IMF Surveillance and Financial Markets –
A Political Economy Analysis

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Abstract

The International Monetary Fund (IMF) is in the process of re-inventing itself with bilateral and multilateral surveillance emerging as a key function. The paper analyses how IMF surveillance announcements may be influenced by political power that member countries exert at the IMF. First, we analyze the content of Article IV Public Information Notices (PIN), and second, we use the financial market reaction to the release PINs as tools to identify the role of political economy factors for IMF surveillance. For a set of emerging market economies, the paper finds that financial markets react more favorable to PIN releases for politically influential member countries. Moreover, IMF surveillance appears to be systematically more favorable for countries with larger IMF loans outstanding, consistent with the finding in the literature that the IMF may engage in 'defensive surveillance'.

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1. Introduction

The ongoing financial crisis has induced an intense search by policy-makers for a fundamental change in the international financial architecture, with the objective of not only re-establishing global economic and financial stability in the short-run but also to safeguard such stability over the longer term. The G20 process, where much of this policy debate is currently taking place, envisages endowing in particular the IMF with a widened set of responsibilities in this regard. The IMF is thus standing at a cross-road in its search for a clearly defined role in the global economic and financial order. It is undergoing two fundamental changes. One concerns a re-definition of its function in the global financial system, in particular in light of the financial crisis; the other a fundamental shift in the balance of political power within the institution. A central tool for the IMF that is set to gain further in importance is surveillance, both at the bilateral level and at the multilateral level, which is emerging as a key function for the IMF.[1]

The second major change the IMF is currently undergoing, and one that is intimately linked to the first change, concerns the balance of political power within the institution as in particular a number of emerging markets push for greater influence, so as to reflect their growing global economic importance. The often controversial debate has been focusing on quota reform, on the institutional structure for instance regarding seats in the Executive Board, as well as the precise role of exchange rate policy within bilateral surveillance activities.

What do countries expect to gain from a bigger say at the IMF? And why are others, in particular many industrialized countries, so reluctant to give up political influence? A benign possibility is that countries wish to maintain or take on a greater share of responsibility in global economic and financial affairs. After all, the IMF is the foremost global financial institution with systemic importance, and a stable global financial system is in the interest of all. Another possibility is that countries wish to derive gains or may hope to exert influence in their own interest. Indeed, as financial markets are sensitive to IMF surveillance recommendations, a more favorable assessment by the IMF can entail gains for countries in the form of more favorable financing conditions and higher foreign investment.

Do countries extract such gains from holding political power at the IMF or other fora? Specifically, does IMF surveillance favor countries that are able to exert political power over those that do not? In our paper, we use a novel approach to evaluate the impact of political economy factors on IMF surveillance by analyzing the financial market reaction – specifically of sovereign spreads – to IMF surveillance communication. More precisely, we use the market reaction to the release of Article IV consultations through a Public Information Notice (PIN) as our proxy for the favorableness of IMF surveillance and the influence of political power.

In principle, a favorable financial market reaction to IMF surveillance implies that the IMF assessment is more positive than investors expected. There are two potential reasons for such a positive reaction. A first one is that countries use their political weight to influence an IMF assessment in their favor. This can take place either directly if a

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[1] To underline the important role of bilateral surveillance, the IMF on 15 June 2007 implemented a landmark framework on bilateral surveillance that commits its members to a code of conduct on domestic and exchange rate policies (IMF, 2007).

country has more influence at the IMF – such as through an Executive Director or a high voting share – or through other fora or in close support from powerful members such as the US or the EU.

A second possibility for a favorable market response to IMF surveillance assessment is that the IMF provides new, and more positive information about its assessment of a country's fundamentals than anticipated by financial markets. Similarly, a PIN release of the IMF may be interpreted by market participants as entailing a stronger commitment by the IMF to e.g. make an existing program work successfully. Another possibility is that financial markets may, on occasion, misinterpret the information provided in a PIN, and thus react positively. However, in all of these cases, there should be no *systematic* reaction of financial markets, i.e. on average markets should be as often positively as negative surprised by an IMF assessment.

The main objective of the paper is to test whether political economy factors influence IMF surveillance. Two elements are central to our identification methodology. First, we use the release of the Public Information Notice (PIN) of the Article IV consultations about the IMF's assessment to identify and measure the presence of political economy factors in IMF surveillance. Although the information content of IMF surveillance goes beyond the releases of PINs, PINs are arguably the most important and timely pieces of information for financial markets about the IMF's assessment.[2] We have available the day of PIN releases, which take place every one to two years, for all IMF members since 2001, so that we can cleanly identify their market impact on sovereign spreads and other asset prices of emerging markets economies.

The second element of our approach is to test for the influence of political power on IMF surveillance.[3] We look in particular at the political power that countries exert via three potential channels that have been emphasized in the literature (see Steinwand and Stone, 2008, for a recent survey of IMF lending determinants): first, the power they hold at the IMF through the presence of an Executive Director, a large voting share, an IMF program or high staff share (see e.g. Bird and Rowlands, 2001; Barro and Lee, 2005, Przeworski and Vreeland, 2000 and 2002); second, through geopolitical influence through e.g. a seat in the UN Security Council or a high UN voting correlation with the US or the EU; or other channels such as military links with the US or through oil (see e.g. Broz & Hawes, 2006; Thacker, 1999; Dreher et al., 2008a and 2008b; and Reynaud and Vauday, 2009); and third, economic linkages vis-à-vis the United States and the EU countries as the most influential IMF members (see e.g. Eichengreen et al., 2006; Pop-Eleches, 2007). In short, countries that hold more such power should not be treated differently by IMF surveillance than other countries. If such countries face systematically a more favorable market reaction (for given macroeconomic fundamentals) in response

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[2] Collier and Gunning (1999) argue that an important role for the IMF in post-stabilization is to provide credible signals to private investors. This is compellingly illustrated by Glennerster and Shin (2004), who state: "Directors of country risk of the major banks in New York […] indicated that IMF Article IV reports were one of the first places they turned to in assessing country risk."

[3] The focus in this paper on IMF surveillance is novel, though there is a large and growing body of literature addressing how political and bureaucratic interests influence IMF lending practices (see Steinwand and Stone, 2008, for a recent survey). For instance, Dreher et al. (2008a and 2008b) find that countries voting with the United States in the UN General Assembly receive lower inflation forecasts as domestic elections approach and countries with large IMF loans outstanding also receive lower inflation forecasts, suggesting that the IMF engages in "defensive forecasting." Lombardi and Woods (2008) also discuss governance issues affecting IMF surveillance, but their work is more focus on surveillance effectiveness.

to IMF surveillance, than this suggests the presence of an influence of political economy factors on IMF surveillance.

The empirical analysis of the paper proceeds in two steps. The first part of the analysis classifies the favorableness of the IMF assessment in all PINs for the 36 EMEs in our sample. While we stress that any such classification is necessarily subjective, the findings are telling in that the favorableness of the PIN assessment of a country appears to be influenced by that country's political influence.

In the second part of the analysis, our results confirm that IMF surveillance is influenced by political economy factors. Financial markets react systematically more favorable to PIN releases of countries that are politically powerful, in particular through their influence at the IMF and the UN. Moreover, surveillance is systematically more favorable for countries with greater IMF loans outstanding relative to GDP, consistent with the finding in the literature that the IMF engages in "defensive surveillance". This political economy influence on IMF surveillance appears to be sizeable: Sovereign spreads of countries with large political influence *systematically* fall by up to 50 basis points more than that of other countries.

These empirical findings need to be interpreted with caution as there are a number of caveats that should be kept in mind. In particular, one interpretation could be that the releases of new information is affecting the level of uncertainty and therefore is affecting the pricing of EMEs sovereign spreads. Moreover, the classification of IMF assessments in the PIN releases is necessarily subjective, and may thus contain a measurement error. In addition, the focus of the sample on 36 EME countries, capturing only a small set of IMF member countries, means that the empirical findings of the paper cannot necessarily be generalized to all countries.

Overall, the two pieces of the analysis form a consistent and mutually reinforcing picture, which suggests that there is a political economy influence in IMF surveillance which induces a favorable financial market reaction. The findings have a number of policy implications. They underline that IMF surveillance indeed exerts a significant effect on financial markets. As such, IMF surveillance fulfils an important insurance role as it may help improve financing conditions for countries that face financial difficulties[4]. They also stress the current efforts by the IMF to reform its internal governance and a rebalancing of influence at the institution.

The paper is organized as follows. Section 2 provides a selective overview of related literature on the IMF and political economy determinants. Section 3 describes the data underlying the empirical analysis. Section 4 decomposes and classifies the PINs and tests for the direct presence of political economy factors in the communication of IMF surveillance and their effect on sovereign spreads. As a robustness check, an unconditional analysis for the presence of a political economy influence through the direct effect of political economy variables on sovereign spreads is provided in section 5. A summary and discussion of policy implications follows in section 6.

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[4] See Ostry and Zettelmeyer (2005) for a study on the link between surveillance and the potential access level to Fund resources a country would have in the event of a crisis. Jeanne, Ostry and Zettelmeyer (2008) provide a theoretical model in which surveillance could be linked to *ex ante* conditionality in terms of crisis prevention effort.

2. Related literature

While research analyzing IMF surveillance is scarce, there is a large and growing body of literature addressing how political and bureaucratic interests influence the lending activities of the IMF. We therefore divide our literature review in two parts: First, some studies focus on the effects of news of IMF financial support on financial markets. Second, others deal with the determinants of IMF loans. While the former rely mainly on event study methodology, the latter rather use panel analysis. We review briefly these two research paths below.

Regarding the first path of research, some studies such as Ostry and Zettelmeyer (2005) and Jeanne, Ostry and Zettelmeyer (2008) provide some theoretical foundations on the link between surveillance and the potential access level to Fund resources. Regarding empirical studies, the majority find that news about IMF financial support, i.e. IMF lending decisions, has a significant influence on financial markets. In particular, Kho and Stulz (2000) and Dong et al. (2000) use event studies to examine the impact of IMF assistance on the value of domestic and US bank stocks during crises. Both report that these bank stocks tend to earn abnormal returns around announcement times. In the same vein, Ganapolsky and Schmukler (1998) examine the impact of the IMF program related news during the Tequila crisis in Argentina and find a positive impact on bond and stock returns. The study of Brealey and Kaplanis (2000) used a wider sample of IMF programs and cover a larger range of financial assets and detect a significant decline in asset prices around announcements of IMF programs. Hayo and Kutan (2005) examine the reaction of financial stock and foreign exchange markets market returns and volatility in a group of six emerging markets (Argentina, Brazil, Indonesia, Pakistan, Russia and South Korea) to a set of IMF events during the Asian, Russian and Brazilian crises of 1997-1999 and show that stock markets react significantly to delays of IMF loans or talks. Finally, Evrensel and Kutan (2007) study changes in daily financial sector stock returns in Indonesia, South Korea, and Thailand in response to IMF related news during the Asian crisis.

A number of studies have also used sovereign bond spreads of emerging markets to determine whether the bond markets react to events such as related to IMF lending. Marchesi and Thomas (1999) model the presence of an IMF program as a signaling device of a country's willingness and ability to undertake substantive reform. In these circumstances, private creditors are more willing to reschedule the country's external debt. Marchesi (2003) tests this prediction and reports evidence in support. Easton and Rockerbie (1999) find that participation in an IMF program lowers the expected probability of a loan default and the average spread. Zhang (2001) and Kamin (2002) however do not find evidences of a change in the access of emerging markets to credit after the Mexican crisis. On the other hand, Dell'Aricca et al. (2002) present evidence for the Russian crisis consistent with a change in the access of emerging markets to credit, but caution that their findings could also be due to a change in the market's perception of risk in emerging markets. Lane and Phillips (2000) report a mixed record of market responses to news of Fund initiatives. Finally, Mody and Savaria (2006) show that IMF loans do not provide a uniformly favorable signaling effect on international bond markets. However, they find evidence that the size of the Fund's loans matters, yet a joint commitment by the country and the IMF is also critical.

Focusing on IMF communication related to surveillance issues, researchers so far have mainly been interested in transparency and have therefore focused on the change in disclosure regimes. Glennerster and Shin (2003) study the impact of change in level of transparency on the level of emerging markets borrowing costs and the level of information in these markets. Using quarterly data for 23 emerging countries over 1999/2002, they find that the level of sovereign spreads falls following the adoption enhancing IMF transparency. Cady (2004) defines transparency as subscription to the IMF's Special Data Dissemination Standard (SDDS). He analyses the effect on 303 new issues of sovereign foreign currency-denominated bonds for seven emerging markets over 1990/2002, and shows that it lowers spreads by around 75 b.p.

Yet, these studies do not take into account political economy issues when analyzing IMF surveillance, though political economy factors have been found to play a significant role in IMF lending decision. In particular, closest to our paper, Dreher, Marchesi and Vreeland (2008b) find a systematic bias in IMF inflation forecasts in favor of countries voting in line with the US in the UN, a proxy for political proximity to the US that has been found to be a strong determinant of IMF loans (see below). Indeed, building on the second path of research, i.e. the literature studying the determinants of IMF financial support, we argue that the Fund's surveillance outcome may also be influenced by political and geopolitical stakes, such as lending decisions.

Sturm et al. (2005) use Extreme Bound Analysis to discriminate between economic and political determinants of IMF loans for a panel of 118 countries over the period 1971–2000. Steinwand and Stone (2008) provide a recent review of the growing empirical literature on political influences on the IMF lending practices. Overall, studies dealing with the political economy of IMF lending find that countries holding a UN Security Council seat and voting with the US in the UN General Assembly receive larger IMF loans (see Barro and Lee, 2005; Dreher et al., 2008a; Dreher, et al., 2008b). Oatley and Yackee (2004) find that the more US banks are exposed to a borrowing country, the larger the IMF loan. Others have focused on country-specific factors such as political stability (Edwards and Santaella, 1993), political freedom (Rowlands, 1995) and democracy indicators (Thacker, 1999; Vreeland, 2001; Dreher and Vaubel, 2004). They find that the closer cultural and political proximity to developed countries, the higher the probability for a country to receive IMF funds. Finally, Reynaud and Vauday (2009) study the geopolitical determinants affecting IMF loan decisions. They argue that IMF loans could be used by creditors to control or to appropriate strategic resources from debtors, such as oil reserves and pipelines, nuclear capacity. They also find evidence that the geographic location of borrowing countries also matters in the attribution of IMF financing.

3. Data

In this section, we describe the data underlying our empirical analysis. We start by explaining the process at the IMF underlying the release of its Article IV assessment in form of the PIN. We then continue by outlining how we proxy for the political power that countries hold and other relevant factors.

3.1 Classification of the PINs

Until the mid-1990s, the Fund published hardly any of the reports prepared for the Executive Board. From 1994 onwards, the Fund started authorizing the publication of an increasing number of in-house documents, beginning with background papers to surveillance reports and gradually extending this policy to country policy intention documents and staff reports. In 1996, publication of a summary of Articles IV discussions, called Public Information Notices (PINs), was established. In March 1999, a pilot program of voluntary disclosure of Article IV staff reports was introduced and in early 2001 this pilot was made permanent.

PINs are published on a regular basis at an annual frequency for each IMF member.[5] They contain an assessment of economic developments, short-term macroeconomic projections and policy suggestions. The objectives of the PINs are to share information, advise the member country, but also to provide an incentive for governments to implement good economic policies.

We collected therefore data – including the precise text and the date of release – for all published PINs (938), Staff Reports (212) and Board Meetings (1282) over the period 1996-2007 covering all IMF members. Our focus throughout the paper will be on 36 emerging market economies (EMEs), which are listed in Table A.1.[6]

Our approach is as follows. If the hypothesis that IMF surveillance, as conveyed through the PIN, is more favorable towards politically powerful member countries, one should find that the PINs also contain different language and systematically more positive assessments of these countries. We hence read through the PINs for the 36 countries and the sample period 2001-2007 and classified the assessment of each PIN, $A_{i,t}$, in terms of their *favorableness* on a scale from -2 to +2:[7]

$$A_{i,t} \quad = \quad \begin{cases} -2 & \textit{very negative} \\ -1 & \textit{negative} \\ 0 & \textit{neutral} \\ +1 & \textit{favorable} \\ +2 & \textit{very favorable} \end{cases}$$

Every PIN has usually the same structure. There is first background information, which is mostly factual information about a country's economy, which is followed by what is called "Executive Board Assessment", containing the IMF's normative assessment. This second part, on which our classification focuses, starts with a short overall assessment of the economy and its economic policies, and then goes into details about 7 broad categories or groups of the economy: economic growth, labor markets, monetary policy

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[5] Regarding the publication of PINs, the current regime involves voluntary but presumed publication. This implies that if a member country does not consent to the publication of the PIN, a brief factual statement shall be released noting that the Board discussion took place. Before the decision to render compulsory the release of the PINs in 2001, the rate of publications was around 42% and increased after 2001 to 95% for the countries in our sample.

[6] We focus on EMEs for two reasons: first, due to data availability of sovereign spreads. Second, we want to limit the analysis to countries for which we may in principle be able to detect a financial market reaction to PINs. Least developed countries often do not have financial markets therefore need to be excluded as well as advanced economies for which PINs may not be considered relevant by market participants.

[7] As voluntary disclosure was introduced in 2001, we use 2001 as a starting date for our analysis.

(in particular interest rates and inflation), fiscal policy (the budget and public debt), international policies (such as the external debt, the exchange rate, capital flows, reserves and trade), financial markets (usually focusing on the banking sector and on the functioning of markets), and the institutional environment of the country (frequently about transparency and market integrity). An External Evaluation Committee mandated by the Executive Board in 1999 stressed that this Executive Board Assessment may in some instances be quite different from the staff view.[8]

We have classified the favorableness of each PIN therefore with regard to the overall assessment as well as the about each of the seven policy groups and the various sub-groups. Clearly, a key difficulty is how to classify the statements and to determine their favorableness. We have followed as close as possible the approach of *content analysis* (see e.g. Holsti 1969), by trying to extract a meaning from the language in the PINs based on criteria that allows us to grade each element of the PIN in terms of its favorableness. In terms of language, for instances statements that refer to e.g. "very strong performance", "highly favorable outlook" or "very strong progress" would be classified as very favorable, and so on.

Apart from being very time-consuming, the classification of most PINs was relatively clear and uncontroversial. In order to deal with possibly ambiguous assessments, both authors read and classified each PIN separately, and very few PINs were found to be ambiguous in their assessments. The classification was made much easier by the fact that PINs not only follow a particular structure, but also are relatively consistent in the language used over time and across countries. Finally, we paid particular attention to forward-looking statements in the PIN as these are likely to contain more relevant information for financial market participants. We provide in Table A.2 in the annex examples of our coding.

Despite this caution and care taken in the classification, we cannot emphasize enough the caveat that this classification is based on our subjective judgment and reading of the IMF PIN releases. It may therefore not always be consistent with the intention of the IMF. More important, however, is that our classification of the PINs is consistent with the judgment of market participants, as our primary objective is to understand and explain the market reaction to the PINs.

Table A.3 gives some summary statistics of our classification of the IMF's PIN releases for the 36 countries in our sample. A number of interesting facts stand out. In particular while for some groups, aggregate differences across countries (as proxied through the standard deviation shown in the table); some others show strong differences. Figures 1 and 2 plot the average scores across the different components assessed and across regions and time, again underlining the cross-country and time variations in the assessments. An interesting feature of Figure 1 is that the IMF PIN frequently does not discuss or mention certain categories, while others are mostly assessed. For instance, the figure shows that fiscal policy, inflation and exchange rates are discussed in the PIN in the great majority of the 157 PINs in our database, while e.g. capital flows are mentioned

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[8] The report states: "Since [the Executive Board Assessment] represents the official collective view of the Fund—not just the staff—and since it forms the basis for the PIN (which also contains a factual background section), it is worth examining in some detail how the summing up is prepared. A first draft is prepared before the Board meeting takes place. The draft is then modified during the meeting to take account of Directors' views, particularly in areas where they do not agree with the staff appraisal." (IMF, 1999)

and assessed only in a few instances. In our classification, elements that are not mentioned accordingly receive a "neutral" score of zero.

Figures 1 and 2

Finally, we conduct a number of consistency checks of our classification of the IMF PINs. In particular, the assessment $A_{i,t}$ in the PINs should broadly match the macroeconomic conditions of the economy. We test for this consistency with macro fundamentals $M_{i,t}$ by estimating:

$$A_{i,t} = \alpha + \lambda\, M_{i,t} + \varepsilon_{i,t} \qquad (1)$$

both for the overall assessment, as well as its individual categories. Given the discrete nature of the classification $A_{i,t}$ equation (1) is estimated using an ordered probit specification. Table 1 shows that there is indeed a close and robust link between the performance of an economy and the IMF assessment in the PIN. A country receives a more favorable assessment by the IMF if it has higher growth, lower inflation and unemployment, larger reserves and a more positive government fiscal position.

Table 1

This analysis is clearly very simplified and much too narrow to accurately reflect all the considerations that go into the assessment of the IMF as reflected in the PIN releases. For instance, a PIN assessment may also consider the performance of policymakers, which given the circumstances may differ from the performance of the economy. The PIN is of course also to some extent forward-looking, and hence IMF projections or expectations about the future performance may matter for the PIN assessment.

However, the point we want to make here is that our classification of the IMF assessment entailed by the PIN is plausible and consistent, both across individual elements within each PIN as well as across countries and with actual underlying economic fundamentals.

3.2 Financial and political economy variables

Our main financial market focus is on the reaction of sovereign spreads of countries to PIN releases. We use the JP Morgan's Emerging Market Bond Index (EMBI), which consists of daily values of country-specific portfolios of dollar-denominated sovereign or quasi-sovereign debt instruments, to test the impact of the publication of PINs on the cost of funding of countries. Moreover, we collected macroeconomic variables that have been found to be determinants of country's sovereign spreads (see Glennerster and Shin, 2004; Cady, 2004; Remolona et al., 2007). These are real economic growth, the unemployment rate, the inflation rate, the government balance, the foreign exchange reserves of the central bank, the short-term external debt and the PPP exchange rate. All these variables are taken from the International Financial Statistics of the IMF, available at quarterly frequency.

Regarding the political economy variables, we collected data on country's exposure at the IMF and their political power at the IMF as well as in the United Nations. Regarding the Fund's exposure, one needs to control for the fact that some countries are following a

lending program and are therefore more exposed to the release of PINs. In fact, an important number of the countries under programs are releasing at the same time their Letter of Intent with their Article IV consultation. Moreover, as it has been shown in the literature on IMF lending, larger loans are limited according to the size of the borrowing country and thus are subject to more scrutiny from the Fund. We therefore control for larger loans with a dummy variable taking the value of 1 when the loan surpasses 140% of country's quota.[9] Finally, the core of the paper is centered on the ability of member countries to influence the outcome of the Article IV consultation. We therefore account for the voting power the member country holds in the Fund using its quota share and a dummy variable whether the country holds a seat at the Executive Board. Of course, the country under consultation does not vote during the consultation, but its sheer size is an indication of its influence on the decisions.[10] Moreover, to capture a country's proximity with the US, we use the data from Dreher et al. (2008a) on the correlation of votes between countries in the UN.

We also include in our analysis other proxies of political factors that have been found to explain IMF financial support as exposed above. These are: the share of national staff in the IMF using the data of Barro and Lee (2005), the presence of G7 embassies, the importance of strategic resources such as oil reserves and pipelines, civil nuclear capacities and also the presence US-UK-France military troops using the data from Reynaud and Vauday (2009). Finally, following Oatley and Yackee (2004), we introduce also the bilateral trade and financial linkages between the country under surveillance and the US and the EU, respectively.

Table A.4 reports descriptive statistics, while Table A.5 presents the correlations between our set of economic variables and the one proxying IMF exposure and proxies for countries' political powers. It confirms for example that most of the Executive Directors are from developed countries since the level of the correlation between getting an IMF Executive Director and using the Fund's resources is small. More interestingly, this analysis confirm the analysis of Thacker (1999) that political realignment of the borrowing country on the US position, proxied by the correlation of the borrowing country's vote at the UN with the US, is positively related to the probability of receiving IMF loan and the probability that this loan is large.

4. Decomposing the PIN assessments

The argument that IMF surveillance may be systematically more favorable for politically influential countries is of course a strong one, and we would like to have as much and as diverse evidence as possible to verify or falsify this finding. A first, direct way of testing the hypothesis is to analyze whether the IMF assessment in the PIN indeed contains a political economy influence, in that countries that have political power at the IMF, UN or through other channels receive a more favorable assessment in the PIN. In

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[9] For GRA loans, such as Stand-by Agreements, the lending limit is set at 100% of country's quota per year. However, the limit for Poverty Reduction and Growth Facilities is set at 140% of country's quota. We therefore used the upper limit of 140%, thus limiting also the number of 'relatively' small SBA, given their important size relative to PRGF.

[10] Studies using cooperative game theory argue that voting share is translating into voting power that gives an indication of a country's capacity to influence the outcome in building coalition in the Executive Board of the IMF (see for example Reynaud et al., 2007).

subsequent sections, we then ask whether such an identified influence in the PIN affects financial markets, and in particular sovereign spreads.

4.1 Are PIN assessments influenced by political economy factors?

As the first step of the analysis, we want to understand whether the PIN assessments $A_{i,t}$ are influenced by the political power $X_{i,t}$ its member countries hold. For our 36-country sample we therefore estimate:

$$A_{i,t} = \alpha + \gamma \ X_{i,t} + \lambda \ M_{i,t} + \varepsilon_{i,t} \qquad (2)$$

where we also allow that the macroeconomic performance $M_{i,t}$ of an economy influences a PIN assessment.

<div align="center">Table 2</div>

The empirical results of Table 2 yield very interesting findings. In particular, the overall PIN assessment indeed appears to be systematically more favorable for countries that have an Executive Director, use a large share of their quota, hold a permanent or non-permanent seat at the UN Security Council or are a nuclear power (as shown in the first column of the table).[11] Focusing on the fiscal policy assessment in the second column indicates that a similar picture holds for the overall assessment in the PIN as well as for the assessment of the fiscal situation of countries.

It should be stressed that PIN assessments are indeed also determined by the macroeconomic conditions of a country, as shown in the lower panel of Table 2. Higher growth, lower unemployment or inflation, and larger reserve and government balance all indicate a better assessment in the PIN.

Overall, the evidence suggests that there is indeed a political economy influence in the PIN assessment of the IMF. It seems in particular the power countries hold at the IMF, but also through other geopolitical channels that countries are able to exert such political influence. Nevertheless, we emphasise that the IMF assessment in the PIN is not solely influenced by the political power of countries, but also by these countries' macroeconomic fundamentals.

4.2 The effect of the PIN political economy influence on financial markets

So far we have found that the assessment in the PINs is in part determined by political economy factors. We now try to trace the effect of political influence on sovereign spreads *directly* through the assessment in the PINs. We do so because it constitutes an alternative way of testing for the presence of political economy factors.

We do so by testing to what extent it is this political economy influence and to what degree the economic performance of a country *as reflected in the PIN assessment* that cause sovereign spreads to react to the release of a PIN. We first extract from the estimation of equation (2) fitted values for the part of the PIN assessment explained by political

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[11] The number of countries with nuclear capabilities in ours ample is, of course, very small. Hence, this result may be driven by outliers, and should not be over-interpreted. In fact, the result is not robust to alternative model specifications.

economy variables, $\hat{A}^X$, and for the part accounted for by fundamentals, $\hat{A}^M$. We then estimate:

$$s_{i,t} = \alpha + \eta \; \hat{A}_{i,t} + \varepsilon_{i,t} \qquad\qquad (3)$$

for the overall effect of the PIN assessment on sovereign spreads $s_{i,t}$ of country i on day t, with $\hat{A} = \hat{A}^X + \hat{A}^M$, and for the split between the components due to political economy factors and due to fundamentals as follows:

$$s_{i,t} = \alpha + \gamma \; \hat{A}_{i,t}^X + \lambda \; \hat{A}_{i,t}^M + \varepsilon_{i,t} \qquad\qquad (4)$$

Our reasoning is as follows: if the effect of a PIN release on spreads identified in Table 2 stems from a political economy influence in the PIN, then we would expect that $\gamma<0$, i.e. a positive influence in the PIN lowers spreads systematically. Our prior for the effect of the macroeconomic component of the PIN assessment $\hat{A}^M$ is that it should exert an effect on sovereign spreads only to the extent that it deviates from market views, and thus comes unexpected. But since such surprises should not be systematically positive or negative, our prior is that $\lambda=0$.

Table 3

Table 3 gives the empirical estimates, for equation (3) in the first two rows, and equation (4) in the bottom two rows of the table. The estimates indicate that the PIN assessment indeed exerts a significant effect on financial markets. More importantly, it is the political economy influence contained in the assessment that systematically affects financial markets, and not the macroeconomic component. This means that a favorable financial market response (a drop in spreads) occurs systematically when the PIN contains a positive political economy influence for politically influential countries, hence $\gamma<0$. Note that $\lambda=0$ does *not* mean that macroeconomic conditions reflected in the PIN are irrelevant. It only means that financial markets have, on average, a similar assessment of countries' macroeconomic conditions, so that they are not *systematically* surprised by the IMF's assessment.

Table 4

In the final part of the analysis, we try to understand which specific elements in the PIN assessments trigger a financial market reaction. For that purpose, we exploit the decomposition of the PIN assessment into individual components (economic growth, labor markets, monetary policy, fiscal policy, international policies, financial markets, and institutions), as discussed in section 3. The evidence of Table 4 again confirms that it is primarily the political economy influence in the PIN assessment that affects financial markets, and not the component accounted for by fundamentals. But it is in particular the political economy influence in the fiscal assessment, as well as the assessment of international policies (external debt, exchange rate, capital flows, reserves and trade) and labor markets in the PIN that affects markets. Moreover, the effect of the political economy component is indeed sizeable.

In summary, this section has attempted to trace the effect of IMF surveillance on financial markets directly through the information contained in its PIN releases. The

evidence suggests, first, that there is indeed a sizeable political economy influence in the PIN, and second, that this influence exerts a statistically and economically significant effect on sovereign spreads and thus on the financing conditions of countries.

Moreover, part of this political economy influence appears to stem from the assessment of countries' fiscal policy stance as well as international policies. Finally, we again emphasize the caveats underlying our judgmental classification of the content of the IMF's PINs. Nevertheless, at the very least the evidence of this section supports and is fully consistent with the hypothesis that countries that hold political power at the IMF, UN or through other channels experience a significant stronger decline in sovereign spreads compared to other countries that lack such influence.

5. Is IMF surveillance unconditional market reactions

Section 4 has tested and confirmed that the IMF assessment in PINs, for a limited set of EMEs, is influenced by the political power of countries, and that in turn sovereign spreads of such politically influential countries respond systematically more favorable to IMF surveillance and PIN releases. In this section, the aim is to provide an alternative test of the presence of a political influence in IMF surveillance by analyzing the unconditional response of sovereign spreads to PIN releases.

In other words, a caveat we stressed for the analysis of section 4 is that it relies on our subjective classification of PINs. In this section, we therefore avoid relying on such a classification by directly analyzing the response of sovereign spreads to PIN releases and the role of countries' political power in this process. The section starts by outlining our identification of this political economy influence, and then proceeds by presenting empirical evidence and various extensions.

5.1 Benchmark results

For the purpose of this alternative test, we identify the political economy influence that may be contained in IMF surveillance by analyzing the contemporaneous effect of PIN releases on sovereign spreads of countries. Our focus is therefore on the behavior of sovereign spreads on days when the IMF releases the PINs of its Article IV consultation. The basic idea is that the release of the IMF assessment through the PIN should be important for financial markets and thus influence sovereign spreads only to the extent that market participants either (a) receive relevant new information from the IMF's analysis and recommendations about fundamentals, or (b) update their understanding of the likelihood of future IMF support for the particular country (i.e. the 'defensive surveillance' hypothesis). Importantly, the efficient market hypothesis implies that PIN releases should not have *systematic* effects on countries' sovereign spreads, i.e. the information they contain should not be systematically better or worse than what markets know about existing economic fundamentals.

Is the content of PINs, and thus their impact on financial markets, related to the power a country exerts on the outcome of the surveillance process within the IMF or through other channels? To test this hypothesis, we model the daily changes in sovereign spreads $s_{i,t}$ (measured in basis points, b.p.) as a function of macroeconomic fundamentals $M_{i,t}$,

political economy variables $X_{i,t}$ as well as an interaction term between the PIN release and the political power of the country $X_{i,t}$:

$$
\begin{aligned}
s_{i,t} = \alpha_i &+ \beta \, PIN_{i,t} + \gamma \, X_{i,t} + \lambda \, M_{i,t} + \omega \, Z_t \\
&+ \delta_X \left(PIN_{i,t} \cdot X_{i,t} \right) + \delta_M \left(PIN_{i,t} \cdot M_{i,t} \right) + \varepsilon_{i,t}
\end{aligned}
\tag{5}
$$

with $PIN_{i,t}$ a dummy taking the value of one if a PIN has been released for a specific country i on a particular day t, and Z_t as fundamentals common to all countries.[12] Standard errors are clustered by country. The main hypothesis of interest is H_0: $\delta_X=0$. δ_X is our measure of what we call the political economy influence. A negative and significant δ_X implies that a country's sovereign spread is systematically reduced in response to a PIN release if it holds political power at the IMF or through other channels.

Several methodological issues should be emphasized. One potential problem of model (5) is obviously that omitted variables may bias the estimates. We deal with this issue by including a set of explanatory variables as broad as possible, but also by including country fixed effects so that the estimators focus on the variation within rather than across countries.[13] Moreover, our preferred way for dealing with potential time variations in spreads is to control directly through the inclusion of common fundamentals Z_t rather than time fixed effects. Finally, we use a robust estimator to correct for heteroskedasticity and skewness in the daily data.

Table 5

Table 5 shows the results for δ_X and δ_M. Panel A focuses on variables measuring countries' power at the IMF, panel B on various proxies for geopolitical influence, and panel C on measures of countries' economic relevance. The estimates of columns (1) and (2) include country fixed effects as in equation (5) above, and the model of columns (3) provide the estimates of pooled regressions for only days of countries with PIN releases.

The coefficients β, γ, and λ are not shown for brevity reasons. As expected, none of these coefficients is statistically significant in any of the model specifications, given that the analysis is conducted using daily data frequency while both macroeconomic fundamentals and the political economy variables are much too slow moving to have an effect at such high frequency.

Overall, there is compelling evidence for the presence of a significant political economy influence in IMF surveillance. In Panel A, the point estimates indicate that sovereign spreads of countries which have an IMF Executive Director fall on average by 12-14 b.p. in response to a PIN release for this country. A similar effect is found for countries that use more than 140% of their IMF quota, supporting the 'defensive surveillance'

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[12] It is common in the literature to test for the effect of external fundamentals, such as US interest rates, business cycle conditions or other factors specific to advanced economies. Our preferred measure of external or common fundamentals is the spread of the EMBI world index, excluding a country's spread itself, as common fundamental, because it constitutes a much broader and more encompassing measure of various external factors that influence countries' spreads.

[13] The variables included in Table 5 are time-varying within countries for the great majority of countries, with a few exceptions. Also note that we prefer to include the global EMBI spreads directly as an observable, rather than time fixed effects as unobservables. However, the empirical findings for the parameters of interest are robust to such an alternative specification.

hypothesis discussed above. Other proxies for countries' influence at the IMF are mostly not relevant, such as the voting shares of countries. The share of staff at the IMF that a country has is statistically significant only for the pooled model in column (3); for which a one standard deviation rise in the staff share (or an increase of 6.1, see Table A.3) lowers sovereign spreads by about 10 b.p. in response to a PIN release.

As to geopolitical influences (Panel B), countries holding a temporary UN Security Council seat see their spreads fall by 17-20 b.p on average. The point estimate for voting correlation in the UN with the USA is also negative and significant. The standard deviation of the variable is 0.16 (see Table A.3), implying that a country with a one standard deviation higher UN voting correlation with the US experiences an about 10 b.p. (larger) decline in its sovereign spreads in response to a PIN release.

Also the economic relevance of countries seems to matter somewhat, though it is generally less sizeable (Panel C). In particular countries with stronger financial linkages with the US – measured as the sum of portfolio investment asset and liabilities vis-à-vis the US over GDP (see section 3) – respond more favorably to PIN releases.

Table 6

One difficulty with the inclusion of so many different proxies for the countries' power at the IMF, geopolitical influence and economic relevance is one of multicollinearity. Several of the proxies are indeed correlated substantially with one another, as indicated in Table A.4. To arrive at a more encompassing model specification, we include and estimate the model for the statistically significant political economy variables from Panels A-C of Table 5. Table 6 shows these estimates. Some of the proxies become statistically insignificant. However, in particular the role of the IMF Executive Director, the size of IMF loan and the UN Security Council seat of countries continue to exert a statistically and economically significant effect on sovereign spreads on days of PIN releases. This encompassing specification of Table 6 is what we take as our benchmark model, on which various subsequent elements of the empirical analysis in the remainder of this paper will be based.

5.2 Caveats and extensions

It is important to stress that the estimates presented in Tables 5 and 6 control for various macroeconomic fundamentals, so that the effects identified for the political economy variables are distinct from that of fundamentals. Moreover, the fundamentals included are mostly not statistically significant. Note that this does not imply that economic fundamentals are irrelevant in determining sovereign spreads, it only means that they do not exert an *additional* effect on days when the IMF releases its assessments through the PINs. In fact, the efficient market hypothesis implies that asset prices should react to information about economic fundamentals, such as contained in the PINs, only to the extent that this information is new and comes unexpected. The findings in Tables 5 and 6 thus suggest that the PINs contains indeed relevant and new information by the IMF about economic fundamentals, but also that this information is not systematic in persistently driving up or down sovereign spreads of countries.

We conduct various extensions to check for the robustness of the findings. In particular, we investigate the stability of the results for alternative country groupings and time

periods and find that restricting the country sample to EMEs (i.e. excluding developing countries) or changing the sample period does not alter the results.[14]

Moreover, our empirical analysis relates to the literature on IMF lending and moral hazard reviewed in section 2. In particular, the argument of Dell'Ariccia, Schnabel and Zettelmeyer (2006) is that sovereign spreads for countries which face moral hazard should be less sensitive to macroeconomic fundamentals because what matters for the pricing of risk is also the extent financial markets expect the IMF to bail out a country in distress. The main finding is that the political power of countries in many cases indeed reduces the sensitivity of their sovereign spreads to macroeconomic variables.

A final note of caution is on the interpretation of the results and the question whether the effect of the identified political economy variables indeed constitutes a "bias" of IMF surveillance. In particular, the finding that sovereign spreads of countries which exceed 140% of their quota tend to react more favorably to PIN release may be interpreted as evidence for the presence of an insurance element implicit in IMF surveillance, as discussed above. Just as for IMF lending, an important function of IMF surveillance is, under certain conditions, to provide an implicit insurance or support for countries in financial difficulties. Hence the very purpose of a PIN release may be precisely for the IMF to signal to financial markets that it stands ready to support a country that is facing such difficulties. This caveat should be kept in mind.

However, while it may apply to countries that use a large share of their IMF quota, it does not appear to be a compelling argument why countries with an IMF Executive Director, with a UN Security Council seat or with a high voting correlation with the US should benefit disproportionably from a PIN release. While financial markets may know that politically powerful countries receive systematically more favorable IMF assessments, a systematically more favorable reaction of financial markets to PIN releases of such influential countries is consistent with the argument in the literature that PIN releases nevertheless help resolve any remaining uncertainty (e.g. Brown et al. 1988).

Other caveats that should be kept in mind when interpreting the empirical findings of the paper are clearly not only the fact that the classification of IMF assessments in the PIN releases is necessarily subjective. Also the focus of the sample on 36 EME countries, capturing only a small set of IMF member countries, means that the empirical findings of the paper cannot necessarily be generalized to all countries. In addition, some of the explanatory variables, such as the nuclear capability of countries, applies only to a small subset of countries, implying that such findings may or may not be highly robust to changes for individual countries.

Overall, the findings, for a limited set of EMEs, suggest that IMF surveillance favors countries with political power at the IMF, at the UN and through other channels in terms of the response of financing conditions to PIN releases. In other words, PINs are systematically more favorable for countries with political power, lowering the risk premia investors require for holding their sovereign bonds and thus implying that financing conditions do not fully price economic fundamentals. This effect is, moreover, economically meaningful as countries with an Executive Director at the IMF, with a large

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[14] Results are not shown for brevity reasons, and are available upon request. Another test is whether sovereign spreads are more or less sensitive to macroeconomic fundamentals depending on countries' political influence.

used IMF quota and with a UN Security Council seat combined have experienced their spreads fall by about 40 b.p. in response to the release of the IMF's PIN.

6. Conclusions

The IMF is standing at a cross-road in its search for a new role in the global economic and financial order. For quite some time now, scholars have argued for greater IMF transparency (e.g. Fischer, 1999). Surveillance, both at the bilateral level and at the multilateral level, has been emerging as a key function for the IMF. The present paper has attempted to assess the experience of the IMF's surveillance over the last decade. It has asked to what extent this IMF surveillance process has been influenced by political economy factors and through other channels.

Our paper has shown that IMF surveillance, for a limited set of EMEs, exhibits a sizeable political economy influence, and partly follows a 'defensive surveillance' motive of supporting indebted countries as emphasized in the literature.

Our empirical approach is novel in that it exploits the financial market reaction to the release of Public Information Notices (PIN) of Article IV consultations to identify the information content of IMF surveillance. Financial markets react systematically more favorable to PIN releases of politically powerful member countries, in particular countries that have influence at the IMF, the UN or through close economic linkages. We find that the market impact of IMF surveillance is sizeable and meaningful: Sovereign spreads of countries with larger political influence at the IMF, UN or other channels systematically fall on average by up to 50 basis points more than that of other countries.

In the first part of the analysis we decomposed and classified all PINs for the 36 emerging markets in our sample for the period 2001-2007. Specifically, we classified the favorableness of the assessment provided by the PINs. The evidence suggests that there is indeed a political economy influence in the PIN assessment of the IMF. The evidence moreover suggests that it is in particular the IMF assessment of countries' fiscal policies that has a systematic impact on sovereign spreads.

There are a number of caveats that should be kept in mind when interpreting the empirical findings of the paper. In particular, the classification of IMF assessments in the PIN releases is necessarily subjective, and may thus contain a measurement error. Moreover, the focus of the sample on 36 EME countries, capturing only a small set of IMF member countries, means that the empirical findings of the paper cannot necessarily be generalized to all countries.

Thus the paper has stressed a number of points of caution for not misinterpreting or over-interpreting the empirical evidence of the paper. The results indeed do not question the important role that IMF surveillance may play in providing information and advice to member governments, financial markets and the wider public. They underline that IMF surveillance indeed exerts a significant effect on financial markets. As such, IMF surveillance fulfils an important insurance role as it may help improve financing conditions for countries that face financial difficulties. However, they also stress the current efforts by the IMF to reform its internal governance and a rebalancing of influence at the institution.

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Table A.1: Benchmark country sample

Asia	L. America/Carib.	Emerging Europe	Africa/Middle East
China	Argentina	Bulgaria	Cote dIvoire
Indonesia	Brazil	Croatia	Egypt
Korea	Chile	Hungary	Lebanon
Malaysia	Colombia	Poland	Morocco
Pakistan	Dominican Rep.	Russia	Nigeria
Philippines	Ecuador	Serbia	Qatar
Thailand	El Salvador	Turkey	South Africa
Vietnam	Mexico	Ukraine	Tunisia
	Panama		
	Peru		
	Uruguay		
	Venezuela		

Table A.2: Sample of coding of IMF assessment in PIN

Coding assessment	Sample PIN statements
+2	▪ "Executive Directors congratulated the authorities for *country*'s strong economic performance and their skillful prudent economic management" ▪ "Directors strongly supported the government's renewed commitment to fiscal consolidation"
+1	▪ "Directors welcomed *country*'s efforts to adopt best practices of corporate governance and the recent steps taken to restructure operations of corporations" ▪ "Directors were encouraged by the readiness of *country*'s external creditors to negotiate a comprehensive debt relief agreement"
0	▪ "Directors considered that fiscal expansion appears to be an appropriate policy stance in the current environment" ▪ "Directors had a broad-ranging discussion on *country*'s exchange rate regime. They generally saw no immediate problem in maintaining the pegged exchange rate system"
-1	▪ "A number of Directors expressed concern, however, about the use of public funds to acquire a commercial airline and the contingent liabilities that the government may be taking on in connection with a number of other privatized infrastructure projects, which could adversely affect the country's long-term growth prospects" ▪ "Some Directors were concerned about the remaining negative market sentiment owing to perceived poor corporate governance practices in a few high-profile cases"
-2	▪ "Directors considered that the *country* economy faces enormous challenges, including in particular the recent legacy of weak policies and institutions, which the authorities have only begun to address" ▪ "Directors expressed concern that progress has been sporadic, and consequently, macroeconomic imbalances remain large and persistent, and poverty and social indicators are declining"

Table A.3: IMF assessment in PIN – Summary statistics

	Mean	Std. dev.
Overall assessment	0.772	0.930
A. Groups		
Growth	0.558	1.099
Labour markets	-0.582	0.956
Monetary policy	0.465	0.976
Fiscal policy	0.044	1.105
International policies	0.404	0.975
Financial markets	0.069	1.019
Institutions	0.121	1.082
B. Sub-groups		
Monetary policy:		
Interest rates	0.379	0.988
Inflation	0.551	0.965
Fiscal policy:		
Budget	-0.026	1.115
Debt	0.063	1.095
International policies:		
External debt	-0.184	1.111
Exchange rate	0.472	0.906
Capital flows	0.593	0.888
Reserves	0.633	1.014
Trade	0.507	0.954
Financial markets:		
Banking	-0.250	1.077
Markets	0.388	0.961
Institutions:		
Transparency	0.140	1.086
Integrity	0.102	1.078

Notes: Based on our classification of 157 PINs for 36 countries, as described in the text.

Table A.4: Summary statistics

	Mean	Std. Dev.	Min	Max
1. Power at IMF:				
IMF Executive Director	0.220	0.467	0	1
Quota used >140%	0.257	0.476	0	1
IMF quota	6.825	0.940	4.984	8.759
IMF program	0.532	0.497	0	1
IMF staff	5.622	6.120	0	22.985
2. Geopolitical influence				
UN Security Council seat	0.143	0.350	0	1
UN voting correl. w. USA	0.023	0.162	-0.266	0.318
UN voting correl. w. EU	0.592	0.114	0.397	0.910
Embassy presence	11.899	7.905	7	41
Oil reserves	1.047	1.360	0	4.391
Oil pipeline	5.917	3.585	0	11.188
Nuclear capability	2.173	3.634	0	9.987
US military presence	2.919	1.734	0	7.370
EU military presence	0.313	1.360	0	7.314
3. Economic relevance				
Trade linkages with US	1.114	3.788	0	20.136
Trade linkages with EU	0.368	0.668	0	4.442
Financial linkages with US	0.613	1.250	0	5.007
Financial linkages with EU	0.252	0.504	0	4.029
4. EMBI sovereign spreads:				
EMBI country	601	868	2	7074
EMBI world	579	287	2	1333
5. Macroeconomic fundamentals:				
Real growth	3.857	4.004	-11.032	18.287
Unemployment rate	10.370	5.322	1.843	30.409
Inflation rate	8.937	13.458	-1.400	96.100
Government balance	-3.125	4.545	-23.986	9.277
Reserves	16.540	10.843	1.544	65.646
Short-term external debt	12.876	22.740	0.0	191.38
PPP exchange rate	215.78	558.38	0.124	3596.4

Notes: The summary statistics shown here are based on quarterly data and the 36-country sample shown in Table A.1.

Table A.5: Correlations

	IMF Executive Director	Quota used >140%	IMF quota	IMF program	IMF staff	UN Security Council seat	UN voting correl. w. USA	UN voting correl. w. EU	Embassy presence	Oil reserves	Oil pipeline	Nuclear capability	US military presence	EU military presence	Trade linkages with US	Trade linkages with EU	Financial linkages with US
1. Power at IMF:																	
IMF Executive Director	1																
Quota used >140%	0.195	1															
IMF quota	0.547	0.132	1														
IMF program	0.060	0.700	-0.115	1													
IMF staff	0.438	0.221	0.347	0.132	1												
2. Geopolitical influence																	
UN Security Council seat	0.312	0.052	0.350	-0.029	0.296	1											
UN voting correl. w. USA	0.018	0.207	-0.335	0.390	0.304	-0.058	1										
UN voting correl. w. EU	-0.066	0.159	-0.022	0.142	-0.081	-0.028	-0.053	1									
Embassy presence	0.504	0.199	0.548	0.102	0.376	0.457	-0.026	-0.062	1								
Oil reserves	0.393	0.033	0.666	-0.052	0.162	0.257	-0.197	-0.299	0.471	1							
Oil pipeline	0.391	0.146	0.610	-0.036	0.432	0.280	-0.177	0.074	0.448	0.636	1						
Nuclear capability	0.425	0.290	0.590	0.134	0.301	0.396	-0.310	0.176	0.564	0.388	0.487	1					
US military presence	0.385	0.259	0.374	0.092	0.496	0.132	0.084	-0.062	0.321	0.296	0.605	0.195	1				
EU military presence	0.062	-0.172	-0.208	-0.245	-0.073	-0.079	-0.138	-0.261	-0.104	-0.060	-0.134	-0.137	0.054	1			
3. Economic relevance																	
Trade linkages with US	0.091	0.050	0.265	-0.020	0.252	0.097	0.092	-0.097	0.302	0.285	0.189	0.298	0.100	-0.057	1		
Trade linkages with EU	0.057	0.017	0.300	-0.103	0.010	0.095	-0.291	0.501	0.232	-0.040	0.117	0.185	0.011	-0.014	0.117	1	
Financial linkages with US	0.309	0.168	0.445	0.068	0.425	0.258	0.170	-0.009	0.556	0.343	0.234	0.450	0.080	-0.103	0.771	0.326	1
Financial linkages with EU	0.204	0.012	0.347	-0.077	0.165	0.146	0.049	0.119	0.233	0.038	-0.047	0.149	-0.184	-0.103	0.200	0.533	0.599

Notes: The correlations shown here are based on quarterly data and the 36-country sample shown in Table A.1.

Figure 1: Distribution of IMF assessment in the PIN across components
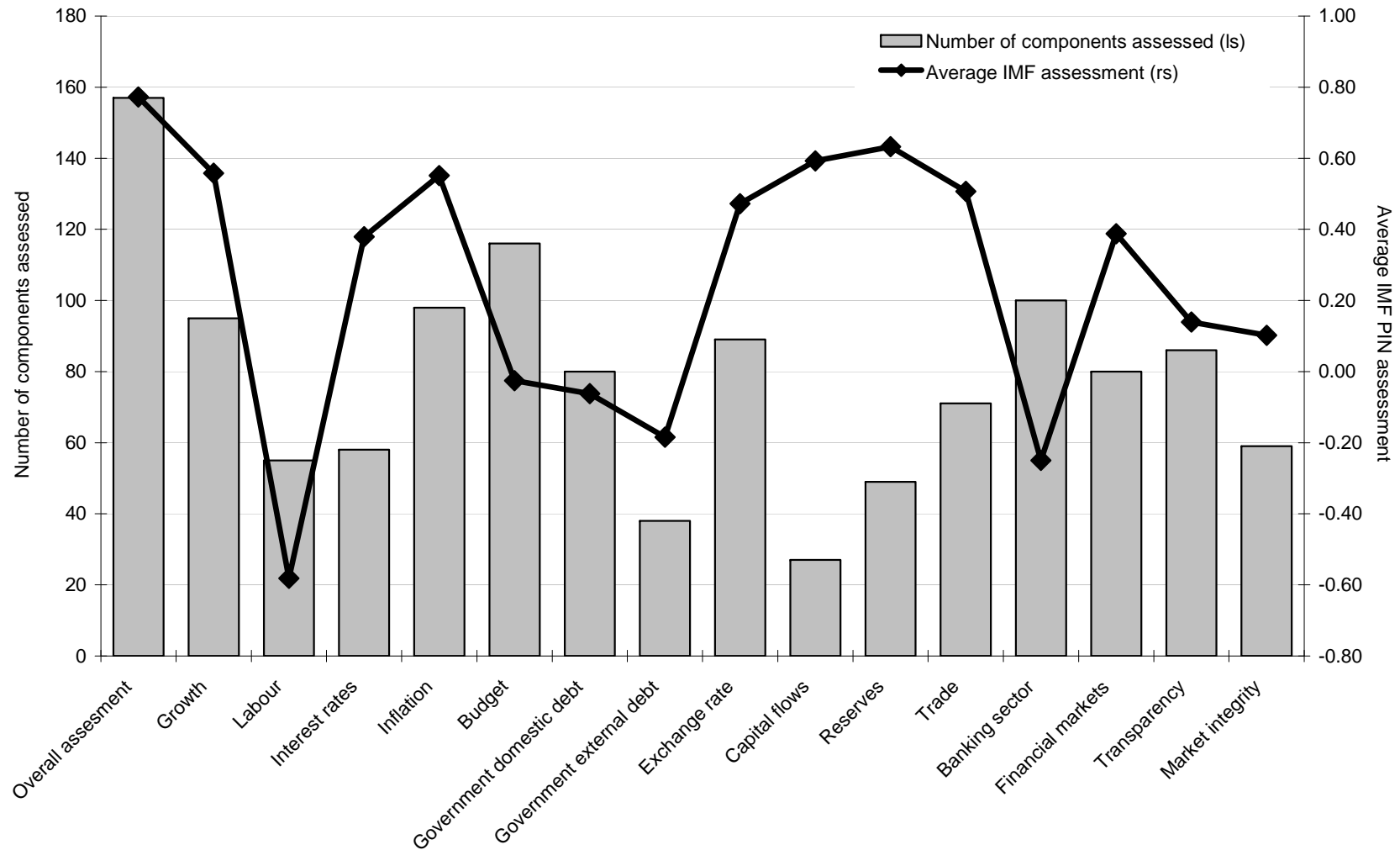
Notes: This figure shows the average assessment across all 157 PINs and the frequency or number of components assessed in this sample.

Figure 2: Distribution of IMF assessment in the PIN across time and regions
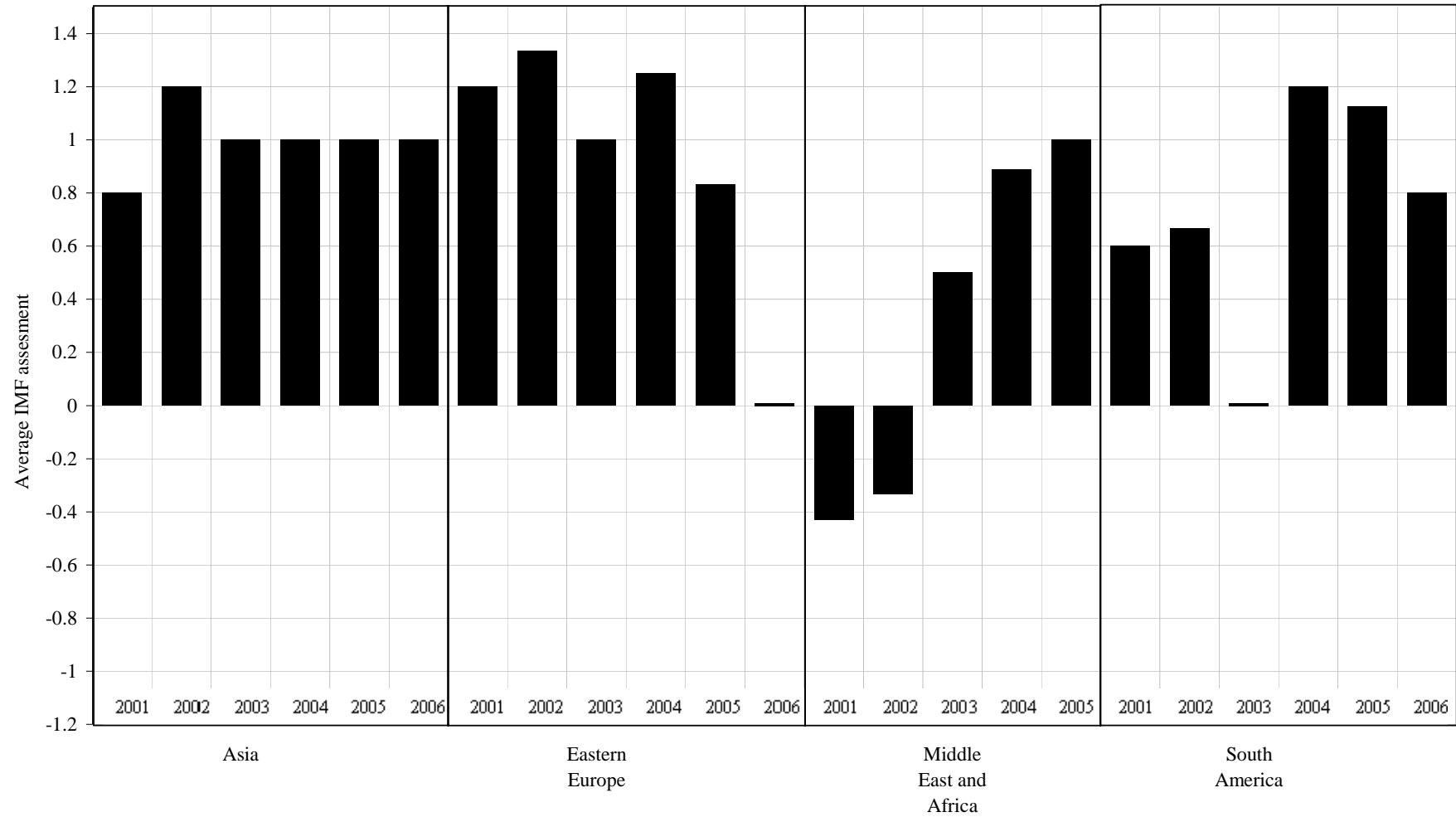
Notes: This figure shows the average assessment across all 157 PINs across regions and time.

Table 1: Linking individual elements of the IMF assessment in the PIN to actual macroeconomic performance

Dep. variable PIN assessment of:	(1) Overall	(2) Growth	(3) Labour	(4) Inflation	(5) Fiscal	(6) Reserves
Macroeconomic fundamentals:						
Real growth	0.080	0.132				
	(0.026)***	(0.027)***				
Unemployment rate	-0.029		-0.066			
	(0.017)*		(0.017)***			
Inflation rate	0.009			-0.010		
	(0.008)			(0.007)		
Government balance	0.054				0.054	
	(0.025)**				(0.022)**	
Reserves	-0.011					0.031
	(0.007)					(0.009)***
Countries	36	36	36	36	36	36
Observations	157	157	157	157	157	157
R-squared	0.145	0.403	0.182	0.080	0.116	0.129

Notes: The table shows the coefficients λ for link between the IMF assessment $A_{i,t}$ in the PIN of various groups and the actual macroeconomic performance of countries $M_{i,t}$, based on

$$A_{i,t} = \alpha + \lambda\, M_{i,t} + \varepsilon_{i,t} \tag{1}$$

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors. R-squared measures for the ordered probit estimates are based on McKelvey & Zavoina.

Table 2: Explaining the IMF assessment through political economy variables and actual macroeconomic performance

Assessment	Overall (1)			Fiscal (2)		
Political economy:						
IMF Executive Director	1.219	***	0.311	1.730	***	0.261
Quota used >140%	1.352	***	0.217	1.323	***	0.204
UN Security Council seat	1.582	***	0.350	1.260	***	0.328
UN voting correl. w. USA	0.731		0.881	3.358	***	0.847
Nuclear capability	0.097	**	0.047	0.042		0.041
US military presence	0.086		0.066	-0.045		0.062
Financial linkages with US	0.076		0.091	0.019		0.098
Macroeconomic fundamentals:						
Real growth	0.079	***	0.024	0.053	**	0.026
Unemployment rate	0.025		0.019	0.059	***	0.018
Inflation rate	-0.011	**	0.005	0.002		0.004
Government balance	0.055	*	0.029	0.094	***	0.029
Reserves	0.033	***	0.010	0.035	***	0.008
Countries	36			36		
Observations	157			157		
R-squared	0.334			0.339		

Notes: The table show the coefficients γ and λ for link between the IMF assessment $A_{i,t}$ in the PIN and political economy variables $X_{i,t}$ and the actual macroeconomic performance of countries $M_{i,t}$, based on

$$A_{i,t} = \alpha + \gamma \; X_{i,t} + \lambda \; M_{i,t} + \varepsilon_{i,t} \tag{2}$$

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors. R-squared measures for the ordered probit estimates are based on McKelvey & Zavoina.

Table 3: Effect of content of IMF assessment on sovereign spreads

	coef.	std. err.
Actual	-7.593 ***	2.313
Fitted overall	-7.796 **	3.654
Fitted political econ.	-8.008 **	3.634
Fitted macro	-4.632	4.631
Countries	36	
Observations	157	

Notes: The table show the coefficients for the effects of the IMF assessment in the PIN on the sovereign spreads $s_{i,t}$ of countries . The second row shows the corresponding effects η when using fitted values for the IMF assessment, i.e. the component of the IMF assessment that is explained by the combined political economy variables and macroeconomic fundamentals, based on

$$s_{i,t} = \alpha + \eta \ \hat{A}_{i,t} + \varepsilon_{i,t} \tag{3}$$

while the last two rows use the decomposition $\hat{A} = \hat{A}^X + \hat{A}^M$ for the split between the components due to political economy factors and due to fundamentals as follows based on:

$$s_{i,t} = \alpha + \gamma \ \hat{A}_{i,t}^X + \lambda \ \hat{A}_{i,t}^M + \varepsilon_{i,t} \tag{4}$$

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors.

Table 4: Decomposing the effect of IMF assessment on sovereign spreads: political economy variables versus actual macroeconomic fundamentals

Fitted values	coef.		*std. err.*
Growth			
Political economy	-3.181		*9.64*
Fundamentals	-2.732		*4.186*
Labour markets			
Political economy	-13.089	*	*6.677*
Fundamentals	-4.093		*5.644*
Monetary policy:			
Political economy	5.108		*7.14*
Fundamentals	-1.662		*12.725*
Fiscal policy:			
Political economy	-6.788	***	*1.426*
Fundamentals	-2.452		*6.513*
International policies:			
Political economy	-26.219	***	*9.484*
Fundamentals	-9.113		*11.881*
Financial markets:			
Political economy	4.373		*7.821*
Fundamentals	25.360		*19.592*
Institutions:			
Political economy	4.681		*7.712*
Fundamentals	6.016		*15.244*
Countries	36		
Observations	157		
R-squared	0.346		

Notes: The table show the coefficients for the effects of the IMF assessment in the PIN on the sovereign spreads $s_{i,t}$ of countries, distinguishing between the components due to political economy factors and due to fundamentals for individual sub-groups of the PIN assessment based on:

$$s_{i,t} = \alpha + \gamma \ \hat{A}_{i,t}^{X} + \lambda \ \hat{A}_{i,t}^{M} + \varepsilon_{i,t} \qquad (4)$$

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors.

Table 5: Effect of PIN releases on daily changes in sovereign spreads

5.A Role of countries' power at the IMF

	(1)		(2)		(3)	
1. Power at IMF:						
IMF Executive Director	-12.721 *	6.445	-14.113 **	6.450	-13.960 *	8.345
Quota used >140%	-12.585 **	6.003	-11.333 **	5.517	-15.197 *	9.122
IMF quota	2.618	3.333	2.392	2.903	3.614	4.273
IMF program	0.968	5.613	0.124	4.314	2.758	9.084
IMF staff	-1.426	1.168	-1.163	1.048	-1.601 ***	0.566
Macroeconomic fundamentals:						
Real growth	-1.315	1.763			-2.032 **	0.901
Unemployment rate	-0.844 *	0.442			-0.727	0.56
Inflation rate	0.117	0.232			0.020	0.23
Government balance	-0.091	0.637			-0.182	0.797
Reserves	-0.006	0.16			0.110	0.305
Common fundamentals:						
EMBI world	0.802 ***	0.172	0.803 ***	0.173	0.118	0.216
Countries	36		36		36	
Observations	20148		20148		157	
Country fixed effects	Yes		Yes		No	
R-squared	0.047		0.046		0.197	

5.B Role of countries' geopolitical influence

	(1)		(2)		(3)	
2. Geopolitical influence						
UN Security Council seat	-16.913 *	9.504	-18.910 *	9.550	-19.711 *	10.29
UN voting correl. w. USA	-65.687 *	38.86	-58.720 *	32.92	-71.080 ***	23.44
UN voting correl. w. EU	-23.938	19.676	-23.118	18.913	-31.744	32.48
Embassy presence	0.532	0.35	0.631	0.432	0.457	0.57
Oil reserves	0.408	3.824	0.686	2.311	2.295	5.221
Oil pipeline	-1.784	1.65	-1.807	1.464	-2.217	1.461
Nuclear capability	-1.743	1.139	-1.643	1.31	-1.552	1.214
US military presence	2.557	2.593	2.642	1.834	2.858	2.445
EU military presence	-4.005 **	1.509	-4.027 ***	1.024	-4.703	2.901
Macroeconomic fundamentals:						
Real growth	-1.168	1.794			-1.898 **	0.941
Unemployment rate	-0.601 *	0.321			-0.322	0.649
Inflation rate	0.001	0.2			-0.100	0.256
Government balance	-0.255	0.795			-0.555	1.031
Reserves	-0.130	0.25			-0.017	0.34
Common fundamentals:						
EMBI world	0.803 ***	0.172	0.805 ***	0.173	0.195	0.223
Countries	36		36		36	
Observations	20148		20148		157	
Country fixed effects	Yes		Yes		No	
R-squared	0.048		0.047		0.178	

5.C Role of countries' economic relevance for the US and EU

	(1)		(2)		(3)	
3. Economic relevance						
Trade linkages with US	2.058 **	*0.906*	2.100 **	*0.808*	2.385	*1.461*
Trade linkages with EU	-0.062	*1.744*	-0.123	*1.745*	0.062	*5.348*
Financial linkages with US	-8.781 **	*3.774*	-8.353 **	*3.234*	-9.687 *	*5.644*
Financial linkages with EU	0.813	*9.009*	0.801	*7.513*	-0.371	*9.54*
Macroeconomic fundamentals:						
Real growth	-1.512	*1.711*			-2.208 **	*0.943*
Unemployment rate	-0.037	*0.463*			0.242	*0.769*
Inflation rate	-0.031	*0.182*			-0.127	*0.236*
Government balance	0.302	*0.52*			0.294	*0.822*
Reserves	0.078	*0.165*			0.196	*0.331*
Common fundamentals:						
EMBI world	0.803 ***	*0.172*	0.805 ***	*0.173*	0.184	*0.229*
Countries	36		36		36	
Observations	20148		20148		157	
Country fixed effects	Yes		Yes		No	
R-squared	0.047		0.046		0.089	

Notes: The table shows the coefficients δ_X and δ_M for the effect on sovereign spreads $s_{i,t}$ of PIN releases interacted with/conditioned on the variable for IMF exposure and political influence $X_{i,t}$ and macroeconomic fundamentals $M_{i,t}$ from equation (5)

$$
\begin{aligned}
s_{i,t} = \alpha_i &+ \beta\, PIN_{i,t} + \gamma\, X_{i,t} + \lambda\, M_{i,t} + \omega Z_t \\
&+ \delta_X \left(PIN_{i,t} \cdot X_{i,t} \right) + \delta_M \left(PIN_{i,t} \cdot M_{i,t} \right) + \varepsilon_{i,t}
\end{aligned}
\tag{5}
$$

The models in columns (1) and (2) are for all available days in the sample period 2001-2007. The model in column (3) stems from a pooled estimation including only those countries on those days when they had a PIN release.

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors.

Table 6: Benchmark encompassing model –
Effect of PIN releases on daily changes in sovereign spreads

	(1)		(2)	
Political economy:				
IMF Executive Director	-15.700 **	*7.730*	-14.214 **	*6.551*
Quota used >140%	-9.783 **	*4.493*	-10.895 **	*5.242*
UN Security Council seat	-10.930 *	*6.494*	-12.387 *	*7.228*
UN voting correl. w. USA	-27.677	*29.736*	-32.233	*31.686*
Nuclear capability	-0.790	*1.194*	-0.891	*1.035*
US military presence	2.304	*1.504*	1.976	*1.65*
Financial linkages with US	1.458	*2.658*	0.889	*1.757*
Macroeconomic fundamentals:				
Real growth			-1.058	*1.678*
Unemployment rate			-0.625	*0.4*
Inflation rate			0.088	*0.185*
Government balance			0.273	*0.595*
Reserves			-0.098	*0.196*
Common fundamentals:				
EMBI world	0.804 ***	*0.173*	0.767 ***	*0.161*
Countries	36		36	
Observations	20148		20148	
Country fixed effects	Yes		Yes	
R-squared	0.047		0.051	

Notes: The table shows for a subset of the political economy variables the coefficients δ_X and δ_M for the effect on sovereign spreads $s_{i,t}$ of PIN releases interacted with/conditioned on the variable for IMF exposure and political influence $X_{i,t}$ and macroeconomic fundamentals $M_{i,t}$ from equation (5)

$$
s_{i,t} = \alpha_i + \beta\, PIN_{i,t} + \gamma\, X_{i,t} + \lambda\, M_{i,t} + \omega Z_t \\
+ \delta_X \left(PIN_{i,t} \cdot X_{i,t} \right) + \delta_M \left(PIN_{i,t} \cdot M_{i,t} \right) + \varepsilon_{i,t}
\tag{5}
$$

The models in columns (1) and (2) are for all available days in the sample period 2001-2007. The model in column (3) stems from a pooled estimation without country fixed effects.
***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. Numbers in italics are robust standard errors.

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