

The influence of financial corporations on IMF lending: Has it changed with the global financial crisis?

Lena Lee Andresen

SNB Working Papers

4/2022



Legal Issues

DISCLAIMER

The views expressed in this paper are those of the author(s) and do not necessarily represent those of the Swiss National Bank. Working Papers describe research in progress. Their aim is to elicit comments and to further debate.

COPYRIGHT©

The Swiss National Bank (SNB) respects all third-party rights, in particular rights relating to works protected by copyright (information or data, wordings and depictions, to the extent that these are of an individual character).

SNB publications containing a reference to a copyright (© Swiss National Bank/SNB, Zurich/year, or similar) may, under copyright law, only be used (reproduced, used via the internet, etc.) for non-commercial purposes and provided that the source is mentioned. Their use for commercial purposes is only permitted with the prior express consent of the SNB.

General information and data published without reference to a copyright may be used without mentioning the source. To the extent that the information and data clearly derive from outside sources, the users of such information and data are obliged to respect any existing copyrights and to obtain the right of use from the relevant outside source themselves.

LIMITATION OF LIABILITY

The SNB accepts no responsibility for any information it provides. Under no circumstances will it accept any liability for losses or damage which may result from the use of such information. This limitation of liability applies, in particular, to the topicality, accuracy, validity and availability of the information.

ISSN 1660-7716 (printed version)

ISSN 1660-7724 (online version)

© 2022 by Swiss National Bank, Börsenstrasse 15,
P.O. Box, CH-8022 Zurich

The influence of financial corporations on IMF lending: Has it changed with the global financial crisis?

Lena Lee Andresen¹

March 2, 2022

Abstract

The global financial crisis of 2007–2008 might constitute another structural change in IMF lending after the Latin American debt crisis and the end of the Cold War. Using a panel dataset of 120 countries with IMF programmes from 1993 to 2016, I find that with the crisis, the importance of financial corporations in IMF lending decisions has risen as major IMF shareholders seek to protect the exposure of their banks, which increased strongly in the years before the crisis. To impress global financial markets, they influence programme design towards more money and more conditions, specifically prior actions. This serves to keep the programme country's market access and avoid default. While financial corporate interests are also associated with a larger programme size for all countries, a positive link with more conditions is only found for countries for which market access matters. For countries with limited market access, IMF staff's technocratic interest in limited conditionality dominates.

Keywords: conditionality, global finance, IMF, political economy

JEL: F33, F34, F53, G15

¹ Swiss National Bank, Postfach, 8022 Zurich, Switzerland, E-Mail: lenalee.andresen [at]snb.ch. The views, opinions, findings, and conclusions or recommendations expressed in this paper are strictly those of the author. They do not necessarily reflect the views of the Swiss National Bank (SNB). The SNB takes no responsibility for any errors or omissions in, or for the correctness of, the information contained in this paper.

1 Introduction

The history of IMF lending decisions since the founding of the institution in 1945 has by no means been homogenous. As Moser and Sturm (2011) describe, there have been at least two structural changes in the IMF lending process since the end of the Cold War. These are the end of the Latin American debt crisis in the late 1980s and the inclusion of the countries of the former Soviet bloc in the early 1990s, which led to almost global IMF membership (p. 2).

The IMF dramatically increased its lending volume because of the global financial crisis (GFC) of 2007–2008. It also extended its support to advanced economies, unseen for many years. Helped by a massive strengthening of its lending power (IMF, 2013a), the IMF played a crucial role in the stabilization of the international financial and monetary system. However, with this renewed visibility of IMF lending, criticism resurfaced that not only were economic considerations driving lending decisions but also the interests of the IMF's most powerful member states. An example is the highly debated 2010 programme for Greece, which was widely considered to be influenced by an interest in protecting heavily exposed European and US financial corporations (Catan & Talley, 2013; Independent Evaluation Office of the International Monetary Fund [IEO], 2016).

The aim of this paper is to analyze how the influence of the financial corporate interests of major IMF shareholders on IMF lending has changed with the GFC. Based on a panel set of 120 countries with IMF programmes covering the years 1993 to 2016, I test the effect of financial corporate interests on two aspects of IMF programme design: the size of IMF programmes and their conditionality. For this, I apply panel OLS and Poisson regressions. I further add interaction terms using a dummy variable on the GFC years. The size of IMF programmes and measures of conditionality have been analysed in past research, which allows some comparability. Finally, I will add a model using the legal origin as an instrumental variable (IV) to perform a robustness check to account for possible endogeneity issues of the variable measuring financial corporate interests.

The main finding is that the GFC constitutes another structural change in IMF lending, as the importance of financial corporations in IMF lending decisions has risen. Major IMF shareholders protect the exposure of their banks, which had risen significantly in the years before the GFC. To impress markets, they influence programme design in the country in which their banks are exposed towards larger lending amounts and tougher conditionality—specifically, more prior actions. This serves to keep the programme country's market access and avoid default. While financial corporate interests are associated with a larger programme size for all countries, the positive link with more prior actions is only present for countries for which market access matters. For countries with

limited market access, IMF staff's technocratic interests in parsimonious conditionality dominate.

This paper is structured as follows. Section 2 lays out the theoretical underpinnings of the influence of financial corporations on IMF lending. It describes whether and how financial corporations influence IMF lending decisions, what past research has found on the topic, and whether the influence of financial corporations has increased with the GFC. Section 3 lays out the research design and hypotheses. Section 4 offers some descriptive evidence for the evolution of IMF programme design and financial corporate exposure. Section 5 describes the method of analysis to test the hypotheses. Section 6 describes the regression results. The final section concludes.

2 Influence of financial corporations on IMF lending and the global financial crisis

2.1 Can financial corporations influence IMF lending decisions?

Based on the IMF's design as laid out in the IMF Article of Agreements, two main actors shape IMF policy, specifically IMF lending decisions. These are the IMF shareholders—the states or governments—and IMF staff, the employees working at the Fund. Both actors have two main channels through which their interests are shaped.²

For IMF staff, there are two principal types of interests to influence IMF policy design, such as in the case of IMF lending decisions. IMF staff acts out of bureaucratic interests when they serve the interest of the institution that employs them. A key interest in this regard is the financial survival of the institution, which, in the case of the IMF, is guaranteed by the interest earned on programmes, subject to programme size. Therefore, IMF staff might act out of a bureaucratic interest in making programmes larger in size than strictly necessary from an economic perspective. IMF staff can also serve technocratic interests, such as when they base their decision-making on beliefs about economic principles and concerns about global financial stability (Copelovitch, 2010, p. 50).

States can also act out of two types of interests when shaping IMF policy. The underlying assumption is that state actors can use their power to influence multilateral organizations such as the IMF. This assumption is quite straightforward, as the members of the IMF are states and their power to influence everyday decisions of the IMF via the executive board is enshrined in the IMF's articles of agreement. Most obviously,

² See Copelovitch (2010) for a detailed overview of the various types of actors and their interests in IMF policy design.

governments requesting IMF lending may be driven by domestic interests in their negotiations with IMF staff. They can, for example, try to limit the reform needs in a programme, with the goal of limiting public protests in the country against unpopular reforms. States can also try to influence IMF lending decisions out of geopolitical interests. There is plenty of research on the role of geopolitical interests, most notably of the US, in IMF lending decisions.³

It could be assumed that financial corporate interests influence IMF lending decisions similarly to geopolitics. However, the mechanism is less straightforward. While geopolitical interests are inherent to the state itself, this is not the case for the interests of financial corporations. Financial corporations are not state actors, and they do not have a formal say on IMF decisions. For their interests to matter, it must be assumed that channels exist through which the interests of corporations can influence states, such that the states will take the corporations' interests into account when negotiating IMF programmes and will effectively negotiate on their behalf.

In this context, a first question is what the goal of financial corporations' influence on IMF lending could be. The literature describes two. The first goal is based on Gould's (2003) research on how the fact that financial corporations act as supplementary financiers to IMF programmes influences conditionality. She finds that if supplementary financing by the private sector is a key factor for an IMF programme, the programme's conditionality tends to contain more aspects that are beneficial for the banking sector. A second goal is protecting the interests of financial corporations that are exposed in the country requesting an IMF programme. This second goal is the focus of this study, as it is closer to the anecdotal evidence observed in the IMF programmes for Euro Area countries after the GFC.

A second question is through which channels financial corporate interests could influence IMF lending decisions. This relates to the more general question of how financial corporations influence policy-making by states. According to Young (2018), they do so through three channels: through their normal business activities, through organized advocacy (lobbying), and through their enmeshment in elite networks (p. 386). In that sense, their influence can be both passive and active. If countries act out of fear of a negative financial market reaction, the power of financial corporations appears passive. However, if financial corporations actively influence state behaviour through lobbying or enmeshment in elite networks, their power becomes strategic.

In the context of financial corporate interests influencing IMF lending decisions, both active and passive channels are possible. If the banks of a particular country A are heavily

³ For a good overview, see Moser and Sturm (2011).

exposed to another country B that is struggling economically, it is possible that the banks of country A will lobby their government to influence an IMF programme in a way that is beneficial to them. It is, however, also possible that the government of country A is afraid of the negative effect on its economy if one of its banks crashes, and hence, will act the same without explicit lobbying (Breen, 2014, p. 5).

2.2 Literature on financial corporations and IMF lending

There is a large body of literature on factors influencing IMF lending design. A comprehensive analysis of the determinants of IMF programme size since the end of the Cold War⁴ is provided by Moser and Sturm (2011). They find that robust determinants are international reserves, economic growth and currency crises on the economic side, as well as past IMF involvement and elections on the political side. According to Breen (2014), the determinants of IMF conditionality are less clear, as neither political nor economic variables explain the variation in the number of conditions in a consistent manner (p. 7). Dreher et al. (2015), however, find that US geopolitical interests in a country are linked to fewer conditions in IMF programmes.

A few papers (see Table 1) look more specifically at the effect of financial corporate interests on IMF lending. As Vreeland (2005) argues, whereas, in geopolitics, IMF programmes are used “to reward friends”, when the banks of major IMF shareholders are exposed, IMF programmes are used to protect the banks. Looking at the findings of past research on the topic, the protection of financial corporations indeed leads to IMF programmes with larger loan sizes and softer conditionality, while there seems to be no effect on the probability of signing an IMF programme.

Table 1: Literature on the effect of financial corporate interests on IMF lending

| Study | Time frame | Channel | Observed effect |
|-------------------------------|---------------------------|-----------------------|------------------|
| Oatley and Yackee (2004) | 1986 to 1998 | Loan size | Larger loan size |
| Broz and Hawes (2006) | 1983 to 2002 | IMF programme signing | Inconclusive |
| | | Loan size | Larger loan size |
| Presbitero and Zazzaro (2012) | January 2008 to June 2010 | IMF programme signing | No effect |
| | | Loan size | Larger loan size |
| Breen (2014) | 1997 to 2006 | Conditionality | Fewer conditions |

⁴ For a good overview of earlier research on the matter, see Sturm (2005).

Oatley and Yackee (2004) found that the size of IMF programmes is defined not only by the economic needs of the country in question but also by the amount of debt that the country owes to US banks. Analyzing IMF programmes between 1986 and 1998, they argue that as IMF programmes facilitate continued debt service, exposed commercial banks have an interest in pressuring US policy-makers to represent their interests in the IMF (p. 418). They find that exposure of US banks to a country requesting an IMF programme leads to a larger loan size. Softer conditionality implies that IMF executive board reviews are easier to pass, so the payout of the next tranche of the loan on time is more likely.

Broz and Hawes (2006) focus their research on the link of the exposure of banks from the US, Great Britain, France, Germany, and Japan to 369 IMF lending decisions during 1983–2002. They find that the size of an IMF programme is positively related to the degree of foreign bank exposure in the programme country.

Presbitero and Zazzaro (2012) also find a link between US financial corporate interests and IMF programme size. They analyze 118 countries participating in 45 IMF programmes between January 2008 and June 2010. At the same time, they do not find a link between the probability of signing an IMF arrangement and bank exposure. They argue that countries with considerable bank exposure are likely to be less risky for investors, as they have more stable economic fundamentals and, hence, are less likely to need an IMF programme.

Breen (2014) finds that IMF programmes have fewer binding conditions (quantitative performance criteria, QPC) when financial corporations of major IMF shareholders are at stake. He argues that if IMF member states aim to protect their exposed banks in a country requesting IMF assistance, they have an interest in the IMF lending process being as smooth as possible, which implies softer conditionality. This ensures that the borrowing country serves its external debt without defaulting or debt restructuring and gives the implicated foreign banks time to reduce their exposure.

2.3 Has the influence of financial corporations increased with the global financial crisis?

During the era of the great moderation—after the end of the Cold War and before the GFC—the low-risk environment and the increasing search for yields contributed to increasing financial interconnectedness and a higher exposure of banks in countries outside their domestic markets. When the GFC hit and eventually evolved into the European debt crisis, protecting banks that had become heavily exposed to struggling countries such as Greece and Ireland became a major driving force of policy-making by IMF member states.

The importance of preserving financial stability became more acute for both governments and the IMF. At the same time, exposed banks likely increased their lobbying, leading to stronger state-corporation relations. Hence, it could be assumed that the influence of financial corporate interests on IMF policy-making increased with the GFC, both through the direct channel of lobbying and closer state-corporation relations and through the indirect channel of state interests in preserving financial stability.

The importance of protecting exposed banks is striking in the case of the first IMF programme for Greece, and there is a large amount of literature criticizing the role played by protecting financial corporate interests in the programme.⁵ In spring 2010, Greece became the first country in the Euro Area to receive an IMF programme of 30 billion euro. In his account of the negotiations around the IMF programme, Blustein (2015) describes how the programme was widely perceived as a means to pay European banks that were heavily exposed in Greece. Struggling German and French banks were among the largest holders of Greek bonds, and because of the IMF programme, they received payment in full and on time of their outstanding investments (p. 1). Blustein also describes how the fear that debt restructuring in Greece, which would have become necessary without the proposed IMF deal, would have become a Lehman-like event in which investors pulled their money out from all over Europe (p. 11).

The case is similarly compelling for Ireland, which received a 22.5 billion euro IMF programme in 2010. In his analysis of the programme, Breen (2012) finds strong support for economic and financial interests influencing the IMF programme for Ireland. He describes how during the negotiations on the programme design between the Irish authorities and IMF staff, there was initial agreement that some form of haircut should be imposed on senior bondholders of Irish banks. However, the European Central Bank and other IMF shareholders intervened to ensure that all senior bondholders had their losses covered. Breen assumes that France and Germany acted in this way to avoid the exposure of the weaknesses in their banks, which were heavily exposed to Ireland and other struggling European economies (p. 9).

3 Research Design

This section lays out the study's research design based on three key hypotheses, which I will derive in the following.

I argue that with the GFC, the importance of financial corporations in IMF lending decisions has risen, not necessarily through direct lobbying of financial corporations with

⁵ See IEO (2016), p. 4, for a good overview.

their respective governments, but rather indirectly. The governments of the IMF shareholders where major banks are domiciled try to protect their exposed banks to avoid a meltdown of their domestic financial system. These countries, also known as the G5, are the IMF member countries with the largest voting shares and that have a seat of their own in the IMF Executive Board—the US, Japan, the UK, France, and Germany (Copelovitch, 2010).

To protect their banks, the G5 will influence IMF programme design in the affected country with the goal of keeping the country's market access. For this, they want the debtor country to try to impress financial markets with its eagerness to enact reforms to show its determination to overcome its economic challenges. This interest in impressing markets rises with the country's exposure to claims by major banks from the G5. To signal reform eagerness to financial markets, the programme should appear especially tough, such as with tougher conditionality.

This interest by the G5 in impressing markets leading to more conditions in the presence of exposure to financial corporations differs from past research by Breen (2014), who found the opposite effect. He argued that fewer conditions imply a smoother lending process and faster payout of IMF loans. However, he analyzed the time before the GFC (1997–2006). As the exposure of the G5 banks and global financial interconnectedness had risen considerably in the run-up to the GFC, I argue that interest in impressing markets has come to dominate interest in a smooth lending process; if the G5 members act together, they easily dominate the IMF Executive Board's majority-based decision-making approach.⁶

Furthermore, by influencing programme design towards tougher conditionality, the G5 overrule the technocratic interests of IMF staff, who increasingly tended towards parsimony in applying conditionality; IMF-internal research from 2005 and 2008 showed that less focused conditionality is linked to better programme outcomes.⁷

In conclusion, the first hypothesis of this study is as follows:

⁶ For example, the IMF programme for Greece of 2010 had a very high number of conditions and prior actions, which was at odds with the trend at the time of parsimony in conditionality, as described in the IMF's ex-post evaluation of the programme (IMF, 2013b, p. 25).

⁷ In the years before the GFC, several major reviews took place on how IMF staff should apply conditionality: the 2005 IMF review of conditionality guidelines, the 2008 IEO evaluation of structural conditionality in IMF-supported programmes, and the 2008 implementation plan for IMF staff of the aforementioned IEO report (IMF 2005, IEO 2007, and IMF 2008). A crucial aspect in these papers is the principle of parsimony in conditionality, which stipulates that fewer, more focused conditions are linked with better programme outcomes. A key finding was that this principle, which originates from the 2002 IMF's conditionality guidelines, had not sufficiently been implemented and should receive renewed impetus.

H1: Since the GFC, conditionality is tougher in IMF programmes for countries to which G5 banks are exposed and for which market access matters.

However, this interest in “impressing financial markets” is not the same for all countries. It is only present in countries for which access to global financial markets plays a major role in their external financing. For countries with limited or no market access, there is little interest in impressing banks, as their external financing is mostly ensured by development aid, concessional lending by multilateral institutions, and bilateral credit by other countries. Such countries, which are mostly low-income countries (LICs), have access to the IMF’s concessional lending facility, the PRGT. For the governments of these countries, impressing financial markets does not matter in case they have to negotiate an IMF programme.

Hence, in countries with limited market access, the technocratic interests of IMF staff dominate programme design, particularly staff interest in focusing on parsimonious conditionality. Therefore, around the time of the GFC, conditionality declined in IMF programmes in countries with limited market access and in which IMF staff had the power to dominate programme design. The timing around the GFC might seem to be a coincidence, but I would argue that it is a consequence of the “great moderation” before the GFC. During that time of unusual global economic stability, there was relatively limited demand for IMF lending and, hence, more time for IMF staff to focus on research and analysis of past activity. The in-depth analysis of past lending and its lessons were among the results of this relatively quiet time. This leads us to the second hypothesis of this study:

H2: In countries for which market access does not matter, the time around the GFC is associated with softer conditionality.

Finally, the GFC also strengthens the link between exposure to financial corporations and IMF programme size. Governments have an interest in influencing programmes towards larger programmes. The governments of the G5 countries will do so because it allows more room to bail out exposed banks. Governments asking for IMF lending will also do so to impress markets out of domestic interests—more money implies more room to manoeuvre for governments in their reform efforts and a less painful reduction of fiscal spending, which could negatively affect the hoped-for economic recovery. This is in line with the findings of past research, which identify a consistent positive link between IMF programme size and exposure to financial corporations.

At the same time, IMF staff has no specific interest in lobbying against itself. From the perspective of technocratic interests, the size of IMF programmes has not been a particular focus of analysis by IMF staff compared to conditionality. A possible reason is that

programme size is less subject to controversy than burdensome conditionality; hence, IMF staff are less in need of defending their views. At the same time, IMF staff has a clear bureaucratic interest in larger programmes, as this implies more interest payments to the IMF, which is the IMF's main source of income. Hence, the bottom line is that both governments and IMF staff have an interest in large programmes. This also implies that there is no reason to differentiate between countries that have market access and countries that do not, as it does not matter for the size of IMF programmes. In line with the findings of past research on bank exposure and IMF programme size, this leads to the third and final hypothesis of this study:

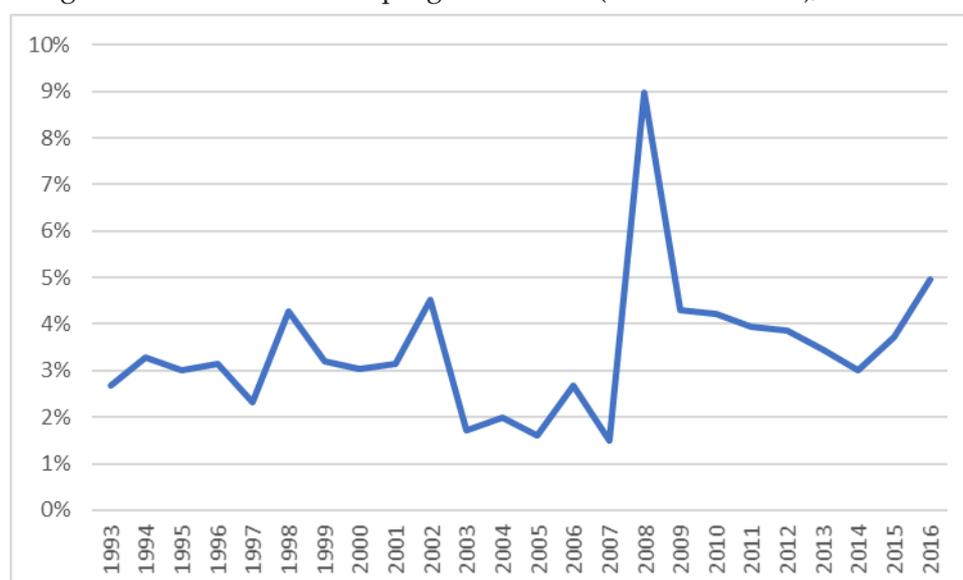
H3: Since the GFC, the size of IMF programmes is positively associated with the exposure of G5 banks.

4 Descriptive Evidence

4.1 IMF programme variables

This section offers some descriptive evidence on the dependent variables in this study and the IMF programme variables to be analyzed—the size of IMF programmes and measures of conditionality.

Figure 1: Evolution of IMF programme size (relative to GDP), 1993-2016



Note: The figure shows the yearly average size of IMF programmes (relative to GDP, in percent) for the period 1993–2016. Source: IMF MONA.

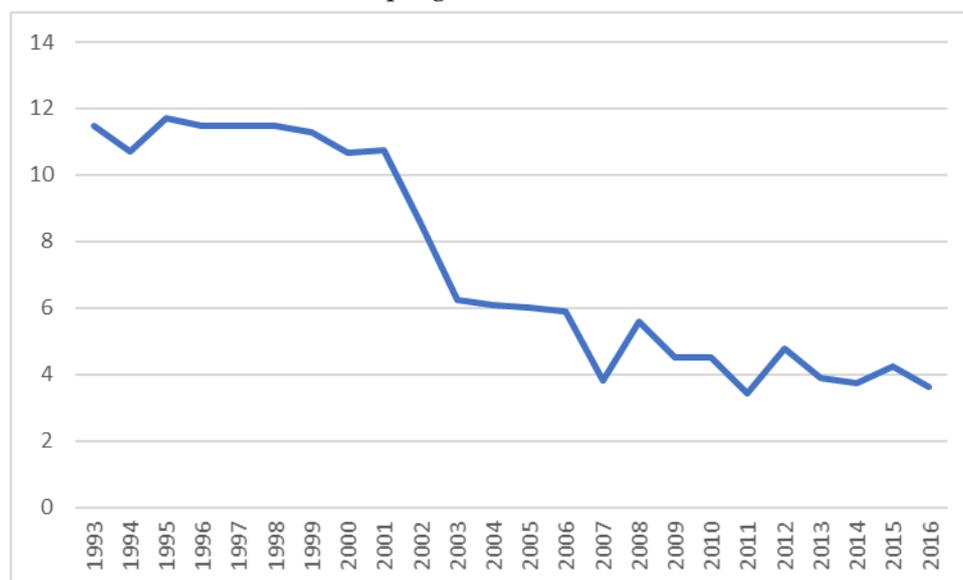
In the period analyzed, 1993–2016, there were 546 IMF programmes⁸ for 120 countries. Overall, the *size of IMF programmes* (relative to GDP) increased during this period (see Figure 1) but with large swings. The evolution of programme size clearly shows how the average programme decreased during the great moderation before the GFC and then increased massively in 2008 before decreasing again somewhat. When comparing the averages of the two periods, there was a decline in IMF programme size from approximately 3% of the receiving country’s GDP before the GFC (1993–2007) to approximately 4.5% thereafter (2008–2016). The average programme size over the entire period (1993–2016) was approximately 3.5%

There are various forms of conditions in IMF programmes. The first type of condition is nonbinding, such as indicative targets and structural benchmarks. As these conditions are not preconditions for the payout of IMF lending, they are considered “soft” and are mostly excluded in research on the matter, such as in Breen (2012) and Dreher et al. (2015). Breen (2014) similarly also uses only binding conditions (QPC). These are specific, measurable conditions (such as ceilings on new debt) under the control of authorities⁹ (IMF, 2021). During the period of 1993 to 2016, an IMF programme had eight binding conditions on average (see Figure 2). However, there was a strong downwards trend over this period, from approximately 11 conditions per programme in the 1990s to approximately four conditions in the years following the GFC. This clearly shows the trend towards parsimony in IMF conditionality over the period in question.

⁸ Only arrangements with IMF financing are included in this study, hence policy-only, nonfinancing arrangements such as the Policy Support Instrument (PSI) are excluded.

⁹ The QPC have to be met at each programme review for a country to receive the next payment tranche under the IMF programme; if not, the country has to present a waiver to the IMF Executive Board. The waiver explains that the deviations were minor or lays out the country authorities’ corrective actions. See IMF (2021).

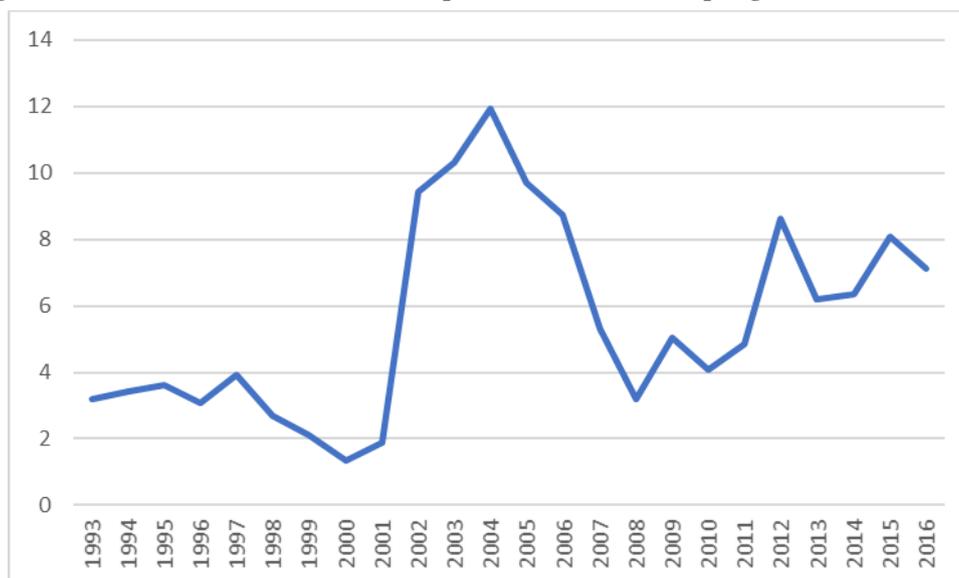
Figure 2: Evolution of the number of quantitative performance criteria (QPC) in IMF programmes, 1993–2016



Note: The figure shows the yearly average of the number of QPCs in IMF programmes for the period 1993–2016. Source: IMF MONA.

Another type of condition is prior actions, which are policy steps a country needs to meet before the IMF Executive Board approves a programme or completes a review (IMF, 2021). These conditions are even tougher than the QPC, as they cannot be waived. Additionally, while all IMF programmes with conditionality will have QPC, prior actions are optional. Over the period 1993–2016, IMF programmes had 4.8 prior actions on average (see Figure 3). Compared to the QPC, the evolution of prior actions was more volatile over the period in question. There was a boom in this conditionality type before the shift to parsimonious conditionality in approximately 2008. Their use became much more restrained just before the GFC and then increased again. The average number of prior actions increased from approximately three in the early 1990s to approximately seven in 2016.

Figure 3: Evolution of the number of prior actions in IMF programmes, 1993–2016



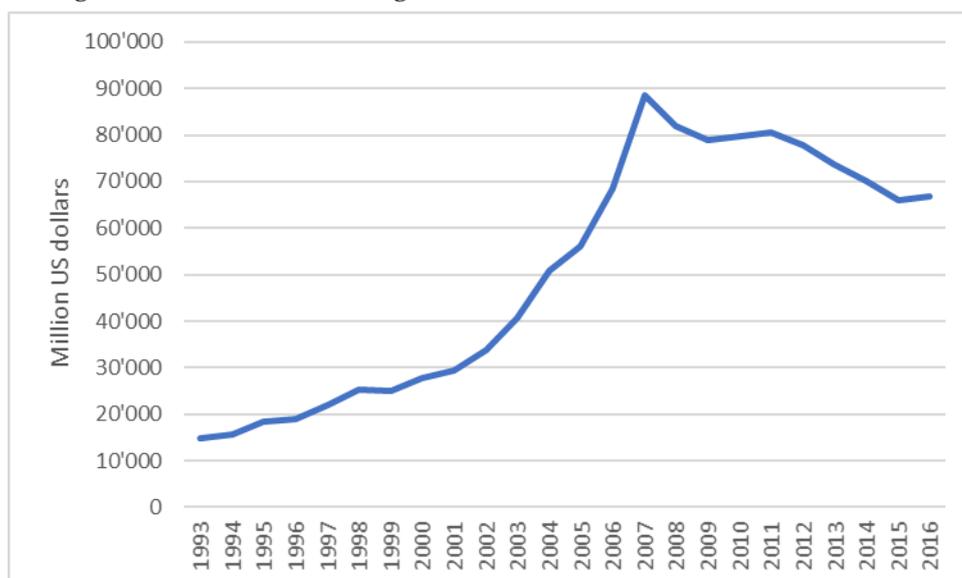
Note: The figure shows the yearly average of the number of prior actions in IMF programmes for the period 1993–2016. Source: IMF MONA.

4.2 Financial corporate interests

To measure financial corporate interests in a country, I use BIS data on consolidated foreign claims of banks for the US, the UK, Germany, Japan, and France (G5) (see Section A.3 in the Appendix for details). The evolution of such foreign claims from 1993 to 2016 (see Figure 4) shows a strong build-up during the great moderation until 2007 and then a decline after the GFC.

In the case of most IMF programmes in this study, the country in question was exposed to claims by foreign banks; hence, there are few observations without claims. Nevertheless, it is insightful to compare the IMF programme variables depending on a country's exposure to such claims and how this changed with the GFC.

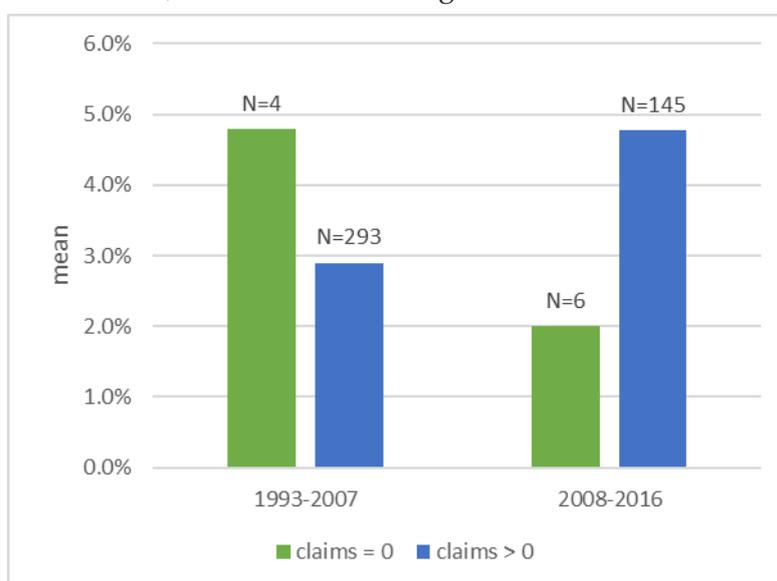
Figure 4: Evolution of foreign claims of banks from the G5, 1993–2016



Note: The figure shows the yearly average of consolidated foreign claims of banks for the US, the UK, Germany, Japan, and France (G5) for the 1993–2016 period. Source: BIS.

For the IMF programme size (see Figure 5), programmes were smaller in the presence of claims of foreign banks before the GFC and considerably larger after the crisis. However, the means are not significantly different from each other.

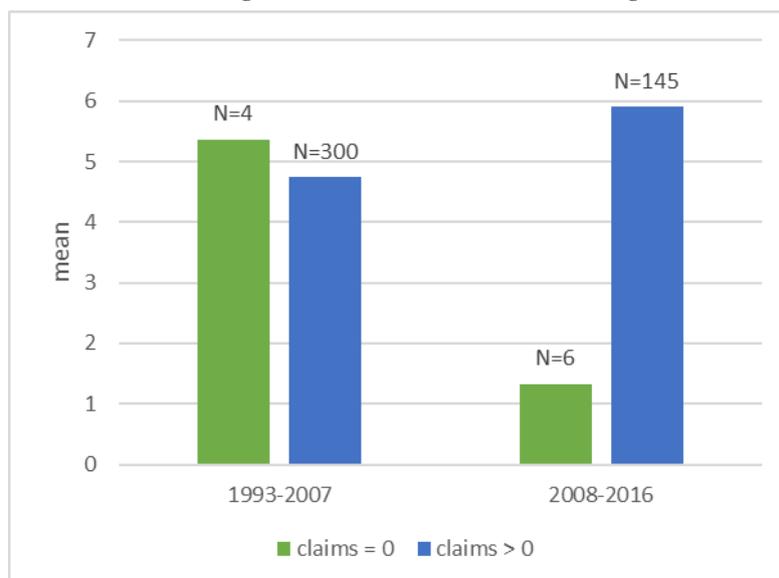
Figure 5: Average IMF programme size, depending on the presence of claims of foreign banks, before and after the global financial crisis



Notes: The figure shows the mean IMF programme size (relative to GDP) for the period before the global financial crisis (1993–2007) and after (2008–2016). The green bar shows the mean if there were no claims of foreign banks, whereas the blue bar shows the mean in the presence of such claims. Above the bars, the number of observations are shown.

For prior actions (see Figure 6), the pattern is more similar to the size of IMF programmes. While again, the presence of claims mattered little to the number of prior actions before the GFC, there were considerably more prior actions in IMF programmes in the presence of claims after the crisis. Again, the means are not significantly different from each other.

Figure 6: Average number of prior actions in an IMF programme, depending on the presence of claims of foreign banks, before and after the global financial crisis



Notes: The figure shows the mean number of prior actions in an IMF programme for the period before the global financial crisis (1993–2007) and after (2008–2016). The green bar shows the mean if there were no claims of foreign banks, whereas the blue bar shows the mean in the presence of such claims. Above the bars, the number of observations are shown.

5 Method of Analysis

5.1 Main regressions

To test the three hypotheses, I analyze a panel dataset of yearly data from 1993 to 2016 for 120 IMF member countries with programmes during that period. The dependent variables are the size of an IMF programme (relative to GDP) and the types of conditions, the number of prior actions and the number of QPCs. The variable of interest in this study is claims of financial corporations of the major IMF shareholders, the G5. This follows the approach used in Breen (2014). These data stem from the Bank for International Settlements (BIS) statistics on consolidated foreign claims of G5 banks. The control variables are largely based on the list of economic and political variables found to be the most robust determinants of IMF programmes by Moser and Sturm (2011, p. 325). Section

A.1 in the Appendix presents the summary statistics of the variables. Section A.4 in the Appendix gives details about the variables used.

For the number of conditions (both QPC and prior actions), panel Poisson is the preferred model, as the variables are count data. Robust standard errors to control for heteroskedasticity and autocorrelation will be applied to all regressions. For the dependent variable IMF programme size, panel OLS is the main method because the variable is continuous. FGLS will be added for comparison given the nonnormality of the error distribution of the variable.

The equation to be tested is:

$$Y_{it} = \alpha_i + \beta_1 FIN_{it} + \beta_2 FIN_{it} * PRGT_{it} + \beta_3 FIN_{it} * GFC_t + \beta_4 FIN_{it} * GFC_t * PRGT_{it} + \beta_5 GFC_t * PRGT_{it} + \beta_6 PRGT_{it} + \beta_7 Z_{it} + \delta_t + u_{it}. \quad (1)$$

where Y_{it} is the dependent variable. FIN_{it} are financial sector interests as captured by the variable claims of financial corporations.

Several interaction terms with dummies are included in the equation. The first interaction term $FIN_{it} * PRGT_{it}$ accounts for the possibility that the importance of claims may differ for poorer and richer countries. For this, a dummy $PRGT$ is introduced, which takes the value of 1 for countries based on their eligibility for support through the IMF's PRGT and precursor trusts in a given year and 0 otherwise. Note that the PRGT eligibility of a country can change over time.

A second interaction term $FIN_{it} * GFC_t$ captures whether the results regarding claims change with the onset of the GFC. For this, a dummy is introduced on the GFC that is zero until 2007 and takes the value of 1 thereafter.

A third interaction term $FIN_{it} * GFC_t * PRGT_{it}$ combines the effect of PRGT and GFC in the presence of claims. The remaining interaction terms cover all remaining combination possibilities.

Note that β_1 only refers to the effect of claims of financial corporations on the dependent variables when the dummies GFC and $PRGT$ are both zero, hence to the years before 2010 and for non-PRGT countries only. Similarly, β_5 measures the interaction effect of the two dummies on the dependent variable if claims of financial corporations are zero. The term β_6 measures the effect of the respective dummy on the dependent variable if claims of financial corporations and the other variables are zero.

Finally, the impact of aggregate time trends is captured by a vector of year dummies δ_t . Z_{it} is a vector of economic and political controls. The term α_i represents country fixed effects, and u_{it} is the error term.

5.2 Robustness checks

Several regressions are added to ensure the robustness of the results. First, to see if the results hold across model specifications, I start with a baseline model without controls, then add important controls, and finally proceed to a full model. Second, the regressions will be repeated while dropping countries with major IMF programmes at the onset of the GFC, specifically Greece, Portugal, and Cyprus. Third, the date of the onset of the GFC was changed to 2009 and 2010.

5.3 Accounting for endogeneity concerns

It cannot be excluded that endogeneity is an issue with claims of financial corporations. It is possible that there are unobserved effects that affect both the design of an IMF programme to a country and the number of claims of financial corporations to the same country, which may not be adequately captured by the control variables. An example could be a strong ability to implement reforms by the country's authorities. Knowledge about this particularity of the country in question could lead to more lenient conditionality in the IMF programme because staff would assume ownership of a programme as high. It could also lead to more investment by foreign banks. In addition, it can be argued that the stock of claims in a given year is based on past decisions, which would imply that claims are predetermined, but not 5–6 years before as would be needed (Hansen & Tarp, 2001).

To account for potential endogeneity issues with the variable claims of financial corporations, an IV approach is applied. For this, in a third set of regressions, Equations 2, 3, and 4 with interaction terms for GFC and PRGT eligibility are repeated using a legal origin dummy as IV. The data on legal origin are sourced from La Porta et al. (2008). Legal origin is a dummy variable that takes the value of 1 if a country has a common law legal tradition based on UK law and the value of 0 otherwise. Widely used in past research, this dummy variable is based on the idea that the legal rules that protect outside investors vary systematically between countries based on their legal traditions or origins. In particular, legal rules based on UK common law are considered considerably more protective than civil law, such as the French, German, Scandinavian and Socialist legal traditions (p. 285).

Legal origin dummies as IV in the context of financial relations between countries have been used, for example, by Acemoglu and Johnson (2005). In this study, the legal origin appears to be an appropriate IV, as foreign banks are very likely to take the relative legal protection of their foreign investments into account in their investment decisions. Hence, claims of financial corporations to a country should be higher if the country has a legal tradition based on UK law. At the same time, the legal origin of many emerging and developing countries, and hence the majority of IMF member countries requesting IMF programmes, can be considered exogenous, given that they are mostly former colonies

and their legal systems were imposed by colonial powers (Acemoglu and Johnson, 2005, p. 961). Finally, it can be argued that the instrument satisfies the exclusion restriction, as it has no direct influence on IMF program design. While the legal context of a country is a key component of investment decisions as mentioned above, it is not very likely that staff economists at the IMF think about the country's legal origin when designing an IMF program in view of size and conditions. Being economists, they will predominantly have the current economic conditions and, possibly, the political circumstances in mind.

Based on this, this instrument can be considered strong, as it seems close to uncorrelated with the error term and relevant, i.e., correlated with the endogenous variable, which is foreign corporate exposure. Table A4-1 in the Appendix shows the first-stage and two-stage least square regressions (2SLS) based on the truncated set of explanatory variables, with measures of a country's legal origin as a proxy for exposure to foreign financial claims. The F-statistic of the first-stage regression suggests that the instrument is sufficiently strong.

6 Results

Section A.2 in the Appendix provides detailed regression results. For all dependent variables, there are two sets of results. The first set includes the main regressions, which are the panel OLS model for IMF programme size and the panel Poisson for the two types of conditions, each of them with robust standard errors and a general specification for the years 1993-2016. The set includes three regressions: a base model with only the variable of interest as a control, which maximizes the number of observations; a truncated model for which a few key control variables with significance at conventional levels are added; and a full model with a complete set of controls that are considered relevant in similar regressions in past research. The second set replicates the base, truncated and full models using an IV model approach to account for possible endogeneity of the variable measuring financial corporate exposure.¹⁰ The results of additional robustness checks are provided in Section A.3 in the Appendix.

For the number of prior actions, I find that after the GFC, and if limited to market access countries, exposure to claims of financial corporations is linked to more prior

¹⁰ For the variable measuring IMF programme size, the sample is kept steady across specifications in the main regressions table. For the variables measuring conditionality, the IV results in the main regression tables are provided for the full sample, as keeping the sample steady (which implies a much smaller sample size) leads to the dropping of one interaction term due to collinearity. However, the results of both samples are comparable. The steady sample regressions for the variables measuring conditionality are provided in the Appendix.

actions. This is the case for the full first set of regressions, hence the base, truncated and full models. The main regression results for the truncated and full models are highly significant at conventional levels. The IV model, using UK legal origin as an instrumental variable, confirms the positive link, but the results are no longer significant. These results are robust to excluding countries with very high bank exposure during the GFC, such as Greece, Portugal and Cyprus. The link is also somewhat robust to changing the start date of the GFC to 2009 and 2010, as the sign remains the same but the results are no longer significant.

Interestingly, no such link is found for the dependent variable on QPC. The main regressions even show a negative link between the conditions for market access countries and financial exposure, but the results are not consistently significant and are not confirmed by the IV model. A reason for this difference from prior actions could be that QPC is a much more “politicized” variable from an IMF staff perspective. QPC are much more widely used than prior actions (which are optional) and are naturally the key focus in efforts to make conditionality more parsimonious. Hence, it is possible that for QPC, the parsimony discussion and overall declining trend dominate their use. Nevertheless, more prior actions by themselves are still a sign that overall conditionality in a programme is tougher, as prior actions set a much higher bar—they are preconditions for payouts, and unlike QPC, they cannot be waived if the government fails to meet them. Hence, their inclusion in a programme, which is optional compared to QPC, carries a strong signalling effect.

Overall, the findings on prior actions confirm the first hypothesis, which states, *“Since the GFC, conditionality is tougher in IMF programmes for countries to which G5 banks are exposed and for which market access matters.”*

For PRGT countries, there is no such positive link between exposure to claims of financial corporations after the GFC and prior actions. The results for QPC for PRGT countries are slightly positive but not significant and not confirmed by the IV model, which finds a negative link. The finding for prior actions hence confirms the second hypothesis, which states, *“In countries for which market access does not matter, the time around the GFC is associated with softer conditionality.”* However, the results go beyond that: for PRGT countries, there is a significant and relatively robust negative link between exposure to claims and prior actions after the GFC. An explanation for this finding could be that higher financial integration of a PRGT country, as measured by higher exposure to claims of financial corporations, could lead IMF staff to be more careful in their programme designs, make “better” programmes, and hence apply policy guidelines such as parsimony in conditionality more consistently.

For the IMF programme size, I find that after the GFC, it is significantly positively linked with claims of financial corporations. This is the case for the full first set of regressions, hence the base, truncated and full models. The IV model confirms the positive link in the truncated model, but the sign changes for the base and full models. The positive link is further robust to applying FGLS, changing the GFC start date to 2009 and 2010 and excluding Greece, Portugal and Cyprus. When differentiating between PRGT statuses of countries, the effect vanishes. Overall, these results confirm the third hypothesis of this study: *“Since the GFC, the size of IMF programmes is positively linked to the exposure of G5 banks.”*

7 Conclusion

In this paper, I argue that the GFC constitutes another structural change in IMF lending after the Latin American debt crisis and the end of the Cold War. I show that with the GFC, the importance of financial corporations in IMF lending decisions has risen. Major IMF shareholders, the G5, protect the exposure of their banks, which increased significantly in the years before the GFC. To impress markets, they influence programme design towards larger lending amounts and tougher conditionality, specifically more prior actions. This serves to preserve access to the programme country’s market and avoid default. While financial corporate interests are associated with a larger programme size for all countries, a positive link with more prior actions is only found for countries for which market access matters. For countries with limited market access, IMF staff’s technocratic interests in parsimonious conditionality dominate.

Based on a panel set of 120 countries with IMF programmes covering the years 1993 to 2016, the effect of financial corporate interests on two aspects of IMF programme design was tested. The size of IMF programmes and measures of conditionality are dependent variables that have been used in past research on the subject, which allows some comparability. To account for possible endogeneity of the variable of interest, claims of financial corporations, I added an IV model using legal origin in the UK legal tradition.

For future research, it would be interesting to go beyond the interests of the major IMF shareholders, the G5, and account for the changing global order by capturing the interests of emerging global powers such as China. It would be interesting to see if and how Chinese financial corporate interests affect IMF lending. Furthermore, given that China has become a key global creditor, the role of Chinese sovereign and corporate debt in addition to financial interests could be of interest in IMF programme design for exposed countries.

References

- Acemoglu, D., & Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy*, 113(5), 949-995.
- Banks, A.S., & Wilson, K.A. (2017). Cross-National Time-Series Data Archive. Databanks International. Jerusalem, Israel. Retrieved from: <https://lib.msu.edu/about/data/cnts>.
- Blustein, P. (2015). Laid low: The IMF, the euro zone and the first rescue of Greece.
- Breen, M. (2012). The International Politics of Ireland's EU/IMF Bailout. *Irish Studies in International Affairs*, 75-87.
- Breen, M. (2014). IMF conditionality and the economic exposure of its shareholders, *European Journal of International Relations*, 1-21.
- Broz, J. L., & Hawes, M. B. (2006). Congressional politics of financing the International Monetary Fund. *International Organization*, 60(2), 367-399.
- Catan, T. & Talley, I. (2013). Past rifts over Greece cloud talks on rescue. *The Wall Street Journal*. Retrieved from <http://online.wsj.com>.
- Copelovitch, M. S. (2010). Master or servant? Common agency and the political economy of IMF lending. *International Studies Quarterly*, 54(1), 49-77.
- De Haan, J., & Sturm, J. E. (2017). Finance and income inequality: A review and new evidence. *European Journal of Political Economy*, 50, 171-195
- Dreher, A. (2006). Does Globalization Affect Growth? Evidence from a new Index of Globalization. *Applied Economics*, 38(10), 1091-1110.
- Dreher, A., Sturm, J. E., & Vreeland, J. R. (2015). Politics and IMF conditionality. *Journal of Conflict Resolution*, 59(1), 120-148.
- Dreher, A. & Vreeland, J. R. (2011). Buying votes and international organizations. Discussion Papers, Center for European Governance and Economic Development Research, 123.
- Gould, E. R. (2003). Money talks: Supplementary financiers and international monetary fund conditionality. *International Organization*, 57(3), 551-586.
- Gygli, S., Haelg F., Potrafke N. & Sturm, J. E. (2019). The KOF Globalization Index – Revisited. *Review of International Organizations*, 14(3), 543-574.
- Hansen, H., & Tarp, F. (2001). Aid and growth regressions. *Journal of Development Economics*, 64(2), 547-570.
- International Monetary Fund [IMF] (2005). Review of the 2002 Conditionality Guidelines. Retrieved from <http://www.imf.org>.
- International Monetary Fund [IMF] (2008). Implementation plan in response to board-endorsed recommendations arising from the IEO evaluation of structural conditionality in IMF-supported programs. Retrieved from <http://www.imf.org>.
- International Monetary Fund [IMF] (2011). Articles of Agreement. Retrieved from <http://www.imf.org>.
- International Monetary Fund [IMF] (2013a). Factsheet: IMF's response to the global economic crisis. Retrieved from <http://www.imf.org>.
- International Monetary Fund [IMF] (2013b). Greece: Ex Post Evaluation of Exceptional Access under the 2010 Stand-By Arrangement. IMF Country Report No. 13/156.
- International Monetary Fund [IMF] (2021). Factsheet: IMF Conditionality. Retrieved from <http://www.imf.org>.
- Independent Evaluation Office of the International Monetary Fund [IEO] (2007). IEO evaluation on Structural Conditionality in IMF-Supported Programs. Retrieved from <http://www.ieo-imf.org>.

- Independent Evaluation Office of the International Monetary Fund [IEO] (2016). The IMF and the Crises in Greece, Ireland, and Portugal. Retrieved from <http://www.ieo-imf.org>.
- Inter-Parliamentary Union (2017). PARLINE database on national parliaments - Election archives. Retrieved from <https://data.ipu.org/>.
- LaPorta, R., Lopez-de-Silanes F., & Shleifer, A. (2008). The Economic Consequences of Legal Origins. *Journal of Economic Literature*, 46 (2), 285-332.
- Moser, C., & Sturm, J. E. (2011). Explaining IMF lending decisions after the Cold War. *The Review of International Organizations*, 6(3-4), 307-340.
- Oatley, T., & Yackee, J. (2004). American interests and IMF lending. *International Politics*, 41(3), 415-429.
- Presbitero, A. F., & Zazzaro, A. (2012). IMF lending in times of crisis: Political influences and crisis prevention. *World Development*, 40(10), 1944-1969.
- Scartascini, C.; Cruz, C. & Keefer, P. (2017). The Database of Political Institutions 2017. Inter-American Development Bank. Retrieved from <https://publications.iadb.org/handle/11319/8806>.
- Sturm, J. E., Berger, H. & De Haan, J. (2005). Which variables explain decisions on IMF credit? An extreme bounds analysis. *Economics & Politics*, 17(2), 177-213.
- Vreeland, J. R. (2005). The international and domestic politics of IMF programs. Yale University, mimeo.
- Young, K. (2018). The modern financial corporation and global policy. In *Handbook of the International Political Economy of the Corporation*. Edward Elgar Publishing.

Appendix

A.1 Summary statistics

Table A1: Summary statistics of variables

| Variable | N | Mean | Std. Dev. | Min | Max | Skewness | Kurtosis |
|--|------|-------|-----------|--------|--------|----------|----------|
| IMF program size rel. to GDP (log) | 448 | -3.82 | 0.99 | -6.89 | -0.01 | -0.19 | 3.25 |
| Number of quantitative performance criteria per program year | 455 | 8.03 | 4.02 | 0.00 | 22.00 | 0.12 | 2.72 |
| Number of prior actions per program year | 455 | 5.05 | 7.13 | 0.00 | 54.00 | 3.24 | 17.72 |
| Claims by G5 banks (log) | 4089 | 6.97 | 3.22 | 0.00 | 14.87 | 0.08 | 2.43 |
| IMF program duration in years ($x+x^2$) | 455 | 9.39 | 5.30 | 2.00 | 20.00 | 0.18 | 2.40 |
| Temporary membership in UN Security Council | 4553 | 0.06 | 0.23 | 0.00 | 1.00 | 3.89 | 16.13 |
| Under IMF program in past 5 years (dummy) | 4675 | 0.29 | 0.45 | 0.00 | 1.00 | 0.93 | 1.86 |
| Reserves in months of imports (log) | 3812 | 1.10 | 1.01 | -6.21 | 4.37 | -1.55 | 9.20 |
| GDP growth yoy | 4484 | 3.81 | 6.28 | -62.08 | 149.97 | 4.63 | 109.19 |
| GDP per capita at constant prices (log) | 4510 | 8.30 | 1.52 | 4.73 | 11.63 | 0.12 | 2.09 |
| Debt service to exports (log) | 2635 | 2.26 | 1.21 | -3.91 | 25.83 | 3.14 | 63.33 |
| Short term debt to total debt (log) | 3109 | 2.11 | 1.51 | -4.61 | 25.83 | 0.78 | 28.35 |
| Currency crisis (dummy) | 4456 | 0.04 | 0.20 | 0.00 | 1.00 | 4.65 | 22.66 |
| Parliamentary election held (dummy) | 4279 | 0.22 | 0.41 | 0.00 | 1.00 | 1.36 | 2.84 |
| Presidential election held (dummy) | 4189 | 0.12 | 0.32 | 0.00 | 1.00 | 2.39 | 6.70 |
| Political instability | 4353 | 0.00 | 1.14 | -0.38 | 20.42 | 6.77 | 79.24 |
| Social unrest | 4353 | 0.00 | 1.43 | -0.39 | 35.72 | 10.49 | 179.62 |
| Freedom House Index of political rights and civil liberties | 4599 | 3.41 | 1.95 | 1.00 | 7.00 | 0.29 | 1.75 |
| Political globalisation | 4397 | 59.13 | 23.56 | 2.69 | 99.54 | -0.20 | 2.07 |
| Financial globalisation, de jure | 3882 | 47.46 | 25.14 | 1.00 | 96.06 | -0.06 | 1.67 |
| Exports from G5, average trade share (log) | 4391 | -7.70 | 2.47 | -16.53 | -1.82 | 0.02 | 2.67 |

A.2 Main regression results

Table A2-1: *Financial corporate exposure and IMF program size*

| | Set 1 - Panel OLS model | | | Set 2 – IV pooled model ¹ | | |
|--|-------------------------|----------------------|----------------------|--------------------------------------|----------------------|----------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure | -0.065 (0.067) | -0.044 (0.070) | 0.149** (0.074) | 0.371*** (0.137) | 0.316** (0.133) | 0.344** (0.139) |
| Financial corporate exposure* global financial crisis | 0.313*** (0.047) | 0.222*** (0.054) | 0.250*** (0.059) | -0.245 (0.261) | 0.016 (0.281) | -0.317 (0.283) |
| IMF program duration | | 0.052*** (0.011) | 0.056*** (0.011) | | 0.059*** (0.008) | 0.067*** (0.009) |
| UN Security Council membership | | | -0.166 (0.172) | | | 0.070 (0.160) |
| IMF arrangement in past 5 years | | | -0.130 (0.133) | | | -0.232* (0.119) |
| Reserves to imports | | | -0.216* (0.126) | | | -0.043 (0.061) |
| GDP growth | | -0.029*** (0.010) | -0.031*** (0.012) | | -0.052*** (0.009) | -0.052*** (0.010) |
| GDP per capita | | -1.457** (0.642) | -2.517*** (0.838) | | -0.029 (0.053) | -0.073 (0.082) |
| Debt to exports | | 0.387*** (0.079) | 0.384*** (0.096) | | 0.277*** (0.070) | 0.279*** (0.078) |
| Short-term debt to total debt | | | 0.038 (0.065) | | | 0.007 (0.050) |
| Currency crisis | | | 0.236 (0.204) | | | 0.534*** (0.177) |
| Parliamentary elections | | | -0.044 (0.136) | | | -0.032 (0.137) |
| Presidential elections | | | -0.017 (0.153) | | | -0.146 (0.146) |
| Political instability | | | 0.050** (0.024) | | | 0.046* (0.026) |
| Social unrest | | | -0.017 (0.036) | | | -0.035 (0.039) |
| Freedom House Index | | | -0.004 (0.084) | | | -0.061 (0.051) |
| Political globalisation | | | -0.007 (0.012) | | | -0.016*** (0.005) |
| Financial globalisation | | | -0.000 (0.008) | | | -0.001 (0.002) |
| Trade share of imports of G5 | | | -0.176 (0.236) | | | 0.088 (0.055) |
| Constant | -3.567*** (0.429) | 5.718 (4.532) | 11.580* (6.770) | -4.412*** (0.275) | -5.053*** (0.444) | -3.194*** (1.211) |
| Observations | 433 | 347 | 295 | 433 | 347 | 295 |
| Number of countries | 115 | 104 | 94 | | | |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The OLS model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin.

Table A2-2: *Financial corporate exposure and prior actions*

| | Set 1 - Panel Poisson model | | | Set 2 – IV pooled model ¹ | | |
|---|-----------------------------|---------------------|----------------------|--------------------------------------|---------------------|----------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure, non-PRGT ² countries | -0.076 (0.089) | -0.047 (0.226) | -0.017 (0.204) | 0.451 (0.822) | 0.321 (0.798) | 0.295 (1.534) |
| Fin. corp. exposure*global financial crisis, non-PRGT countries | 0.221 (0.164) | 0.550*** (0.212) | 0.806*** (0.262) | 2.497 (2.718) | 6.486 (5.929) | 3.936 (5.690) |
| Financial corporate exposure, PRGT countries | -0.044 (0.106) | -0.154 (0.220) | -0.080 (0.210) | -0.807 (1.280) | -0.978 (1.427) | -1.098 (2.267) |
| Fin. corp. exposure*global financial crisis, PRGT countries | -0.211 (0.189) | -0.470** (0.232) | -0.799*** (0.273) | -1.514 (3.171) | -4.412 (6.233) | -3.281 (6.152) |
| IMF program duration | | -0.019* (0.011) | -0.005 (0.014) | | -0.006 (0.048) | 0.047 (0.062) |
| UN Security Council membership | | | 0.200 (0.315) | | | -0.368 (1.923) |
| IMF arrangement in past 5 years | | | -0.092 (0.181) | | | -1.707** (0.806) |
| Reserves to imports | | | -0.234 (0.175) | | | -1.650*** (0.483) |
| GDP growth | | -0.021 (0.013) | -0.039** (0.016) | | -0.126** (0.058) | -0.117* (0.069) |
| GDP per capita | | -0.140 (0.600) | -1.229 (0.888) | | -1.047* (0.555) | -1.040 (0.711) |
| Debt to exports | | 0.188* (0.102) | 0.177 (0.109) | | 0.825 (0.574) | 1.043 (0.771) |
| Short-term debt to total debt | | | -0.130 (0.080) | | | -0.305 (0.327) |
| Currency crisis | | | 0.552** (0.257) | | | 1.746 (1.120) |
| Parliamentary elections | | | -0.280 (0.202) | | | 0.820 (0.946) |
| Presidential elections | | | 0.411* (0.225) | | | 0.102 (1.271) |
| Political instability | | | -0.025 (0.046) | | | -0.323 (0.258) |
| Social unrest | | | 0.037 (0.045) | | | 0.338 (0.246) |
| Freedom House Index | | | -0.173 (0.117) | | | -0.679** (0.343) |
| Political globalisation | | | 0.016 (0.020) | | | 0.045 (0.039) |
| Financial globalisation | | | -0.007 (0.009) | | | -0.020 (0.019) |
| Trade share of imports of G5 | | | 0.613* (0.316) | | | -0.196 (0.397) |
| Constant | | | | 2.711*** (0.636) | 9.862** (4.340) | 10.039 (9.631) |
| Observations | 413 | 316 | 265 | 455 | 356 | 299 |
| Number of countries | 95 | 81 | 71 | | | |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ²PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust.

Table A2-3: *Financial corporate exposure and quantitative performance criteria (QPC)*

| | Set 1 - Panel Poisson model | | | Set 2 – IV pooled model ¹ | | |
|---|-----------------------------|---------------------|---------------------|--------------------------------------|---------------------|-------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure, non-PRGT ² countries | 0.036 (0.026) | 0.151* (0.079) | 0.157* (0.082) | 0.932 (0.598) | 0.836 (0.678) | 1.145 (1.099) |
| Fin. corp. exposure*global fin. crisis, non-PRGT countries | -0.269** (0.133) | -0.271 (0.169) | -0.305* (0.167) | 1.099 (0.836) | 2.238** (0.907) | 1.633 (1.426) |
| Financial corporate exposure, PRGT countries | -0.035 (0.030) | -0.140* (0.080) | -0.142* (0.083) | -0.086 (0.754) | -0.158 (0.838) | -0.420 (1.242) |
| Fin. corp. exposure*global financial crisis, PRGT countries | 0.240* (0.134) | 0.231 (0.170) | 0.263 (0.169) | -1.453 (0.990) | -2.153* (1.096) | -1.499 (1.534) |
| IMF program duration | | 0.005 (0.003) | 0.005 (0.004) | | 0.036 (0.032) | 0.028 (0.037) |
| UN Security Council membership | | | 0.034 (0.113) | | | -0.918 (0.858) |
| IMF arrangement in past 5 years | | | -0.056 (0.038) | | | -0.264 (0.357) |
| Reserves to imports | | | -0.021 (0.026) | | | -0.216 (0.208) |
| GDP growth | | -0.007* (0.004) | -0.005 (0.005) | | -0.019 (0.030) | -0.021 (0.035) |
| GDP per capita | | -0.017 (0.126) | 0.046 (0.208) | | 0.182 (0.168) | 0.337 (0.240) |
| Debt to exports | | 0.009 (0.027) | 0.008 (0.028) | | 0.200 (0.155) | 0.281 (0.194) |
| Short-term debt to total debt | | | -0.001 (0.020) | | | -0.067 (0.170) |
| Currency crisis | | | -0.114* (0.068) | | | -0.420 (0.579) |
| Parliamentary elections | | | -0.044 (0.059) | | | 0.111 (0.420) |
| Presidential elections | | | 0.053 (0.057) | | | 0.292 (0.494) |
| Political instability | | | 0.027*** (0.009) | | | 0.032 (0.109) |
| Social unrest | | | -0.018 (0.017) | | | 0.014 (0.090) |
| Freedom House Index | | | -0.032 (0.026) | | | 0.148 (0.142) |
| Political globalisation | | | -0.003 (0.005) | | | 0.012 (0.013) |
| Financial globalisation | | | 0.006* (0.003) | | | 0.005 (0.007) |
| Trade share of imports of G5 | | | -0.050 (0.063) | | | -0.081 (0.152) |
| Constant | | | | 11.014*** (0.346) | 8.937*** (1.541) | 5.746* (2.938) |
| Observations | 423 | 327 | 274 | 455 | 356 | 299 |
| Number of countries | 98.000 | 85.000 | 74.000 | | | |

Notes Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ²PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust.

A.3 Robustness checks

Table A3-1: *Financial corporate exposure and IMF program size:*
Robustness check on the start date of the global financial crisis

| | Set 1 – Start date: 2009 | | | Set 2 – Start date: 2010 | | |
|--|--------------------------|---------------------|----------------------|--------------------------|---------------------|----------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure | -0.033 (0.069) | -0.026 (0.069) | 0.181** (0.073) | -0.030 (0.071) | -0.025 (0.072) | 0.188** (0.074) |
| Financial corporate exposure* global financial crisis | 0.231*** (0.053) | 0.157*** (0.042) | 0.179*** (0.043) | 0.202*** (0.053) | 0.143*** (0.039) | 0.172*** (0.035) |
| IMF program duration | | 0.055*** (0.011) | 0.059*** (0.012) | | 0.056*** (0.010) | 0.060*** (0.011) |
| UN Security Council membership | | | -0.138 (0.173) | | | -0.099 (0.157) |
| IMF arrangement in past 5 years | | | -0.174 (0.138) | | | -0.183 (0.139) |
| Reserves to imports | | | -0.218 (0.131) | | | -0.213* (0.128) |
| GDP growth | | -0.030** (0.011) | -0.030** (0.012) | | -0.029** (0.011) | -0.030** (0.013) |
| GDP per capita | | -1.453** (0.687) | -2.557*** (0.915) | | -1.510** (0.686) | -2.621*** (0.868) |
| Debt to exports | | 0.420*** (0.081) | 0.423*** (0.098) | | 0.421*** (0.081) | 0.423*** (0.097) |
| Short-term debt to total debt | | | 0.021 (0.070) | | | 0.019 (0.069) |
| Currency crisis | | | 0.231 (0.198) | | | 0.242 (0.195) |
| Parliamentary elections | | | -0.063 (0.140) | | | -0.051 (0.140) |
| Presidential elections | | | -0.010 (0.156) | | | -0.032 (0.154) |
| Political instability | | | 0.044* (0.024) | | | 0.039 (0.024) |
| Social unrest | | | -0.019 (0.037) | | | -0.024 (0.037) |
| Freedom House Index | | | -0.021 (0.083) | | | -0.034 (0.082) |
| Political globalisation | | | -0.014 (0.013) | | | -0.018 (0.012) |
| Financial globalisation | | | 0.000 (0.007) | | | 0.001 (0.007) |
| Trade share of imports of G5 | | | -0.133 (0.243) | | | -0.132 (0.243) |
| Constant | -3.781*** (0.444) | 5.495 (4.883) | 12.375* (7.325) | -3.806*** (0.463) | 5.896 (4.885) | 13.083* (6.900) |
| Observations | 433 | 347 | 295 | 433 | 347 | 295 |
| Number of countries | 115 | 104 | 94 | 115 | 104 | 94 |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The OLS model is adjusted for panel data, with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research.

Table A3-2: *Financial corporate exposure and IMF program size:*
Robustness check on excluding Greece, Portugal and Cyprus

| | (1) Base model | (2) Truncated model | (3) Full model |
|--|----------------------|----------------------|----------------------|
| Financial corporate exposure | -0.064 (0.067) | -0.044 (0.070) | 0.149** (0.074) |
| Financial corporate exposure* global financial crisis | 0.313*** (0.047) | 0.222*** (0.054) | 0.250*** (0.059) |
| IMF program duration | | 0.222*** (0.054) | 0.056*** (0.011) |
| UN Security Council membership | | | -0.166 (0.172) |
| IMF arrangement in past 5 years | | | -0.130 (0.133) |
| Reserves to imports | | | -0.216* (0.126) |
| GDP growth | | -0.029*** (0.010) | -0.031*** (0.012) |
| GDP per capita | | -1.457** (0.642) | -2.517*** (0.838) |
| Debt to exports | | 0.387*** (0.079) | 0.384*** (0.096) |
| Short-term debt to total debt | | | 0.038 (0.065) |
| Currency crisis | | | 0.236 (0.204) |
| Parliamentary elections | | | -0.044 (0.136) |
| Presidential elections | | | -0.017 (0.153) |
| Political instability | | | 0.050** (0.024) |
| Social unrest | | | -0.017 (0.036) |
| Freedom House Index | | | -0.004 (0.084) |
| Political globalisation | | | -0.007 (0.012) |
| Financial globalisation | | | -0.000 (0.008) |
| Trade share of imports of G5 | | | -0.176 (0.236) |
| Constant | -3.574*** (0.427) | 5.718 (4.532) | 11.580* (6.770) |
| Observations | 429 | 347 | 295 |
| Number of countries | 112 | 104 | 94 |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The OLS model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research.

Table A3-3: *Financial corporate exposure and prior actions:*
Robustness check on the start date of the global financial crisis

| | Set 1 – Start date: 2009 | | | Set 2 – Start date: 2010 | | |
|---|--------------------------|---------------------|---------------------|--------------------------|---------------------|---------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure, non-PRGT ² countries | 0.040 (0.105) | 0.209 (0.184) | 0.330 (0.205) | 0.002 (0.102) | 0.112 (0.202) | 0.246 (0.209) |
| Fin. corp. exposure*global fin. crisis, non-PRGT countries | 0.026 (0.161) | 0.276 (0.182) | 0.416* (0.252) | 0.038 (0.126) | 0.236 (0.146) | 0.240 (0.163) |
| Financial corporate exposure, PRGT countries | -0.177 (0.115) | -0.423** (0.171) | -0.442** (0.184) | -0.125 (0.109) | -0.315* (0.187) | -0.382** (0.188) |
| Fin. corp. exposure*global financial crisis, PRGT countries | -0.004 (0.189) | -0.132 (0.238) | -0.284 (0.293) | -0.031 (0.177) | -0.133 (0.244) | -0.203 (0.254) |
| IMF program duration | | -0.015 (0.011) | 0.002 (0.014) | | -0.021* (0.012) | -0.005 (0.015) |
| UN Security Council membership | | | 0.059 (0.299) | | | -0.146 (0.286) |
| IMF arrangement in past 5 years | | | -0.048 (0.181) | | | -0.068 (0.179) |
| Reserves to imports | | | -0.220 (0.167) | | | -0.252 (0.160) |
| GDP growth | | -0.025* (0.014) | -0.042** (0.017) | | -0.020 (0.013) | -0.040** (0.018) |
| GDP per capita | | -0.107 (0.627) | -1.360 (0.873) | | -0.305 (0.561) | -1.230 (0.888) |
| Debt to exports | | 0.255*** (0.098) | 0.267*** (0.103) | | 0.195* (0.103) | 0.165 (0.107) |
| Short-term debt to total debt | | | -0.132 (0.084) | | | -0.104 (0.078) |
| Currency crisis | | | 0.473* (0.260) | | | 0.512* (0.271) |
| Parliamentary elections | | | -0.246 (0.188) | | | -0.192 (0.203) |
| Presidential elections | | | 0.293 (0.215) | | | 0.321 (0.213) |
| Political instability | | | -0.017 (0.048) | | | -0.026 (0.052) |
| Social unrest | | | 0.018 (0.043) | | | 0.045 (0.045) |
| Freedom House Index | | | -0.143 (0.123) | | | -0.118 (0.115) |
| Political globalisation | | | 0.013 (0.019) | | | 0.012 (0.018) |
| Financial globalisation | | | -0.004 (0.010) | | | -0.005 (0.010) |
| Trade share of imports of G5 | | | 0.604** (0.300) | | | 0.746** (0.339) |
| Constant | | | | | | |
| Observations | 413 | 316 | 265 | 413 | 316 | 265 |
| Number of countries | 95 | 81 | 71 | 95 | 81 | 71 |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ² PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust.

Table A3-4: *Financial corporate exposure and prior actions:*
Robustness check on excluding Greece, Portugal and Cyprus

| | (1) Base model | (2) Truncated model | (3) Full model |
|--|-------------------|---------------------|----------------------|
| Financial corporate exposure, non-PRGT ² countries | -0.070 (0.088) | -0.047 (0.226) | -0.017 (0.204) |
| Financial corporate exposure*global financial crisis, non-PRGT countries | 0.230 (0.162) | 0.550*** (0.212) | 0.806*** (0.262) |
| Financial corporate exposure, PRGT countries | -0.049 (0.104) | -0.154 (0.220) | -0.080 (0.210) |
| Financial corporate exposure *global financial crisis, PRGT countries | -0.219 (0.188) | -0.470** (0.232) | -0.799*** (0.273) |
| IMF program duration | | -0.019* (0.011) | -0.005 (0.014) |
| UN Security Council membership | | | 0.200 (0.315) |
| IMF arrangement in past 5 years | | | -0.092 (0.181) |
| Reserves to imports | | | -0.234 (0.175) |
| GDP growth | | -0.021 (0.013) | -0.039** (0.016) |
| GDP per capita | | -0.140 (0.600) | -1.229 (0.888) |
| Debt to exports | | 0.188* (0.102) | 0.177 (0.109) |
| Short-term debt to total debt | | | -0.130 (0.080) |
| Currency crisis | | | 0.552** (0.257) |
| Parliamentary elections | | | -0.280 (0.202) |
| Presidential elections | | | 0.411* (0.225) |
| Political instability | | | -0.025 (0.046) |
| Social unrest | | | 0.037 (0.045) |
| Freedom House Index | | | -0.173 (0.117) |
| Political globalisation | | | 0.016 (0.020) |
| Financial globalisation | | | -0.007 (0.009) |
| Trade share of imports of G5 | | | 0.613* (0.316) |
| Constant | | | |
| Observations | 411 | 316 | 265 |
| Number of countries | 94 | 81 | 71 |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ² PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust.

Table A3-5: *Financial corporate exposure and prior actions (steady sample)*

| | Set 1 - Panel OLS model | | | Set 2 – IV pooled model ¹ | | |
|---|-------------------------|---------------------|----------------------|--------------------------------------|---------------------|---------------------|
| | (1) Base model | (2) Truncated model | (3) Full model | (1) Base model | (2) Truncated model | (3) Full model |
| Financial corporate exposure, non-PRGT ² countries | -0.076 (0.089) | -0.047 (0.226) | -0.017 (0.204) | 1.164 (4.950) | 3.349 (6.347) | 2.610 (5.802) |
| Fin. corp. exposure*global fin. crisis, non-PRGT countries | 0.221 (0.164) | 0.550*** (0.212) | 0.806*** (0.262) | 1.054 (2.095) | 2.756 (2.099) | 0.299 (2.644) |
| Financial corporate exposure, PRGT countries | -0.044 (0.106) | -0.154 (0.220) | -0.080 (0.210) | -1.218 (4.852) | -3.708 (6.231) | -3.881 (5.592) |
| Fin. corp. exposure*global financial crisis, PRGT countries | -0.211 (0.189) | -0.470** (0.232) | -0.799*** (0.273) | | | |
| IMF program duration | | -0.019* (0.011) | -0.005 (0.014) | | 0.003 (0.050) | 0.073 (0.066) |
| UN Security Council membership | | | 0.200 (0.315) | | | 0.716 (2.235) |
| IMF arrangement in past 5 years | | | -0.092 (0.181) | | | -1.875** (0.867) |
| Reserves to imports | | | -0.234 (0.175) | | | -1.583** (0.616) |
| GDP growth | | -0.021 (0.013) | -0.039** (0.016) | | ##### (0.064) | -0.218** (0.089) |
| GDP per capita | | -0.140 (0.600) | -1.229 (0.888) | | -0.946 (0.616) | -1.222 (0.762) |
| Debt to exports | | 0.188* (0.102) | 0.177 (0.109) | | 1.099* (0.650) | 1.167 (0.867) |
| Short-term debt to total debt | | | -0.130 (0.080) | | | -0.720* (0.403) |
| Currency crisis | | | 0.552** (0.257) | | | 1.569 (1.171) |
| Parliamentary elections | | | -0.280 (0.202) | | | 0.416 (1.050) |
| Presidential elections | | | 0.411* (0.225) | | | 0.119 (1.514) |
| Political instability | | | -0.025 (0.046) | | | -0.379 (0.294) |
| Social unrest | | | 0.037 (0.045) | | | 0.649*** (0.247) |
| Freedom House Index | | | -0.173 (0.117) | | | -0.989** (0.397) |
| Political globalisation | | | 0.016 (0.020) | | | 0.061 (0.044) |
| Financial globalisation | | | -0.007 (0.009) | | | -0.015 (0.022) |
| Trade share of imports of G5 | | | 0.613* (0.316) | | | -0.190 (0.479) |
| Constant | | | | 2.647*** (0.655) | 7.877* (4.603) | 11.760 (10.378) |
| Observations | 413 | 316 | 265 | 413 | 316 | 265 |
| Number of countries | 95 | 81 | 71 | | | |

Notes Standard errors in parentheses (p<0.01 - ***, p<0.05 - **, p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ²PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust. ³Dropped due to collinearity issues in the IV model given the limited sample size.

Table A3-6: *Financial corporate exposure and quantitative performance criteria (steady sample)*

| | Set 1 - Panel OLS model | | | Set 2 – IV pooled model ¹ | | |
|---|-------------------------|-------------------------------|----------------------|--------------------------------------|-------------------------------|----------------------|
| | (1) Base model | (2) Trunca ted model | (3) Full model | (1) Base model | (2) Trunca ted model | (3) Full model |
| Financial corporate exposure, non-PRGT ² countries | 0.036 (0.026) | 0.151* (0.079) | 0.157* (0.082) | 3.330*** (0.809) | 2.988*** (0.951) | 2.753** (1.251) |
| Fin. corp. exposure*global fin. crisis, non-PRGT countries | -0.269** (0.133) | -0.271 (0.169) | -0.305* (0.167) | -0.529 (0.505) | 0.113 (0.552) | -0.109 (0.692) |
| Financial corporate exposure, PRGT countries | -0.035 (0.030) | -0.140* (0.080) | -0.142* (0.083) | -2.517*** (0.690) | -2.380*** (0.840) | -2.239* (1.163) |
| Fin. corp. exposure*global financial crisis, PRGT countries | 0.240* (0.134) | 0.231 (0.170) | 0.263 (0.169) | | 0.031 (0.029) | 0.031 (0.036) |
| IMF program duration | | 0.005 (0.003) | 0.005 (0.004) | | | -0.764 (0.953) |
| UN Security Council membership | | | 0.034 (0.113) | | | -0.094 (0.361) |
| IMF arrangement in past 5 years | | | -0.056 (0.038) | | | -0.273 (0.226) |
| Reserves to imports | | | -0.021 (0.026) | | -0.055** (0.027) | -0.049 (0.033) |
| GDP growth | | -0.007* (0.004) | -0.005 (0.005) | | 0.164 (0.182) | 0.217 (0.256) |
| GDP per capita | | -0.017 (0.126) | 0.046 (0.208) | | 0.260 (0.164) | 0.204 (0.202) |
| Debt to exports | | 0.009 (0.027) | 0.008 (0.028) | | | -0.065 (0.178) |
| Short-term debt to total debt | | | -0.001 (0.020) | | | -0.353 (0.572) |
| Currency crisis | | | -0.114* (0.068) | | | -0.043 (0.475) |
| Parliamentary elections | | | -0.044 (0.059) | | | 0.239 (0.521) |
| Presidential elections | | | 0.053 (0.057) | | | 0.014 (0.110) |
| Political instability | | | 0.027*** (0.009) | | | 0.120 (0.135) |
| Social unrest | | | -0.018 (0.017) | | | 0.107 (0.157) |
| Freedom House Index | | | -0.032 (0.026) | | | 0.017 (0.014) |
| Political globalisation | | | -0.003 (0.005) | | | 0.006 (0.007) |
| Financial globalisation | | | 0.006* (0.003) | | | -0.118 (0.174) |
| Trade share of imports of G5 | | | -0.050 (0.063) | | 0.031 | 0.031 |
| Constant | | | | 10.990*** (0.379) | 8.890*** (1.664) | 6.586** (3.079) |
| Observations | 423 | 327 | 274 | 423 | 327 | 274 |
| Number of countries | 98.000 | 85.000 | 74.000 | | | |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 - *). The Poisson model is adjusted for panel data with fixed effects and clustered robust standard errors. Year dummies are omitted for better visualisation. The truncated model has controls that are significant at conventional levels. The full model has a complete set of controls that are considered relevant in similar regressions in past research. ¹In the IV model, financial corporate exposure is replaced with UK legal origin. ² PRGT refers to low-income countries with access to the IMF's concessional Poverty Reduction and Growth Trust. ³Dropped due to collinearity issues in the IV model given the limited sample size.

A.4 Two-stage least square regression

Table A4-1: Two-stage least square regressions

| | (1) First-stage regressions | (2) Instrumental variables (2SLS) regression |
|------------------------------|-----------------------------|--|
| UK legal origin | 0.106 (0.329) | |
| Financial corporate exposure | | 2.887 (9.050) |
| IMF program duration | -0.058 (0.023) | 0.224 (0.549) |
| GDP growth | 0.0259 (0.022) | -0.116 (0.247) |
| GDP per capita | 1.049*** (0.132) | -3.036 (9.307) |
| Debt to exports | 0.502*** (0.138) | -1.218 (4.621) |
| Constant | -2.707 (1.079) | 2.936 (23.079) |
| Observations | 374 | 347 |
| F Test | 45.09 | |

Notes: Standard errors in parentheses (p<0.01 - ***; p<0.05 - **; p<0.1 -). The choice of controls reflects the choice in the main regression's truncated model. Instrumented variable: financial corporate exposure. Instruments: IMF program duration, GDP growth, GDP per capita, Debt to exports.

A.5 Variables in detail

IMF program size. This variable has been used in past research, as described above. Based on the IMF MONA database, this is a positive continuous variable that is given in the year a country signs an IMF program, and a missing value is assigned to all other cases. The value is divided by the receiving country's GDP. Taking logs improves the distributional characteristics of the variable.

Prior actions. This variable measures a specific type of condition in an IMF program. Prior actions are policy steps a country needs to meet before the IMF Executive Board approves a program or completes a review. A prior action has to be met before the program can be approved or the review can take place in the sense of a precondition. The variable is based on the IMF MONA dataset. The number of prior actions is given in the year a country signs an IMF program. For all other data points, the variable is a missing value.

Quantitative performance criteria (QPC). The variable measures the conditionality inherent to an IMF program, specifically the binding number of conditions that have to be met for each program review; if not, the authorities have to take corrective action and request a waiver. The variable is based on the IMF MONA dataset. As suggested by Breen (2012) and Dreher et al. (2015), only the binding and measurable QPC are used, and hence softer conditions such as indicative targets and structural benchmarks are omitted. The number of conditions is given in the year a country signs an IMF program. For all other data points, the variable is a missing value.

Program duration. This variable is added as a nonlinear control variable (transformed using $x+x^2$), as the size and the number of conditions in an IMF program could be influenced by the program length, which can vary from less than 1 to 4 years. Based on the IMF MONA dataset, this variable is given in the year a country signs an IMF program. For all other data points, the variable is a missing value.

Claims of financial corporations. The variable of interest in this study is the interests of financial corporations of the major IMF shareholders—the US, the UK, Germany, Japan, and France—also known as the “G5” (Copelovitch, 2010). This follows the approach used in Breen (2014). These data are sourced from the data provided by the BIS on consolidated foreign claims of reporting banks for the G5. The variable is constructed by cumulating the claims by the G5 financial corporations in millions of US dollars, ranging from zero to positive values. The variable is strongly skewed to zero, as there are no claims for most countries, while the amounts become very large for some countries. To improve the distributional character of the claims variable, logs are taken.

UN Security Council temporary membership. This variable has been used in past research to measure the geopolitical importance of a country (for example, Dreher et al., 2015, p. 9). Temporary membership of a country in the United Nations Security Council (USNC) is based on a seat allocation that varies for each region, so it appears to be largely idiosyncratic. The variable is constructed as a binary variable, which takes the value of 1 if a country is a temporary member of the UNSC in a given year and the value 0 otherwise. Membership usually lasts for two years, as the effect is expected to be higher in anticipation of membership and in the first year and should ebb off in the second year of membership. This variable enters with a one-period lead.

Under IMF program. This is a binary variable that indicates whether a country was under the IMF program in the past 5 years, in which case it takes the value of 1 and the value 0 otherwise. Based on IMF MONA data, it reflects the observed persistence of a country's dependence on IMF resources, contrary to the aim of the IMF to offer temporary assistance.

Reserves to imports. This variable measures total reserves in months of imports. A low level of reserves increases external pressures and thus the likelihood of a country having to ask the IMF for help. Based on data provided by the World Bank Development Indicators (WDI), the variable is calculated as total reserves including gold, divided by imports of goods and services, which itself is divided by 12. To improve the distributional characteristics of the variable, logs are taken.

GDP growth. This variable measures year-on-year real GDP growth at constant prices based on the IMF WEO database. Weak economic growth might lead to a larger likelihood that a country will ask for IMF credit. Given possible endogeneity problems, the variable enters with a one-period lag.

GDP per capita. This variable captures real GDP per capita in constant US dollars. Poorer countries are more likely to need IMF financial assistance. The variable is based on WDI data. To improve the distributional characteristics of the variable, logs are taken.

Debt to exports. This variable captures debt services scaled to exports and is based on WDI data. A heavy debt burden relative to overall income increases the likelihood of the need for external funds. To improve the distributional characteristics of the variable, logs are taken.

Short-term debt to total debt. This variable is based on WDI data and captures short-term debt as a percentage of total external debt. A higher ratio of short-term debt increases capital outflows in the case of crisis and is, hence, linked to the need for IMF assistance. To improve the distributional characteristics of the variable, logs are taken.

Currency crisis. This variable is a dummy for a currency crisis, which is defined, following Moser and Sturm (2011), by a nominal depreciation of the currency of at least

30%, which is also at least a 10% increase in the rate of depreciation compared to the previous year (p. 312). The variable is based predominantly on WDI and completed where necessary by Thomson Reuters spot rates. IMF programs are more likely in the context of currency crises.

Parliamentary and presidential elections. These variables are dummies capturing the occurrence of legislative and executive elections in a year. The data are sourced from the Parline database on national parliaments (Inter-Parliamentary Union, 2017). The timing of entering IMF programs is often dependent on the timing of elections. The variables enter in a one-period lag.

Political instability. This variable measures political instability in a country. Following the suggestion by Moser and Sturm (2011), it is based on the first principal component of the number of political assassinations, revolutions, guerrilla problems, government crises and instability indicated by the CNTS data archive (Banks and Wilson, 2017).

Social unrest. Following the suggestion by Moser and Sturm (2011), the variable social unrest reflects the first principal component of demonstrations, strikes and riots provided by the CNTS data archive (Banks and Wilson, 2017). As this variable relies on news reports, its accuracy is limited, particularly for countries with limited freedom of the press. This variable enters as lead, as anticipated social unrest in a country, particularly because of an unpopular IMF program, will likely enter into the government's calculation of costs and benefits of an IMF program.

Freedom House Index. Sourced from the Freedom House Index, this variable is the average of the political rights index and the civil liberties index. In a more liberal country, public opposition against reforms under an IMF program could be higher.

Political globalisation. This variable captures political globalisation as measured by the KOF globalisation index. A country that is highly integrated in world politics is more likely to request IMF assistance.

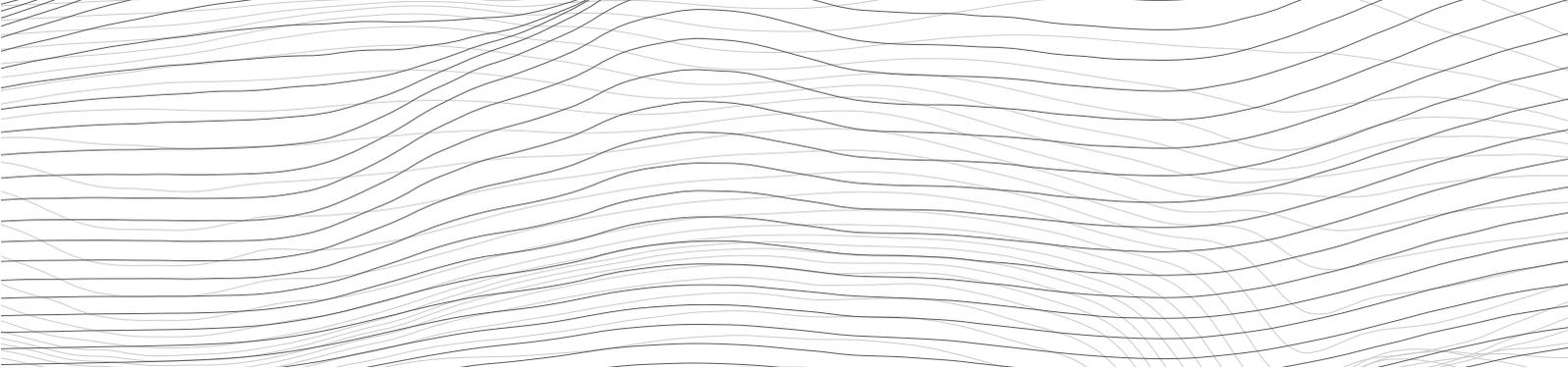
Financial globalisation. This variable captures the de jure financial globalisation of a country. This variable is based on the KOF globalisation indicator. As is the case with the de facto indicator, higher financial integration could imply better access to capital markets but also higher exposure to changing investor sentiment. The de jure indicator is also likely to capture the views of national authorities and IMF staff on a country's financial integration compared to effective exposure as measured by a de facto indicator.

Trade share. Following Breen (2014), a control to measure a country's exposure to trade by the G5 countries is added. It can be assumed that the financial links between two countries are somewhat related to their trade relations. The trade share is calculated based on the IMF's Direction of Trade Statistics, which captures exports from the main IMF

shareholders to other countries in millions of US dollars. The average of a country's trade share from G5 is taken, weighted by the shareholder's total exposure to the world. To improve the distributional characteristics of the variable, logs are taken.

Recent SNB Working Papers

- 2022-04 Lena Lee Andresen:
The influence of financial corporations on IMF lending: Has it changed with the global financial crisis?
- 2022-03 Alain Galli, Rina Rosenblatt-Wisch:
Analysing households' consumption and saving patterns using tax data
- 2022-02 Martin Indergand, Eric Jondeau, Andreas Fuster:
Measuring and stress-testing market-implied bank capital
- 2022-01 Enrique Alberola, Carlos Cantú, Paolo Cavallino, Nikola Mirkov:
Fiscal regimes and the exchange rate
- 2021-20 Alexander Dentler, Enzo Rossi:
Shooting up liquidity: the effect of crime on real estate
- 2021-19 Romain Baeriswyl, Samuel Reynard, Alexandre Swoboda:
Retail CBDC purposes and risk transfers to the central bank
- 2021-18 Nicole Allenspach, Oleg Reichmann, Javier Rodriguez-Martin:
Are banks still 'too big to fail'? – A market perspective
- 2021-17 Lucas Marc Fuhrer, Matthias Jüttner, Jan Wrampelmeyer, Matthias Zwicker:
Reserve tiering and the interbank market
- 2021-16 Matthias Burgert, Philipp Pfeiffer, Werner Roeger:
Fiscal policy in a monetary union with downward nominal wage rigidity
- 2021-15 Marc Blatter, Andreas Fuster:
Scale effects on efficiency and profitability in the Swiss banking sector
- 2021-14 Maxime Pillot, Samuel Reynard:
Monetary Policy Financial Transmission and Treasury Liquidity Premia
- 2021-13 Martin Indergand, Gabriela Hrasco:
Does the market believe in loss-absorbing bank debt?
- 2021-12 Philipp F. M. Baumann, Enzo Rossi, Alexander Volkmann:
What drives inflation and how? Evidence from additive mixed models selected by cAIC
- 2021-11 Philippe Bacchetta, Rachel Cordonier, Ouarda Merrouche:
The rise in foreign currency bonds: the role of US monetary policy and capital controls
- 2021-10 Andreas Fuster, Tan Schelling, Pascal Towbin:
Tiers of joy? Reserve tiering and bank behavior in a negative-rate environment
- 2021-09 Angela Abbate, Dominik Thaler:
Optimal monetary policy with the risk-taking channel
- 2021-08 Thomas Nitschka, Shajivan Satkuranathan:
Habits die hard: implications for bond and stock markets internationally
- 2021-07 Lucas Fuhrer, Nils Herger:
Real interest rates and demographic developments across generations: A panel-data analysis over two centuries
- 2021-06 Winfried Koeniger, Benedikt Lennartz, Marc-Antoine Ramelet:
On the transmission of monetary policy to the housing market
- 2021-05 Romain Baeriswyl, Lucas Fuhrer, Petra Gerlach-Kristen, Jörn Tenhofen:
The dynamics of bank rates in a negative-rate environment – the Swiss case
- 2021-04 Robert Oleschak:
Financial inclusion, technology and their impacts on monetary and fiscal policy: theory and evidence



SCHWEIZERISCHE NATIONALBANK
BANQUE NATIONALE SUISSE
BANCA NAZIONALE SVIZZERA
BANCA NAZIUNALA SVIZRA
SWISS NATIONAL BANK

