028
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
Unemployment Rate$_{t-1}$		-0.0016*	-0.0068***	-0.0035**	-0.0055***
		(0.001)	(0.002)	(0.002)	(0.002)
Controls:					
Country FE			Yes	Yes	Yes
Meeting FE				Yes	Yes
Political groups FE					Yes
Observations	1909	1906	1906	1906	1906
R-squared	0.001	0.003	0.057	0.200	0.259

Robust standard errors in parentheses. ***, **, * denote significance at a 1%, 5% and 10% level, respectively.

rate acquires greater absolute magnitude and is more precisely estimated. Instead, the coefficient of the inflation variable flips its sign and remains statistically insignificant. In column (4), we control for time-variant common factors by adding meeting fixed effects. This slightly reduces the absolute magnitude and the statistical significance of the unemployment rate coefficient. Finally, in column (5), we control for party-specific factors by adding party group fixed effects. Importantly, this most stringent specification confirms the negative and statistically significant relationship between unemployment rate and the salience MEPs attribute to the ECB's price stability mission.

Figure 5: Marginal Effect of Unemployment on the Predicted Share of MEPs' Voice on Primary Mission

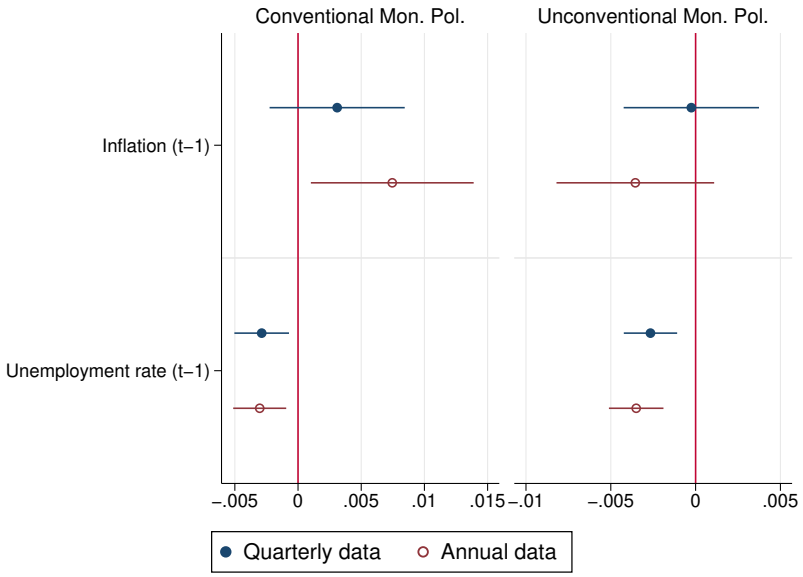


To better quantify the importance of the correlation between the share of political voice dedicated to the primary mission in the communication of the MEPs during the Monetary Dialogues and the rate of unemployment in their country, Figure 5 presents the predicted

share of speeches MEPs devote to the ECB primary mission, conditional on the level of national unemployment for an average MEP. This figure is based on the results of Column (5) in Table 4. Based on these results, a MEP elected in a member state with a rate of unemployment that is lower than 6%, e.g. Germany and other Central and Northern European countries for a long period over the past twenty years, is estimated to devote more than 20% of her Monetary Dialogue speeches to issues related to the ECB primary mission. This share drops to less than 17% for a MEP elected in a country with unemployment higher than 12%, as it was the case in the countries most affected by both the 2007-08 global financial crisis and the euro area sovereign debt crisis.

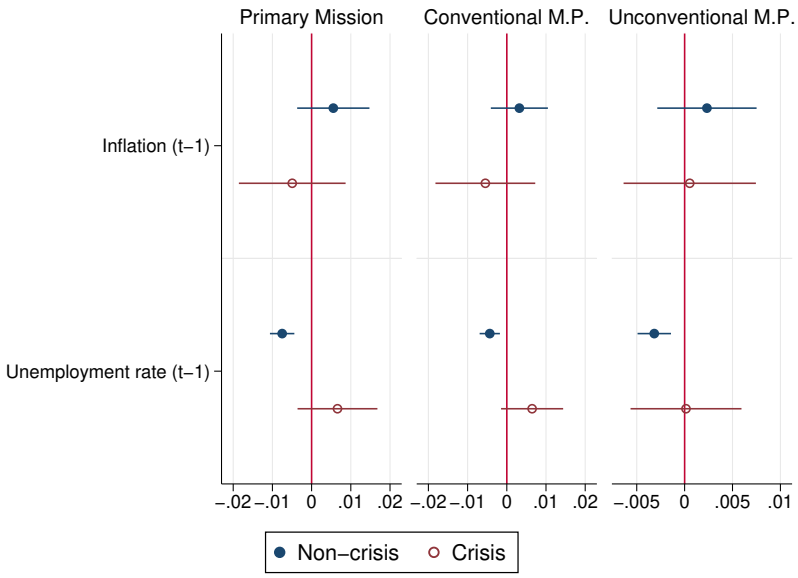
Figure 6 repeats the econometric exercise presented in Table 4 by replacing the dependent variable with the sub-sets of topics related to the ECB primary missions, i.e. conventional and unconventional monetary policy. The results from these new estimations are similar to those in Table 4 and confirm the importance of the unemployment rate in explaining the political voice dedicated to both conventional and unconventional monetary policies in accountability settings. In addition, when using annual data, the coefficient of the inflation rate becomes statistically significant in explaining the salience MEPs attribute to issues related to conventional monetary policy, while it remains not statistically significant for unconventional monetary policy.

Figure 6: MEPs' Voice on Conventional and Unconventional Monetary Policy as a Function on Inflation and Unemployment



To further single out the impact of labour conditions on politicians's voice in keeping

Figure 7: MEPs' Voice on Primary Mission and Subtopics during Non-crisis and Crisis Years



the central bank accountable, we also control for the potential impact of financial crises on policymakers' behavior. In particular, Figure 7 replicates the estimates presented in Table 4 and Figure 6 by focusing on the subset of non-crisis and crisis years, respectively. In particular, we use the Laeven and Valencia (2020) database to identify the beginning and end of each systemic banking crisis episodes experienced by the EU countries in our sample.[9]

These results confirm the importance of the unemployment rate to explain the MEPs' voice dedicated to both the primary mission as a whole and the main issues related to the ECB primary mission, i.e. conventional and unconventional monetary policy, during non-crisis years. At the same time, the unemployment rate coefficient loses its significance when we focus our attention on crisis years. Overall, these results suggest that the heterogeneity in the unemployment rate significantly affects political voice during non-crisis years, representing the vast majority of our sample observations.

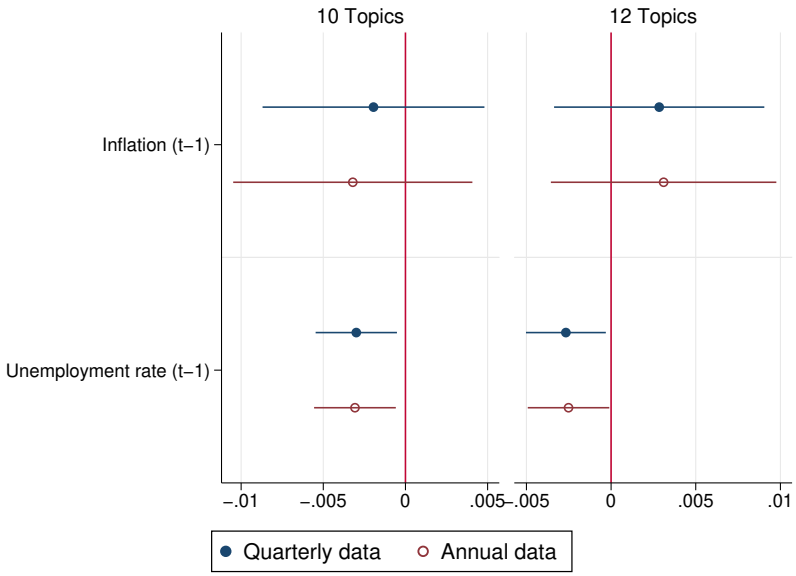
[9]By looking at these data, it is for example possible to find out that the global financial crisis lasted only two years in Germany, i.e. between 2008 and 2009, while it lasted 5 years in Spain and Italy, for example. At the same time, some of the countries in our sample did not experience a crisis in 2008.

5 Robustness tests

So far, our results have focused on the baseline specification of a STM based on 11 topics and an econometric model including inflation and unemployment covariates plus country, meeting, and political group fixed effects. In this section, we test the sensitivity of our results to alternative specifications of both the STM and the econometric model. First, we consider alternative specifications of our topic model. Guided by the results of Appendix Figure A.1, we retrieve the results of two other models that perform well in terms of the exclusivity-semantic coherence trade-off, namely models with 10 and 12 topics, respectively. Similar to the model with 11 topics, we identify and aggregate clusters of words that relate to the ECB's primary mission from these alternative STM specifications. We then employ our baseline econometric specification to verify that the results related to the relationship between domestic unemployment and MEPs' voice about the primary mission are qualitatively unchanged.

Figure 8 plots the coefficients obtained by focusing our estimations on the alternative models with 10 and 12 topics, respectively. Overall, the evidence presented in this figure confirms the importance of the unemployment rate, at both quarterly and annual levels, as a driver of the share of MEPs speeches dedicated to price stability.

Figure 8: Robustness Tests: Primary Mission Share with Alternative Models



Second, using our baseline STM specification, we introduce a set of additional macroeconomic control variables to further tackle the issue of omitted variable bias, which has

already been partly addressed by our fixed-effect strategy. In the selection of the additional control variables, we are guided by the previous work by Fraccaroli et al. (2020), who investigate the determinants of different dictionary-based measures of topics and sentiment in the parliamentary hearings of the Federal Reserve, the Bank of England and the ECB at the aggregate level. In particular, we introduce the following control variables: (a) the absolute value of the deviation of domestic inflation from the ECB's objective of 2%, (b) real GDP growth, (c) domestic credit to private sector as a percentage of domestic GDP.[10] The latter has been shown to be a good proxy of domestic financial stability (Schularick and Taylor, 2012).[11]

In addition to these variables, we also include two measures that have been used as a benchmark to assess the domestic level of financial instability in the wake of the European sovereign debt crisis and that might account for the MEPs' decision not to focus on the primary mandate of the ECB during the Monetary Dialogues. The first variable is the long-term interest rate on sovereign debt of the country of origin of each MEP, namely the 10 year yield on sovereign bonds. The second variable is the share of nonperforming loans (NPLs) to total loans of the domestic banking sector, which can be seen as a proxy of the health of domestic financial institutions.[12] These variables might explain why MEPs decide to focus more on issues of financial regulation, macro-prudential policy and banking supervision, which are not part of the primary mandate of the ECB.

Table 5 presents the results of the robustness checks carried out with the inclusion of these additional macroeconomic control variables. In all columns, we use the most stringent specification of our econometric model, namely the one with country, meeting and political group fixed effects. In columns (1)-(4), we make use of the level of inflation employed in our baseline specifications, while in columns (5)-(8), we focus on the deviation of domestic inflation from the ECB's 2% objective, as in Fraccaroli et al. (2020). All estimations include the levels of both the unemployment rate and domestic real GDP growth, columns (2) and (6) add the measure of credit-to-GDP, columns (3) and (7) add the long-term interest rate, and columns (4) and (8) introduce the share of domestic NPLs. With the exception of the

[10] The quarterly level data on real GDP growth have been obtained from the IMF's International Financial Statistics, while the measure of domestic credit to private sector as a percentage of domestic GDP has been extracted from the World Bank Open Data website.

[11] Fraccaroli et al. (2020) also use an index of economic uncertainty for the US, the UK and the euro area and time dummies for election periods. In our case, the index of economic uncertainty is not available for all EU countries, and the potential effect of European elections on MEPs' voice on monetary policy is already captured by our time fixed effects strategy.

[12] The data on sovereign bond yields are retrieved from the ECB Statistical Data Warehouse, while the annual shares of NPLs to total loans are collected from the World Bank Open Data website.

Table 5: Robustness Tests on Macroeconomic Determinants of MEPs' Voice on Primary Mission

	Share of speeches dedicated to Primary Mission							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Inflation$_{t-1}$	0.0028	0.0019	0.0020	0.0065				
	(0.004)	(0.006)	(0.006)	(0.007)				
Inflation Deviation$_{t-1}$					-0.0030	-0.0012	-0.0011	-0.0052
					(0.004)	(0.006)	(0.006)	(0.007)
Unemployment Rate$_{t-1}$	-0.0055***	-0.0054***	-0.0060***	-0.0069**	-0.0059***	-0.0057***	-0.0063***	-0.0078**
	(0.002)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)	(0.003)
Real GDP growth$_{t-1}$	0.0023	0.1539	0.3113	0.1802	-0.0451	0.1357	0.2906	0.1413
	(0.484)	(0.529)	(0.554)	(0.637)	(0.478)	(0.520)	(0.547)	(0.640)
Credit to private sector (% of GDP)$_{t-1}$		0.0002	0.0002	0.0009*		0.0002	0.0002	0.0010**
		(0.000)	(0.000)	(0.001)		(0.000)	(0.000)	(0.001)
Long-term interest rate			0.0032	0.0072			0.0031	0.0075
			(0.004)	(0.005)			(0.004)	(0.005)
Nonperforming loans to total loans$_{t-1}$				0.0001				-0.0002
				(0.002)				(0.002)
Controls:								
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Meeting FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Political groups FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,906	1,611	1,611	1,034	1,906	1,611	1,611	1,034
R-squared	0.256	0.291	0.291	0.371	0.256	0.291	0.291	0.371

Robust standard errors in parentheses. ***, **, * denote significance at a 1%, 5% and 10% level, respectively.

long-term interest rate, we employ lagged values for all the macroeconomic variables, as these are the plausibly observable values at time t. We keep the contemporaneous value of the 10 year sovereign bond yield, as the assumption of observability of this value at time t is more plausible than for the other variables.

The results of Table 5 confirm the presence of a robust link between country-level unemployment rates and the share of politicians' voice dedicated to the primary mission of the ECB. The negative and statistically significant relationship between these two variables provides further evidence that domestic unemployment is a key determinant of politicians' focus on the primary mandate of the ECB. Hence, the nature of political voice on monetary policy is significantly affected by the macroeconomic factors characterising the constituencies of the elected officials.[13]

In addition to the macroeconomic determinants discussed so far, it might be the case that domestic political determinants influence the share of politician's voice dedicated to the various topics. Among these determinants, one might expect that national elections could induce politicians to focus more on the state of their economy while holding the ECB accountable. To check this hypothesis, in Table 6 we replicate the estimations presented in Table 4 by introducing an interaction term between a national election dummy, *Election dummy* that equals one in the year of a national election, and the lagged values of both inflation and the unemployment rate. Interestingly, the coefficient for unemployment rate remains negative and statistically significant, while the interaction terms are not sig-

[13]These results remain robust to the adoption of an alternative econometric specification, i.e. the generalized linear model, which allows for a dependent variable to be bounded between 0 and 1 (see Papke and Wooldridge, 1996). See results presented in Appendix Table C.1.

Table 6: Robustness Tests: Elections and MEPs' Voice on Primary Mission

	Share of speeches dedicated to Primary Mission				
	(1)	(2)	(3)	(4)	(5)
Inflation_{t-1}	0.0013	-0.0000	-0.0039	0.0057	0.0012
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Election dummy	0.0002	-0.0075	-0.0055	-0.0302	-0.0460*
	(0.014)	(0.027)	(0.027)	(0.027)	(0.027)
$\text{Inflation}_{t-1}\times$ Election dummy	0.0044	0.0047	0.0045	0.0067	0.0100
	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
$\text{Unemployment Rate}_{t-1}$		-0.0017*	-0.0068***	-0.0039**	-0.0061***
		(0.001)	(0.002)	(0.002)	(0.002)
$\text{Unemployment Rate}_{t-1}\times$ Election dummy		0.0007	0.0005	0.0021	0.0028
		(0.002)	(0.002)	(0.002)	(0.002)
Controls:					
Country FE			Yes	Yes	Yes
Meeting FE				Yes	Yes
Political groups FE					Yes
Observations	1,906	1,903	1,903	1,903	1,903
R-squared	0.001	0.003	0.058	0.198	0.258

Robust standard errors in parentheses. ***, **, * denote significance at a 1%, 5% and 10% level, respectively.

nificantly different from zero. These results confirm the correlation between the level of national unemployment rate and the share of speeches dedicated by MEPs to the primary mission of the ECB. While we find limited support in favour of a political business cycle in the accountability of the ECB.[14]

Table 7: Macroeconomic Determinants of MEPs' Voice on Secondary and Ancillary Missions

Share of speeches dedicated to:	Secondary Mission		Ancillary Mission	
	(1)	(2)	(3)	(4)
Inflation_{t-1}	-0.0056	-0.0031	-0.0058	-0.0042
	(0.005)	(0.005)	(0.005)	(0.005)
$\text{Unemployment Rate}_{t-1}$	0.0045***	0.0063***	-0.0002	0.0003
	(0.002)	(0.002)	(0.002)	(0.002)
Controls:				
Country FE	Yes	Yes	Yes	Yes
Meeting FE	Yes	Yes	Yes	Yes
Political groups FE		Yes		Yes
Observations	1,906	1,906	1,906	1,906
R-squared	0.427	0.464	0.371	0.400

Robust standard errors in parentheses. ***, **, * denote significance at a 1%, 5% and 10% level, respectively.

So far, our analysis has focused on the macroeconomic determinants of the share of MEPs' speeches dedicated to the ECB primary mission. In Table 7 we focus our attention on the macroeconomic determinants of the share of speeches dedicated by MEPs to the topics associated to the secondary (columns 1 and 2) and ancillary (columns 3 and 4) missions of the ECB. The positive and statistically significant coefficient for the unemployment rate in columns (1) and (2) suggest that MEPs dedicate more attention to the ECB secondary mission when domestic unemployment rate is higher in their country. While

[14]Similar results are obtained when we focus on the behaviour of MEPs in the year prior to a national election, rather than on the year of an election. Results are available upon request.

neither inflation nor unemployment are correlated with the share of speeches dedicated to the ancillary mission of the ECB. These findings corroborate our results, suggesting that, when unemployment rate is higher in the constituency of an MEP, she will dedicate less attention to the ECB primary mission and more to its secondary one.

6 Concluding remarks

Up to forty years ago, economic theory paid little to no attention to central bank governance. However, as soon as economic theory started to recognize the importance of institutional settings in determining macroeconomic performance, i.e. in both New Classical and New Keynesian models, this topic started to gain influence (Eijffinger and Masciandaro, 2014). Identifying the most appropriate governance framework to design the relationship between the incumbent government and the central bank thus became a crucial element in monetary economics (Barro and Gordon, 1983; Backus and Driffill, 1985; Rogoff, 1985; Lohmann, 1992). The consensual view that has emerged from this scholarship is that optimal central bank governance is essentially two sides of the same coin. On the one side, the central bank has to be independent, i.e. the central bank implements monetary policy decisions protected from short-sighted political interference. On the other side, the central bank has to be accountable. That is to say, it has to act in a transparent way and implement an effective communication policy (see Eijffinger and Hoeberichts, 2002; Issing, 2005; de Haan et al., 2007; Ehrmann and Fratzscher, 2007; Rozkrut et al., 2007; Berger et al., 2011; Siklos and Sturm, 2013; Anderes et al., 2019).

The acknowledgment of the importance of accountability to monetary policy's credibility has shed new light on central banks' behavior and independence. However, existing scholarship has thus far adopted a somehow one-sided view of accountability. In particular, much of the existing scholarship has focused on central banks as the only 'active' player in the accountability relationship. Indeed, while several studies exist on the procedures and mechanisms through which central banks account for the decisions to their elected principals, no parallel attention has been devoted to examine how principals keep the central bank accountable.

This paper has tackled this research gap in the scholarly literature on accountability. In particular, the contribution of the paper to the existing literature is twofold. First, we provide a systematic examination of the policy issues that politicians hold the central bank accountable for - what we called political voice. Based on an original data set of

MEPs' speeches within the framework of the Monetary Dialogues, our findings indicate that elected officials do not always keep the central bank accountable for the price stability objective they delegated to the ECB. MEPs also keep the central bank accountable for a broad set of issues that are connected but distinct from the ECB primary mission.

Second, we investigate the determinants of the political voice's reaction function. Our findings, which are robust across multiple specifications, indicate that politicians' reaction function is akin to a political Phillips curve: the ECB is less likely to be held accountable for the primary objective of price stability when labor market conditions deteriorate. While a fully-fledged interpretation of this finding is beyond the scope of this paper, whose primary objective has been to unveil the gap in the accountability literature, some considerations are in order. In particular, the negative relationship between unemployment and political voice on the primary mission of the ECB might reflect elected officials' attempt to send a signal to their constituencies. Indeed, studies on public opinion towards the ECB clearly indicate that unemployment is a key driver of (negative) public attitudes towards the central bank (see Armingeon and Guthmann, 2014; Foster and Frieden, 2017; Roth et al., 2014). The non-significance of the inflation coefficient in most specifications as compared to unemployment might also indicate that central banks have become victims of their own success: having successfully tamed inflationary pressures, policymakers' accountability concerns for price stability might have been significantly discounted. This is certainly the case for the ECB as euro area countries have experienced inflation rates *below 2%* in most of the years between 1999 and 2019. While unemployment rate became a more important issue among MEPs, especially following the global financial crisis and the euro area sovereign debt crisis, as it doubled its pre-crisis levels in few countries.

Third, the contribution of the paper is also methodological. The application of STM to identify the content of political voice offers a promising methodological instrument to investigate the two-way relationship between central banks and their principals, as well as to examine how central banks respond to the accountability concerns that are articulated not just by governments but also by the broad public (see Moschella et al., 2020).

The evidence offered by this paper speaks to a lively debate on the mandate of the ECB. Our study has shown that the secondary objectives of the ECB have consistently captured politicians' attention over the past decade, and more so in contexts facing labor market deteriorations. Despite the increasing importance of the ECB's secondary mandate, it remains unclear whether and how to provide a ranking of the relative importance of the

secondary objectives, and who should be in charge of doing so. This debate has been recently stimulated by the proposal of a group of notable scholars and observers arguing that the European Parliament and the ECON committee should be put in charge political guidance on the ECB's secondary objectives (Béres et al., 2020). From a normative perspective, by shedding light on the prominence of discussions related to the secondary objectives of the ECB in the Monetary Dialogues, our results support the idea of strengthened and more formalized accountability practices regarding the ECB's secondary mandate – an issue that has not been extensively addressed by the recently concluded ECB's strategy review.

In future research, it will be all the more important to ascertain whether and to what extent political voice affects monetary policy. Political voice can indeed be regarded as an informal channel of pressure on central banks: politicians may strategically use the voice they articulate in accountability settings to pressure the central bank to focus on some policy issues instead of others. Moreover, as suggested by emerging literature on bottom-up politicization in Europe (Bressanelli et al., 2020), domestic economic and political pressures may provide political actors with new opportunities to politicize issues at the European level, including monetary policy (see Tortola, 2020). Future research is thus warranted to examine how central banks react to political voice, especially at a time when many forces combine to challenge central bank independence, such as populist politics, weakening levels of public support for technocratic central banks, and worsening public finances following the Covid pandemic.

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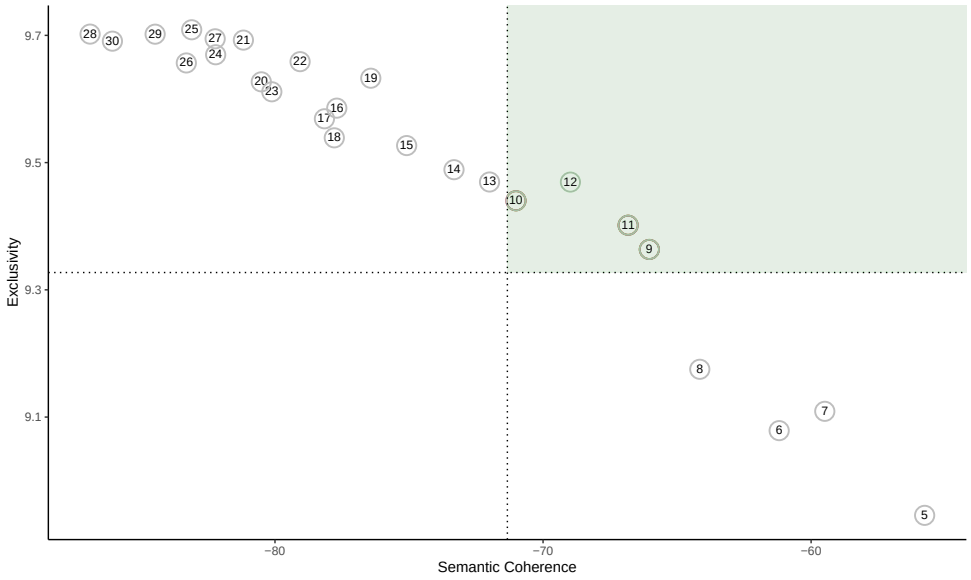
Appendix

A STM Exclusivity and Semantic Coherence of Topic Models

Figure A.1: Exclusivity and Semantic Coherence of Topic Models in the Range between 5 and 30 Topics



B Representative Speeches

- **Topic 1: Economic Policy and Outlook**.

  (i) "Mr President, in your initial statement, you presented a clearly growing euro area economy with some uncertainties on the horizon and probably the most severe of them all is what is called 'geopolitical risks' and in those geopolitical risks we see the Protectionist temptations, mainly in the United States, but we also see the effects of the Federal Reserve's monetary policy derived from the larger fiscal deficits in the United States, which generated this past summer a notable crisis in emerging economies: Brazil, Argentina , Turkey. In this sense, and taking advantage of the fact that I am one of the last to ask, which means that the questions that you had written down have been asked by the other deputies who spoke before, I would like to ask you about these geopolitical risks, about these risks that we are seeing in Turkey, in Brazil, in Argentina, which may affect the scenario of the euro area, as well as the risks of such protectionism or of a return, of a reversal of expansionary monetary policy in the United States more accelerated than expected in by virtue of the larger fiscal deficits expected in that country."

  (ii) "Mr President, Madam Chairperson, ladies and gentlemen, I would like to thank you on behalf of my group for the clarity and clarifications. [?] On the second point: I think it is important that you have made it clear that monetary policy cannot replace sensible economic policy and the necessary reform measures because - the chairwoman has already touched on it - if economic data is revised downwards despite the situation Political desires are growing, which can even go so far as to politicize the question of the status, role and definition of the ECB in connection with the Constitutional Convention. I think it is very important that we make it clear that monetary policy cannot replace economic policy, that structural reforms are urgently needed and that we do not want to change the status of the ECB's independence and its role in Europe. My question to you - you have not touched on this - concerns the relationship with America, i.e. the euro / dollar exchange rate, and the enlargement process. What are the effects of these two factors, west and east, on the future development of economic policy and thus also on your analyzes for monetary policy?"

- **Topic 2: Euro Area Membership**

  (i) "Thank you very much, Chair. Mr Duisenberg, if we compare the situation in Denmark today where Denmark has a link with ERM2 with a situation where we hope Denmark becomes a member of the EMU, do you think that there are further conditions that Denmark has to fulfil and, in your opinion, would there be additional advantages for Denmark in becoming a member of the EMU? Do you think,

Mr Duisenberg, that there would be advantages for the Euro if Denmark votes in favour? In other words, if Denmark becomes a member of the Euro will the Euro as a currency be strengthened? Thank you."

(ii) "The Bundesbank recently expressed some concern over the enlargement of the eurozone. Some analysts also say that new Member States have to catch up and then enter the eurozone. Do you see the process of catching up as an obstacle to entering the eurozone? Do you think that the process of catching up is compatible with membership of the eurozone?"

- **Topic 3: Financial Stability and Regulation**

(i) Mr Trichet, thank you for your remarks on hedge funds, which I still find very interesting and relevant. You said that there are not that many, but those which are there are very big, and it is a huge and increasingly important development on our financial market. I would add some points. Firstly, over the last three years in the European capital markets and in industry we have seen an increasing importance of these capital funds. I think we can expect an ever-increasing development of capital funds operations and hedge funds on the European markets. It is a simple fact that the business model for many hedge funds has changed over the last few years, because we have had very low interest rates and these have led hedge funds to invest in items other than normal interest-bearing items, i.e. stocks, first and foremost. When I look at the case studies on specific firms, I see an astonishing amount of specific cases in which hedge funds have led to a tripling or quadrupling of the internal debt of these firms, emptying their capital and a quick withdrawing of shareholders' values as a net effect of these operations. When I add to that the well-known herding and crowding effect of many hedge funds, we have a positive correlation between their actions. When I add to that the credit derivatives with over-the-counter dealings, I see some risks and dangers, which lead me to the following questions. First, Mr Trichet, could you imagine some reporting requirements for hedge funds that could give us a better monitoring basis in the private and public sectors, including yours? Second, could we imagine some well-structured requirements for information which would give us better transparency for hedge fund operations? Lastly, when you said we need a worldwide agreement, I cannot help thinking that there is the New York Stock Exchange; there is a monitoring system in the US which is far-reaching and much more demanding than in most places in Europe. We have the City Code in London, but do you not see that this lack of balance in monitoring procedures, transparency and access is in itself having a lagging-behind effect on the European financial markets? This underlines that we have to do something more than we have done in the past."

(ii) "Mr President, I commend the European Central Bank for the injection of liquidity. I believe that under extraordinary circumstances, exceptional means should be used. At the same time you have used a series of words like correction of markets, enhancing transparency, getting more clarity, shunning opacity of markets, but arguably - and you have also mentioned that - we can extract useful lessons from current events, from a very serious crisis in my view, but similar lessons could also have been learnt against the background of the Asian crisis, the long-term capital management episode. So I am asking myself if that is the case - and it is a very serious crisis which cannot isolate only the sub-prime market and use the sub-prime market as a way to deal with this crisis - are we not facing very serious flaws in our regulatory frameworks, in our regulations? If that is the case - and you also mentioned the single market and global financial markets - I believe that Tommaso Padoa-Schioppa has made very commonsensical comments in this respect. It is raising the issue of convergence of regulations which some people in the EU do not like. But that issue also raises another issue, a very legitimate one. What is the content of the regulations? What is the nature of the regulations? How can we regulate financial innovations so that the detrimental effects of financial innovation do not bring about a systemic crisis?"

- **Topic 4: Banking Supervision and Macroprudential Policy**

(i) "Thank you, President Draghi, for being here once again and for being available to address issues that are of key importance to the Committee on Economic and Monetary Affairs. I would like to pick up on the issue of non-performing loans, which the ECB and you yourself actually have described as a key - or even the key - vulnerability in the European banking system. I would also like to mention the issue of EDIS, of course, as rapporteur, of which I know that the ECB is a strong proponent. We hope to be ready soon within our team of shadows to also be able to hold a meeting with your experts on this issue. Of course, the issue of NPLs - let's call it risk reduction - and EDIS - let's call it risk sharing - are interlinked, not only in terms of content, but also politically, I'm afraid. Hence my questions: How can we make progress on EDIS, which is what we want as a team of shadows and a rapporteur, if there is such reluctance in some Member States to address the issue of non-performing loans - I refer, of course, to the reactions to the proposed ECB guidance on the matter; and what in your view is the best way to address NPL flow, and stocks even, since the issue won't miraculously solve itself; what do you think is a realistic timetable to bring NPLs down to a level comparable to the international level? These are key issues that are interlinked, through the issue of EDIS, that we will have to address as rapporteur and shadow rapporteurs. I thank you already beforehand for your strong commitment to both issues and for your answers."

(ii) Welcome, President Draghi. My first question concerns the lessons one might like to draw from the past decade for the ECB system. In particular, I would like to ask you whether we have already reached the optimal degree of centralisation, especially with regard to national central banks in the ECB system.

With hindsight, it would appear that the responsibilities of national central banks for ELA, ANFA and PSPP ought to be reviewed. Similarly, some of the debates we have with regard to TARGET 2 could be defused in a much more centralised system. I would be curious about your take on such steps. They would of course require legal changes. My second question concerns the concept of SBBS. The ESRB did an excellent report on the subject. I am sorry to talk about something to do with the ESRB already, but this is my speaking slot. Following that report, the Commission proposed legislation to help the introduction of ESBEs. However, there is one major difference between the ESRB proposal and the Commission proposal. It concerns the question of the treatment of the junior tranche in bank balance sheets, in particular whether it should be treated as risk free. I am concerned that, if the junior tranche were to be treated as risk free, this would defeat the entire purpose and of course the idea is really to create a very safe asset with the senior tranche. I would be curious to know your take on that matter, which we are currently discussing in Parliament.

- **Topic 5: Monetary Policy / Money Growth and Unconventional Policies**

  (i) "So Mr. Draghi, do you think that there should be no volume restriction for the PSPP - now it is only about the PSPP, not about the entire APP - and the ECB can continue the program indefinitely if necessary? Do I understand you correctly?"

  (ii) Thank you, Chair. It is good to have you here and let me thank you once again for the job you do. I will refer to the topic that you discussed at length at the beginning, namely the question of communication and forward guidance. I have two issues on which I would like to know your opinion. The first is that obviously forward guidance on interest rates can help you to deliver the message on monetary policy and so influence the longer end of yield curve. At the same time, one can argue that if the forward guidance is extensive and there is, in the meantime, a change of circumstances, you can get into a situation where monetary policy reaction is not optimal. If the central banks react too late, the cost of adjustment would then be higher. So the first question is: how do you see a balancing of these two goals? The second is: how do you see forward guidance in the future? On the one hand, we can say that this is a commitment, but if it is commitment, then the issue of the optimality of monetary policy is there. On the other hand, if this is a conditional commitment, it depends on the future development of the economy. It can be argued that more transparency in inflation forecasting can deliver exactly the same result. So I wonder how you see that second point.

- **Topic 6: Institutional Issues**

  (i) "If you didn't understand me, please repeat what I said. I have a specific question. I made a statement regarding the myth of women who have had nothing to do with the setbacks of Lehman Brothers and Goldman Sachs. You understood that. You did not understand the question. I will therefore repeat it to you because I would have liked you to tell us a little more about the principle of decentralization which will be implemented within the framework of the single banking supervision mechanism. How can the ECB ensure that national authorities work well for the system and do not serve the exclusive interests of the Member States where they are established? If I understand correctly, should there not be a very close dialogue between the ECB and the national supervisory authorities, while knowing that the ECB is responsible, in my opinion, as a last resort, and that it must therefore have the means of this responsibility? Capito?"

  (ii) "Mr President, I seem to understand that you share the view that the mistake was made in the Treaty of Nice, all in all in attributing to the Council of Governors, by unanimous decision, the basic proposal on which to discuss. I believe that this proposal suffers from the need to find unanimity, and therefore to have a defensive proposal from the Board of Governors. Moreover, the fact that - I do not want my colleague Goebbels - if I have not misunderstood, Luxembourg will have more weight in the vote than Poland - and you, President, say that Poland is the only case - shows that it's a defensive thing. I would like to ask you: you have already said it, but are you really sure that this mechanism does not inevitably lead to sit in the Council of Governors by virtue of a national representation, and not on a level of personal independence of judgment? Does this mechanism not risk leading to a nationalization of the representations?"

- **Topic 7: Sovereign Adjustment Programs**

  (i) "Mr President, Mr Draghi, in Greece the memorandums have been a complete failure and yet I have heard nothing at all from you in the way of self-criticism or indeed the slightest acceptance of responsibility. In fact, you appear to be washing your hand of the entire matter like a latter-day Pontius Pilate. I must remind you that, despite receiving EUR 240 billion in loans under the first two memorandums, Greece still has 1.5 million unemployed, 40 % of its population living below the poverty line, GDP down by 26% and a debt that has risen unmanageably from 123% of GDP in 2010 to an expected 201% in 2016, according to the IMF. So why, despite the failure of the first two memorandums, are you, as a member of the Troika, continuing to pursue the same policy under the third memorandum? Why do you continue in the Troika to extort EUR 3,2 billion annually from Greek property owners under the special property tax, as well as increasing VAT to 23% in the Aegean islands, at a time when pensions are being cut and the welfare system is in tatters? Why are you authorising the auctioning of first homes in Greece? Why are you still refusing to agree to the reimbursement of over EUR 3 billion in

profits on bonds purchased at 40% below their face value by the ECB, and redeemed at their full value? Why then are you not ploughing back these profits back into projects to tackle youth unemployment, which currently exceeds 50%? Finally, do you intend to accept the haircut proposed by the IMF in order to make Greek debt more manageable? What is the situation regarding non-performing loans? Greece simply cannot take any more and is sending you a powerful message with today's general strike, Mr Draghi."

(ii) "Madam President, Mr Draghi, as you know, according to the October 26 decision, Greece's debt to the private sector will be cut by 50%. At the same time there is a decision by the private sector, private individuals, to join in this haircut, the so-called PSI, which you mentioned earlier, and according to the decision, this process must be completed by January 2012 to trigger the new agreement. loan agreement and assistance to Greece. As far as we know, the Greek government offers them haircut bonds guaranteed by the EFSF, but the EFSF is in crisis and at risk and many countries that participate in this mechanism and provide the greatest guarantees. The question is: Why and which bondholders would accept such a haircut in the face of dubious guarantees? And a second, perhaps more personal: How would you persuade these bondholders to sit at the negotiating table and accept the haircut, and even on a choking timetable, which you know very well."

- **Topic 8: Fiscal Policy and Structural Reforms**

(i) "Mr President, you were present in Dublin when the stability pact was negotiated. You know better than I that the word "growth" was added at the end, at the request of President Chirac. So there is nothing about growth in the stability pact. In this regard, I would like to ask you a supplementary question. You have just castigated these excessive deficits in certain large countries and you say that these deficits must be corrected. How do you judge the American deficit which will exceed 5% of the American gross domestic product this year, and the Japanese deficit which, probably, will reach 7% of the Japanese gross domestic product?"

(ii) "Mr. Speaker, you said earlier that you refused to comment on the American and Japanese budget deficits. Nevertheless, you are making yourself the champion of plowing and product market flexibility and you cite, as it were, the United States of America. However, I see that in Europe we are talking about stability and that America is currently producing growth. And the recent surge in American growth owes nothing to the flexibility of the American labor markets - we even speak of job-loss recovery or jobless recovery -, but it owes everything to American budget deficits, to the measures taken by the American government. and a much more accommodating monetary policy than that pursued by the European Central Bank. Shouldn't we still think about this American example, when we ask for stability in Europe, to have growth?"

- **Topic 9: Euro Coins and Banknotes**

(i) "Thank you very much President Duisenberg. Your position on the frontloading of notes before l January, I see that your position has not changed and your answer is still unsatisfactory for us. There are some new elements in your decision but it seems that some retail organisations, local authorities, consumers and even the Prime Minister of France have actually started to express their concerns about the question of frontloading and counterfeiting of notes as well. Concerning this argument about actually giving the notes too early, before 1 January, of course you would need somebody to accept this money before 1 January for there to be a problem. If there are no transactions, I think there is a very limited risk compared to the problems that we are hearing from retailers about the safety of having all these coins and problems and calculation mistakes as well. I think would be possible to get for example 100 euros beforehand a couple of days before 1 January and that would help a much bigger group of people. Now I quite agree with you that of course after a week or two everything will be fine. But our concern is that people are not going to be very knowledgeable about what the euro note actually look like, and that is our concern. So the question is: is it so difficult to change your thinking, your plan on this if you could get some effective solutions before the 1st of January, because this answer is really not satisfactory in particular from a safety point of view."

(ii) "Mr Duisenberg, you said that according to the May Regulation, it is not possible to distribute the Euro notes and coins four days in advance. You then say that for technical reasons the transition period cannot be reduced to one and half years but not under the Regulation. Now this implies that the Regulation can be changed if indeed that were to be the will of all those concerned in the European Union and I think that would be very useful indeed to get rid of people's fears and worries about this transition, this change-over weekend. You were also talking about confusion. I would say that I am in favour of one national tender but if on 1st January 2002, if the public is expected to keep a currency separate, what about blind people's organisations, shouldn't they get the coins and notes four days beforehand so that they can get accustomed to this ? And by way of conclusion, Mr Duisenberg, I would say that in the European Union we think that the best educated consumers in the world are being insulted if they will not be entrusted with keeping money for four days before they can actually use it."

- **Topic 10: Euro Area Governance**

(i) "Mister President! Then I can ask a question about your explanations: in your opinion, there can be no ex ante coordination for the establishment of a balanced policy mix in the euro area because the independence of the central bank could be affected. There could only be ex post coordination that made no sense economically or in terms of employment policy. Now I ask you: Nobody has any doubts about the independence of the American Federal Reserve; nobody has any doubts about the independence of Mr. Greenspan. Isn't the future of central banking perhaps the future of the American concept rather than the concept you brought in? Will that mean that one day we would have to come up with a kind of horizontal mandate more than is contained in the Maastricht Treaty today? We have seen a major change in the role of central banking over the past few decades. The central banking independence margin was by no means a given. Isn't it likely that a change in this direction is likely in the future of central banking?"

(ii) "Thank you Mr President, I would like to ask a question on the governance of the Central Bank and the national central banks since you have referred to the Court of Justice in April the case of the Governor of Latvia, Mr Rimsevics, suspended of his functions by the government on the grounds of corruption. The first part of my question is, first of all, what did you know, not only of the activities of customers outside the euro zone who could use this central bank or of the risks of money laundering as they have been identified by the American Congress, but especially of the governor's behavior and actions and the risks of drift? We understand that you have inquired of the Court concerning the procedure in Latvia but a question arises all the same: how, in the event of a suspicion or a concern as to the probity of a governor of central bank of one of the member states of the zone, do you think that one should intervene to make stop its functions in the respect of the statutes of the Central Bank and the independence of the national central banks?"

- **Topic 11: Monetary Policy / Interest Rate Policy and Inflation Outlook**

(i) "In any case, the real interest rates are higher than the growth rate, which is not normal according to economic theory. You have seen that your colleague from the US Federal Reserve has set a level of interest which is below that of inflation, that is to say a negative interest rate. So, I would like to know if it is normal that the short-term interest rate is above the growth rate of the economy? What are you thinking of doing for those virtuous countries where the inflation rates are lower, and therefore suffer from rather punitive interest rates? On the other hand, I would like a reply to my first question, do you feel that the drop in industrial activity over a year is sufficient to take the growth rate below the potential growth rate, or do you intend to continue to cause industrial growth to fall in Europe?"

(ii) "Mr President, Chair, You have said time and again today that you consider inflation a monetary phenomenon, but, of course, money comes with a velocity and velocities are usually changeable, so one wonders where that leaves your first pillar? But that is by the way. The main question is, even you will not insist that raising interest rates leads to an acceleration of the rate of growth. We are advised by our experts that the weakness of the Euro is explainable by the persistent growth differential in favour of the United States, which your interest rates rise does not seem to do anything to diminish. If so, and if it is indeed true that the weakness of the Euro is due to a differential growth effect, by your raising of the interest rates you are prolonging, one would say, the weakness of the Euro, the improvement of which has not been spectacular in the markets, let's face it. Therefore, by trying to fight inflation you are exacerbating one of the tendencies to inflation which is the low Euro, you admit. I wonder how you would comment on that."

C Robustness tests

Table C.1: Robustness Tests on Macroeconomic Determinants of MEPs' Voice on Primary Mission - Generalized linear model estimations

	Share of speeches dedicated to Primary Mission							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Inflation$_{t-1}$	0.0370	0.0372	0.0388	0.0712				
	(0.033)	(0.042)	(0.042)	(0.055)				
Inflation Deviation$_{t-1}$					-0.0222	-0.0050	-0.0053	-0.0353
					(0.033)	(0.044)	(0.044)	(0.059)
Unemployment Rate$_{t-1}$	-0.0354***	-0.0337**	-0.0367**	-0.0448**	-0.0407***	-0.0394***	-0.0424***	-0.0532***
	(0.011)	(0.014)	(0.014)	(0.022)	(0.009)	(0.012)	(0.013)	(0.021)
Real GDP growth$_{t-1}$	-0.2366	1.0005	1.9624	0.0888	-0.5625	0.8190	1.7119	0.0788
	(3.207)	(3.685)	(3.800)	(4.336)	(3.213)	(3.701)	(3.805)	(4.467)
Credit to private sector (% of GDP)$_{t-1}$		0.0007	0.0005	0.0063*		0.0010	0.0009	0.0072*
		(0.003)	(0.003)	(0.004)		(0.003)	(0.003)	(0.004)
Long-term interest rate			0.0221	0.0521			0.0209	0.0540
			(0.030)	(0.039)			(0.031)	(0.039)
Nonperforming loans to total loans$_{t-1}$				0.0020				-0.0010
				(0.011)				(0.011)
Controls:								
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Meeting FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Political groups FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,906	1,611	1,611	1,034	1,906	1,611	1,611	1,034

Robust standard errors in parentheses. ***, **, * denote significance at a 1%, 5% and 10% level, respectively.