An International Watchtower: IMF Surveillance and the Fear of Declaring one's Exchange Rate Regime

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August 30, 2013

Abstract

This paper considers the question of whether IMF surveillance influences the propensity of a policymaker to untruthfully display his exchange rate regime. The analysis combines worldwide data on *de jure* and *de facto* exchange rate regimes with data on IMF publications. The empirical evidence of this paper suggests that the IMF surveillance significantly reduces the probability to renege on the announced exchange rate regime. Those results seem to be asymmetric since they are essentially driven by the negative influence of the IMF surveillance on the deviation from an announced floating regime and not from an announced fixed regime. The endogeneity concerns are considered by exploiting the international outreach of the countries as instruments for IMF surveillance and the results confirm the initial findings. Several robustness checks are performed: alternative *de facto* classifications, alternative measures of IMF surveillance, additional controls and power asymmetries among members.

Keywords: Exchange rate regime, Fear of floating, International institution, IMF
JEL Classification: E58, F31, F33, F53

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1 Introduction

Deviations of actual exchange rate policy from the official exchange rate regime are far from being anecdotal. On the one hand, there is an epidemic case of countries that officially announce a floating exchange rate regime but intervene heavily on foreign exchange markets to avoid large depreciations and/or appreciations, displaying what Calvo & Reinhart (2002) call the *fear of floating*. On the other hand, Obstfeld & Rogoff (1995) suggest that tight fixed exchange rate regimes generally do not last more than five years. Deviations from an announced target are not exceptional, displaying what Alesina & Wagner (2006) call the *fear of pegging*. Both arguments show that the official exchange rate regime does not necessarily contain accurate information about the conduct of the exchange rate policy. Among other authors, Reinhart & Rogoff (2004) develop an algorithm to determine the exchange rate policy that is implemented and end up with a *de facto* exchange rate regime classification. They consider the official *de jure* classification to be "a little better than random".

Most scholars then followed these influential studies and replaced the *de jure* regime data by the newly created *de facto* exchange rate regime classifications. The IMF itself has modified its approach and has provided annual reports that incorporate both the declared exchange rate regime and the subjective evaluation of its staff. As argued by Guisinger & Singer (2010), the *de jure* exchange rate regime remains an important source of information about a country's official statements and communication strategy. Both classifications are useful to study the divergence between the announcement and the implementation of the exchange rate policy.

The literature is essentially focused on the motivation of a policymaker to declare a *de jure* regime that differs from his *de facto* regime. In particular, the observed fear of floating was importantly examined by different authors. The fear of floating has been related to the importance of the exchange rate pass-through (Calvo & Reinhart (2002)), the risk of balance sheet losses resulting from a devaluation (Hausmann, Panizza & Stein (2001)), the likelihood of speculative attacks (Levy-Yeyati & Sturzenegger (2005)), or the fear of an appreciation, be it for prudential (Aizenman & Sun (2012)) or mercantilist motives (Levy-Yeyati, Sturzenegger & Gluzmann (2013)). The literature almost never investigates the external elements that may constrain the choice of exchange rate arrangements. Two notable exceptions are present in the literature. First, the study of Alesina & Wagner (2006) analyzes the institutional quality as a constraint on the propensity to untruthfully declare one's exchange rate regime. Their results suggest that countries with poor institutions have great difficulty in maintaining pegging and countries with relatively good institutions may display fear of floating maybe to signal their differences from those countries unable to keep their commitments of monetary stability. Second, Méon & Minne (2011) analyze the constraint on the propensity to dissimulate one's exchange rate regime, imposed by the freedom of the press and the access to information. The media seem to play the role of a "watchdog" and the freedom of the press tends to have a negative influence on both deviations from the

announced exchange rate regime.

However, to the best of my knowledge, there is no global analysis of the importance of IMF surveillance for policymakers in charge of the exchange rate policy. One main question then remains unreturned: does IMF surveillance influence the truthfulness of policymakers' statements, in particular about exchange rate policy? In an international setting, central banks are interconnected and external constraints may be added to national ones (institutional quality and press freedom). The constraint imposed by international institutions such as the International Monetary Fund is certainly an important one that influences on economic policies. The IMF's new *raison d'être* appears to be the monitoring of national authorities' actions and statements regarding the monetary and exchange rate policies. Surveillance already accounts for the largest part of its budgetary resources and seems to have become more and more influential (Dreher, Marchesi & Vreeland (2008)). Countries have no interest in ignoring IMF surveillance and advice and generally consider them as an important source of information. Some examples illustrate the influence of IMF surveillance on central banks' announcements and information releases: after the Mexican crisis of 1994–1995, the IMF increased the regularity of its publications about individual countries in response to the perception that the infrequent release of reserves data had exacerbated the crisis. This trend was even reinforced following the Thai crisis, because manipulating the official level of reserves was relatively common but unofficial (Shin & Glennerster (2003)). As a result, transparency was globally improved and many harmonized datasets were created. More recently (February, 2013), the IMF formally censored Argentina for failing to fulfill international criteria for compiling economic data. The IMF has recently seemed to intensify the surveillance of its members. Surveillance by the international organization is also becoming central for both financial and real sectors. IMF related news, for instance, provoked reactions from investors on financial markets (Hayo & Kutan (2005), Kutan, Muradoglu & Sudjana (2012)).

Theoretically, the effect of IMF surveillance on the fear of declaring is *a priori* negative, but remains uncertain because the IMF has no power to directly modify national policies and rarely applies sanctions against its members. A possible influence of IMF surveillance operates through the development and endorsement of internationally recognized standards and codes. Increasing IMF surveillance of its members should make them more likely to stick to international standards, e.g. exchange rate regime classification. Additionally, the IMF may be seen as a forum in which countries share their experience and knowledge about economic policies and performance (Lombardi & Woods (2008)). The learning costs are negatively influenced by the transfer of knowledge and should then decrease the propensity to deviate from the announced exchange rate regime. The IMF is also an important provider of data and information about the economic situation and prospects of its members. Providing new data could put a spotlight on the discrepancy between the announcement and the implementation of exchange rate policy. To avoid negative reactions of and a loss of credibility from financial markets and trading partners, a policymaker should then stick to his commitment. The negative influence of IMF surveillance, how-

ever, requires policymakers to consider the IMF as an influential international organization.

Exchange rate practices are diverse and deviating from an announced floating exchange rate regime (fear of floating) does not have the same meaning as deviating from an announced fixed regime (fear of pegging). The influence of the IMF should also depend on the differences between these two exchange rate arrangements. In particular, the commitment to a fixed exchange rate regime is easier to verify and the information provided by the IMF should be less crucial to detect a deviation from the announcement. The fear of pegging is then likely to be less influenced by IMF surveillance.

To test and quantify the theoretical intuition, I rely on a panel dataset containing both developed and developing countries. The dependent variable is the difference between the *de facto* and *de jure* exchange rate regimes. To proxy IMF surveillance, the key explanatory variable is based on the publications referring to a given country and published by the IMF (e.g. Public Information Notices, Speeches, Annual Meeting Statements,...). If the IMF staff regularly releases publications about a country, the country appears to come under the scrutiny of the IMF. The analysis is of course complicated by the fact that the IMF carefully scrutinizes the countries struggling with currency problems. As a consequence, there may be a systematic difference in its surveillance and an obvious simultaneity problem. To reduce the bias, I first consider the dependent variable with a lag of one year. I then address this fundamental endogeneity problem in IV estimations by exploiting the fact that the stock of IMF publications related to a given country depends on its political and diplomatic international outreach. A country promoting active international engagement is more likely to be active in more international organizations. Dropping the organizations that are managed by national authorities allows me to consider variables that are exogenous to economic policy choices. Three measures of the participation to those international organizations are then used as a proxy for the international outreach and as instruments to isolate the effect of IMF surveillance.

This paper's contribution to the literature is threefold. First, this paper extends the debate about the fear of declaring one's exchange rate regime by analyzing the role of the IMF as a constraint on policymakers. This paper is in line with the initial findings of Alesina & Wagner (2006) and Méon & Minne (2011) and introduces an international dimension to the existing constraints. Second, I contribute to the literature related to the role of international organizations in shaping national economic policies and public choices. In particular, I see my present work as a supplement to studies about the influence of the IMF surveillance on national economic policies (Shin & Glennerster (2003), Mussa (1997)). Third, this paper analyzes the influence of the IMF through its provision of data and information and then contributes to the corresponding literature (Cady (2005), Hayo & Kutan (2005), or Fratzscher & Reynaud (2011)). Unlike previous studies about IMF surveillance, I focus on the propensity to renege on the announced exchange rate regime.

The main findings can be summarized as follows: empirical evidence from

logit and IV estimations supports that greater surveillance of a country by the IMF is associated with lower probability of deviating from the announced exchange rate regime. The IMF surveillance, however, does not influence the deviations from a floating regime (fear of floating) and from a fixed regime (fear of pegging) symmetrically. It has no significant influence on the fear of pegging but a significant and negative influence on the fear of floating. The estimated effect suggests that if the IMF releases one more publication about the average country, its probability to renege on a floating exchange rate regime is reduced by 2.18 percentage points. These results resist many robustness tests, including considering alternative exchange rate regime classifications, using alternative measure of IMF surveillance, increasing the set of controls and considering power asymmetries between members.

The remainder of the paper is organized as follows. Section 2 discusses the motivations to untruthfully report the de facto exchange rate regime and the theoretical impact of the IMF surveillance on the propensity to do so. Section 3 describes the data and the empirical strategy. Section 4 displays the findings, while section 5 tests their robustness. Section 6 concludes.

2 Reneging on the exchange rate regime

Following the papers of Calvo & Reinhart (2002) and Hausmann *et al.* (2001), there has been an expanding literature on the discrepancy between what policymakers announce they do regarding the exchange rate policy (exchange rate regime *de jure*), and what they actually implement (exchange rate regime *de facto*). In the next subsection, I survey the main incentives that drive policymakers to undertake these exchange rate strategies. In the second subsection, I analyze the role of the IMF surveillance on the truthfulness of the exchange rate policy.

2.1 Fear of declaring

There are many incentives for policymakers to simultaneously declare one exchange rate regime and implement another. Alesina & Wagner (2006) link these deviations to institutional development. Countries with inadequate institutions are unable to maintain their exchange rate unchanged. Countries with superior institutions choose the fear of floating strategy, perhaps to signal their type via smoothed exchange rates. Carmignani, Colombo & Tirelli (2008) add the political context in their study.

Some arguments are essentially focused on the fear of floating. In particular, Genberg & Swoboda (2005) raise the fact that announcing a fixed exchange rate regime may attract speculative attacks against the parity. This may destabilize the economic system from the start. *De jure* announcing a floating regime appears to be less costly in terms of commitment for a central bank whereas *de facto* smoothing the exchange rate fluctuations may involve consequential benefits. Levy-Yeyati *et al.* (2013) first put forward the trade related benefits

of keeping an undervalued currency. Hausmann *et al.* (2001) subsequently suggest that de facto stabilizing the exchange rate allows a central bank to avoid increases in the country's debt burden in local currency as well as balance sheet losses due to large depreciations. Finally, Calvo & Reinhart (2002) argue that limiting the fluctuation of the exchange rate is a means of limiting inflation pressure in countries where the pass-through of exchange rate variations to prices is large.

Conversely, some arguments are focused on the fear of pegging.[1] Obstfeld & Rogoff (1995) argue that the openness of capital markets magnifies any weakness in a policymaker's commitment to a fixed exchange rate. Apart from a few exceptions, an announced fixed exchange rate regime ends up with a collapse. von Hagen & Zhou (2009) point out that a *de jure* fixed exchange rate regime is an investment in credibility and that investment is lost if the policymaker changes his statement. As a consequence, it could be more advantageous to slightly modify the exchange rate target rather than changing the announced regime in order to have more flexibility in the conduct of monetary policy.

The literature listed in this section focuses on the incentives for policymakers to untruthfully declare their actual exchange rate regime. Whether they *can* do it depends on the role of the IMF and on the influence of its surveillance.

2.2 IMF Surveillance

The IMF's main role is to foster monetary cooperation and maintain financial stability. In order to achieve these goals, the IMF is supposed to "exercise firm surveillance over the exchange rate policies of members". IMF surveillance consists in "overseeing the international monetary system and monitoring the economic and financial policies of its 188 member countries" (IMF, 2013). From a practical point of view, the Fund performs, *inter alia*, a bilateral surveillance, or the appraisal of and advice on economic policies of each member country. The IMF staff continually monitors economic situations and policies of member countries either by visiting them or by analyzing their announcements and data. In some cases, countries may be punished for not fulfilling the IMF standards or not following IMF instructions. The IMF surveillance and the presence of IMF economists drive policymakers to stick to international standards and practices (Shin & Glennerster (2003)). Publications from the IMF are related to the performance of its staff or committees but also to activities organized within and/or by the Fund. Its publications then put policymakers under more pressure (notably peer pressure) to implement the recommendations of the IMF staff and most countries take stock of them. An important international standard is

[1] There is no consensus on the terminology of this exchange rate arrangement. On the one hand, Levy Yeyati, Sturzenegger & Reggio (2010) define the fear of pegging as choosing a *de facto* peg but declaring a more flexible regime (fear of announcing a peg). On the other hand, Alesina & Wagner (2006) define the fear of pegging as choosing a *de jure* regime but implementing a more flexible arrangement (fear of actual pegging). In this paper, as the exchange rate regimes are coded in a binary base, the second definition matches the purpose of this study better.

associated with the exchange rate regime classification. In particular, definitions of reserves data and intervention policies have been harmonized by the Fund.[2]

Some policymakers lack experience in the management of monetary and exchange rate policies. In this context, economists from the IMF can share the aggregate experience of other members about economic policies and performances. Through its surveillance and activity, the IMF reduces the extent to which policymakers are affected by learning costs. The IMF also works as a global forum in which a country may learn from another, notably through the expertise of IMF economists. Collection and provision of information by the Fund facilitates (Bayesian) updating of countries preferences and allows different consideration of competition and/or cooperation (Lombardi & Woods (2008)). The experience transfer may affect both deviations from announced exchange rate regime. On the one hand, the aggregated knowledge could be helpful for inexperienced countries committed to a fixed regime to maintain the fixed parity without frequent adjustment. Shared experience could improve the institutional processes and decrease the propensity to undertake fear of pegging strategies (Alesina & Wagner (2006)). On the other hand, countries learn the response of economic agents to local currency depreciation under the fear of floating. By sharing the experience of other members, the IMF could then accelerate the learning of the balance sheet effects and its consequences on the economy. As such, many developing countries learned, during the 2000s, that their fear was unfounded and moved towards more *de facto* flexibility, as explained by Bigio (2010). The IMF may then advise them how to match announcement and implemented policies or, in other words, how to exit the fear of floating or the fear of pegging.

Another argument is based on the influence that the IMF has on financial markets' information. The IMF provides additional data and information about countries' economic situations and this leads to a decrease of investors perceived risk. Empirical analyses show that surveillance by the IMF tends to increase financial market returns (Hayo & Kutan (2005), Fratzscher & Reynaud (2011)) and decrease borrowing costs (Shin & Glennerster (2003), Cady (2005)). Both effects improve and stabilize the financial prospects of a country and then calm down speculative attacks. Improving financial markets' information may influence the fear of floating and the fear of pegging separately. On the one hand, countries that use the fear of floating strategy to avoid destabilization from speculative attacks (Genberg & Swoboda (2005)) then have less incentive to do so. On the other hand, countries would find it easier to stick the announced fixed regime to *de facto* fixed exchange rate regimes in a more stable economic context. Frequent release of reliable data about exchange rate intervention tends to reassure the investors and may then improve the sustainability of an annouced fixed regime. The provision of information about the *de facto* intervention also reduces the influence and effectiveness of the exchange regime announced by the country. The reduction of information asymmetry makes the fear of declaring strategy useless because the economic agents update their beliefs with the avail-

[2] E.g. before the Thai crisis, the definition of international reserves in particular in Thailand did not require that forward booking and swaps be reported as part of the foreign exchange intervention.

able information. Additionally, the data release by the IMF allows investors and voters to have greater access to information and the media to better scrutinize the exchange rate policy. Méon & Minne (2011) show that the access to information and media activity result in a lower probability of untruthfully reporting the *de facto* regime. Both elements tend to impose a greater discipline in the conduct of exchange policies notably via voting or investing sanctions. However, the argument can be reversed and the investors may also overreact to any additional publication even if it does not bring any relevant information. Investors could attach too much weight to the conditionality of their forecasts, or get confused by the large and increasing amount of information they receive (van der Cruijsen, Eijffinger & Hoogduin (2010)). This view does not seem to be verified in the empirical literature on transparency in monetary and exchange rate policies (Ehrmann, Eijffinger & Fratzscher (2012), Fratzscher (2008)).

The arguments of this subsection are globally in favor of a negative relationship between IMF surveillance and the propensity to misdeclare one's exchange rate regime. Both the fear of pegging and the fear of floating should then be influenced negatively. The two strategies remain, however, considerably different and the commitment to a *de jure* peg is easier to verify. The additional information provided by the IMF is highly valuable when facing a fear of floating case but not necessarily when facing a fear of pegging case. In the classical example of a peg to a single currency, a fixed parity is transparent and the foreign-exchange rate is sufficient to detect a deviation. In this case, investing in additional information or surveillance is not required. Moreover, the IMF surveillance could even positively influence the propensity to renege on a fixed exchange rate regime. The release of additional information or data might highlight some economic or institutional weaknesses. This makes the commitment to a fixed exchange rate difficult to keep. The effect on the fear of pegging is thus uncertain, typically for less developed countries.

3 Data and estimation strategy

3.1 Data

The dataset consists in four parts. First, the data used for the dependent variable are drawn from both *de jure* and *de facto* exchange rate regimes. Second, publications displayed by the IMF form the basis for the key independent variable. Third, data about participation to international organizations are used to perform IV estimations. Finally, a set of control variables is defined to isolate the effect of IMF surveillance. The descriptive statistics for all the variables are provided in the appendix (Table A.1).

***De jure* vs. *de facto* exchange rate regimes** The *de jure* exchange rate regime is the one announced by the national authorities. The classification is provided by the IMF and extensively described in its Annual Report on Exchange Rate Arrangements and Exchange Restrictions. Until 1999, the *de jure*

classification was the only one to be reported and was solely determined by a self-declaration of the exchange rate arrangement. If a given country, for example, announced a floating regime, then the IMF classified it as floating even if the monetary authorities, in fact, carry out an active exchange rate policy.[3] Deviations from the announced regime are far from being exceptional and the prevailing exchange rate fluctuations do not always correspond to the declared intentions. Some scholars then developed *de facto* classifications (e.g. Reinhart & Rogoff (2004), Shambaugh (2004) or Levy-Yeyati & Sturzenegger (2005)) to measure the exchange rate policy that is implemented by monetary authorities. The IMF itself took stock of these findings and incorporated in the annual reports the self-declared regime and subjective staff judgment.

The dependent variable should measure the discrepancy between the *de jure* and *de facto* exchange rate regimes and draws on both regimes. To construct that variable, both the *de jure* classification and a *de facto* classification are required. The main classification of *de facto* exchange rate regimes is provided by Reinhart & Rogoff (2004), hereafter R&R. This classification has been used in the few studies that have tried to explain the discrepancies between announced and implemented exchange rate regimes, such as Alesina & Wagner (2006), Carmignani *et al.* (2008) or Méon & Minne (2011). The R&R classification seems more appropriate for this purpose. The first reason is that the methodology is based on a detailed analysis of countries' chronology, official exchange rates but also dual market rates. The existence of parallel exchange rates remains an important issue in developing countries, and results from interventions through capital controls. Actual exchange rates, as opposed to official exchange rates represent more the result of the implemented policies and less what the monetary authorities want to exhibit to the rest of the world. The second reason is related to the data collection and updating. The R&R classification is the most widespread panel dataset, as it concerns up to 153 countries between 1946 and 2010. The alternative classifications are not updated for recent years and this point is crucial for matching key explanatory variables.

The second classification often used and cited in empirical studies is the one developed by Levy-Yeyati & Sturzenegger (2005). The algorithm set up by the authors is based on reserves and base money, whose relative low availability leads to many inconclusive cases. Transparent countries would then be over-represented in the sample. A third *de facto* classification is developed by Shambaugh (2004). This classification is binary and, to some extent, intermediate between the two previous classifications, as explained by Alesina & Wagner (2006). The choice of the *de facto* classification may still be considered as subjective and critical. I will therefore check the robustness of the findings to the use of two alternative well known classifications, respectively provided by Levy-Yeyati & Sturzenegger (2005) and Shambaugh (2004). [4]

[3] Alesina & Wagner (2006) cite the example of China between 1994 and 1997. China decided to peg its exchange rate to the US dollar. The IMF however classified China as pursuing a managed float because the Chinese authorities insisted on being classified as such.

[4] For further information about exchange rate regime classifications, see Tavlas, Dellas & Stockman (2008).

As in Méon & Minne (2011), I focus on a binary separation of the exchange rate regimes between fixed and flexible exchange rate regimes. The binary basis divides exchange rate regimes into the fixed and flexible categories, without focusing on more subtle differences, such as the difference between a pure and a dirty float, or the difference between a peg and a crawling peg.[5] Considering a wider range of categories has some advantages but raises the problem of comparability across classification schemes, as explained by Klein & Shambaugh (2010). The following exchange rate arrangements make up the fixed exchange rate regimes category: exchange rate regimes with no separate legal tender, currency boards, pegged exchange rates, crawling pegs, and exchange rates with crawling bands. Conversely, the managed and independently floating exchange rate regimes belong to the flexible exchange rate regime category. The freely falling category that is defined in the R&R classification, is not considered in the construction of the dependent variable, because it represents more an unwanted situation of hyperinflation than a fear of declaring strategy. Moreover, the corresponding observations may be considered as outliers, because of the special conditions generated by such situations.

The next steps consist in matching the *de jure* and *de facto* regimes and generating a dummy variable that reflects the discrepancy between the implemented and the declared regimes. This variable takes the value one if the *de jure* and the *de facto* regimes coincide and zero if not. The variable represents a global measure of the untruthfulness of countries' declarations to the IMF, and is called the "fear of declaring" variable.

A postulate of the previous section is that IMF surveillance influences the fear of floating and the fear of pegging differently. In particular, a fixed regime is, *ceteris paribus*, easier to verify, and the IMF expertise could then not be essential to detect untruthful declarations about exchange rate arrangements. To tackle this issue, the sample is splitted in two according to the direction of the deviation: towards more fixity (fear of floating) or towards more flexibility (fear of pegging). The first subsample corresponds to the "fear of floating" and is composed by countries that announce a floating regime. The dependent variable takes the value one if a country announces a floating exchange rate regime but implements a fixed one; and the value zero if a country announces and implements a floating exchange rate regime. The second subsample corresponds to the "fear of pegging" and is composed by countries that announce a fixed regime. The dependent variable takes the value one if the country announces a fixed exchange rate regime but implements a floating one; and the value zero if a country announces and implements a fixed exchange rate regime.

The distinction between fear of floating and fear of pegging is, in this study, driven by the exchange rate regime *de jure*. It is, however, possible to opt for the reverse strategy, as in Méon & Minne (2011). The choice made here is motived by different reasons. First, as the cornerstone of this paper is the relationship between countries and the IMF, spliting the sample according to the exchange rate regime announced to the IMF, namely the exchange rate regime *de jure*,

[5] This hypothesis is relaxed in the robustness checks.

seems to be a natural choice. Second, the IMF surveillance involves the implementation and verification of norms and standards, such as the exchange rate regime. Announcing its exchange rate regime to the IMF then takes on great importance for a country. It is particularly meaningful for countries that are willing to gain or regain credibility with the Fund and its members (e.g. borrowing countries). Third, the IMF has a significant influence on financial markets' information about countries' economic stance. Declarations from monetary authorities, notably about the exchange rate policy, are thoroughly analyzed by investors and may provoke important reactions on financial markets. The announcement of the exchange rate regime is central in my study.

IMF surveillance To investigate the impact of IMF surveillance on the truthfulness of countries' declarations, I need to define a set of variables measuring the intensity of the IMF monitoring of its members. Defining a general indicator for both bilateral and multilateral surveillance is from the start difficult for two reasons. The first reason is data availability and matching. Most of the data concerning the IMF are either related to IMF financing programs (Dreher (2006)) or standards subscriptions (Cady (2005)). Both elements are problematic because they do not encompass the surveillance process or data do not have enough variability across countries on a yearly basis. The second reason is related to the secrecy of the IMF process of surveillance. The reports of surveillance activities are published only with the consent of the country (or countries) concerned (e.g. Public Information Notices, or Article IV Staff reports).

To build up an indicator that tackles the aforementioned issues, I use the IMF-related news available on the official website.[6] To proxy the IMF surveillance, the key explanatory variable is based on all news referring to a given country, in a given year and displayed by the IMF. In a first step, IMF news are simply counted and the explanatory variable represents the number of publications related to the country that are released on the IMF website. For a report to be included in the indicator, it should not only cite the country but should address a specific matter concerning the country. The publications categories taken into account in this paper are classified and described in detail in the technical appendix. The news indicator is not only related to IMF financing programs but also to external communication and publications that are part of the bilateral surveillance. Annual meeting statements and publications of global committees are more related to multilateral surveillance. Concerning the secrecy of the IMF process of surveillance, it is a non–negligible issue and may include some bias in the results. In particular, some countries may simultaneously decide to undertake a fear of declaring strategy and not to reveal the reports related to the detection of the deviating strategy. This problem is, however, limited because a vast majority of members accepts to be transparent and to publish these reports. Moreover, most publications categories

[6]The period taken into account is 1997-2010. Before 1997, the publication of news was occasional and the surveillance was mainly unreported to the public. As the availability of the dependent variable is limited to 2010, it is unnecessary to collect data beyond that year.

do not require the agreement of the concerned country officially to be released (Speeches, Transcripts, IMF Staff Papers, Finance and Development,...). As a robustness checks, two alternative measures of IMF surveillance are considered: principal component analysis and a selection of the reports related to public communication.

According to the theoretical literature, the sign of the relation between IMF surveillance and the probability to untruthfully report the exchange rate regime is negative. The relation should be stronger with the fear of floating than with the fear of pegging. This intuition is investigated in the results section.

Control variables In the baseline models, I control for size, level of development, economic growth, trade openness, capital controls, level of democracy and establishment of IMF financing programs. The size of a country is measured by its population (in millions). Initial papers studying the determinants of the exchange rate regime pointed out that smaller countries have greater incentives and lower costs to opt for a fixed regime. This aspect might influence the exchange rate policy choice. Moreover, size is also related to IMF surveillance since a larger country tends to be concerned by more topics, issues or international relationships. The IMF should therefore cover a larger country more intensively.

The level of development is measured by the logarithm of the constant price purchasing power parity adjusted gross domestic product per capita retrieved from the Penn World Table 7.1 database. Exchange rate policies are affected by the level of development of a country because of the access to international finance, the credibility of the monetary authorities or historical differences. Economic growth measures how fast a country's economy is growing and I proxy it here with the lagged growth of the real GDP per capita.[7] A growing country has more freedom to choose its economic policies either because of larger fiscal leeway or because of lower pressure from financial markets.

Trade openness is measured by the ratio of exports plus imports over GDP and represents total trade as a percentage of GDP. This variable is regularly used as a control variable in studies related to exchange rate policies. The variable reflects the fact that an open country is particularly careful about the *de facto* stability of its exchange rate. Trade openness then modifies the benefits associated with the fear of floating and fear of pegging strategies.

Capital controls are measured by the index developed by Chinn & Ito (2008). The indicator is based on dummy variables related to restrictions on cross-border financial transactions reported in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions. The presence of multiple exchange rates is, *inter alia*, central in the construction of the index. Instituting capital controls on international transactions may help to accommodate independence of monetary policy and active exchange rate policy. It allows the policymaker to simultaneously fix his *de jure* exchange rate and let his black market exchange

[7] Using a lagged variable reduces the extent to which correlation of the level of development (GDP) and economic growth (GDP growth) may influence the results.

rate fluctuate.

The level of democracy is measured by democratic and autocratic "patterns of authority" and the expert coding index is taken from Polity IV data. For each year and country, the Polity IV democracy index records key qualities of executive recruitment, constraints on executive authority, and political competition and ranges from -10 (autocracies) to +10 (democracies). The index represents the potential constraint imposed by a democratic system, in which reneging on its commitments may imply sanctions from voters or political opponents.

An important influence exerted by the IMF is related to its financial support. IMF programs were designed to cover two main objectives: short-term balance-of-payments assistance to members and long-term loans at subsidized interest rates for poor countries. Reneging on one's exchange rate regime can be driven by political incentives with respect to international organizations. The IMF may influence domestic policies and the choice of the *ex-ante* (de jure) exchange rate regime, notably through the implementation of their programs (Boockmann & Dreher (2003)). During crisis periods, a policymaker may implement monetary policies that are either independent of IMF programs or in conflict with the IMF's position, such as smoothing exchange rate fluctuations (Kutan *et al.* (2012)). He may have an incentive to declare a floating exchange rate regime and implement a fixed one to reduce external pressure on their policies. Furthermore, the moral hazard interpretation suggests that, due to IMF support, the policy maker may refuse to implement necessary reforms advised by the IMF because they are politically costly (Evrensel & Kutan (2006)). I introduce the number of IMF programs (Dreher (2006)) as a control variable.

3.2 Identification strategy and instrumental variables

As the dependent variable is a binary variable, the first estimations are based on a binary logit model. It is estimated with robust standard errors clustered at the country level, to control for serial correlation and for heteroskedasticity across countries. All regressions also include year fixed effects, to control for unobserved global trends, in particular the global intensification of IMF surveillance. Country fixed effects appear to be inappropriate in this study, because both IMF publications and exchange rate arrangements are generally stable or slowly moving through time for most countries.[8] Most publications categories are not systematically driven by short-run developments, but more importantly by long-run characteristics of the country as the category "Article IV reports" (Shin & Glennerster (2003)). The results are thus driven by the differences between countries much more than the differences within a country's evolution. A country fixed effect would thus soak up the effect of the key explanatory variable.

The investigation is obviously complicated by the presence of an endogeneity bias, in particular a simultaneity bias. IMF surveillance is typically undertaken

[8]If the dependent variable is partitioned into components attributable to different sources of variation, 99.43% of the variation is attributable to the between effect and 0.57% to the within effect.

or intensified with countries that are dishonest or suspected to be. First, through its surveillance, the IMF "should avoid manipulating the international monetary system in order to prevent effective balance-of-payments adjustment or to gain unfair competitive advantage" (Mussa (1997)). The fear of declaring strategy may be considered as a mechanism to gain such unfair competitive advantage. Second, the IMF has a role of informing financial markets through its provision of data and reports. By analyzing countries that are less transparent with respect to their economic policies, the IMF compensates the lack of reliable information that financial markets cope with. As a consequence, the untruthful report of the exchange rate regime might simply increase IMF surveillance, thereby reversing the causality formulated in the previous sections.

To reduce the extent to which my results are influenced by the endogeneity bias, I introduce a lag of one year into the building of the key independent variable, IMF surveillance. However, this variable remains relatively stable through years and considering a lag would not entirely solve the problem. Another endogeneity problem may also appear if we consider a third variable influencing both the dependent and independent variables. The level of transparency of a central bank may, for example, influence both IMF surveillance, through better communication to the IMF, and the exchange rate strategy, through a change of the central bank's objectives.

I therefore complement the initial approach with instrumental variables estimations. The instruments are based on the international outreach of a country, more precisely on the participation to International Nongovernmental Organizations (INGOs). Among its functions, "The IMF seeks to mitigate the negative effects of globalization on the world economy in two ways: by ensuring the stability of the international financial system, and by helping individual countries take advantage of the investment opportunities offered by international capital markets, while reducing their vulnerability to adverse shocks or changes in investor sentiment" (IMF Issues Brief, 2002). The international outreach of a country is crucial for the IMF and its staff. More a country is integrated internationally, more attention this country requires from the IMF. More importantly, multi-country thematic reports (e.g. on interconnectedness or clusters) often tackle common topics and problems that member countries face simultaneously or together. Bilateral surveillance (or Article IV consultations), as well as various global reports and economic data reports also deal with interconnections between countries (IMF Factsheet, March 2013). Consequently, more a country is interconnected with other countries, more the IMF releases publications about the country. To measure the international outreach and interconnectedness, I use the participation to international organizations. Several indicators are provided by the Union of International Associations (UIA), that has specialized in the collection of data on international organizations. The instruments taken into account are the number of IO of which the country is a member, the number of international meetings held in the country and the number of IO headquarters present on the national territory.

These measures have the advantage of being strongly related to international diplomacy and politics, but not really to international economics. In particu-

lar, the objective is to avoid variables that are highly correlated with economic openness, as the latter is an important determinant of the exchange rate regime choice in the literature. The instruments being used present either no significant correlation or a low negative correlation with trade openness (less than 0.1 in absolute value). Moreover, to construct exogenous indicators, I only consider International Organizations that are not under the control of national authorities and drop the intergovernmental organizations (e.g. World Trade Organization, United Nations, IMF). By doing so, the link between national economic policies and governance of International Organizations is weakened. The instruments are designed to be strongly correlated with IMF surveillance (around 0.45) and weakly with the national exchange rate arrangement (around -0.11).

After merging the datasets, I end up with an effective sample of up to 142 countries over the 1997-2010 (logit estimations) or 2000-2010 (IV estimations) periods. The aim of this paper is to test whether there is a relationship between the level of surveillance by the IMF in a country and the propensity to renege on the announced exchange rate regime. Increased surveillance might be associated with a lower propensity to renege on one's announcement. This intuition is tested in the next section.

4 Results

The baseline results are reported in Table 1. The first three columns estimate the regressions related to the deviation from any *de jure* regime using binary logit models. As described in Subsection 3.1, in a the first step, the study concerns all the countries-years regardless of the announcement. In a second step, I divide the sample according to the exchange rate regime *de jure*. For each chosen specification, the regression is run in succession for the fear of declaring (reneging on any regime), the fear of pegging (reneging on a fixed regime) and the fear of floating (reneging on a floating regime). The IV estimations are then performed following the same specifications and are reported in the last three columns.

In Table 1, the core set of control variables is included and the coefficients related to these variables are mainly insignificant. As explained in Méon & Minne (2011), the results related to the 1990s and those related to the 2000s show different patterns, notably due to the development of the *de facto* classification. These results are not totally in line with previous studies. The size (population) seems however positively related to the fear of floating. This might be explained by the exchange rate policies undertaken by some outliers with respect to size (e.g. China, India or Russia). Democracy is relatively similar to Alesina & Wagner (2006) showing that democratic countries have an incentive to reduce uncertainty by lowering the fluctuation of their exchange rate in a *de jure* flexible regime.

Fear of declaring In the first column of Table 1 (fear of declaring), the coefficient of IMF surveillance is negative and significant at the 5% level. This

Table 1: Baseline regressions[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.039	0.061	-0.090	-0.014	0.010	-0.015
	(0.02)**	(0.05)	(0.03)***	(0.01)**	(0.02)	(0.01)**
Population	0.002	-0.002	0.002	0.001	-0.000	0.000
	(0.00)**	(0.01)	(0.00)**	(0.00)***	(0.00)	(0.00)
Real GDP per cap.	-0.126	0.251	-0.182	-0.030	0.057	-0.093
	(0.13)	(0.47)	(0.21)	(0.04)	(0.04)	(0.05)*
Trade Openness	0.001	-0.002	0.002	-0.000	-0.000	-0.000
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Capital Control	0.084	-0.162	-0.009	0.019	-0.035	0.015
	(0.11)	(0.37)	(0.14)	(0.03)	(0.03)	(0.04)
Democracy	-0.005	0.063	-0.062	-0.001	0.007	-0.016
	(0.02)	(0.04)	(0.04)	(0.01)	(0.01)	(0.01)**
IMF Programs	0.130	0.033	0.270	0.031	-0.016	0.067
	(0.14)	(0.45)	(0.25)	(0.06)	(0.06)	(0.08)
GDP growth (lagged)	1.234	-1.814	2.204	0.251	-0.347	0.072
	(1.67)	(2.92)	(3.02)	(0.62)	(0.41)	(0.95)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.00	0.04	0.01
Weak id. test (rel. bias)				$< 10\%$	$< 5\%$	$< 5\%$
Overid. test				0.76	0.94	0.16
$PseudoR^2$	0.03	0.09	0.14			
2nd-stage F	0.03	0.00	0.00	0.07	0.64	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1713 (142)	759 (91)	954 (110)	902 (128)	391 (79)	511 (85)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

result indicates that greater surveillance of a country by the IMF is associated with smaller probability of untruthfully displaying its exchange rate regime. The coefficient of the IMF surveillance remains statistically significant both for the logit model and the IV model. To gauge the economic significance of the results, I compute and analyze the marginal effect of the IMF surveillance on the propensity to declare a regime that is different from the regime the country implements for the logit regression (column 1). In a logit model, the marginal effect of a covariate varies according to the observation's information, which makes the interpretation of the coefficient difficult. The marginal effect of the average country is equal to -.0091. This means that releasing one additional

publication about the average country decreases its probability of reneging on its exchange rate regime by 0.91 percentage point.[9] As countries are relatively heterogeneous with respect to the surveillance that the IMF exerts on them, it is informative to consider a larger change in the publications of IMF news. For instance, imagine that the IMF increases its publications related to the Republic of Venezuela by one standard deviation.[10] The number of publications about that country would rise from 0 to 9, reaching a level comparable to that of Portugal at the same time. *Ceteris paribus*, the predicted probability of reneging on its exchange rate regime would approximately decline from 0.41 to 0.32 in our model.

Formerly, I focused on the mean value for the marginal effect, but this provides only a general pattern of the influence of IMF surveillance. Following Shin & Glennerster (2003), the marginal effect of IMF surveillance should be decreasing with the number of reports that are published about the country. The first IMF publication about a country should reveal unkown data and information. After the first publication that are released, the more the IMF releases publications about the country, the more it is likely that the information is repeated or irrelevant for investors or economic agents. The influence of one additional IMF publication should be decreasing and even become insignificant after a certain threshold. I then compute the marginal effect for the average country and its 95% confidence interval for each IMF publications level. The other explanatory variables are taken at their respective mean value. Figure 1 confirms the previous intuition. The marginal effect of the release of an IMF publication is greater for countries that are less monitored by the IMF. After the release of 71 publications, the marginal effect of an additional publication is no longer significant at the 5% level.

Figure 1 also shows that the influence of IMF publications is spread out if the initial level is relatively low. This is evidence that IMF surveillance does not have the same amplitude for less monitored countries. Releasing one additional publication does not have the same impact on these countries' propensity to renege on their announced exchange rate regimes, but remains negative and significant. This might be explained by the presence of outliers (mainly the People's Republic of China and the Republic of India).[11]

Fear of pegging or/and fear of floating ? Reneging on a floating exchange rate regime or a fixed one are based on different incentives and strategies. The effect of IMF surveillance is also suspected to be different. In the second column

[9] In the graphical appendix (Figure A.1), the density function for the marginal effect is provided.

[10] The Republic of Venezuela is a country about which the IMF did not published any news in 2009

[11] Both China and India experienced more extensive surveillance from the IMF than predicted by the model. At the same time, these countries continued undertaking exchange rate intervention and announcing floating regimes. With this level of surveillance, other countries would not sustain this strategy. Both countries have an idiosyncratic influence on the global economy and the IMF then has only a limited impact on their national policies. Excluding the two outliers reinforces the baseline results.

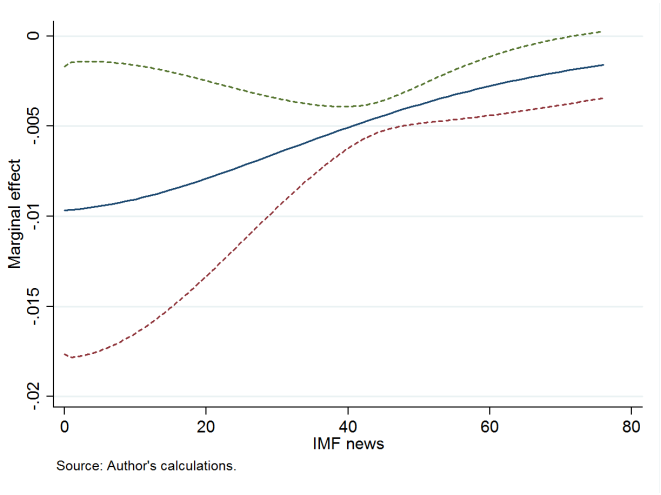

Figure 1: Marginal effect of an IMF publication on the probability of reneging on its exchange rate regime for each IMF publication initial level (column 1, Table 1). The other explanatory variables are taken at their respective mean value

of Table 1 (fear of pegging), the effective subsample exclusively concerns the countries that announce a fixed exchange rate regime to the IMF. The fear of pegging is a strategy consisting in announcing a fixed exchange rate regime (*de jure*) and implementing a floating one (*de facto*). The coefficient of IMF surveillance is insignificant for the logit model. IMF surveillance seems to have a limited influence on the propensity to renege on a fixed exchange rate regime. As explained in the Subsection 2.2, a *de jure* fixed exchange rate regime is, *ceteris paribus*, easier to verify. The publication of news by the IMF may thus not be necessary to detect a fear of pegging strategy.

In the third column of Table 1 (fear of floating), the effective subsample exclusively concerns the countries that announce a floating exchange rate regime to the IMF. The fear of floating is a strategy consisting in announcing a floating exchange rate regime (*de jure*) and implementing a fixed one (*de facto*). The marginal effect of the average country is equal to -.0218 and is significant at the 1% level. If the IMF publishes one more report about the average country, the probability of reneging on its floating exchange rate regime decreases by 2.18 percentage points.[12] The most striking result arises if we consider an increase in IMF publications about the least monitored country (the Islamic Republic of Iran) of about one standard deviation.[13] The number of publications would

[12]In the graphical appendix (Figure A.1), the density function for the marginal effect is provided.

[13]The Islamic Republic of Iran is a country about which the IMF published only one news in 2009.

increase from 1 to 11, reaching a level comparable to that of Indonesia at the same time. The probability of reneging on a floating regime would then go from 0.83 to 0.67.[14] This result shows that the effect of IMF surveillance on the fear of declaring detected previously is mainly driven by its effect on the fear of floating. Without any surveillance from the IMF, countries have a greater probability of undertaking a fear of floating strategy (0.83) than a fear of declaring strategy (0.37). The marginal effect of IMF surveillance is particularly important for less monitored countries (Figure 2). In that respect, the global picture seems similar to the one analyzed on the fear of declaring. However, contrary to the results on the fear of declaring, the marginal effect is increasing with the number of publications for the countries about which the IMF publishes less than 17 news. This means that the 17^{th} publication tends to have more impact on the probability to renege on one's floating exchange rate regime than the first one. The first publications may be seen as revealing only partial or already known information about the country's policies. However, the next publications may add important information up to a certain level after which the marginal effect of an additional publication on the dependent variable decreases.

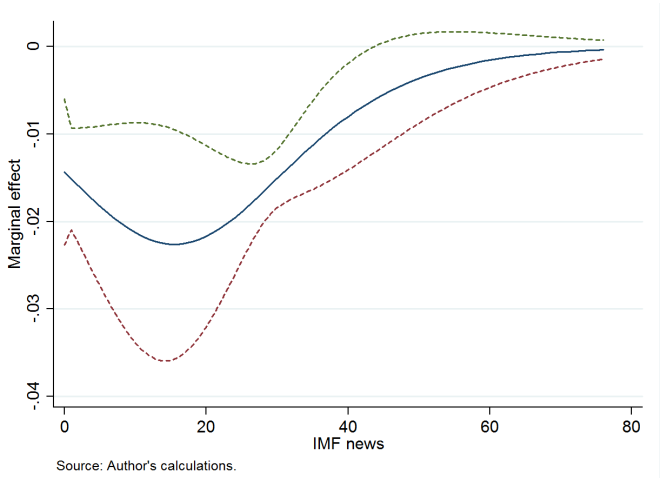

Figure 2: Marginal effect of IMF publications on the probability of reneging on a floating exchange rate regime for each IMF news level (column 3, Table 1). The other explanatory variables are taken at their respective mean value.

Unlike in Méon & Minne (2011), I do not find a symmetric influence of the constraint on the propensity to untruthfully report the exchange rate regime. This difference may be explained by the specific objective of the IMF to "avoid manipulating the international monetary system in order to prevent effective

[14]The probability would decrease to 0.0056 if the number of publications reaches its maximum level for my sample (76).

balance-of-payments adjustment or to gain unfair competitive advantage" (Mussa (1997)) that is typically related to the fear of declaring (Levy-Yeyati *et al.* (2013)). Consequently, the focus of the IMF surveillance is set on the behavior pertaining to a deviation from a floating exchange rate regime.

Endogeneity problems As explained in the Subsection 3.2, the initial regressions may suffer from endogeneity problems and, in particular, simultaneity problems. To address the endogeneity issue, I report analogous specifications using the method of instrumental variables in the last three columns of Table 1.[15] The three instruments used in IV estimations are the number of IO of which the country is member, the number of international meetings held in the country and the number of IO headquarters present on the national territory. To verify the relevance of the instruments, I perform the usual tests related to the IV method for each regression. The results for the underidentification and overidentification tests are consistent with the instruments being relevant (a rejection of the null that the excluded instruments are uncorrelated with the endogenous regressor) and coherent (a failure to reject the null that the error term is uncorrelated with the instruments), while the weak identification tests indicate that the instruments are reasonably strong (the IV estimator introduces bias that is less that 5 or 10 percent that of the bias of the OLS estimator).[16]

The IV estimates are roughly comparable to results obtained with the Logit model (significant at conventional levels and negative). The marginal effect is marginally larger than the logit estimations for the fear of declaring. Increasing the number of publications about a country tends to decrease its probability of reneging on its exchange rate regime by 1.4%. The interpretation should, however, be considered with caution as the model is not designed to deal with a binary dependent variable. Concerning the fear of pegging, the coefficient related to IMF surveillance, and even the F-stat, are not significant at the conventional levels. This evidence reinforces the idea that IMF surveillance does not significantly influence the propensity to undertake a fear of pegging strategy. Concerning the fear of floating, the results are similar to the ones obtained with the logit model. The coefficients related to IMF surveillance are significant and negative, and the marginal effect is somewhat comparable to the logit estimations. I conclude that the main result –the negative influence of the IMF surveillance on the fear of declaring and fear of floating – is robust to baseline endogeneity considerations.

5 Robustness Checks

To test the robustness of the main results, I perform several complementary estimations that can be classified into four categories. I first consider alternative

[15] I also tested the IV probit model and the results are identical or even stronger. The advantage of the 2SLS approach is its simplicity, mostly in terms of interpretation.

[16] The aforementioned tests keep indicating the validity of the instruments in the robustness checks and in particular in those dealing with alternative exchange rate regime classifications.

de facto exchange rate regime classifications to construct the dependent variable. Second I test alternative measures for the key independent variable. Third, I introduce additional variables to control for other countries-years characteristics. Finally, I take into account the power asymmetry that exists between members of the IMF and consider only the less powerful members.

5.1 Alternative *de facto* classifications

Dealing with exchange rate regime classifications is difficult from the start as the choice of the *de facto* classification is subjective and may thus introduce a bias in the results. I consider replacing the R&R classification by two alternative ones developed respectively by Shambaugh (2004) and Levy-Yeyati & Sturzenegger (2005). A disadvantage of both datasets is the shortfall of the matching between the availability of the dependent and independent variables. Shambaugh's binary classification draws on whether the official exchange rate of a country stays within a small band around its base currency. A drawback of this classification is the absence of the multilateral peg or the unofficial exchange rate in the construction. The results are displayed in Table 2 and broadly confirm the main findings of Section 4. In the IV regressions, however, the coefficient related to IMF surveillance turns out to be insignificant in the case of the fear of floating (column 6). Note that the underidentification test, the weak identification test and the overidentification test still confirm that the instruments remain valid.

Levi-Yeyati and Sturzenegger's classification relies on an algorithm based on the official exchange rate, international reserves and base money. The algorithm notably uses the international reserves dataset that leads to many unclassified cases. The results are reported in Table 3. The IV estimations are particularly close to those obtained with the R&R classification. The results pertaining to alternative classifications tend to reinforce the initial finding: extensive surveillance from the IMF tends to reduce a country's propensity to renege on its *de jure* (floating) exchange rate regime.

Finally, instead of considering a binary exchange rate classification, one may be interested in considering a more detailed classification. For instance, the four categories classification of Reinhart & Rogoff (2004) is regularly used in the literature, as in Alesina & Wagner (2006). It allows us to use a finer measure of deviation from the announced exchange rate regime. The dependent variable is defined as the absolute value of the difference between the *de jure* and the *de facto* exchange rate regimes. The new dependent variable ranges from 0 to 3 and requires the use of an ordered logit model.[17] The endogeneity problem remains and the IV estimations are also performed with this specification. The results are displayed in Table A.2. The results obtained with the IV regressions are similar to those of the baseline. For the ordered logit models, however, the coefficients related to the key independent variable are insignificant. This may be explained by the fact that a finer classification of exchange rate regimes is associated with

[17] A country is categorized as undertaking a fear of pegging strategy when the announced exchange rate regime is more flexible than the implemented one, and *vice versa* for the fear of floating.

Table 2: Baseline regressions, SH classification[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.074	-0.073	-0.087	-0.013	-0.036	-0.008
	(0.03)***	(0.05)	(0.03)***	(0.01)*	(0.01)***	(0.01)
Population	0.002	-0.001	0.002	0.001	0.000	0.000
	(0.00)***	(0.00)	(0.00)***	(0.00)***	(0.00)	(0.00)***
Real GDP per cap.	0.170	0.537	0.103	0.007	0.084	-0.004
	(0.17)	(0.36)	(0.21)	(0.04)	(0.08)	(0.05)
Trade Openness	0.000	-0.010	0.004	-0.000	-0.002	0.000
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)***	(0.00)
Capital Control	-0.259	-0.492	-0.244	-0.032	-0.088	-0.022
	(0.13)*	(0.30)	(0.16)	(0.03)	(0.06)	(0.04)
Democracy	-0.014	0.028	-0.058	-0.006	0.010	-0.019
	(0.03)	(0.05)	(0.04)	(0.01)	(0.01)	(0.01)**
IMF Programs	-0.418	0.308	-1.212	-0.064	0.228	-0.202
	(0.34)	(0.54)	(0.60)**	(0.08)	(0.16)	(0.06)***
GDP growth (lagged)	-1.795	-5.290	0.464	-2.454	-2.070	-3.221
	(1.95)	(3.92)	(1.66)	(0.70)***	(0.58)***	(1.20)***
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.01	0.00	0.09
Weak id. test (rel. bias)				$< 5\%$	$< 5\%$	$< 5\%$
Overid. test				0.51	0.27	0.66
$PseudoR^2$	0.10	0.12	0.15			
2nd-stage F	0.00	0.01	0.00	0.00	0.01	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	800 (114)	338 (72)	462 (86)	288 (88)	120 (53)	168 (61)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at 10 percent level, ** indicates significance at 5 percent level, and *** indicates significance at 1 percent level.

ambiguous cases. For instance, the difference between a floating regime and a dirty floating regime is sometimes small and leads to misclassifications.

5.2 Alternative measures for IMF surveillance

In a second set of robustness checks, I consider replacing the key independent variable – IMF surveillance – in the baseline model with alternative measures. The estimations are based on the same econometric models used in the previous section. One may be concerned that some news categories tend to repeat the same information and suffer from high correlation. Consequently, the first

Table 3: Baseline regressions, LYS classification†

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.010	0.061	-0.025	-0.022	-0.017	-0.027
	(0.01)	(0.07)	(0.02)	(0.01)**	(0.01)	(0.01)**
Population	0.001	-0.007	0.001	0.001	0.000	0.001
	(0.00)***	(0.02)	(0.00)***	(0.00)***	(0.00)	(0.00)***
Real GDP per cap.	-0.207	0.745	-0.242	0.039	0.023	0.068
	(0.14)	(0.34)**	(0.16)	(0.06)	(0.05)	(0.07)
Trade Openness	0.002	-0.005	0.009	-0.000	-0.000	-0.001
	(0.00)	(0.01)	(0.00)*	(0.00)	(0.00)	(0.00)
Capital Control	0.098	-0.805	0.177	-0.032	-0.034	-0.019
	(0.10)	(0.30)***	(0.11)	(0.04)	(0.04)	(0.05)
Democracy	-0.001	0.025	-0.021	-0.003	0.007	-0.022
	(0.02)	(0.05)	(0.02)	(0.01)	(0.01)	(0.01)**
IMF Programs	-0.147	-1.888	-0.041	0.096	-0.146	0.172
	(0.20)	(0.95)**	(0.26)	(0.10)	(0.07)**	(0.12)
GDP growth (lagged)	0.680	-3.922	4.330	0.390	0.337	-0.754
	(1.58)	(3.92)	(1.87)**	(1.04)	(1.03)	(1.81)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.03	0.02	0.10
Weak id. test (rel. bias)				$< 10\%$	$< 10\%$	$< 10\%$
Overid. test				0.31	0.51	0.34
$PseudoR^2$	0.02	0.18	0.06			
2nd-stage F	0.08	0.00	0.09	0.00	0.71	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	917 (135)	355 (80)	562 (105)	311 (97)	126 (54)	185 (69)

† Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

alternative measure is based on a principal component analysis (PCA) instead of a simple accumulation of IMF publications. The objective is to capture the independent component embedded in the IMF surveillance measure after stripping out correlated elements within each category of news. More specifically, I consider the first principal component, the one accounting for as much of the variability in the data as possible (15%). The first component is positively correlated with most of the IMF publications. The only two exceptions are the Heavily Indebted Poor Countries (HIPC) Initiative documents and the Policy Framework Papers, that show a low negative correlation with the first component (>-8%). Globally, this indicator may be considered as being positively

associated with IMF surveillance. The results from this expanded measure are reported in Table A.3. An important role of the IMF is based on its provision of information to financial markets or, in general, to economic agents but also to trading partners (Hayo & Kutan (2005) or Cady (2005)). I focus on the IMF news public communication: speeches, public information notices, press releases, news briefs and views & commentaries to the media.[18] The second alternative measure aggregates only the aforementioned categories of news to replace the key independent variable, the IMF surveillance. The results are provided in Table A.4.

Replacing the key independent variable by the two alternative measures confirms the results obtained with the baseline model: greater IMF surveillance tends to reduce the propensity to untruthfully report a floating exchange rate regime but not a fixed exchange rate regime.

5.3 Additional controls

In the baseline models, the core set of controls includes countries' caracteristics: size, the level of development, economic growth, trade openness, capital controls, the level of democracy and the establishment of IMF financing programs. In Tables A.6, A.5 and A.7, I expand the control variables to include additional elements that may come into play in this study: governance quality, press freedom, and currency crises.

The choice of the exchange rate regime but also the deviation from the announced exchange rate regime may both be influenced by institutional quality. Alesina & Wagner (2006) suggest that countries with good political institutions tend to deviate from flexible to more rigid regimes, whereas countries with bad institutions tend to deviate from fixed to more flexible regimes. At the same time, the development of an international institution, such as the IMF, was initiated by countries endowed with high quality institutions. I then added the variables pertaining to institutional quality from the Composite Indicator Dataset (Kaufmann, Kraay & Mastruzzi (2011)), provided by the World Bank, to the set of control variables. The variables measure six dimensions of governance from 1996 on: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. The results are displayed in Table A.5. I find that controlling for institutional quality does not affect previous findings on IMF surveillance. The coefficient related to the additional control variables are mostly insignificant. I do not find the same results as Alesina & Wagner (2006) with the effective sample most certainly because I focus on a binary exchange rate classification and on a different period.

A somewhat related alternative approach is focused on press freedom and follows the initial idea of Méon & Minne (2011). They report consistent evidence supporting the watchdog view of the media. Namely, they find that increased press freedom and easier access to information result in a lower probability

[18] See the description of the news categories in the technical appendix.

of untruthfully reporting the *de facto* exchange rate regime. The results are displayed in Table A.6 and are similar to those of the baseline models.

One may be concerned by the presence of countries experiencing a currency crisis in the sample. In the context of a currency crisis, the country experiences unstable conditions (notably generated by speculative attacks) and its exchange rate is likely to be more volatile. Simultaneously, the country is expected to be followed and analyzed by the IMF economists. To control for this aspect, I add a dummy measuring the occurrence of a currency crisis from the Reinhart & Rogoff (2009) dataset. A country is considered to experience a currency crisis if its currency undergoes an annual depreciation versus the US Dollar (or the relevant anchor currency historically the UK Pound, the French Franc, or the German DM and presently the Euro) of 15 percent or more. To reduce the extent to which the correlation of this variable with the core set of control variables may influence the results, I use the lagged value for the currency crisis dummy. The results are displayed in Table A.7. The results reinforce the initial findings, namely the negative and significant influence of the IMF surveillance on the fear of declaring and fear of floating. The coefficient of the IMF surveillance is even significant and negative for the logit estimations of the fear of pegging.[19]

5.4 Power asymmetries among members

One may also think of the IMF as being driven by power asymmetries among members of the IMF. Surveillance could be analyzed as a tool to monitor less influencial members and implement norms accepted by powerful countries (typically borrowers). To determine whether my findings are typical of a given group of countries, I select the sample according to the World Bank classification of income by excluding the category "High Income OECD" countries.[20] The results are displayed in Table A.8. The coefficients related to the IMF surveillance remain significant and negative both for the fear of declaring and fear of floating. Notice also that for the fear of floating, the coefficients are significant at the 1% level.

The differences between countries are not only related to the income level but also to the experience accumulated with the IMF. The less influencial members could be the countries that entered in the IMF recently and the surveillance operates more intensively with the new members. To test the robustness of the findings, I drop the observations corresponding to the original members of the IMF, namely the countries whose membership was accepted before December 31, 1945.[21] The results are reported in Table A.9. The influence of the IMF surveillance on the fear of floating is negative and significant. Concerning the fear of pegging, the key coefficient is significant and positive, meaning that

[19] Dropping the observations concerning countries experiencing a currency crisis leads to similar results (available upon request).

[20] Excluding also the category "High Income non OECD" leads to identical results that are available upon request.

[21] Including an additional control variable corresponding to the elapsed time since the membership of the country leads to the same results as the baseline model. The results are available upon request.

increasing the IMF surveillance tends to increase the propensity to renege on the announced fixed regime. An explanation could be that additional publications highlight some economic or institutional weaknesses for the investors and make the commitment difficult to keep for less influencial members.

6 Conclusion

In this paper, I have examined the influence of IMF surveillance on the propensity of a country's authorities to renege on their *de jure* exchange rate regime. The evidence suggests that IMF surveillance constrains the policymakers to reveal their *de facto* exchange rate regime truthfully. The more a country is scrutinized by the IMF, the less the country undertakes exchange rate policies that contradict the announced exchange rate regime. This result is essentially driven by the negative influence of the IMF surveillance on the deviation from an announced floating regime. The probability of chosing a fear of floating strategy is reduced on average by 2.18 % each time the IMF publishes an additional news about a country. The influence of the IMF surveillance on the fear of pegging is mainly insignificant. The basic findings take into account the possibility that the reverse causality induces a bias in the baseline models by deploying an instrumental variables approach that controls for endogeneity problems. The results are particularly robust to alternative *de facto* classifications, other measures of IMF surveillance, additional controls and a selection of less influencial members.

Practically, if the IMF's objective is essentially centered on the transparency of exchange rate practices, then the public communication and IMF surveillance should be fostered with respect to untruthful countries. With only one publication from the IMF, the average country has a probability to renege on a floating regime of 83%. Increasing the number of publications of the average country by one standard of deviation (11) reduces the probability by 15 percentage points.

In this paper, I focus on the *types* of publications but not on the *issues* that are tackled by the publications. More insight is then required about the nature and topics related to the publications. Intuitively, the publications affairing to monetary and exchange rate issues should have a significant influence but should also be concerned by severe endogeneity problems. In this regard, coming up with a broader and precise measure of the publications issues seems to be a difficult but worthwhile area for future research.

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Technical Appendix

A.1 Data Description

Article IV Staff Reports Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with government and central bank officials, and often private investors and labor representatives, members of parliament, and civil society organizations. Article IV consultations usually take place on a yearly basis. Based on these discussions, the staff team express its views in the *Article IV Staff Reports* that do not necessarily reflect the views of the Executive Board of the IMF. The main report describes the recent economic developments and policies of the country. Upon its return, the staff team submits a report to the IMF's Executive Board for discussion. The Board's views are then summarized and transmitted to the country's authorities. Member countries that agree to the publication of their Article IV staff report can have a response published alongside the report.

Meeting statements 1. The Annual Meetings of the International Monetary Fund (IMF) and the World Bank Group each year bring together central bankers, ministers of finance and development, private sector executives, and academics to discuss issues of global concern. *Annual Meeting Statements* are delivered by countries' representatives at these meetings and reported by the IMF. 2. The Development Committee is a ministerial-level forum of the World Bank Group and the International Monetary Fund for intergovernmental consensus-building on development issues. *Development Committee Statements* are delivered by countries' representatives in these meetings and reported by the IMF. 3. The International Monetary and Financial Committee has 24 members who are central bank governors, ministers, or others of comparable rank and who are drawn from the governors of the Fund's 188 member countries. The IMFC is responsible for advising, and reporting to, the IMF Board of Governors as it manages and shapes the international monetary and financial system. *IMFC statements* are delivered on the behalf of a country and at an IMFC's meeting. 4. *Statements at Donor Meetings* are delivered by IMF representatives at meetings of bilateral and multilateral creditors and donors, convened to coordinate support for a country's adjustment and reform efforts.

Public communication 1. *Public Information Notices* were issued after Executive Board discussions of: Article IV consultations with member countries; surveillance of developments at the regional level; post-program monitoring; and ex post assessments of member countries with longer-term program engagements. These articles were issued only with the consent of the country(ies) concerned. 2. The *Press Releases* and *Transcripts* of conference calls or press conferences are releases statements, notices to the press and key economic statistics concerning the IMF and/or its members. These are delivered on a daily basis and posted to the official website as they are released throughout the day. 3. *Speeches* are delivered by IMF officials in economic summits, conferences

or meetings, and generally pertain to current economic issues. 4. The *News Brief* is a short summary of Executive Board discussions directly related to IMF program reviews. They ceased on December 31, 2002 and have now been consolidated into the Press Release. 5. The *Views & Commentaries* are articles on issues of topical interest that have been written by Management and staff of the IMF for publication in the media.

Program documents These documents are delivered for countries that follow a cooperation or financing program (i.e. borrowing countries) from the IMF. 1. The *Mission Concluding Statements* describe the preliminary findings of IMF staff at the conclusion of certain missions, as official staff visits. Missions are performed as part of regular consultations following a request to benefit from IMF financing programs. 2. The *Letter of Intent* is delivered by the concerned national authorities and describes the policies that they intend to implement in the context of its request for financial support from the IMF. 3. The *Heavily Indebted Poor Countries (HIPC) Initiative* is a joint IMF-World Bank's comprehensive approach related to debt reduction and designed to ensure that no poor country faces a debt burden it cannot manage. To date, debt reduction packages under the HIPC Initiative have been approved for 36 countries, 30 of them in Africa, providing US$75 billion in debt-service relief over time.

Publications and magazines 1. The *IMF Staff Papers* was the official research journal of the IMF. The journal published high-quality, peer-reviewed papers from staff members but also from academic researchers. It has now ceased publication and has been replaced by the *IMF Economic Review*. 2. *Poverty Reduction Strategy Papers* (or previously *Policy Framework Papers*) are delivered by member countries in broad consultation with stakeholders and development partners, including the staffs of the World Bank and the IMF. They describe the country's macroeconomic, structural, and social policies in support of growth and poverty reduction, as well as associated external financing needs and major sources of financing. 3. *Finance and Development* is a quarterly magazine of the IMF, publishing analysis of issues related to the international financial system, monetary policy, economic development, poverty reduction, and other world economic issues. A country member may also be the central topic of a published article. 4. *IMF Survey* is a magazine publishing news, views, and analysis from the IMF. Intended for a broad audience, it features insight into Fund operations, policy analyses, country developments, globalization, interviews with leading economists, letters from readers, and current issues in international finance. 5. The categories "*IMF Publications*" and "*Other*" consist of country reports, policy papers and working papers that are either not included in the previous categories or have been included since a certain decision from the IMF public relation departement.

A.2 Additional Tables

Table A.1: Summary statistics for main variables of interest[†]

Variables	**Obs.**	**Mean**	**Std. Dev.**	**Min.**	**Max.**
Dependent variables					
De jure classification	1713	0.56	0.50	0	1
R&R classification	1713	0.27	0.44	0	1
LY&S classification	854	0.36	0.53	0	1
SH classification	758	0.53	0.50	0	1
R&R deviation	1713	0.38	0.48	0	1
LY&S deviation	854	0.30	0.46	0	1
SH deviation	758	0.17	0.38	0	1
IMF Surveillance					
IMF news[‡]	1713	9.71	9.36	0	76
IMF news (PCA)[‡]	1713	0.38	1.88	-2.15	13.69
IMF news (selection)[‡]	1713	6.41	7.75	0	67
Control variables					
Population (in millions)	1713	45.03	153.27	0.41	1330.14
Real GDP per cap. (log)	1713	8.58	1.28	5.71	11.10
Trade Openness	1713	81.91	43.49	15.20	433.05
Capital Control	1713	0.56	1.59	-1.86	2.46
Democracy	1713	4.62	5.90	-10	10
IMF Programs	1713	0.11	0.33	0	2
GDP growth[‡]	1713	0.03	0.06	-0.17	1.15
Voice and Accountability	1393	-0.02	0.95	-2.16	1.83
Political stability	1393	-0.15	0.90	-2.73	1.67
Government efficiency	1393	0.02	0.98	-1.98	2.41
Regulatory quality	1393	0.06	0.92	-2.26	2.08
Rule of law	1393	-0.08	0.97	-2.12	2.00
Control of corruption	1393	-0.04	1.00	-1.82	2.59
Currency crisis[‡]	848	0.12	0.33	0	1
Instrumental variables					
Membership IO	1290	2210.28	1971.90	1	8807
Meeting IO	902	10.96	29.34	0	329
Secretariat IO	1283	252.24	836.96	0	8395

[†] Notes: Descriptive statistics correspond to the baseline specification, namely the first column of Table 1.
[‡] One-period-lagged variables

Table A.2: Baseline regressions, four categories R&R classification[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.007	0.012	-0.007	-0.027	-0.004	-0.032
	(0.01)	(0.02)	(0.01)	(0.01)**	(0.01)	(0.01)**
Population	0.001	-0.002	0.001	0.001	-0.000	0.001
	(0.00)**	(0.00)	(0.00)**	(0.00)***	(0.00)	(0.00)***
Real GDP per cap.	-0.018	-0.077	-0.028	0.058	-0.009	0.052
	(0.13)	(0.23)	(0.13)	(0.07)	(0.08)	(0.08)
Trade Openness	0.002	0.002	0.002	-0.001	-0.000	-0.001
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Capital Control	0.078	-0.019	0.108	0.035	0.016	0.051
	(0.10)	(0.17)	(0.11)	(0.06)	(0.06)	(0.07)
Democracy	-0.007	0.009	-0.013	-0.011	-0.003	-0.014
	(0.02)	(0.04)	(0.02)	(0.01)	(0.01)	(0.01)
IMF Programs	0.142	-0.005	0.158	0.101	-0.040	0.131
	(0.12)	(0.25)	(0.14)	(0.12)	(0.10)	(0.15)
GDP growth (lagged)	1.775	1.557	2.232	0.292	0.779	0.661
	(2.38)	(1.57)	(2.83)	(0.93)	(0.79)	(1.28)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.00	0.02	0.00
Weak id. test (rel. bias)				$< 10\%$	$< 5\%$	$< 10\%$
Overid. test				0.65	0.89	0.88
$PseudoR^2$	0.01	0.07	0.01			
2nd-stage F	0.00	0.05	0.00	0.02	0.00	0.04
Estimation	OLogit	OLogit	OLogit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1713 (142)	917 (116)	1480 (137)	902 (128)	492 (97)	750 (115)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.3: Baseline regressions, IMF news as a PCA[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.157	0.365	-0.405	-0.072	0.050	-0.074
	(0.08)*	(0.24)	(0.15)***	(0.03)**	(0.11)	(0.03)**
Population	0.002	-0.003	0.002	0.001	-0.000	0.000
	(0.00)**	(0.01)	(0.00)*	(0.00)***	(0.00)	(0.00)*
Real GDP per cap.	-0.121	0.232	-0.172	-0.025	0.053	-0.090
	(0.13)	(0.47)	(0.21)	(0.04)	(0.04)	(0.05)*
Trade Openness	0.002	-0.002	0.003	-0.000	-0.001	-0.000
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Capital Control	0.082	-0.172	-0.020	0.019	-0.035	0.016
	(0.11)	(0.37)	(0.14)	(0.03)	(0.03)	(0.04)
Democracy	-0.007	0.062	-0.063	-0.002	0.007	-0.016
	(0.02)	(0.04)	(0.04)	(0.01)	(0.01)	(0.01)**
IMF Programs	0.125	0.036	0.245	0.024	-0.013	0.055
	(0.14)	(0.44)	(0.25)	(0.06)	(0.07)	(0.08)
GDP growth (lagged)	1.247	-2.019	2.269	0.316	-0.385	0.179
	(1.67)	(2.96)	(2.94)	(0.63)	(0.45)	(0.97)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.00	0.05	0.01
Weak id. test (rel. bias)				$< 5\%$	$< 5\%$	$< 5\%$
Overid. test				0.73	0.93	0.14
$PseudoR^2$	0.02	0.10	0.13			
2nd-stage F	0.09	0.00	0.01	0.07	0.67	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1713 (142)	759 (91)	954 (110)	902 (128)	391 (79)	511 (85)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.4: Baseline regressions, selected news[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.017	0.088	-0.060	-0.012	0.058	-0.034
	(0.02)	(0.05)*	(0.02)**	(0.02)	(0.03)*	(0.02)*
Population	-0.002	-0.013	-0.008	0.000	-0.004	-0.000
	(0.00)	(0.01)	(0.00)*	(0.00)	(0.00)**	(0.00)
Real GDP per cap.	-0.028	0.154	0.059	0.007	0.074	0.000
	(0.14)	(0.39)	(0.26)	(0.04)	(0.05)	(0.06)
Trade Openness	0.001	0.000	-0.002	-0.000	-0.000	-0.002
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)***
Capital Control	0.069	-0.025	-0.126	0.001	-0.037	-0.033
	(0.11)	(0.31)	(0.15)	(0.03)	(0.04)	(0.04)
Democracy	-0.005	0.058	-0.059	0.001	-0.002	-0.013
	(0.02)	(0.04)	(0.05)	(0.01)	(0.01)	(0.01)
IMF Programs	0.149	0.094	0.250	0.009	0.003	0.082
	(0.15)	(0.39)	(0.30)	(0.08)	(0.10)	(0.13)
GDP growth (lagged)	0.929	-2.156	0.262	0.121	-0.864	-0.827
	(1.50)	(2.84)	(2.29)	(0.68)	(0.64)	(1.27)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.02	0.04	0.04
Weak id. test (rel. bias)				$< 20\%$	$< 20\%$	$< 20\%$
Overid. test				0.97	0.95	0.92
$PseudoR^2$	0.02	0.12	0.13			
2nd-stage F	0.10	0.00	0.00	0.91	0.72	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1343 (114)	657 (79)	686 (85)	659 (101)	325 (69)	334 (64)

[†] The selected news are: public information notice, press release, publication and speech. Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.5: Baseline regressions, governance indices[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.036	0.080	-0.088	-0.010	-0.012	-0.007
	(0.02)**	(0.06)	(0.02)***	(0.01)**	(0.03)	(0.00)*
Population	0.002	-0.008	0.002	0.001	0.000	0.000
	(0.00)**	(0.01)	(0.00)**	(0.00)***	(0.00)	(0.00)
Real GDP per cap.	-0.001	0.073	0.370	0.019	-0.004	0.032
	(0.20)	(0.51)	(0.30)	(0.06)	(0.07)	(0.06)
Trade Openness	0.002	0.002	0.002	-0.000	-0.001	0.001
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Capital Control	0.129	-0.344	-0.002	0.026	-0.060	0.021
	(0.12)	(0.40)	(0.17)	(0.03)	(0.04)*	(0.04)
Democracy	-0.028	-0.065	-0.124	0.014	-0.002	-0.016
	(0.05)	(0.10)	(0.07)*	(0.01)	(0.01)	(0.02)
IMF Programs	-0.037	-0.109	0.159	-0.000	-0.026	-0.002
	(0.16)	(0.39)	(0.28)	(0.06)	(0.08)	(0.07)
GDP growth (lagged)	1.367	0.703	1.236	0.052	0.376	-0.561
	(1.67)	(2.21)	(3.09)	(0.58)	(0.47)	(0.84)
Voice	0.321	1.529	0.681	-0.134	0.099	0.072
	(0.49)	(1.01)	(0.57)	(0.14)	(0.13)	(0.15)
Pol. stability	-0.154	-0.938	0.174	0.018	-0.056	0.070
	(0.23)	(0.50)*	(0.37)	(0.06)	(0.07)	(0.10)
Gov. eff.	0.049	-0.054	-1.223	-0.117	0.001	-0.401
	(0.53)	(1.48)	(0.80)	(0.15)	(0.16)	(0.20)**
Reg. quality	-0.302	-1.254	-0.127	-0.024	-0.007	-0.028
	(0.50)	(1.18)	(0.75)	(0.15)	(0.15)	(0.14)
Rule of law	0.484	0.859	0.870	0.169	0.164	0.202
	(0.57)	(1.31)	(0.79)	(0.15)	(0.17)	(0.18)
Control of corr.	-0.618	0.672	-1.019	-0.069	-0.012	-0.145
	(0.42)	(1.08)	(0.65)	(0.12)	(0.18)	(0.16)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.00	0.04	0.00
Weak id. test (rel. bias)				$< 10\%$	$< 5\%$	$< 5\%$
Overid. test				0.87	0.77	0.54
$PseudoR^2$	0.04	0.16	0.21			
2nd-stage F	0.41	0.00	0.00	0.04	0.84	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1393 (142)	633 (90)	760 (106)	834 (127)	364 (76)	470 (82)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.6: Baseline regressions, press freedom[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.040	0.060	-0.090	-0.013	0.004	-0.015
	(0.02)**	(0.05)	(0.03)***	(0.01)**	(0.02)	(0.01)**
Population	0.002	-0.002	0.002	0.001	0.000	0.000
	(0.00)**	(0.00)	(0.00)**	(0.00)***	(0.00)	(0.00)
Real GDP per cap.	-0.098	0.214	-0.195	-0.022	0.053	-0.090
	(0.14)	(0.50)	(0.23)	(0.04)	(0.04)	(0.05)*
Trade Openness	0.001	-0.002	0.002	-0.000	-0.001	-0.000
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
Capital Control	0.091	-0.204	-0.011	0.024	-0.052	0.016
	(0.11)	(0.44)	(0.14)	(0.03)	(0.04)	(0.04)
Democracy	0.012	0.021	-0.068	0.006	-0.004	-0.014
	(0.03)	(0.08)	(0.05)	(0.01)	(0.01)	(0.01)
IMF Programs	0.116	0.064	0.280	0.023	-0.018	0.065
	(0.15)	(0.46)	(0.24)	(0.06)	(0.06)	(0.08)
GDP growth (lagged)	1.133	-1.340	2.233	0.156	-0.109	0.061
	(1.63)	(2.76)	(3.01)	(0.58)	(0.37)	(0.93)
Press freedom	0.007	-0.016	-0.002	0.003	-0.005	0.001
	(0.01)	(0.03)	(0.02)	(0.00)	(0.00)	(0.00)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.00	0.05	0.01
Weak id. test (rel. bias)				$< 5\%$	$< 5\%$	$< 5\%$
Overid. test				0.78	0.97	0.16
$PseudoR^2$	0.04	0.10	0.18			
2nd-stage F	0.04	0.00	0.00	0.09	0.73	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1713 (142)	759 (91)	954 (110)	902 (128)	391 (79)	511 (85)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.7: Baseline regressions, currency crises[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.050	-0.099	-0.094	-0.008	-0.005	-0.008
	(0.02)**	(0.06)*	(0.04)**	(0.00)*	(0.03)	(0.00)*
Population	0.002	-0.065	0.003	0.000	0.000	0.000
	(0.00)*	(0.08)	(0.00)	(0.00)**	(0.00)	(0.00)
Real GDP per cap.	-0.365	31.673	-0.563	-0.082	0.138	-0.141
	(0.23)	(19.37)	(0.31)*	(0.06)	(0.07)*	(0.08)*
Trade Openness	-0.001	-0.257	-0.002	-0.001	-0.002	-0.001
	(0.00)	(0.14)*	(0.00)	(0.00)	(0.00)	(0.00)
Capital Control	0.076	-27.130	0.157	0.030	-0.081	0.044
	(0.18)	(17.19)	(0.21)	(0.04)	(0.09)	(0.05)
Democracy	0.017	15.388	-0.062	0.001	0.018	-0.016
	(0.05)	(9.48)	(0.06)	(0.01)	(0.02)	(0.01)
IMF Programs	0.186	.	0.343	0.061	-0.096	0.089
	(0.27)	.	(0.32)	(0.09)	(0.07)	(0.09)
GDP growth (lagged)	5.150	14.221	4.702	0.510	-0.249	0.003
	(4.11)	(12.78)	(6.42)	(1.00)	(0.51)	(1.48)
Currency crisis (lagged)	-0.137	2.759	-0.947	0.010	0.169	-0.105
	(0.32)	(0.89)***	(0.36)***	(0.07)	(0.10)*	(0.07)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.01	0.14	0.04
Weak id. test (rel. bias)				$< 5\%$	$< 5\%$	$< 5\%$
Overid. test				0.87	0.78	0.61
$PseudoR^2$	0.08	0.70	0.21			
2nd-stage F	0.00	0.00	0.00	0.00	0.00	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	848 (65)	142 (24)	556 (55)	553 (64)	189 (34)	364 (50)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.8: Baseline regressions, power asymmetries[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.036	0.036	-0.104	-0.016	-0.001	-0.041
	(0.02)*	(0.07)	(0.03)***	(0.01)*	(0.01)	(0.01)***
Population	0.002	-0.003	0.003	0.001	-0.000	0.001
	(0.00)**	(0.01)	(0.00)**	(0.00)***	(0.00)	(0.00)***
Real GDP per cap.	0.024	-0.215	0.145	-0.014	-0.043	0.018
	(0.15)	(0.45)	(0.25)	(0.05)	(0.03)	(0.05)
Trade Openness	0.000	0.011	-0.002	-0.000	0.002	-0.002
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)**	(0.00)**
Capital Control	0.177	-0.123	0.063	0.030	-0.020	-0.015
	(0.11)	(0.33)	(0.15)	(0.03)	(0.02)	(0.04)
Democracy	-0.003	0.050	-0.069	-0.002	0.004	-0.013
	(0.02)	(0.04)	(0.04)	(0.01)	(0.00)	(0.01)**
IMF Programs	0.077	0.061	0.159	0.039	-0.003	0.124
	(0.14)	(0.37)	(0.25)	(0.06)	(0.05)	(0.09)
GDP growth (lagged)	1.430	-0.475	3.314	0.411	-0.130	0.623
	(1.90)	(1.67)	(3.00)	(0.66)	(0.31)	(1.22)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.01	0.06	0.01
Weak id. test (rel. bias)				$< 5\%$	$< 5\%$	$< 5\%$
Overid. test				0.15	0.27	0.66
$PseudoR^2$	0.03	0.06	0.12			
2nd-stage F	0.06	0.00	0.00	0.09	0.94	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1323 (114)	573 (72)	750 (90)	624 (100)	254 (61)	370 (66)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

Table A.9: Baseline regressions, original members[†]

	Fear of Declaring	**Fear of Pegging**	**Fear of Floating**	**Fear of Declaring**	**Fear of Pegging**	**Fear of Floating**
IMF news (lagged)	-0.017	0.088	-0.060	-0.012	0.058	-0.034
	(0.02)	(0.05)*	(0.02)**	(0.02)	(0.03)*	(0.02)*
Population	-0.002	-0.013	-0.008	0.000	-0.004	-0.000
	(0.00)	(0.01)	(0.00)*	(0.00)	(0.00)**	(0.00)
Real GDP per cap.	-0.028	0.154	0.059	0.007	0.074	0.000
	(0.14)	(0.39)	(0.26)	(0.04)	(0.05)	(0.06)
Trade Openness	0.001	0.000	-0.002	-0.000	-0.000	-0.002
	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)***
Capital Control	0.069	-0.025	-0.126	0.001	-0.037	-0.033
	(0.11)	(0.31)	(0.15)	(0.03)	(0.04)	(0.04)
Democracy	-0.005	0.058	-0.059	0.001	-0.002	-0.013
	(0.02)	(0.04)	(0.05)	(0.01)	(0.01)	(0.01)
IMF Programs	0.149	0.094	0.250	0.009	0.003	0.082
	(0.15)	(0.39)	(0.30)	(0.08)	(0.10)	(0.13)
GDP growth (lagged)	0.929	-2.156	0.262	0.121	-0.864	-0.827
	(1.50)	(2.84)	(2.29)	(0.68)	(0.64)	(1.27)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
1st-stage F				0.00	0.00	0.00
Underid. test				0.02	0.04	0.04
Weak id. test (rel. bias)				$< 10\%$	$< 20\%$	$< 20\%$
Overid. test				0.97	0.95	0.92
$PseudoR^2$	0.02	0.12	0.13			
2nd-stage F	0.10	0.00	0.00	0.91	0.72	0.00
Estimation	Logit	Logit	Logit	IV 2SLS	IV 2SLS	IV 2SLS
Obs. (countries)	1343 (114)	657 (79)	686 (85)	659 (101)	325 (69)	334 (64)

[†] Heteroskedasticity and host country correlation-robust standard errors are reported in parentheses. A constant term was included in the regressions, but not reported. The underidentification test is the Kleibergen Paap rk LM, the weak identification test is the Kleibergen-Paap rk Wald F, and the overidentification test is the Hansen J. * indicates significance at the 10% level, ** indicates significance at the 5% level, and *** indicates significance at the 1% level.

A.3 Additional Figures

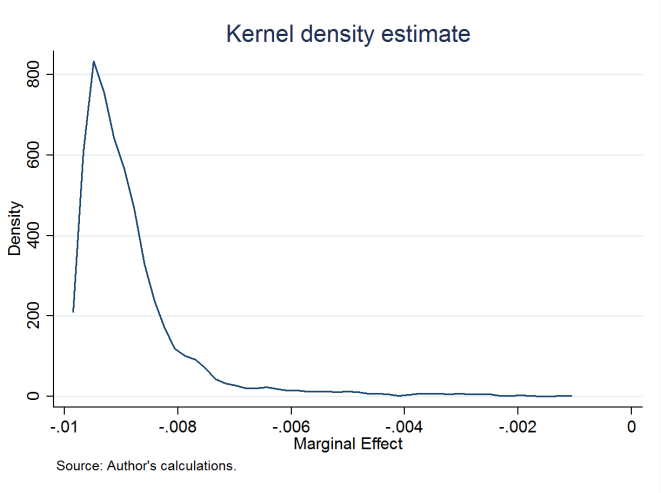

Figure A.1: Epanechnikov kernel density estimate of the marginal effect of the variable "IMF news" based on logit estimates related to the fear of declaring (column 1, Table 1). The other explanatory variables are taken at their respective mean value.

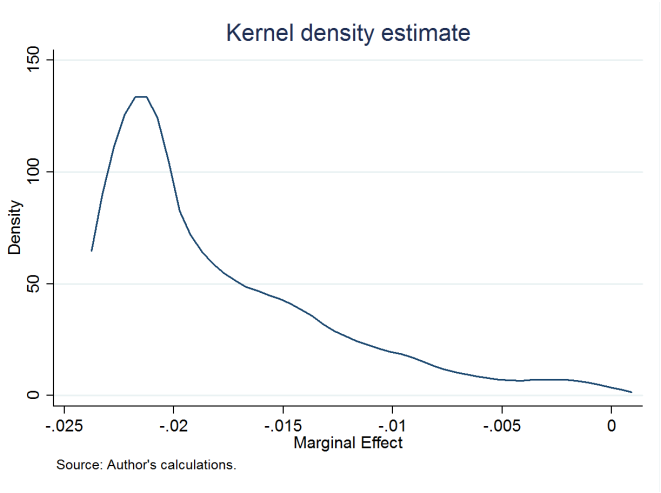

Figure A.2: Epanechnikov kernel density estimate of the marginal effect of the variable "IMF news" based on logit estimates related to the fear of floating (column 3, Table 1). The other explanatory variables are taken at their respective mean value.