## What Do Central Bankers Do? Evidence from the European Central Bank's Executive Board\*

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#### Abstract

This paper examines how managers at the top of a public institution, central bank executives, allocate their working time. Using detailed information from personal diaries of the six members of the European Central Bank's Executive Board over a period of two years, we codify and analyze more than 3,700 reported activities and compare the results with recent findings on the time use of CEOs in the private sector. We report four additional observations. First, the daily schedule of central bankers is dominated by routine tasks; variations in economic uncertainty have, on average, no significant effect on the number of activities. Second, there are sizable differences in the scope of activities across board members. Third, the change in publication rules of diary entries from 'on request' to 'regular' was associated with a significant decline in reported activities. Fourth, nationality matters: Board members interact disproportionately often with fellow nationals.

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"I'm late, I'm late, for a very important date."

Alice in Wonderland
(Walt Disney Productions, 1951)

## 1 Introduction

Central banks typically face a challenging trade-off when communicating about their activities. On the one hand, the provision of information is widely believed to improve the effectiveness of monetary policy making. Being open about goals and strategies makes a central bank accountable. Also, explaining decisions and their background allows observers to better anticipate central bank actions. The European Central Bank (ECB), for instance, pursues, in line with this reasoning, a policy of 'forward guidance', providing explicit statements on the future path of monetary policy (European Central Bank, 2014).

On the other hand, central banks value confidentiality. With respect to policy-making, it is argued, for instance, that too much information, instead of providing additional insights, possibly confuses agents, thereby increasing uncertainty. External review may also distort internal behavior. Hämäläinen (1998) notes, for instance, that "[i]f detailed minutes and voting records were published, the discussions of the collegial [ECB] Governing Council would certainly become less frank and open-minded." Vickers (1998) argues, more generally, that "there is surely information relevant for policy-making that is simply incapable of being put in the public domain." Overall, in view of these conflicting arguments, van der Cruijsen, Eijffinger, and Hoogduin (2010) conclude that there may be an optimal degree of central bank transparency.

In this paper, we examine a novel feature of central bank transparency, the release of the meeting calendars of leading central bank executives. Before publication of this information, insights into the daily schedule of top central bankers were limited; they were also highly selective. Descriptions from inside central banks are basically restricted to autobiographies by central bankers, which are typically written and published years after their term of office has expired and often take a nuanced, not necessarily balanced perspective. External characterizations of work habits and routines include biographies and central bank histories;

<sup>&</sup>lt;sup>1</sup>A number of papers provide empirical evidence in line with this view. Fatás, Mihov and Rose (2007), for instance, argue that having a quantitative target for monetary policy tends to lower inflation and smooth business cycles. Dincer and Eichengreen (2014) find that greater central bank transparency is associated with lower average levels of inflation and lower inflation variability.

<sup>&</sup>lt;sup>2</sup>Issing (1999, p. 517-18) notes, in similar fashion, that "[w]e make no claim for complete transparency and we do not pretend to live in a perfect 'glass house'." Conti-Brown (2016, p. 266) even argues that "the Fed's governance is complicated, confused, and opaque."

<sup>&</sup>lt;sup>3</sup>An exception may be public statements by central bank officials in which they describe their daily routine. For example, when asked about how he managed to find the time to write a bestselling (though controversial) book, a former Executive Board member of the Deutsche Bundesbank noted that as central banker, work was done by Tuesday afternoon (Sarrazin, 2011).

these portrayals, however, hardly provide a comprehensive account of day-to-day activities of central bankers.

Our analysis of the time use of central bankers draws on detailed listings of the daily events of the ECB's key officials, including its President and Vice-President, which have been recently made available mainly in response to requests under the European Union Freedom of Information rules. After all, despite various dimensions of independence, the ECB is a public institution and its staff members are public servants. Consequently, the data and information provided to the public should meet certain standards in terms of completeness and accuracy.

After digitizing and codifying the information from the calendars of the (six) Executive Board members of the ECB, we compile a data set that covers more than 3,700 individual activities for two non-consecutive years over the period from 2014 to 2016. We then analyze this data along various lines. Apart from providing stylized facts about management practices and daily routines in a public institution, we particularly aim at identifying empirical regularities of central bankers' activities related to the mandate and tasks of the central bank.

Previewing our main results, we find that the daily schedule of the ECB's Executive Board members is dominated by routine tasks. A substantial share of the reported activities is represented by meetings that take place at regular intervals. Also, there is no variation in activities over time that can be reasonably related to economic fundamentals. Across individual board members, in contrast, there are considerable differences in both the number and range of activities, possibly explained, in part, by their different responsibilities within the institution. Examining joint patterns in diary entries, there is strong evidence of a secrecy bias. With the change in publication rules from 'on request' to 'regular', there has been a measurable decline in reported activities. We also find, in line with Badinger and Nitsch (2014), that nationality matters. Board members tend to interact disproportionately often with fellow nationals.

The remainder of the paper is organized as follows. Section 2 briefly reviews the relevant literature. Section 3 describes the institutional background and discusses features of our data. The heart of our paper is Section 4, which presents the empirical model and estimation results. Finally, Section 5 concludes.

## 2 Related Literature

Our paper links to various strands of research. An established literature, for instance, examines issues in central bank design. Among the wide range of features discussed, a large body of work focuses on the size and structure of central bank decision-making bodies, especially monetary policy committees. Another design feature, which is of even more relevance to us, is central bank communication.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup>In practice, the communication policies of central banks differ substantially around the world; policies also turn out to be frequently adjusted and retailored. While there is no consensus on which communications strategy constitutes 'best practice' for central banks, Blinder, Ehrmann, Fratzscher, De Haan, and Jansen (2008) argue that more and better central bank communication helped to improve the predictability of monetary policy decisions.

Blinder, Ehrmann, Fratzscher, De Haan, and Jansen (2008) review the rapidly growing empirical literature and conclude that communication policy is an important instrument in the central banker's toolkit.

Another set of papers aims to empirically assess the effects of management. Bloom, Sadun, and Van Reenen (2012) examine differences in the organization of firms across countries. Other papers analyze the effects of managers (Bertrand and Schoar, 2003) and management practices (Bloom, Eifert, Mahajan, McKenzie, and Roberts, 2013) on firm policies and firm performance. After documenting considerable variation in managerial styles and practices, these papers typically find that managers and management have a sizable impact on organizational performance.

The paper that is most closely related to ours is Bandiera, Guiso, Prat, and Sadun's (2010) study on the time use of managers. After having collected, with admirable effort, detailed information on how CEOs allocate their time between different work activities, they document a number of stylized facts of CEO behavior. CEOs are found, for instance, to spend the largest part of their days with other people, most of whom belong to the firm. More importantly, the more time the CEO spends with insiders, the better the company does.

Bandiera, Guiso, Prat, and Sadun (2010) examine extremely detailed time use data, covering, in principle, all the activities of CEOs that last longer than 15 minutes. The data is recorded by the CEOs' personal assistants for the period of a pre-specified week (from Monday to Friday). It is collected for 94 CEOs of top-600 Italian firms. Our data, in contrast, is public information. It covers selected activities of six top executives of a public institution, the ECB, for a period of two non-consecutive years (including weekends).

## 3 Institutional Background and Data

## 3.1 Institutional Background

In our empirical analysis, we examine the daily schedules of the six members of the Executive Board of the ECB. The board consists of the President, the Vice-President and four members who are all formally appointed, for a non-renewable term of eight years, by the Council of the European Union at the level of heads of government and heads of state.<sup>5</sup> While dates of appointment differ, ensuring that not all members need to be replaced at the same time, the composition of the board is unchanged over our sample period. Table 1 lists the members of the board, who served terms during our sample period and provides some personal background information.

< Table 1 here >

<sup>&</sup>lt;sup>5</sup>The European Parliament is also consulted. It cross-examines the candidates at a public hearing in its Economic and Monetary Affairs Committee, then discusses the candidacy in a parliamentary plenary session. It has no power to veto an appointment, however.

The board runs the central bank's day-to-day business. Among other duties, it sets the agenda for ECB meetings, prepares the economic analyses and makes initial recommendations on policy. Operational decisions are taken jointly. However, each member also has responsibility for important functions of the central bank; see Appendix Table A1. The board forms, along with the governors of the national central banks of the (currently 19) euro area countries, the Governing Council, which is the main decision-making body of the ECB, responsible for formulating monetary policy for the euro area.

#### 3.2 Data

On Friday, 30 October 2015, the ECB issued a press release in which it announced that it will publish, from now on, the monthly meeting calendars of its Executive Board members.<sup>6</sup> Since the calendars are published after a disclosure period of about three months, the first diaries, with data for November 2015, were released in February 2016. Since then, the meeting calendars have been published regularly on a monthly basis.<sup>7</sup>

In its press release, the ECB motivated the introduction of this new element in the central bank's communication strategy, which complements the information already available to the public (such as the weekly schedule of speaking engagements, speeches, and transcripts of media interviews), by "the ECB's commitment to transparency and accountability". Three days later, however, on Monday, 2 November 2015, the Financial Times reported, in a front page story, that the newspaper has obtained meeting calendars of the Executive Board members after a freedom of information request.

While the ECB's initial press announcement went largely unnoticed, with no coverage in major newspapers, the Financial Times story made headlines because the data show that some board members had met market participants either during or shortly before key policy meetings, thereby illustrating the tight links between central bank officials and the financial services industry. The information provided to the Financial Times, covering the period from August 2014 to the end of July 2015, is available on request from the ECB's communications division.

Based on this information, we compile a data set of the activities of the Executive Board members of the ECB for two non-overlapping periods of 12 months from August 2014 to July 2015 and from November 2015 to October 2016. For each activity, the calendars provide the date and location of the activity as well as a brief description.<sup>8</sup> In total, our data set comprises 3,723 entries, or about 0.8 (1.2) entries per member and (business) day, with considerable variation across board members and over time. The last column of Table 1 tabulates the number of reported activities by board member.

<sup>&</sup>lt;sup>6</sup>The press release is online available at https://www.ecb.europa.eu/press/pr/date/2015/html/pr151030.en.html

<sup>&</sup>lt;sup>7</sup>The information is online available at https://www.ecb.europa.eu/ecb/orga/transparency/calendars-of-the-EB-members/html/index.en.html

<sup>&</sup>lt;sup>8</sup>The calendars for the first 12-month period also include the actual time of the activity, which we do not explore here.

After digitizing the information from the calendars, we codify the data and generate two additional variables. First, we classify calendar entries by type of activity. In particular, we categorize each activity under one of 21 headings, generally distinguishing between i) official duties, which typically take place at regular intervals and where participation is de facto mandatory (e.g., Executive Board meetings), and ii) other, 'less-official' activities, referred to as meetings in the following, where participation is not always mandatory or based on invitations (e.g., participation in conferences), or which take place on a board member's initiative. The types of activities are listed in Table 2. Second, whenever possible, we identify the nationality of the Executive Board members' counterpart involved in the activity. Meetings with counterparts for whom the nationality is identifiable account for about one third of the reported activities (1,311 entries).<sup>10</sup>

< Table 2 here >

Finally, we augment our calendar data with variables from standard sources (such as, for instance, the ECB's capital subscription key).

### 3.3 Descriptive Statistics

The monthly calendars list only selected activities. These activities include appointments with external parties, unless release of the information could undermine the protection of public interests recognized at EU level, and various internal meetings, most of which are regularly scheduled. The calendars miss, however, many irregular, unscheduled internal activities of the board members and therefore provide only an incomplete picture of the entire use of central bankers' working time. Still, they contain valuable information that can be exploited to derive interesting insights.

Table 3 describes the (reported) activities of the ECB's Executive Board members along various dimensions. When calendar entries are classified by type of activity, for instance, it turns out that activities of board members are almost equally split between official duties and meetings (see above). Moreover, among those other management assignments, which typically imply interactions with outsiders, meetings with government officials dominate, followed by meetings with representatives of media and of the financial services industry.

It is also interesting to note that, despite the considerable variation in internal and external counterparts, the majority of the reported activities take place at the headquarters of the ECB in Frankfurt, Germany. Other frequently visited locations include places in Germany, Belgium (which hosts many European Union institutions), and the United States. Finally, reviewing interactions with

<sup>&</sup>lt;sup>9</sup>Strictly speaking, both types of activities are 'part of the job' of a central banker and hence official.

<sup>&</sup>lt;sup>10</sup>For example, Peter Praet's calendar lists a "meeting with BBVA", a Spanish banking group, in Milan, Italy on September 11, 2014 (from 8.30 to 9.15am). For this event, the geographic location (Italy) and the nationality of the counterpart (Spain) differ, and both features are codified.

counterparts from a specific country, meetings with government officials top the list of interactions with nationals from major European countries, while meetings with the financial industry are the most frequent activity with counterparts from the United States (and also the United Kingdom, for which results are not shown).

< Table 3 here >

Figure 1 illustrates patterns in activities over time. The upper graph, which plots the number of activities by month, displays a weak seasonal pattern, with a notable decline in activities during holiday seasons, especially in the month of August. The lower graph presents the analogue for the days of the week. This graph shows that the busiest period for board members is the middle of the week. However, a non-negligible share of activities also takes place on weekends, thereby reflecting an irregular work schedule, which seems typical for top executives.

< Figure 1 here >

## 4 Empirical Results

The calendar entries and their descriptive statistics provide some interesting insights into the daily work schedule of central bankers. However, for a more systematic assessment of Executive Board members' behavior (at work), we now turn to more comprehensive statistical analysis.

### 4.1 Transparency

We begin our empirical analysis of the board members' calendar entries by examining the consistency in reporting activities over time. In particular, we hypothesize that the change in publication rules for the calendars of the board members from 'on request' to 'regular' has been associated with a change in the willingness to disclose information to the wider public. After all, knowing in advance that diary entries will be made public may affect how the board members keep their diaries. To analyze this issue empirically, we set up and estimate empirical models of the form:

$$NumEntries_{mt} = \beta DumRegular_t + \gamma_m + \delta_s + \varepsilon_{mt}, \tag{1}$$

where  $NumEntries_{mt}$  is the log of the number of monthly calendar entries of board member m at time t,  $DumRegular_t$  is a dummy variable taking the value of one in observation periods, where the calendar has been released regularly as part of the ECB's communication strategy (and zero otherwise),  $\gamma_m$  and  $\delta_s$  are sets of member-specific and calendar month-specific fixed effects, respectively, with the latter capturing seasonal variations in the number of entries, and  $\varepsilon_{mt}$  is an idiosyncratic error term. The parameter of interest to us is  $\beta$ , which captures

systematic changes in reporting behavior between the two periods with different publication rules.

Table 4 presents the results of a least squares estimation of equation (1). In the first column, we consider aggregate time-series data on calendar entries, using as regressand the total number of reported activities in a given month, summed over all Executive Board members. With one observation per month, there are only 24 observations used in this tentative regression. Still, as shown in column (1), the estimate of parameter  $\beta$  is negative and, with a t-statistic of about 3.7, highly statistically significant. Moreover, the estimated effect is sizable in magnitude, suggesting that the number of reported activities decreased by about 28 percent after the regime shift, which made publication of the board members' calendars a regular part of the communication strategy of the ECB. This finding is an indication that from then on calendar entries have been screened more critically.

#### < Table 4 here >

Column (2) exploits the panel dimension of our data and replicates the analysis for the cross-section of individual board members and the same time period. Apart from increasing the number of observations by factor six, this specification also allows to control for differences in reporting behavior between board members by including Executive Board member fixed effects. Reassuringly, the results remain qualitatively and quantitatively unchanged with this extension.

In the remaining four columns of Table 4, we examine a possible explanation for the observed decline in the number of reported activities of the ECB's Executive Board members. In particular, it seems plausible that, after the switch to the regular release of their meetings calendars, board members tend to report fewer activities of the type, which led to public criticism after the ad hoc publication of their diaries, especially meetings with the private sector. Accordingly, the decline in the number of calendar entries should be particularly observable in these categories of diary entries, while the change in publication rules is expected to have had little or no consequence for the number of activities related to official duties. As shown in columns (3)-(6) of Table 4, however, the estimated decline in the number of reported activities is negative in all specifications and, if anything, larger in magnitude for official duties than for non-official activities (meetings), therefore refuting this hypothesis.

To further analyze this issue, Figure 2 plots the estimates of  $\beta$  for each type of activity listed in Table 2, using the monthly number of reported activities in a given category instead of the total number of activities as regressand. Considering the results for various types of official duties (plotted at the top of the figure) in more detail, it is remarkable that the number of reported Executive Board and Governing Council meetings has fallen considerably, despite the fact that the regular frequency of Governing Council meetings has remained unchanged over the sample period.<sup>11</sup>

<sup>&</sup>lt;sup>11</sup>As a rule, the Governing Council holds its meetings twice a month, with exceptions being possible (for instance, to accommodate special holiday situations). The interval of Governing

Part of the explanation is a drop in irregular Governing Council meetings, especially teleconferences.<sup>12</sup> Moreover, the decline in reported Governing Council meetings has been partly compensated by an increase in the number of meetings of (other) ECB committees. Most importantly, however, and as shown in the middle of the figure, board members also report, in line with intuition, significantly fewer meetings with government, media and bankers after the practice of regularly publishing the board members' monthly calendars had been established.

### 4.2 Responsibilities

In our next empirical exercise, we explore the cross-section variation in the scale and scope of individual board members' activities. Specifically, it may be argued that central bank executives, similar to top managers in the private sector, perform both internal business functions as well as external representation functions. These functions are likely to differ across positions, depending on the board members' responsibilities. For example, the President of the ECB is expected to have more external appointments than other board members. Appendix Table A1 lists the distribution of responsibilities across members of the ECB's Executive Board.

We compare the meetings calendars of board members along various lines. In general, our estimation equations takes the form:

$$ShEntries_{mt} = \sum_{m} \beta_{m} Dum Member_{m} + \delta_{s} + \varepsilon_{mt}, \qquad (2)$$

where  $ShEntries_{mt}$  is the share of selected activities (such as official duties) in the total number of monthly calendar entries of board member m at time t,  $DumMember_m$  is a dummy variable which identifies an individual ECB Executive Board member m (such as the President),  $\delta$  is a comprehensive set of calendar month-specific fixed effects, and  $\varepsilon$  is the error term. Using shares instead of plain numbers of calendar entries as dependent variable not only corrects for differences in the number of reported activities across board members, it also deals with the change in reporting behavior after the switch in publication rules.

In our analysis, we proceed sequentially. In the upper panel of Table 5, we tabulate the estimates of  $\beta$  for the President of the ECB, Mario Draghi, relative to all other members of the Executive Board (meaning that their parameters are effectively restricted to equality and captured by the constant term). To describe individual work schedules, we compute two variables, which we use as regressands: the share of official duties in total activities (column (1)) and the share of reported

Council meetings dedicated to monetary policy changed from monthly (the first Governing Council meeting of the month) to eight times a year, starting in January 2015; see https://www.ecb.europa.eu/press/pr/date/2014/html/pr140703\_1.en.html

<sup>&</sup>lt;sup>12</sup>With a view to ensuring that ECB decisions can be adopted at any time, the Executive Board established a regime for the adoption of decisions by means of teleconferencing; see https://www.ecb.europa.eu/ecb/legal/pdf/en\_dec\_1999\_7\_f.pdf

activities taking place at the headquarters of the ECB (column (2)). For both measures, however, it turns out that the estimated parameters are statistically indistinguishable from zero, indicating that the President's schedule does not deviate systematically from the average of other board members along these two dimensions.

#### < Table 5 here >

The lower panel of Table 5 reports analogous panel estimates, including dummy variables for each individual Executive Board member (apart from the President reflected by the constant term). Interestingly, six of the ten parameter estimates take values that are significantly different from zero. There is evidence, for instance, perhaps not surprisingly, that the daily schedule of Benoît Cœuré, who is the board member responsible for international relations, is predominantly characterized by irregular meetings and activities. Also, since a non-negligible share of his activities is devoted to meetings with external parties, many of his activities take place outside of the ECB. For the remaining board members, with the exception of Peter Praet, a disproportionately large share of internal activities is reported.

#### 4.3 External Conditions

Our data set on the calendar entries of ECB Executive Board members has, in comparison with other time use data, advantages and disadvantages. An obvious shortcoming is the relatively small sample size, both in terms of the number of individuals for whom data are available and in the scale and scope of daily activities on which information is released to the public. On the other hand, a major asset of our data set is the long time frame of 24 months over which activities are recorded, thereby allowing us to reasonably examine variation in individual behavior over time.

In our empirical analysis, we relate the daily schedules of the Executive Board members to economic conditions faced by the central bank. Although the ECB is engaged in a wide range of tasks, the ECB primarily defines and implements monetary policy with the aim of maintaining price stability, which is its primary objective.<sup>13</sup> Consequently, the internal workload may depend measurably on the level of complexity and uncertainty involved in assessing the macroeconomic environment in the euro area.

In our analysis, we make use of a new measure of economic policy uncertainty. Baker, Bloom, and Davis (2016) construct country-specific indices of uncertainty by searching the digital archives of international newspapers for certain keywords

<sup>&</sup>lt;sup>13</sup>Hartmann and Smets (2018) apply textual analysis to identify the topics that were addressed in 1,892 public speeches by the ECB's Executive Board members for the period from May 1998 to April 2018. Despite a remarkable breadth of issues, the core theme of monetary policy and inflation covered a sizable share of speeches most of the time.

(including, but not limited to, "uncertainty" or "uncertain").<sup>14</sup> We relate the number of reported activities to their index for Europe and expect the work schedule of central bankers to intensify (and the number of activities to increase) in times of greater economic policy uncertainty.<sup>15</sup>

Figure 3 plots the uncertainty index along with the total number of board member activities over time. While there is some notable variation in uncertainty, with a particularly strong increase in uncertainty in the year 2016, the monthly number of board member activities seems to be mainly dominated by a seasonal pattern. Therefore, there is no obvious visual evidence of a relationship between uncertainty and board members' activity.

#### < Figure 3 here >

To further analyze this issue, we expand equation (1), which accounts for the structural break in reporting behavior, and estimate equations of the form:

$$NumEntries_{mt} = \alpha Uncertainty_t + \beta DumRegular_t + \gamma_m + \delta_s + \varepsilon_{mt}, \quad (3)$$

where the variables are defined as before and  $Uncertainty_t$  is the log of the economic policy uncertainty index for Europe in period t from Baker, Bloom, and Davis (2016).

Table 6 presents the results. Analogous to Table 4, we begin with a time series analysis, using as dependent variable the total monthly number of reported board member activities, aggregated across all board members. In this specification, the estimate of  $\alpha$  takes a counter-intuitive negative sign, although the coefficient is only weakly significant at the 10 percent level. However, the estimated coefficient increases in both (absolute) value and statistical significance when we apply a panel data approach and analyze activities at the level of individual board members (column (2)). Counter to our expectations, therefore, our empirical results suggest that the effect of policy uncertainty on board member activity is, if anything, negative.

#### < Table 6 here >

In the remaining columns of Table 6, we tabulate the estimation results for official and non-official activities, respectively. While the parameter estimates of  $\alpha$  again

<sup>&</sup>lt;sup>14</sup>The data are regularly updated and available online, in monthly frequency, at http://www.policyuncertainty.com/. For the European index, Baker, Blook and Davis (2016) draw on two newspapers per country: Le Monde and Le Figaro for France, Handelsblatt and Frankfurter Allgemeine Zeitung for Germany, Corriere Della Sera and La Repubblica for Italy, El Mundo and El Pais for Spain, and The Times of London and Financial Times for the United Kingdom. All our results remain virtually unchanged when their index for Europe is replaced by an individual country-level index of uncertainty.

<sup>&</sup>lt;sup>15</sup>We obtain similar results when we use the uncertainty index for the euro area compiled by Husted, Rogers, and Sun (2016).

indicate a strong decline in official activities during times of uncertainty, we do not obtain any robust results for meetings.<sup>16</sup>

Overall, the daily schedule of central bankers seems to be dominated by a regular work routine. Specifically, there is no evidence that the working time of Executive Board members, according to their reported activities, varies with external economic conditions (e.g., becomes more hectic during times of greater uncertainty). This finding suggests, as it is comforting to note, that established routines and procedures are often sufficient to deal with challenging situations.

#### 4.4 Home Bias

In the ECB, as in any other European Union institution, staff members are expected to perform tasks in the interest of the (entire) European Union (or, for that matter, euro area). Therefore, the national background of candidates is typically not considered to be an important selection criterion for appointment and promotion.<sup>17</sup> For Executive Board members, for instance, the EU Treaty stipulates that the person "shall be appointed from among persons of recognized standing and professional experience in monetary or banking matters." <sup>18</sup>

In practice, however, nationality matters – a lot. In the Executive Board, the largest member countries of the euro area, Germany, France, and Italy, accomplished to have a national representative in this management circle since the establishment of the ECB, thereby continuously filling three of the six positions. Badinger and Nitsch (2014) note that national representation in the top management of the ECB is narrowly spread across countries and find, more alarmingly, that monetary policy decisions seem to be linked to national representation in the core business areas of the ECB.

In the following, we examine the intensity of the ECB's Executive Board members' national ties in terms of i) the frequency of their home country visits and ii) the frequency of their meetings with fellow nationals. Obviousy, significantly more frequent activities in the home country or with fellow nationals would be indicative of strong home country linkages (or 'home bias').

To analyze this issue, we estimate the following model:

$$NumEntries_{mct} = \beta DumHome_{mc} + \xi X_{ct} + \gamma_m + \eta_c + \theta_t + \varepsilon_{mct}, \tag{4}$$

where  $NumEntries_{mct}$  is the number of monthly calendar entries of board member m with counterparts from country c at time t,  $DumHome_{mc}$  is a dummy variable which takes the value of one when a counterpart's country is the home country of the board member (and zero otherwise),  $X_{ct}$  is a vector of additional control

<sup>&</sup>lt;sup>16</sup>Since equation (2) extends equation (1) by a control variable, it is worth noting that the qualitative and quantitative results regarding the effect of the change in the reporting rules (reflected by the estimate of  $\beta$ ) remain unchanged for meetings, whereas the effect on the reporting of official duties is rendered insignificant.

<sup>&</sup>lt;sup>17</sup>As a general rule, however, the ECB appoints only nationals of European Union member states, in line with the Staff Regulations of officials of the European Communities.

<sup>&</sup>lt;sup>18</sup>See Article 109a of the Treaty on European Union, online available at https://www.ecb.europa.eu/ecb/legal/pdf/maastricht\_en.pdf

variables,  $\gamma_m$ ,  $\eta_c$ , and  $\theta_t$  are comprehensive sets of member, country-, and time-specific fixed effects, respectively, and  $\varepsilon$  is the error term.

We employ alternative empirical specifications of our estimation model. In a first set of exercises, we focus on the location of the activities reported in the board members' calendars. We begin with a qualitative analysis, using as regressand a binary dummy variable which takes the value of one when a board member m has paid an official visit to a country c in a given month t (and zero otherwise). Our panel is balanced and contains (6 members  $\times$  24 months  $\times$  41 countries =) 5,904 observations. The results are tabulated in the upper panel of Table 7.

#### < Table 7 here >

Column (1) presents the estimation results from the most parsimonious specification of equation (4), a bivariate probit regression, which includes only our key explanatory of interest, the home country identifier. As shown, the estimate of  $\beta$  is positive and statistically highly significant, indicating that there is strong evidence of a home bias in the board members' travel activities as it implies that a country is more likely to be visited by an Executive Board member, in official function, if it is his or her home country. However, while interesting, the result is only suggestive since it is bivariate.

Accordingly, in column (2), we additionally include controls, which proxy the relative attractiveness of countries as travel destinations from a central banker's perspective such as a country's economic weight (measured by the national share in the ECB's capital) and whether the country visited is the home country of other Executive Board members (measured by a dummy variable). The estimated coefficients on these controls take the expected (positive) sign. Moreover, with this extension, the point estimate of  $\beta$  is reduced by more than one half. Still, the estimated home bias effect remains of significance, both economically and statistically.

The effect is also robust to splitting the sample by publication period (and, therefore, also reporting standards), as shown in columns (3) and (4) of the table. In the final column of Table 7, we examine the most demanding specification of equation (4), including comprehensive sets of board member-, time- and country-fixed effects. Reassuringly, the estimation result is qualitatively and quantitatively unchanged.

The lower panel of Table 7 presents the analogues estimates, replacing the binary variable with the actual number of reported activities in country c in a given month as dependent variable. For this perturbation, using a Poisson estimator to take account of the count nature of the regressand, our findings again remain remarkably robust.

Table 8 replicates the analysis from Table 7. However, instead of focusing on the location of a reported activity, the nationality of the partner, if identified, is taken into account. It is reassuring to note that the results not only turn out to be robust to this perturbation, but increase in magnitude and significance.

< Table 8 here >

In sum, there is strong evidence that Executive Board members tend to keep strong national ties. They visit their home country more often; they also report more frequent activities with national compatriots. For governments of euro area member countries, therefore, it may be particularly attractive to place a national individual in the ECB's Executive Board.

## 5 Conclusions

For a long time, central banks have been accused of being secretive, a view that seems to be remarkably persistent. For example, Posen (2013, p. 166) writes, at the beginning of his review of journalist Neil Irwin's inside story of the world's most powerful central bankers, a bestselling book entitled "The Alchemists" (!), "Central bankers have always carried a mystique far beyond justification. Even as their policies and procedures have become markedly more transparent, the air of secrecy and power about them persists."

In reality, central banks have become strikingly more open over time. According to Haldane and McMahon (2018), there has been even a 'communications revolution', with an exponential growth in central bank communication over the past 70 years. Moreover, Blinder (2018) predicts that transparency is likely to increase further. Arguing that transparency is a one-way street, he claims (p. 567) that "[o]nce a central bank moves toward greater transparency in some dimension, it never reverts back to its old, less-transparent ways."

Among the central bank information disclosed to the public recently are listings of the daily schedule of the central bank's top executives. These listings not only provide interesting insights into how managers allocate their working time in a public institution, thereby complementing findings for the private sector, but also contain information useful for the understanding of the practice of monetary policy making.

In this paper, we analyze the activities listed in the published meetings calendars of the six members of the ECB's Executive Board. Based on this data, we find, perhaps not surprisingly, that the daily schedule of the ECB's key executives is dominated by routine tasks. It is interesting to note, however, that there are sizable differences in the scope of activities across board members (e.g., participating in events, which take place outside of the headquarters of the ECB), which are possibly explained, at least in part, by the members' different responsibilities within the organization. From a policy perspective, the most relevant result is that board members tend to interact disproportionately often with fellow nationals. As a result, national representation in the ECB matters.

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# Appendix

< Table A1 here >

Table 1: Executive Board Members of the European Central Bank, 2014-2016

Board Member	Since	Nationality	Birth Year	Nationality Birth Previous Position Year	Calendar Entries (2014-15, 2015-16)
Mario Draghi Vítor Constâncio Benoît Cœuré	11/2011 06/2010 01/2012	Italy Portugal France	1947 1943 1969	Governor, Banca d'Italia Governor, Banco de Portugal Deputy Director General, French Trea-	601 (327, 274) 539 (315, 224) 971 (553, 418)
Sabine Lautenschläger Yves Mersch	01/2014 $12/2012$	Germany 1964 Luxembourg 1949	1964 1949	sury Deputy President, Deutsche Bundesbank Governor, Banque centrale du Luxem-	621 (352, 269) 423 (225, 198)
Peter Praet	06/2011	Belgium	1949	bourg Executive Director, Nationale Bank van België/Banque Nationale de Belgique	568 (319, 249)

Notes: Calendar entries cover the periods 08/2014-07/2015 and 11/2015-10/2016, respectively.

 ${\bf Table~2:~Categorization~of~Calendar~Entries}$ 

Official Duties	Meetings
Executive Board	Academics
Governing Council	Associations
Supervisory Board	Bankers
ECB committees	Companies
Fora	Conferences
	European Union
	EU institutions
	Former officials
	Government
	Media
	National central banks
	Non-governmental organizations
	Organizations
	Other
	Receptions
	Supervised entity

Notes: Each calendar entry has been categorized into one of the listed categories.

Table 3: Characterizations of ECB Executive Board Member Activities

Indicator	Number	% of Total
By Activity:		
Official Duties	1,649	44.3
Internal Meetings	1,230	33.0
Meetings	2,074	55.7
Government	342	9.2
Media	303	8.1
Bankers	226	6.1
By Location:		
ECB	2,176	58.4
Germany (outside ECB)	330	8.9
USA	243	6.5
Belgium	232	6.2
By Partner and Activity:		
USA	229	6.2
Bankers	74	
Government	51	
Academics	45	
European Union	151	4.1
Fora	150	
Germany	150	4.0
Government	76	
Academics	32	
Bankers	17	
France	141	3.8
Government	75	
Bankers	35	
Academics	14	

Notes: The total number of calendar entries is 3,723.

Table 4: Publication Rules and Reported Board Member Activity

	All Activities Official Duties		Meetings			
Sample	Total	Member	Total	Member	Total	Member
	(1)	(2)	(3)	(4)	(5)	(6)
$\overline{DumRegular}$	$-0.280^{**}$ $(0.076)$	$-0.281^{**}$ $(0.046)$	$-0.301^*$ $(0.103)$	$-0.311^{**}$ $(0.045)$	$-0.247^*$ $(0.087)$	-0.258** $(0.075)$
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Member FE	No	Yes	No	Yes	No	Yes
Observations	24	144	24	144	24	143
Adj. $R^2$	0.79	0.75	0.67	0.72	0.75	0.61

*Notes*: OLS estimation. The dependent variable is the log of the number of monthly calendar entries. Robust standard errors in parentheses. \*\*, \* and # denote significance at the 1%, 5% and 10% level, respectively.

Table 5: Responsibilities and Board Member Activity

	Share Official Duties	Share Location ECB
a) President		
Dummy Draghi	0.033 $(0.025)$	-0.054 (0.034)
Month FE	Yes	Yes
Observations	144	144
Adj. $R^2$	0.19	0.13
b) Other Board Members		
Dummy Cœuré	$-0.127^{**}$	-0.178**
v	(0.032)	(0.041)
Dummy Constâncio	0.047	0.092**
	(0.032)	(0.034)
Dummy Lautenschläger	0.000	0.148**
	(0.031)	(0.046)
Dummy Mersch	0.017	0.143**
	(0.032)	(0.043)
Dummy Praet	-0.100*	0.066
	(0.038)	(0.045)
Month FE	Yes	Yes
Observations	144	144
Adj. $R^2$	0.38	0.46

*Notes*: OLS estimation. The dependent variable is the share of activities listed in the first row in the number of monthly calendar entries. Robust standard errors in parentheses. \*\*, \* and # denote significance at the 1%, 5% and 10% level, respectively.

Table 6: Economic Policy Uncertainty and Board Member Activity

	All Activities		Official Duties		Meetings	
	(1)	(2)	(3)	(4)	(5)	(6)
Sample	Total	Member	Total	Member	Total	Member
Uncertainty	$-0.347^{\#}$ (0.167)	$-0.421^{**}$ (0.137)	$-0.740^{**}$ $(0.210)$	$-0.753^{**}$ $(0.119)$	0.018 $(0.216)$	-0.135 $(0.236)$
DumRegular	$-0.154^*$ $(0.051)$	$-0.128^*$ $(0.058)$	-0.032 $(0.065)$	-0.037 -0.046	$-0.254^{**}$ $(0.073)$	$-0.209^*$ $(0.104)$
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Member FE	No	Yes	No	Yes	No	Yes
Observations	24	$144\ 24$	2424	14424	2424	14324
Adj. $R^2$	0.80	0.76	0.77	0.77	0.73	0.61

Notes: OLS estimation. The dependent variable is the log number of monthly calendar entries. Robust standard errors in parentheses. \*\*, \* and # denote significance at the 1%, 5% and 10% level, respectively.

Table 7: Home Bias and Places of Board Member Activity

	Baseline	Controls	Publication Request Regular		Fixed Effects
	(1)	(2)	(3)	(4)	(5)
a) Activity in Home Cou	untry				
Dummy Home Country	1.504**	0.663**	0.745**	0.592**	0.787**
	(0.107)	(0.115)	(0.161)	(0.165)	(0.128)
Dummy EB Countries		0.769**	0.787**	0.750**	
		(0.073)	(0.102)	(0.104)	
Capital Key		0.054**	0.058**	0.049**	
		(0.005)	(0.008)	(0.008)	
Member FE	No	No	No	No	Yes
Time FE	No	No	No	No	Yes
Country FE	No	No	No	No	Yes
Observations	5,904	5,904	2,952	2,952	5,904
Pseudo $\mathbb{R}^2$	0.06	0.19	0.21	0.18	0.39
b) Number of Activities	in Home C	Country			
Dummy Home Country	1.876**	0.586**	0.590**	0.581**	0.731**
v	(0.155)	(0.159)	(0.214)	(0.215)	(0.155)
Dummy EB Countries		1.290**	1.383**	1.176**	
		(0.150)	(0.215)	(0.200)	
Capital Key		$0.059^{**}$	0.069**	$0.044^{**}$	
		(0.011)	(0.015)	(0.014)	
Member FE	No	No	No	No	Yes
Time FE	No	No	No	No	Yes
Country FE	No	No	No	No	Yes
Observations	5,904	5,904	2,952	2,952	5,904
Pseudo $\mathbb{R}^2$	0.04	0.14	0.18	0.1	0.43

*Notes*: a) Probit estimates. The dependent variable is a dummy variable, which takes the value of one if a board member reports an activity in a country in a given month. b) Poisson estimates. The dependent variable is the number of monthly calendar entries in a country by board member. Robust standard errors in parentheses. \*\*, \* and # denote significance at the 1%, 5% and 10% level, respectively.

Table 8: Home Bias and Counterpart of Board Member Activity

	Baseline	Controls	Publication Request Regular		Fixed Effects		
	(1)	(2)	(3)	(4)	(5)		
a) Activity with Counterpart from Home Country							
Dummy Home Country	1.592**	0.979**	0.998**	0.961**	1.055**		
	(0.105)	(0.119)	(0.167)	(0.169)	(0.120)		
Dummy EB Countries		$0.418^{**}$	$0.411^{**}$	$0.427^{**}$			
		(0.081)	(0.114))	(0.116))			
Capital Key		$0.057^{**}$	$0.061^{**}$	$0.053^{**}$			
		(0.006)	(0.008)	(0.008)			
Member FE	No	No	No	No	Yes		
Time FE	No	No	No	No	Yes		
Country FE	No	No	No	No	Yes		
Observations	5,920	5,920	2,962	2,958	5,920		
Pseudo $R^2$	0.07	0.16	0.17	0.15	0.33		
b) Number of Activities with Counterpart from Home Country							
Dummy Home Country	2.453**	1.415**	1.561**	1.204**	1.354**		
a y	(0.140)	(0.146)	(0.197)	(0.206)	(0.141)		
Dummy EB Countries	,	0.528**	0.400*	0.687**	,		
J		(0.146)	(0.201)	(0.210)			
Capital Key		0.093**	0.104**	0.079**			
1		(0.010)	(0.013)	(0.015)			
Member FE	No	No	No	No	Yes		
Time FE	No	No	No	No	Yes		
Country FE	No	No	No	No	Yes		
Observations	5,920	5,920	2,962	2,958	5,920		
Pseudo $R^2$	0.10	0.17	0.20	0.14	0.43		

Notes: a) Probit estimates. The dependent variable is a dummy variable, which takes the value of one if a board member reports an activity with a counterpart from a country in a given month. b) Poisson estimates. The dependent variable is the number of monthly calendar entries with a counterpart from a country by board member. Robust standard errors in parentheses. \*\*, \* and # denote significance at the 1%, 5% and 10% level, respectively.

Table A1: Distribution of Responsibilities of Board Members, 2014-16

#### Mario Draghi, President

Communications

Counsel to the Executive Board

ESRB Secretariat

Internal Audit

Secretariat, incl. Governance and Compliance Office

Chief Services Office

#### Vítor Constâncio, Vice-President

Macroprudential Policy and Financial Stability Research

#### Benoît Cœuré

Intern. and European Relations, Repr. in Washington, D.C.

Market Operations

Oversight of Payment Systems

#### Sabine Lautenschläger

Vice-Chair of the Supervisory Board

Legal Services for SSM Issues (with Yves Mersch)

Statistics

#### Yves Mersch

Banknotes

Legal Services

Market Infrastructure and Payments

Risk Management

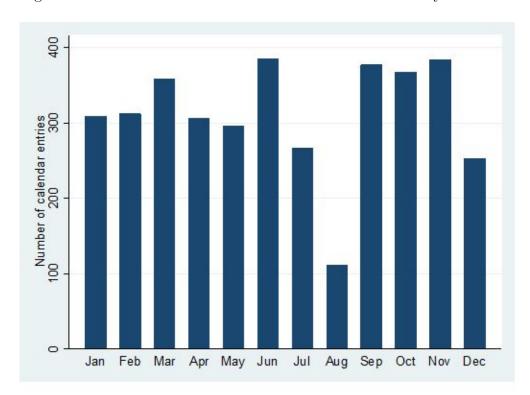
#### Peter Praet

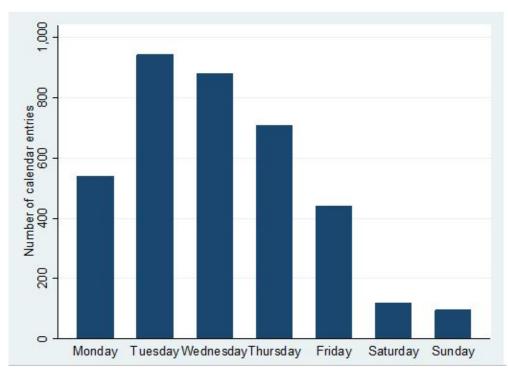
Economics

Preparation of Monetary Policy Decisions

Notes: In addition, a Chief Services Officer, Michael Diemer, is responsible for administration, budget and finance, human resources, and information systems. Source: European Central Bank; see https://www.ecb.europa.eu/ecb/pdf/orga/distributionofresp\_EB.pdf

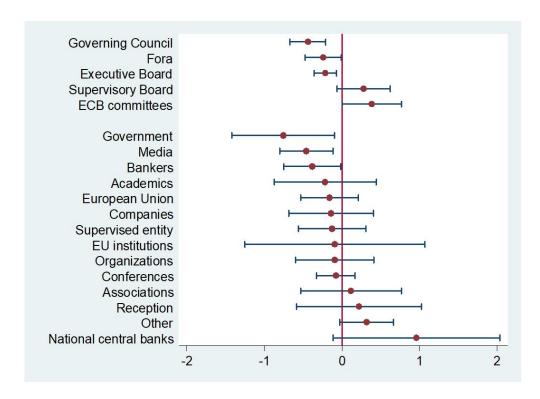
Figure 1: Patterns of ECB Executive Board Member Activity over Time





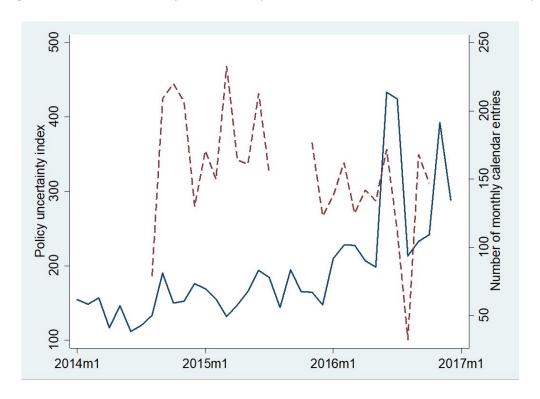
Notes: The upper graph aggregates the number of calendar entries of Executive Board members of the ECB by month. The lower graph aggregates, analogously, the number of calendar entries by day of week. Data cover the periods 08/2014-07/2015 and 11/2015-10/2016.

Figure 2: Publication Rules and Reported Board Member Activity



Notes: The figure plots coefficient estimates (and 95% confidence intervals) from regressions similar to column 1 in Table 4, using the monthly number of reported activities in a given category instead of the total number of activities as regressand.

Figure 3: Economic Policy Uncertainty and Executive Board Member Activity



*Notes*: The solid line plots the economic policy uncertainty index for Europe from Baker, Bloom and Davis (2016); the dashed line plots the total number of monthly calendar entries of Executive Board members of the ECB (right scale).