Elite Capture and the Political Economy of International Bailouts

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Abstract

In light of an extensive literature on elite capture and capital flight, we argue that the ability to draw on a 'Global Financial Safety Net' creates perverse incentives because elites can benefit from accumulating debt to extract rents, hide these safely in offshore financial sinks while steering their countries into financial disaster. Focusing on the International Monetary Fund (IMF), we hypothesize that elite wealth in offshore bank accounts has a first-order impact on a government's willingness to call upon the IMF and to accept more loan conditions. Relying on a novel dataset comprising, we show that an increase in capital flight by one standard deviation increases the predicted probability of participating in an IMF program by up to 8.4%. We verify that our results also hold for structural lending programs of the World Bank underscoring the intimate linkages between elite capital flight to offshore financial destinations and submission to structural adjustment.

1 Introduction

Capital flight is a key obstacle to sustainable development. While policymakers often point the finger to financial markets, in many cases, it is the well-connected *local elites* who have captured the government to plunder the wealth of their countries and expatriate assets into safe havens (Jayachandran and Kremer, 2006; Alstadsæter, Johannesen and Zucman, 2018; Andersen, Johannesen and Rijkers, 2020). Notwithstanding its ethical status, such behavior also erodes interpersonal trust and undermines quality of governance, furthering endemic corruption and crony business practices that amplify financial vulnerabilities (Cerra, Rishi and Saxena, 2008). By depriving a country of investible capital, it can lead to a loss of tax revenues, ballooning public debt, and rising inequality, ultimately undermining development prospects and increasing macroeconomic vulnerabilities (Alesina and Tabellini, 1989; Ndikumana, Boyce and Ndiaye, 2014). According to Global Financial Integrity estimates, annual net financial outflows from developing countries amount to approximately $2 trillion (GFI 2016).

Previous literature analyzing the determinants of elite capital flight identifies dysfunctional governance frameworks for distorted financial incentives that provide a fertile breeding ground for various criminal activities such as embezzlement, trade mis-invoicing, and tax evasion, opening the floodgates for wealthy elites to move their fortunes abroad (Collier, Hoeffler and Pattillo, 2001; Ndikumana and Boyce, 2003; Le and Rishi, 2006). We shift attention to a hitherto neglected determinant of elite capital flight — the availability of a 'Global Financial Safety Net' (GFSN). Here, we focus on the primary lender for countries in economic trouble: the International Monetary Fund (IMF).[1] In exchange for fresh credit, borrowing governments must typically agree to so-called 'structural adjustment' — entailing a comprehensive set of reforms to economic policy and institutional arrangements collectively known as 'conditionality' (Babb and Carruthers, 2008; Kentikelenis, Stubbs and King, 2016; Reinsberg et al., 2019). A striking feature is that many highly indebted crisis-ridden countries are net creditors to the rest of the world while being among the top-borrowers of the Fund. These countries register a substantial share of funds located in offshore

[1] An empirical reason to focus on the IMF is the relative paucity of detailed data on bailouts from other lenders, despite recent noteworthy advances (Scheubel and Stracca, 2019; Schneider and Tobin, 2020; Clark, 2020).

financial destinations — estimated to reach up to $36 trillion (Shaxson, 2019). While there is an ongoing debate about whether IMF programs catalyze foreign investment and global financial integration (Breen and Egan, 2019), little is known about how elite wealth in offshore accounts affects the nature of and submission to structural adjustment.

Our key premise is that a captured government can benefit from accumulating excessive debt to extract rents, hide these in offshore financial sinks while steering a country towards financial disaster. We argue that the availability of IMF bailouts — even when they involve harsh conditionality — amplifies these perverse incentives. We show that such 'going-for-broke' behavior can be optimal: because elite capital flight is often hidden and repatriating looted assets to affected countries is difficult, elites can benefit from accumulating debt to extract rents regardless of the national consequences. Once elites have expatriated their assets into safe havens, they find it easy to agree to IMF programs with far-reaching conditionality, which allows them to extract rents at the expense of the population at large. The joint expectations from our model are that countries with high levels of elite capital flight are more vulnerable to adverse financial shocks and thus be more likely to be under IMF programs. Furthermore, we expect governments to accept a greater number of conditions, given that its durable effects are shouldered not by the elites themselves but by ordinary citizens. Our model predicts that these effects will be more salient under circumstances of high corruption, natural resources, and where government elites are near the end of their tenure (e.g., for instance before a regime breakdown).

To test these theoretical predictions, we rely on a novel dataset comprising 162 countries between 1980 and 2018. In contrast to prior analyses on capital flight — which primarily rely on export mis-invoicing measures — we are particularly interested in elite capital flight into offshore financial sinks.[2] To measure elite capital flight, we use data on bilateral banking ties from the Bank of International Settlements (BIS, 2020). We specifically isolate the capital outflows of a potential IMF client country into a selected set of offshore tax havens.[3] By focusing on these jurisdictions, we are unlikely to capture capital flows related to 'real' economic activity but rather

[2]For a survey on available definitions and statistical methods measuring capital flight, see for instance, Ndikumana, Boyce and Ndiaye (2014).

[3]These countries are Bahamas, Bahrain, Bermuda, Cayman Islands, Chile, Chinese Taipeh, Curacao, Cyprus, Guernsey, Hong Kong, Isle of Man, Jersey, Luxembourg, Macao, Ireland, Panama, Singapore, and Switzerland.

the financial transactions of country elites (Zucman, 2015; Alstadsæter, Johannesen and Zucman, 2019; Andersen, Johannesen and Rijkers, 2020).

Using a variety of methodological approaches, including instrumental variables, our regression results indicate that an increase in elite wealth in offshore financial sinks by one standard deviation increases the predicted probability for an IMF program by up to 8.4% ($p < 0.05$). Strikingly, this financial rescue tends to come with more strings attached: a one-standard deviation increase in offshore elite wealth is associated with at least 1.5 more binding conditions in an IMF program ($p < 0.05$). These results withstand a battery of robustness checks and hold across different model specifications and varying modeling assumptions. Specifically, we mitigate concerns that results are spurious in the sense that both capital flight and IMF programs are driven by financial vulnerability. Furthermore, we show that our results are driven by elites endogenously triggering an IMF bailout; we do not find our mechanism to operate in the context of natural disasters that elites cannot anticipate.

Our research extends existing knowledge of the dynamics of capital flight (Pepinsky, 2014; Zucman, 2015; Boyce and Ndikumana, 2017). A recent part of the existing literature has concentrated on its political driving forces (Frantz, 2018), on underlying illicit financial activities (Kubinec and Pandya, 2019), and on the behavioral mechanics of tax evasion (Findley, Nielson and Sharman, 2013). Our approach, however, is related to another strand of research analyzing the rerouting of foreign aid (Andersen, Johannesen and Rijkers, 2020), yet it differs in important respects. The political economy literature on foreign aid has long noted that significant amounts of aid get wasted due to corruption (Winters and Martinez, 2015; Swedlund, 2017; Heinrich and Kobayashi, 2020). Although a recent study finds evidence for elite capture of World Bank project funding (Andersen, Johannesen and Rijkers, 2020), our study is the first to show this mechanism in the context of IMF lending programs, allowing us to bridge hitherto unconnected research streams on elite capture of foreign aid and the determinants of IMF conditionality. Importantly, we demonstrate how the availability of an IMF bailout creates a perverse incentive for *ex ante* elite capital flight (Akerlof et al., 1993), with attendant adverse social and financial effects wrought by intrusive IMF-mandated domestic policy reforms.Insofar, we also complement previous research that analyzes the dynamic

interaction between international financial players, governments, and the IMF (Gould, 2003; Broz and Hawes, 2006; Chwieroth, 2009; Chapman et al., 2017; Guisinger, Mukherjee and Bagozzi, 2016; Rickard and Caraway, 2019).

Our work is also related to the IMF's role in promoting 'moral hazard' (Dreher and Vaubel, 2004; Aklin and Kern, 2019). It is important to highlight that our proposed mechanism is different: whereas moral hazard is a result of limited liability but involves default costs, our proposed financial strategy allows local elites to shield their private wealth in lucrative offshore accounts, whilst socializing the deleterious consequences of accumulating public liabilities. A key innovation of our research is that we can also isolate a 'perverse' knock-on effect arising from elite capital flight: harsher IMF conditionality. As such, our proposed mechanism points towards a socially even more destructive mechanism than would arise from 'moral hazard' alone (Akerlof et al., 1993).

Finally, we contribute to the ongoing policy debate on capital flight. Our findings underscore an under-appreciated facet of the global fragmentation in financial regulation and the importance of closing financial loopholes to mitigate the adverse consequences and side-effects of IMF conditionality that are disproportionally levied on lower-income segments of society. As these cannot shield their assets and wealth abroad, but have to absorb the brunt of adjustment programs, our results lend support to existing proposals for global cooperation and coordination geared towards an equitable strengthening of financial governance frameworks.

2 Background and hypotheses

What are the social, economic, and political conditions under which national governments seek assistance from international financial organizations? Scholars have argued that the ability to access a lender of last resort incentivizes governments to spend beyond their means (Dreher and Vaubel, 2004; Aklin and Kern, 2019). Given that the Bretton Woods institutions remain the main lenders of last resort (Scheubel and Stracca, 2019; Gavin, 2020), we focus on the IMF to unpack a seeming paradox in global financial markets: many heavily indebted and crises-ridden countries that fall into the Global Financial Safety Net (GFSN) are net creditors to the rest of the world.

To illustrate this point, consider the case of Equatorial Guinea. Finding itself in economic woes

— due to declining oil export receipts — the country unlocked a $40 million bail-out loan from the IMF in 2018. According to estimates of the US Treasury this amount is what "[President] Obiang's oldest son and vice-president, Teodoro Nguema Obiang Mangue, spent between 2000 and 2011 buying luxury properties on four continents and assets including Michael Jackson memorabilia."[4] Similarly, Jayachandran and Kremer (2006, 34) document several instances where governments "have borrowed from abroad, expropriated the funds for personal gain, and left the debts to the population." We believe that these observations are not coincidental but reflect a common pattern among IMF borrowers. To derive our key hypotheses, we present a formal model in a supplementary appendix (see, Section A1) and provide the intuition here.

We argue that a captured government can benefit from accumulating excessive debt to extract rents,[5] hide these in offshore financial sinks while steering a country towards financial disaster. For example, Boyce and Ndikumana (2017, 263) report, for a selected sample of African economies, that "each dollar of new external borrowing is associated with 60 to 80 cents of additional capital flight in the same year." Built on secrecy and loose financial oversight, offshore financial sinks provide an attractive destination for wealthy elites to shield their assets and evade taxes (Ndikumana and Boyce, 2003; Garcia-Bernardo et al., 2017; Alstadsæter, Johannesen and Zucman, 2019). Although not all elite capital flight represents an illicit financial transaction, it is frequently associated with various criminal activities such as embezzlement, trade mis-invoicing, and tax evasion. This type of elite capital flight deprives an economy of investible capital and can create a toxic policy mix of falling tax revenues and increased demand for government spending. This effect is most pronounced in developing countries. In the face of starved fiscal spaces, deepening inequality, and social and political uncertainty, governments often resort to further external borrowing to fund government operations, domestic investment, and to pay off vested interests (Boyce, 1992; Ndikumana and Boyce, 2003; Ndikumana, Boyce and Ndiaye, 2014; Goldsmith, 2020).[6]

This raises the question why lenders fund these captured governments. First, private investors

[4] "Worlds Longest-Serving Ruler Must Reveal His Assets for an IMF Bailout." Bloomberg, December 26, 2019.

[5] It is often leading policymakers and their family members who are capable of extracting rents and reroute even borrowed funds into offshore financial sinks (Andersen, Johannesen and Rijkers, 2020).

[6] Paying off vested interests can be thought of a patronage payments to key constituents and/or the opportunity costs of not addressing underlying elite capital flight dynamics. In both instances, we assume that a government needs to borrow to meet its ends.

can often charge exorbitant interest rates, and further benefit when they become the vehicle for elite capital flight. Relying on leaked documents from the so-called FinCEN files, a group of investigative journalists estimates that global banks have helped to move more than $2 trillion of elite wealth into offshore financial accounts. As an illustrative example, they report that JP Morgan "moved money for people and companies tied to the massive looting of public funds in Malaysia, Venezuela and Ukraine."[7] Second, official lenders often pursue political goals and consequently override red flags in lending relationships allowing governments to accumulate substantial foreign debt (Stone, 2002; Copelovitch, 2010). Besides providing loans, donors might additionally back up funds by issuing implicit and explicit guarantees incentivizing private investors to lend. For example, in his Congressional testimony for the hearing on the Asian financial crises, former CEO of CalEnergy, David Sokol, explained that his firm "would have not invested in Indonesia if we'd not been able to attain OPIC insurance, because the transparency issues were clear to us."[8] .

Importantly, stacking up foreign debt on shaky fiscal foundations, these economies become more susceptible to run into financial troubles once economic prospects worsen (Ndikumana, Boyce and Ndiaye, 2014). Building on these insights, we expect that countries with high levels of elite capital flight are more vulnerable to adverse financial shocks and are more likely under IMF programs.

It is important to highlight that our proposed mechanism is different from 'moral hazard' (Dreher and Vaubel, 2004). Whereas 'moral hazard' is a result of limited liability but involves default costs, our proposed mechanism is socially even more destructive (Akerlof et al., 1993). The ability to draw on the IMF not only dampens a captured government's incentives to contain elite capital flight (i.e., 'moral hazard') but creates incentives to steer an economy into financial disaster. This becomes possible because the IMF provides financial relief but does not have a mandate or the legal means to seize elite wealth in offshore financial accounts (regardless of whether these funds were attained illegally), freeze looted funds, repatriate stolen assets and/or remove a predatory government (Smallwood, 2005).[9] The ability to shield their wealth in offshore financial destinations,

[7] "Global Banks Defy U.S. Crackdowns by Serving Oligarchs, Criminals and Terrorists." ICIJ, September 20, 2020.

[8] Hearing before the Subcommittee on Asia and the Pacific and International Economic Policy and Trade of the Committee on International Relations, House of Representatives, 105th Congress, Second Session, February, 4, 1998.

[9] Commenting on the Bank of Kabul crisis in Afghanistan in 2008, IMF (2011, 86) states that "asset recovery, for example, which is a complex and difficult process even for the most advanced countries, may prove particularly difficult in this case." As in the case of Afghanistan, the IMF usually cooperates with local authorities and the Stolen

a country's elites will try to 'cash out' before the arrival of the IMF and have nothing to lose at the bargaining table with the IMF. Thus, they may be inclined to accept harsher conditions, without much regard for the wider ramifications of a country's population.

Illustrative of this point is the case of Tajikistan. When rescuing Tajikistan from the brink of default in 2005, the IMF audit overlooked a credit guarantee scheme that insured the claims of a consortium of politically well-connected banks and lenders towards the cotton industry.[10] As collateral for this guarantee, the central bank pledged almost the entirety of its foreign reserves and thus allowed high-ranking government officials to siphon almost $300 million out of the country.[11] Furthermore, it is well established that the country's state-owned enterprises "*provide substantial cash flow to the ruling elite*"(ICG, 2009, 14). The most prominent business in the government's portfolio has been the Tajikistan Aluminium Company, Talco, that has accounted "for more than half of Tajikistan's export revenues."[12] The Tajik "government owns 70% of the TML and the rest is owned by wealthy Tajik individuals, presumably including members of the Rahmon family."[13] To siphon out profits into offshore accounts, in 2005, the government set-up a tolling arrangement: Talco Management Ltd. (TML). Strikingly, the firm is registered in the British Virgin Islands, allowing its owners to repatriate the profits (tax free) in offshore accounts. In line with our expectations, to unlock much-needed financial relief in 2008, a high-ranking Tajik government official "repeated several times that Tajikistan would be ready to accept any conditions the Fund demanded."[14]

In extreme cases, IMF programs can even work as a catalyst for fraudulent behavior. In line with research on elite capture of foreign aid (Nye, 1967; Jensen and Wantchekon, 2004; Bjørnskov, 2010; Andersen, Johannesen and Rijkers, 2020), IMF programs can even open a revolving door, where a share of bailout funds are siphoned into offshore accounts. Following this logic, business

Asset Recovery Initiative, which is a joint program of the World Bank and the UNODC, to recover stolen funds but has no means to seize these assets. Furthermore, the Articles of Agreement of the Bretton Woods institutions formally prohibit interference into the domestic politics of borrowing countries (Reinsberg, 2015).

[10] "IMF says Tajikistan Broke Borrowing Rules." Financial Times. March 6th, 2008

[11] "Banker accused of huge fraud in Tajikistan." The Guardian. April 13th, 2009.

[12] "The intriguing case of Talco Aluminium." The Financial Times. October 28, 2008

[13] "Tajikistan – Back in the USSR at TALCO." Wikileaks. Cable ID $08DUSHANBE516\_a$.

[14] "Tajikistan Pleads for Help to Resolve Self-Inflicted Cotton Finance Crisis." Wikileaks. Cable ID $08DUSHANBE86\_a$.

and political elites can use financial shell companies (and other round-tripping schemes) to tap IMF bailouts (Aykut, Sanghi and Kosmidou, 2017).[15] Moreover, elites can also benefit from specific IMF program components. For example, privatizations of state-owned enterprises within IMF programs can be even used to (cherry-)pick "*state assets at bargain-basement prices.*"[16]

Based on these insights, we formulate two complementary hypotheses. First, we expect that greater elite capital flight increases the likelihood that a country will enter into an agreement for an IMF program. Second, we hypothesize that this program will entail a greater than default number of loan conditions. Our theory has some additional observable implications. We anticipate that in certain institutional settings and under certain economic conditions the proposed effects are more pronounced. We discuss several of these conditions below.

First, *ex ante* elite capital flight and IMF bailouts will be more likely where looting is easier and the chance of punishment is lower. This will be the case where governance frameworks are weak and state institutions are corrupted. Weak institutions make it easier for political and business groups to infiltrate and capture the policymaking process (Kang, 2002; Hoff and Stiglitz, 2005). Furthermore, institutional weaknesses form a comfortable breeding ground for all sorts of criminal activities such as embezzlement, trade misinvoicing, and tax evasion, effectively functioning as a trigger for investors to deposit their profits in offshore accounts for safekeeping (Pond, 2018). For example, in the case of Ukraine, powerful oligarchs extensively use financial round-tripping schemes to evade taxes and shield their assets in offshore financial sinks (Earle et al., 2020). Taken together, weak institutional fundamentals build the backbone of distorted financial incentives, which often form the bedrock for the built-up of macrofinancial vulnerabilities, alleviating the need for bailout funding from the IMF.

Second, natural resource rents are relatively easy to appropriate for well-connected elites, as such wealth is often concentrated in the hands of few vested interests (Ndikumana, Boyce and Ndiaye, 2014; Ross, 2015). Furthermore, natural resource exports unlock the opportunity to engage in

[15] An indication of the viability of this mechanism is the recent growth of so-called 'Phantom' FDI, which is often domestic money funneled through tax havens back into the economy. Recent research suggests that Phantom FDI "accounts for around $15 trillion, almost 40 percent of total FDI, globally" (Damgaard, Elkjaer and Johannesen, 2019, 26).

[16] "Kremlin Gobbles Up Sibneft." The Wall Street Journal. September 29, 2005.

extensive trade mis-invoicing to siphon funds into offshore financial sinks (for a review of these mechanisms, see Ndikumana, Boyce and Ndiaye (2014)). Moreover, resource rents can be pledged as collateral that allow captured governments to take on more debt and thus access more funding to be shift into offshore financial sinks (Ndikumana, Boyce and Ndiaye, 2014). In addition, an indirect effect exists: resource rents are closely linked to corruption and a weakening of governance frameworks (for a review of this resource curse literature, see Ross (2015)). This, in turn, amplifies the underlying driving forces for elite capital flight. Combining these effects, we expect that a substantial amount of resource wealth amplifies incentives for adopting a 'going-for-broke' strategy.

Finally, when elites anticipate being voted out of office and/or when a captured government cannot sustain its political grip over a country, we expect elite capital flight to accelerate. At the outset of the financial crisis in 1997 "[President] Suharto's friends and children exported several billion dollars [...] as the political and economic crisis worsened"(Hale, 1998, 10).[17] Similarly, several reports indicate how President Anastasio Samoza "spent the final weeks of his administration liquidating every asset he and his government could lay hands on",[18] and moved these funds into a vast web of offshore accounts.[19] On the basis of these insights, we expect the linkages between elite capital flight and an IMF program to be most pronounced at the twilight of a political regime.

3 Research design

3.1 Data

To test our hypotheses, we construct a novel dataset comprising 162 countries between 1980 and 2018. Our outcome is a binary variable indicating whether a country is under an IMF program. As a narrow reading of our argument would limit our mechanism to the initial decision to implement an IMF program, we verify that a drop of all IMF program observations other than the first year of a respective IMF program does not affect our results.[20] We believe our current operationalization

[17] Interestingly, the names of Suharto's children also re-appear in the so-called Panama Papers.

[18] "Somoza Legacy: Plundered Economy." The Washington Post, November 30, 1979.

[19] "The Wealth of Anastasio Somoza." The New York Times, June 22, 1979.

[20] We drop the lagged dependent variable because the series no longer exhibits serial correlation. We report the results in Table A2.

is sensible because elites may well consider prior to every IMF program review whether or not to continue an ongoing IMF program as a function of whether they have expatriated their financial assets. Moreover, we count the total number of binding conditions, which includes prior actions, quantitative performance criteria, and structural performance criteria. Both pieces of information are available from the IMF Monitor Database (Kentikelenis, Stubbs and King, 2016). To maximize the sample period, we updated the list of IMF programs based on publicly available data through to 2018.

To measure offshore elite wealth, we use data on direct cross-border capital flows in the form of private bilateral bank deposits, which we coded from the Bank of International Settlements databases (BIS, 2020). A key advantage of our measure is that we can isolate *de facto* bank transactions instead of relying on measures related to trade mis-invoicing or a statistical residual in a country's balance of payments.[21] Given that the lion's share of bank deposits in offshore financial sinks belongs to a country's elites (e.g., Alstadsæter, Johannesen and Zucman, 2019), we are able to capture elite wealth and not government transactions and/or bank deposits of the general population. In support of our claim, Alstadsæter, Johannesen and Zucman (2019, 2074) — relying on leaked banking data for a sample of Scandinavian individuals — report that "the top 0.01 percent of the wealth distribution owns about 50 percent" of the wealth hidden in these offshore financial accounts. To illustrate this point in our context, consider the case of Ukraine. It is well-documented that oligarchs use accounts in the Netherlands, Cyprus, Switzerland, and several island states to evade taxes and shield their wealth (Earle et al., 2020). From a purely empirical perspective, such transactions would lead to greater Ukrainian deposits in these countries, but do not necessarily correspond to enhanced trade ties or any closer economic cooperation. For example, at the outset of the global financial crisis in 2008, Ukrainian entities harbored $29.8 billion in Switzerland alone, almost double the amount of the requested IMF bailout package of $16.5 billion (IMF, 2008) (whereas Swiss imports from Ukraine stood at $125 million) (BIS, 2020).[22]

Using this data source, we construct our measure of capital flight in three steps. First, we

[21] For a survey of competing measures, see, for instance, Ndikumana, Boyce and Ndiaye (2014).

[22] The data for these bilateral trade estimates has been retrieved from the Observatory of Economic Complexity (OEC).

aggregate the reported bank deposit amounts of a country in 18 selected offshore financial destinations that are commonly considered 'tax havens' (Garcia-Bernardo et al., 2017; Damgaard, Elkjaer and Johannesen, 2019; Coppola et al., 2020). As destination countries, we selected the Bahamas, Bahrain, Bermuda, Cayman Islands, Chile, Chinese Taipeh, Curacao, Cyprus, Guernsey, Hong Kong, Isle of Man, Jersey, Luxembourg, Macao, Ireland, Panama, Singapore, and Switzerland. A distinct advantage of restricting our sample to banking deposits in these jurisdictions — as opposed to analyzing all countries at once — is that we capture capital flight derived not from 'real' economic activity but from wealthy individuals and firms seeking a safe haven for their private wealth (Zucman, 2015).[23] We scale the sum of these capital flows by Gross Domestic Product (GDP). We source GDP data from the Penn World Tables because they have the largest coverage for our sample (Feenstra, Inklaar and Timmer, 2015). Furthermore, to mitigate concerns that we are merely picking up endogenous trends in international financial markets and not the dynamic nature of 'exiting' capital, we analyze deviations of these banking transactions from the country mean instead of taking its absolute values.

To eliminate confounding bias, we include a battery of controls that we organize in three sets. The first is a minimal set of control variables, which includes aggregate capital outflows obtained from adding up the annual capital flows reported by all 48 destination countries in the BIS database (BIS, 2020), and country-fixed effects and year-fixed effects.[24] Incorporating aggregate capital outflows is important to mitigate concerns that we are picking up an episode of rapid capital outflows. The second is our baseline set of macroeconomic controls, including log-transformed GDP per capita, the (logged) inflation rate,[25] reserves in months of imports (WDI, 2020), and a binary indicator for financial crisis (Laeven and Valencia, 2013). Previous studies have used these economic variables to predict IMF programs (Vreeland, 2003; Nooruddin and Simmons, 2006; Moser and Sturm, 2011). We include the financial crisis indicator because during periods of crisis, countries are more likely to turn to the Fund but are also likely to suffer abrupt money outflows (Beeson

[23] Our results are robust to variations in the set of tax-haven countries (Table A3, A4), such as using only Switzerland and the 16 tax-haven countries identified by Andersen, Johannesen and Rijkers (2020).

[24] As discussed below, country-fixed effects can be approximated by correlated random effects in the context of probit-type models.

[25] To avoid generating missing values for negative inflation rates, we apply a hyperbolic transformation.

and Broome, 2008). A third set of controls captures political factors. In particular, we include a binary indicator of democracy (Coppedge, Alvarez and Maldonado, 2008), available from the IPE dataset (Graham and Tucker, 2019). We also include a binary indicator for the incidence of any coup d'état (Powell and Thyne, 2011), as political instability may increase the likelihood of capital flight as well as the need for IMF assistance (Collier, Hoeffler and Pattillo, 2001). Furthermore, we measure the UN General Assembly voting alignment with the G7 countries (Bailey, Strezhnev and Voeten, 2015). UN voting patterns — viewed as a proxy for geo-strategic alignment — are known to predict IMF programs (Dreher, Sturm and Vreeland, 2015), but may also relate to financial outflows to G7 countries. Our final control variable is the (logged) number of nationals residing abroad as refugees, asylum-seekers, and humanitarian migrants (UNHCR, 2020). The rationale for including this variable is that it helps us dismiss a potential alternative explanation whereby cross-border movements of natural persons would account for capital flight.[26] We include the descriptive statistics and further information on data sources in the supplementary appendix (Table A1).

3.2 Empirical Model

The appropriate statistical model to test the relationship between capital flight and IMF programs is a time-homogenous Markov model — a probit-type model with a lagged dependent variable. This is necessary due to 'recidivism' in IMF lending — the tendency of a borrowing country to require assistance again in subsequent years (Vreeland, 2003). Due to the non-linear nature of the outcome variable, we cannot include country-fixed effects (Greene, 2002). Our second-best solution is a correlated random-effects multi-level probit model, which includes the country-specific means of all predictors to allay concerns about non-zero covariance between the predictors and the random intercept (Wooldridge, 2005; Skrondal and Rabe-Hesketh, 2014; Albarran, Carrasco and Carro, 2019). Our empirical model is an advancement over simple probit models as the predominant choice in the related literature (Nooruddin, 2010; Moser and Sturm, 2011; Vreeland, 2003).[27] Formally,

[26] A similar variable would be remittance inflows as a percentage of GDP (WDI, 2020) but its available data coverage is lower.

[27] Following common practice in IMF program research, we also specify a linear probability model with country-fixed effects for the likelihood of being under an IMF program, obtaining similar results to the probit specification (Table A15).

our simplest empirical model can be expressed as follows:

$$\mathsf{Pr}(y_{it}|y_{i,t-1}, k_{it}, X_{it}, u_i) = \Phi(y_{i,t-1}\alpha + k_{it}\beta + X_{it}\gamma + u_i + \phi_t + \varepsilon_{it}) \tag{1}$$

where $\mathsf{Pr}(y_{it})$ is the probability that a country is under an IMF program, as a function of whether it has been under a program last year ($y_{i,t-1}$), elite capital flight (k_{it}), a vector of control variables (X_{it}), country-specific effects (u_i), and year effects (ϕ_t). All other terms are estimable parameters, except the idiosyncratic error term (ε_{it}).

4 Results

Results for IMF program participation

To illustrate capital flight patterns around IMF programs, we first provide some descriptive statistics. We isolate all 322 episodes of IMF program onsets and fit a local polynomial to extract the general trend of capital outflows around the onset of an IMF program.[28] We illustrate these findings in Figure 1.

We find that average capital outflows peak four quarters prior to IMF program onset and drop sharply thereafter, until the first quarter of an IMF program, where they reach their local minimum. This pattern cannot be attributed to an announcement effect and/or IMF-induced policy conditions. Even if one considers that it may take up to one quarter to finalize negotiations for an IMF program (McDowell, 2017), the peak of capital outflow still lies before the decision to approach the Fund. To illustrate this point, we consider the case of Tajikistan. In November 2007, a World Bank representative — in an off-the-record conversation — commented that President "Rahmon now knows he is going to have to request the instrument — the International Monetary Fund's Poverty Reduction and Growth Facility program."[29] Leaving ample room for capital flight, it was not until March 2009 (or five quarters later) that the Tajik government officially submitted its

[28] Our relevant time window spans twelve quarters on both sides of the point of IMF program onset. This reflects the modal three-year duration of IMF adjustment programs (e.g., Reinsberg et al., 2019).

[29] "Weekend Update on Tajik Liquidity Crisis." Wikileaks. Cable ID $07DUSHANBE1589\_a$.

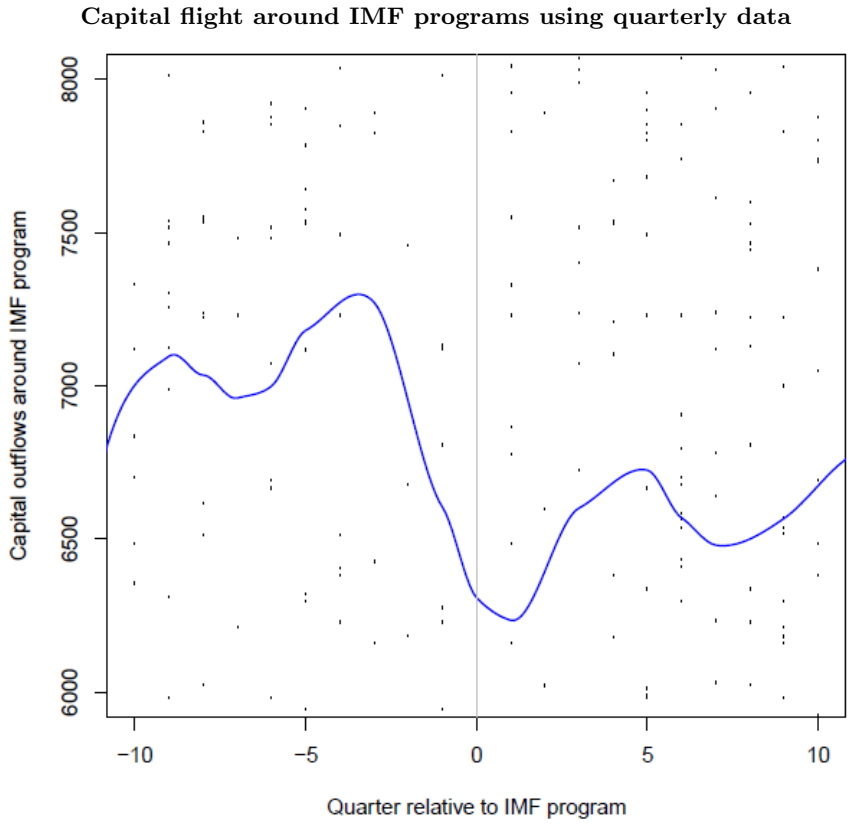

Figure 1: The illustrations shows the local polynomial fit of capital outflows around all 322 IMF program onsets in the sample period with available data on capital outflows to tax havens.

letter of intent to request funds through this instrument.[30] Thus, we believe this pattern reflects a strategic anticipation of an IMF program so that capital flight ensures wealth is hidden in offshore accounts.

To further disentangle these findings, we present results concerning the relationship between capital flight and IMF programs in Table 1. In column (1), we report the results without control variables; column (2) features the results with a minimal set of controls, whereas column (3) displays the results with a full set of control variables.

We find that an increase in elite capital flight by one standard deviation increases the predicted probability for an IMF program by 3.2% — from 63.1% to 65.2% ($p < 0.05$) — in the model with baseline controls. Most notably, in the final model specification with the complete set of controls,

[30] "Republic of Tajikistan: Letter of Intent, Memorandum of Economic and Financial Policies, and Technical Memorandum of Understanding." March 31, 2009.

Elite Capital flight and IMF programs

	(1)		(2)		(3)	
IMF program						
Capital flight	0.034***	(0.013)	0.040***	(0.013)	0.038***	(0.012)
IMF program (lagged)	2.372***	(0.105)	2.251***	(0.106)	2.247***	(0.106)
Capital outflow	-0.007	(0.011)	-0.009	(0.010)	-0.008	(0.010)
GDP per capita			-1.301***	(0.313)	-1.277***	(0.330)
Inflation growth			0.031	(0.023)	0.031	(0.023)
Reserves			-0.045**	(0.022)	-0.047**	(0.023)
Financial crisis			0.835***	(0.189)	0.870***	(0.191)
Democracy					0.089	(0.238)
Coup d'état					-0.592	(0.462)
UNGA alignment with G7					0.299**	(0.148)
Refugees					0.035	(0.026)
Observations	2543		2005		1984	
Pseudo-R2	0.511		0.531		0.537	

Table 1: The dependent variable takes the value 1 if a country is under an IMF program and 0 otherwise across all model specifications. The results were obtained using correlated random-effects probit regressions with year effects and predictor means included. Robust standard errors clustered on countries in parentheses. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

an increase in elite wealth raises the probability of IMF program participation by 3.45% — from 60.8% to 62.9% ($p < 0.05$). Control variables behave as expected. For example, countries are more likely under an IMF program when their per-capita income is lower, when they run short of foreign reserves, when there is a financial crisis, and when they are more aligned with G7 countries (Copelovitch, 2010; Moser and Sturm, 2011; Dreher, Sturm and Vreeland, 2015). We also find strong evidence of recidivism (Vreeland, 2003; Bird, Hussain and Joyce, 2004; Conway, 2007). Note that the means of all predictors are included but suppressed from the output, which implies that our coefficients can be interpreted as within-country effects.

A key threat to our results is measurement error. To mitigate concerns that our results are merely an artefact of measurement error, we construct an alternative capital flight measure based on deviations from cross-border banking transactions that would be predicted if these were the outcome of legitimate (real) economic transactions (i.e., these would correspond to closer trade ties between two countries). To create this measure, we proceed in three steps. First, we run a two-way fixed effects regression in which we predict capital outflows by the total level of exports.[31] Second, based on this regression, we predict the level of capital outflows that is associated with a given level of exports, allowing for country-specific means and common global shocks. We then take the difference between actual outflows and predicted outflows. Here, again, an abnormally high positive outflow likely reflects elite capital flight that is not rooted in 'real' economic transactions. Third, we dichotomize the measure by creating a dummy variable for positive excess outflows. Our results are unaffected when considering actual deviations (Table A9). A key advantage of this measure is that the need for scaling disappears, rendering it more robust against measurement error. We present our results in Table 2.

We find that an IMF program is 8.4% more likely (up from 62.0% to 67.2%), compared to circumstances of no excess capital outflows in the model with baseline controls ($p < 0.05$). As seen in Table 3, our result holds across different model specifications. Control variables conform to theoretical expectations.

[31] Both variables should be positively related. According to macroeconomic theory, a current account surplus (a country has more exports than imports) must be matched by a capital account deficit (the country effectively provides credit to its export destinations). Here we use reported flows from all 47 destination countries in the BIS database and find that exports are strongly positively associated with capital outflows ($p < 0.001$).

Capital flight and IMF programs using excess deposits as an alternative measure

	(1)		(2)		(3)	
IMF program						
Excess deposits	0.488***	(0.129)	0.462***	(0.138)	0.473***	(0.137)
IMF program (lagged)	2.582***	(0.097)	2.402***	(0.108)	2.361***	(0.110)
Capital outflow	-0.002	(0.002)	-0.001	(0.001)	-0.001	(0.001)
GDP per capita			-1.290***	(0.356)	-1.370***	(0.403)
Inflation growth			0.036	(0.025)	0.039	(0.024)
Reserves			-0.066***	(0.024)	-0.063**	(0.025)
Financial crisis			0.625***	(0.208)	0.650***	(0.207)
Democracy					0.110	(0.222)
Coup d'état					-0.464	(0.510)
UNGA alignment with G7					0.328**	(0.138)
Refugees					0.036	(0.029)
Observations	2022		1606		1606	
Pseudo-R2	0.542		0.553		0.556	

Table 2: The dependent variable takes the value 1 if a country is under an IMF program and 0 otherwise across all model specifications. *Capital flight* takes the value of 1 if bank deposits exceed their predicted value — based on a country's exports — in a given year and 0 otherwise. The results were obtained using a correlated random-effects probit regressions with year effects and predictor means included. Robust standard errors clustered on countries in parentheses. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

We also verify that controlling for differences of the capital flight variable does not alter our main result. For the export-based measure, even the difference is positively significant (Table A9). To further probe the robustness of our findings, we perform several additional tests.

First, we collected data on trade-related value gaps (measured in millions of U.S. dollars) as a proxy measure of trade mis-invoicing from Global Financial Integrity (GFI) for up to 99 countries from 2008 to 2017 (GFI, 2020). We find a positive relationship between capital flight and the likelihood of an IMF program, although the estimates are statistically significant at conventional levels only in the minimal model (Table A5).

Second, we use Boyce and Ndikumana's (2014) measure of real capital flight, available for 30 African economies from 1980 to 2015.[32] We find a weakly positive relationship between capital flight and IMF programs, albeit only when dropping the first decile of the least corrupt African countries (Table A6). While these results are consistent with the evidence thus far, we note the weak level of statistical significance and the apparent lack of effect homogeneity across the Africa sample.[33]

Finally, we exploit cross-country variation in capital account controls. Our assumption is that if capital flight serves to shield the assets of a wealthy elite before the arrival of the IMF, any observed excess flight likely derives from the ability of well-connected elites to protect their private fortunes by circumventing regulatory protocols (Loungani and Mauro, 2001; Epstein, 2005; Zucman, 2015).[34] We perform a split-sample analysis wherein we discriminate between countries with open and closed capital accounts (Table A10). To further sharpen this analysis, we inspect cases where restrictions on capital outflows but not necessarily on capital inflows exist. The data for these analyses come from Gygli et al. (2018) and Eichengreen and Rose (2014). We find that the positive relationship

[32]For data, we rely on the most recent available data from Boyce and Ndikumana (2017). Capital flight is calculated as the residual in national balance of payment statistics capturing "discrepancies between recorded foreign exchange inflows and recorded uses of these inflows" (Boyce and Ndikumana, 2017, 2). As with our main predictor, we scale the variable by GDP and subtract the within-country mean, while controlling for the mean itself. Furthermore, we include the mean of capital outflows to ensure that our results are not biased by general capital outflow surges.

[33]However, in preview of our later results, we note here that there is a strong positive relationship between elite wealth and the number of conditions in an IMF program (Table A7). Since many African countries are under IMF programs most of the time, this is a strong finding that cannot be explained by sample selection effects. It also provides some intuition for the weak results on the African sample: because most African countries are under IMF programs most of the time, there is less variation left to explain.

[34]For example, Loungani and Mauro (2001) document for the case of Russia the ineffectiveness of capital outflow controls — in particular for well connected elites — to curb capital flight in the 1990s.

between elite capital flight and IMF programs persists in the sub-sample of countries at relatively low levels of financial openness. This result holds for our main predictor as well as the alternative predictor based on excess capital flows. Furthermore, consistent with our expectation, we also find a persistent effect in the sub-sample of countries with restrictions on outward capital flows but not inward capital flows.[35]

Effect heterogeneity

We now test additional observable implications of our model. To that end, we allow the effect of elite capital flight upon IMF program participation to vary across different contexts and implement a series of split-sample tests at the median of the moderating variable (Table A11). In particular, we expected that capital flight would be more likely to trigger IMF programs under conditions of weak governance, natural resource wealth, and short time horizons of elites.

Weak governance: If a country has weak institutions, elites will find it easier to loot, as their illicit activities will less likely be detected and less likely punished (Hoff and Stiglitz, 2005). We therefore expect the relationship of interest to be stronger in poorly governed countries. Our measure of governance quality is the ICRG index, available from the QoG database (Teorell et al., 2018). We indeed find this is the case for both of our measures of capital flight.

Natural resources: Natural resource rents are conducive for elite capital flight. Concentrated in the hands of a few elites, resource exports allow for greater trade mis-invoicing and lead to a weakening of institutional fundamentals thus providing greater leeway for elite capital flight (Ross, 2015; Boyce and Ndikumana, 2017). Our expectation is that greater natural resource wealth will amplify the effect of elite capital flight upon IMF program participation. We proxy resource wealth by natural resource wealth as a percentage of GDP, available from the WDI (World Bank, 2019). Consistent with our expectation, we find our relationship of interest to be present among resource-rich countries.

[35]Due to severely limited time-series overlap with our BIS measure, we took the within-country average of the Eichengreen-Rose measure and used the mean to split the sample.

Short elite time horizons: If elites expect to lose power, they will have greater incentives for elite capital flight and less concern for its socially disruptive effects. The CHISOLS database is ideally suited to test this mechanism because it captures changes in the underlying support coalition of a leader (Mattes, Leeds and Matsumura, 2016). As the measure is continuous, we include an interaction effect between capital flight and the CHISOLS measure, which we find to be positively significant. Figure 2 plots the effect of capital flight on the probability of an IMF program for different levels of change in the leader's support coalition. The marginal effect is most pronounced when the old elite loses power completely, which is consistent with the expectation that capital flight is more likely to trigger IMF programs when elites have a shorter time horizon and try to cash out before the arrival of the IMF.

Capital flight and IMF programs under different leader horizons

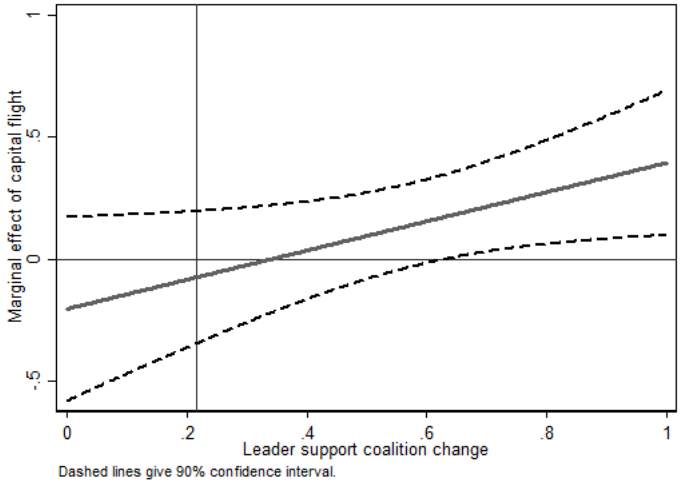

Figure 2: The graph shows that a full swing in the leader's support coalition generates a positive effect of capital flight on IMF programs.

Addressing Inferential Threats

Given the observational nature of our data, our results might be observationally equivalent to other competing theories. If this was the case, our results may be spurious. Next, we summarize our efforts to address these concerns.

First, if capital flight is intended to shield wealth in offshore accounts prior to the IMF's arrival,

this pattern should only appear in situations where the IMF is in fact called upon. We expect a relative peak of capital outflow before the crisis onset for countries requesting IMF assistance. In contrast, we would expect capital flight to set in later for crisis episodes without any IMF involvement (Pepinsky, 2014). To make our comparisons as plausible as possible, we only consider episodes of financial crises (Laeven and Valencia, 2013) and trace capital outflows around such crisis events (see Figure 3).[36] Our findings confirm these expectations. For IMF countries, capital flight peaks six quarters before the crisis and consistently decreases thereafter, while for non-IMF countries, capital outflows accelerate in the run-up to the crisis event.

Capital outflows around financial crises with different IMF involvement

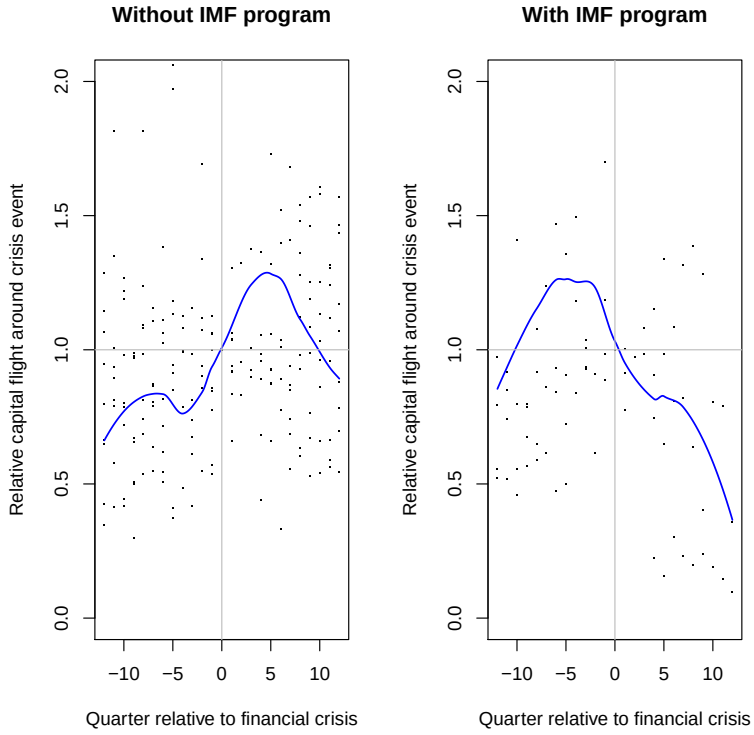

Figure 3: The left-hand graph shows elite capital flight around financial crises onsets without IMF involvement. The right-hand graph captures elite capital flight around financial crises onsets involving a subsequent IMF program. Elite capital flight is normalized to 1 at time of crisis onset. In both graphs, cases with an IMF program onset in the pre-crisis period were excluded.

Second, we exploit that IMF programs predicated on natural disasters cannot be anticipated

[36]To identify crises with IMF involvement, we require an IMF program to be concluded not before the crisis outbreak and up to one year after it.

by the elites and therefore our posited mechanism would not hold. To that end, we identify all IMF programs agreed in the year after a natural disaster with at least 25 deaths has hit and separate these observations from all other IMF programs.[37] As an alternative measure, we sample those IMF facilities particularly designed to address natural disasters, for example the Catastrophic Contingency Reserve. Our results show that the relationship between capital flight and IMF programs indeed only holds for regular IMF programs, but not for those following deadly disasters and disaster facilities (Table A12).

Third, the relationship between elite capital flight and IMF programs might be spurious. To mitigate such concerns, we perform an instrumental-variable analysis. We report the full model description in Section A2 and results in Table 3. We construct a compound instrument consisting of the interaction between a country's level of international indebtedness and the (lagged) Volatility Index (VIX) (Scheubel and Stracca, 2019). Several reasons motivate our approach. First, shocks in global financial markets — reflected in increases in the VIX — are arguably exogenous to a country's policy environment (Forbes and Warnock, 2012; Miranda-Agrippino and Rey, 2020).[38] Second, increases in the VIX reflect increasing global investor aversion leading to a drying up of funds in global equity markets and thus making it less attractive to move funds abroad (Miranda-Agrippino and Rey, 2020). A caveat in using a global VIX measure is a lack of variation across countries over time. Furthermore, using it as a sole instrument would (most certainly) violate the exclusion restriction as increases in the VIX might be equivalent to sudden stops in capital inflows (Eichengreen, Gupta and Mody, 2008). To compensate for these shortcomings, we interact this variable with a measure of the level of foreign indebtedness. Besides capturing a country's vulnerability to changing investor sentiments, foreign debt is an important fuel component for capital flight (Boyce and Ndikumana, 2017; Andersen, Johannesen and Rijkers, 2020).[39] Thus, the instrument identifies the differential effect of capital flight on the propensity of IMF programs in countries with high indebtedness versus countries with low indebtedness. The compound instrument is plausibly

[37] This death threshold is in line with studies of civil war. Results do not hinge upon it.

[38] For instance, Forbes and Warnock (2012) analyzing 50 emerging and developed economies in the time span between 1980 and 2009 find that global risk aversion (or changes in the VIX) trump domestic macroeconomic factors and outperform specifications based on U.S. interest rate dynamics when predicting capital outflow dynamics.

[39] For example, Andersen, Johannesen and Rijkers (2020, 1) estimate that official World Bank lending corresponds to a 7.5% increase in offshore bank deposits.

excludable given that we control for its constituent terms, two-way fixed effects, and other controls, which may be related to factors that predict IMF programs independently from capital flight. We find that (instrumented) capital flight significantly increases the propensity of being under an IMF program. In substantive terms, an increase in capital flight by one standard deviation makes an IMF program more likely by 6.2% (up from 38.2% to 40.6%) in the baseline model ($p < 0.05$). All control variables remain unaffected. The instrument behaves as expected and is moderately strong, passing the conventional threshold of the Kleibergen-Paap statistic ($F > 10$) except in the barebones model. For robustness, we verify that our results hold for two alternative compound instrument specifications.[40] For all instruments, we also verified that they are plausibly excludable. Included in the outcome stage, the instruments were never significant, giving us sufficient confidence about their viability (Conley, Hansen and Rossi, 2012).

Finally, we verify that captured governments agree to more stringent conditionality in the wake of elite capital flight. To account for selection into IMF programs we estimate a system of two equations: one IMF program equation and one outcome equation for the number of binding conditions, defined only for observations under IMF programs.[41] We report the results in Table 4.

Our findings indicate that increasing elite capital flight by one standard deviation is related to 1.8 more binding conditions in an IMF program ($p < 0.01$). The result holds consistently across various sets of control variables, although few control variables exert a consistent effect on the number of conditions.

A potential caveat of our two-stage analysis is that we assume that capital flight is exogenous with respect to IMF conditions. Relaxing this assumption, we consider a three-equation model in which we use the aforementioned instrument — the interaction of external debt and the (lagged) VIX — for capital flight to calculate the predicted capital flight in the outcome equation. We report

[40] Specifically, we use the average level of financial openness, as measured by the KOF index of financial globalization, interacted with the lagged VIX indicator. The rationale for this measure is that in times of global market distress capital flight reacts more strongly in financially less integrated countries (Forbes and Warnock, 2012). Similarly, we interact the lagged VIX with the average level of capital outflows to tax havens. The logic behind this instrument is that, in times of global financial market distress, capital flight should be better predicted for countries where capital flight is less common in general. In both cases, the results are qualitatively unaffected. The results also hold when substituting the lagged VIX by the differenced VIX as well as for the lagged change in the U.S. interest rate instead of the VIX measure (Table A13).

[41] The two-equation setup assumes that capital flight is exogenous with respect to IMF conditions. For an extended description of the model, see Appendix Section A2.

Elite capital flight and IMF programs: instrumental variable estimation

	(1)		(2)		(3)	
IMF program						
Capital flight	0.004*	(0.002)	0.007***	(0.002)	0.007***	(0.002)
IMF program (lagged)	0.617***	(0.023)	0.588***	(0.026)	0.588***	(0.025)
Capital outflow	-0.000	(0.000)	-0.001	(0.001)	-0.001	(0.001)
GDP per capita			-0.291***	(0.092)	-0.289***	(0.089)
Inflation growth			0.008*	(0.005)	0.007	(0.005)
Reserves			-0.009*	(0.005)	-0.008*	(0.005)
Financial crisis			0.212***	(0.037)	0.210***	(0.038)
Democracy					-0.036	(0.077)
Coup d'état					-0.101	(0.091)
UNGA alignment with G7					0.071*	(0.039)
Refugees					0.001	(0.010)
Capital flight						
Compound instrument	-0.000	(0.000)	0.000***	(0.000)	0.000***	(0.000)
VIX (lagged)	0.043	(0.026)	-0.024	(0.016)	0.013	(0.011)
External debt (lagged)	-0.003	(0.006)	-0.011	(0.009)	-0.011	(0.009)
IMF program (lagged)	0.213*	(0.123)	-0.015	(0.137)	-0.001	(0.133)
Capital outflow	0.436***	(0.051)	0.337***	(0.122)	0.334***	(0.121)
GDP per capita			-0.085	(0.667)	-0.038	(0.642)
Inflation growth			0.013	(0.009)	0.012	(0.009)
Reserves			-0.042	(0.030)	-0.042	(0.032)
Financial crisis			0.009	(0.079)	0.163	(0.167)
Democracy					0.534	(0.597)
Coup d'état					-0.023	(0.089)
UNGA alignment with G7					-0.415	(0.275)
Refugees					0.106	(0.100)
IMF observations	2722		2174		2149	
Pseudo-R2	0.508		0.519		0.527	
Capital flight observations	1839		1457		1437	
Wihtin-R2	0.013		0.327		0.339	
F-statistic	1.425		8.713		8.527	

Table 3: Correlated random-effects probit regressions with year effects and predictor means included. Robust standard errors clustered on countries in parentheses. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Elite capital flight, IMF programs, and IMF conditionality

	(1)		(2)		(3)	
IMF conditions						
Capital flight	0.423***	(0.075)	0.435***	(0.059)	0.439***	(0.084)
GDP per capita			-26.411***	(8.316)	-27.102***	(7.854)
Inflation growth			-0.063	(0.302)	-0.070	(0.296)
Reserves			1.561**	(0.717)	1.483**	(0.685)
Financial crisis			4.671	(3.141)	4.707	(2.920)
Democracy					3.332	(3.792)
Coup d'état					-3.222	(7.660)
UNGA alignment with G7					1.234	(2.155)
Refugees					-0.646	(0.980)
IMF program						
Compound instrument	-0.172***	(0.053)	-0.139*	(0.075)	-0.142*	(0.076)
IMF liquidity ratio	0.002	(0.022)	0.048	(0.037)	0.056	(0.040)
GDP per capita			-0.912***	(0.222)	-0.914***	(0.227)
Inflation growth			-0.002	(0.005)	-0.003	(0.005)
Reserves			-0.002	(0.008)	-0.002	(0.008)
Financial crisis			0.325***	(0.066)	0.321***	(0.068)
Democracy					-0.046	(0.110)
Coup d'état					-0.087	(0.068)
UNGA alignment with G7					0.025	(0.068)
Refugees					-0.012	(0.020)
Conditionality observations	825		629		621	
Adjusted R2	0.307		0.344		0.346	
IMF observations	2224		1612		1583	
Adjusted R2	0.443		0.442		0.440	
F-statistic	10.404		3.444		3.507	

Table 4: The results were obtained using a correlated random-effects probit regressions with year effects and predictor means included. Robust standard errors clustered on countries in parentheses. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

the results in Table A14. We find a substantively similar effect of (instrumented) capital flight on the number of conditions, albeit at a lower level of statistical significance across models. Only in the baseline model do we find a statistically significant effect, amounting to about 1.5 additional conditions for an increase in capital flight by one standard deviation ($p < 0.05$). The instrument for capital flight is moderately strong ($F = 11$).[42] We also probe robustness of our results on conditionality using the alternative sample of capital flight from Africa, we find a positively significant effect of capital flight and the number of IMF conditions across different model specifications (Table A7).

While our empirical analysis has focused on IMF bailouts, our theoretical mechanisms should generalize to other bailouts from the GFSN. Specifically, we would expect a similar dynamic for World Bank structural adjustment loans, which may involve equally intrusive conditionality but do not allow the World Bank to effectively control elite capital flight. This is different for other elements of the GFSN, such as bilateral bailouts — whereby creditors can coerce financial transparency through a variety of foreign policy tools. Our mechanism is less likely to hold for regional financial arrangements, for which conditionality is less common. We therefore focus on replicating our findings on World Bank loans. Building on a newly available dataset (Clark and Dolan, 2020), we indeed find that the likelihood of a World Bank bailout is significantly higher after elite capital flight (Table A15). In addition, governments submit to a higher number of World Bank conditions in such circumstances (Table A16).[43] These results greatly increase our confidence in the general validity of our theoretical mechanism.

Overall, we find supporting evidence that countries are more likely to come under an IMF program in the wake of capital flight. In addition, we reveal that under these circumstances, countries tend to agree to more stringent conditionality. Taken together, the results lend support to our political economy argument emphasizing a first-order effect of elite capital flight on the incidence and design of IMF programs.

[42]The instrument for IMF programs collapses under inclusion of baseline controls, which is likely due to the short sample period.

[43]This result also holds when instrumenting for capital flight as before (see Table A17).

5 Conclusion

A wealth of research analyzing the determinants of elite capital flight points to the importance of dysfunctional governance frameworks for bolstering distorted financial incentives. Given (seemingly) endless possibilities of sophisticated financial engineering, we argue that a country's elites can privatize economic gains by moving funds into offshore financial destinations, thereby increasing a country's vulnerability to financial shocks. Building on previous literature, we argue that the ability to draw on the IMF creates perverse economic incentives so that elites can benefit from IMF bailouts without having to share the burden of these IMF-induced adjustments. Although the Fund possesses numerous instruments to address economic crises, it does not have any means to seize elite wealth in offshore financial sinks, to the effect that the costs of elite capital flight are passed onto the population at large.

Our empirical contributions rest on a series of econometric models producing results that are robust, even when considering different measures of capital flight and numerous model specifications. At the same time our findings leave ample room for future research. For one, we would need further research on the scope conditions of our argument. While our mechanism holds for at least two sources of bailouts in the Global Financial Safety Net — adjustment loans from leading international financial institutions — it might also hold for bilateral bailouts, regional financial agreements, and central bank swaps, albeit under more specific circumstances (Clark, 2020; Gavin, 2020; Schneider and Tobin, 2020). In line with our argument, 'going-for-broke' should be most likely where large bailouts are available which involve potentially intrusive conditionality. A scope condition of our argument therefore is that it should mostly apply to Western-dominated international financial institutions, rather than regional financial arrangements, which do not impose stringent conditionality (Henning, 2019). In addition, our analysis is silent on the question of whether domestic investors fleeing the country before the arrival of the IMF ever return — and if so, what form repatriated funds take. Furthermore, it is unknown which conditions will incentivize elites to return their wealth. Although existing literature tries to address these questions (Breen and Egan, 2019), we believe that analyzing elite capital flight dynamics in the context of IMF programs represents an important avenue for future research.

Besides strengthening governance structures and anti-corruption measures in lending programs, we believe that formulating financing clauses denying bailouts for firms and individuals that engage in tax avoidance and 'phantom' FDI schemes might produce tangible program outcomes. To date, "a handful of European governments, including Denmark and France, have barred emergency cash for any companies registered in countries on the EU's list of non-cooperative tax jurisdictions."[44] Thus, international organizations could require governments to implement similar clauses, while also addressing (and redressing) the adverse distributional effects of their own policy interventions. Consequently, a stronger focus on socially equitable reform measures in combination with greater emphasis on closing financial loopholes is warranted to reduce unwanted side-effects of IMF programs. Finally, the IMF has the potential to enhance global cooperation and coordination to mitigate the deleterious effects of international capital flight. With more than 100 countries currently awaiting financial relief, these policy implications for program access and design are of utmost importance to reduce the global economic fallout from the current COVID-19 pandemic.

[44] "Corporate Bailouts Should Come with Strings." The Financial Times. April 28, 2020.

References

Akerlof, George A., Paul M. Romer, Robert E. Hall and N. Gregory Mankiw. 1993. "Looting: The Economic Underworld of Bankruptcy for Profit." *Brookings Papers on Economic Activity* 1993(2):1–73.

Aklin, Michaël and Andreas Kern. 2019. "Moral Hazard and Financial Crises: Evidence from American Troop Deployments." *International Studies Quarterly* 63(1):15–29.

Albarran, Pedro, Raquel Carrasco and Jesus M. Carro. 2019. "Estimation of Dynamic Nonlinear Random Effects Models with Unbalanced Panels." *Oxford Bulletin of Economics and Statistics* 81(6):1424–1441.

Alesina, Alberto and Guido Tabellini. 1989. "External Debt, Capital Flight and Political Risk." *Journal of International Economics* 27(3-4):199–220.

Alstadsæter, Annette, Niels Johannesen and Gabriel Zucman. 2018. "Who Owns the Wealth in Tax Havens? Macro Evidence and Implications for Global Inequality." *Journal of Public Economics* 162:89–100.

Alstadsæter, Annette, Niels Johannesen and Gabriel Zucman. 2019. "Tax Evasion and Inequality." *American Economic Review* 109(6):2073–2103.

Andersen, Jørgen Juel, Niels Johannesen and Bob Rijkers. 2020. "Elite Capture of Foreign Aid: Evidence from Offshore Bank Accounts." World Bank Policy Research Paper No. 9150.

Aykut, Dilek, Apurva Sanghi and Gina Kosmidou. 2017. "What to Do When Foreign DirectInvestment Is Not Direct or Foreign." World Bank Policy Research Paper No. 8046.
URL: *http://documents.worldbank.org/curated/en/319451493385113949/pdf/WPS8046.pdf*

Babb, Sarah L. and Bruce G. Carruthers. 2008. "Conditionality: Forms, Function, and History." *Annual Review of Law and Social Science* 4:13–29.

Bailey, Michael, Anton Strezhnev and Erik Voeten. 2015. "Estimating Dynamic State Preferences from United Nations Voting Data." *Journal of Conflict Resolution* 61(2):430–456.

Beeson, Mark and André Broome. 2008. "Watching from the Sidelines? The Decline of the IMF's Crisis Management Role." *Contemporary Politics* 14(4):393–409.

Bird, Graham, Mumtaz Hussain and Joseph P. Joyce. 2004. "Many Happy Returns? Recidivism and the IMF." *Journal of International Money and Finance* 23(2):231–251.

BIS. 2020. "Locational Banking Statistics." Bank of International Settlements Database.
URL: *https://www.bis.org/statistics/bankstats.htm*

Bjørnskov, Christian. 2010. "Do Elites Benefit from Democracy and Foreign Aid in Developing Countries?" *Journal of Development Economics* 92(2):115–124.

Boyce, James K. 1992. "The Revolving Door? External Debt and Capital Flight: A Philippine Case Study." *World Development* 20(3):335–349.

Boyce, James K. and Léonce Ndikumana. 2017. Debt and Capital Flight. In *Handbook of Globalisation and Development*. Edward Elgar Publishing.

Breen, Michael and Patrick JW Egan. 2019. "The Catalytic Effect of IMF Lending: Evidence from Sectoral FDI Data." *International Interactions* 45(3):447–473.

Broz, J. Lawrence and Michael Brewster Hawes. 2006. "Congressional Politics of Financing the International Monetary Fund." *International Organization* 60(2):367–399.

Cerra, Valerie, Meenakshi Rishi and Sweta C. Saxena. 2008. "Robbing the Riches: Capital flight, Institutions and Debt." *The Journal of Development Studies* 44(8):1190–1213.

Chapman, Terrence, Songying Fang, Xin Li and Randall W Stone. 2017. "Mixed signals: IMF Lending and Capital Markets." *British Journal of Political Science* 47(2):329–349.

Chwieroth, Jeffrey M. 2009. *Capital Ideas: The IMF and the Rise of Financial Liberalization*. Princeton University Press.

Clark, Richard. 2020. "Bargain Down or Shop Around? Outside Options and IMF Conditionality." unpublished working paper.

Clark, Richard and Lindsay Dolan. 2020. "Pleasing the Principal: US Influence in World Bank Policymaking." *forthcoming* American Journal of Political Science.

Collier, Paul, Anke Hoeffler and Catherine Pattillo. 2001. "Flight Capital as a Portfolio Choice." *The World Bank Economic Review* 15(1):55–80.

Conley, Timothy G., Christian B. Hansen and Peter E. Rossi. 2012. "Plausibly Exogenous." *Review of Economics and Statistics* 94(1):260–272.

Conway, Patrick. 2007. "The Revolving Door: Duration and Recidivism in IMF programs." *The Review of Economics and Statistics* 89(2):205–220.

Copelovitch, Mark S. 2010. "Master or Servant? Common Agency and the Political Economy of IMF Lending." *International Studies Quarterly* 54(1):49–77.

Coppedge, Michael, Angel Alvarez and Claudia Maldonado. 2008. "Two Persistent Dimensions of Democracy: Contestation and Inclusiveness." *The Journal of Politics* 70(3):632–647.

Coppola, Antonio, Matteo Maggiori, Brent Neiman and Jesse Schreger. 2020. "Redrawing the Map of Global Capital Flows: The Role of Cross-Border Financing and Tax Havens." NBER Working Paper No. 26855.
URL: *https://www.nber.org/papers/w26855*

Damgaard, Jannick, Thomas Elkjaer and Niels Johannesen. 2019. "What Is Real and What Is Not in the Global FDI Network?" IMF Working Paper No. 19/274.
URL: *https://www.imf.org/en/Publications/WP/Issues/2019/12/11/what-is-real-and-what-is-not-in-the-global-fdi-network*

Dreher, Axel, Jan-Egbert Sturm and James Raymond Vreeland. 2015. "Politics and IMF Conditionality." *Journal of Conflict Resolution* 59(1):120–148.

Dreher, Axel and Roland Vaubel. 2004. "Do IMF and IBRD Cause Moral Hazard and Political Business Cycles? Evidence from Panel Data." *Open Economies Review* 15:5 – 22.

Earle, John S., Scott Gehlbach, Anton Shirikov and Solomiya Shpak. 2020. "The Oligarch Vanishes: Defensive Ownership, Property Rights, and Political Connections." unpublished working paper. **URL:** *https://ssrn.com/abstract=3683924 or http://dx.doi.org/10.2139/ssrn.3683924*

Eichengreen, Barry and Andrew Rose. 2014. "Capital Controls in the 21st Century." *Journal of International Money and Finance* 48:1–16.

Eichengreen, Barry, Poonam Gupta and Ashoka Mody. 2008. Sudden Stops and IMF-Supported Programs. In *Financial Markets Volatility and Performance in Emerging Markets*. University Of Chicago Press pp. 219–266.

Epstein, Gerald A. 2005. *Financialization and the World Economy*. Edward Elgar Publishing.

Feenstra, Robert C., Robert Inklaar and Marcel P. Timmer. 2015. "The Next Generation of the Penn World Table." *American Economic Review* 105(10):3150–82.

Findley, Michael, Daniel Nielson and Jason Sharman. 2013. "Using Field Experiments in International Relations: A Randomized Study of Anonymous Incorporation." *International Organization* 67(4):657–693.

Forbes, Kristin J. and Francis E. Warnock. 2012. "Capital Flow Waves: Surges, Stops, Flight, and Retrenchment." *Journal of International Economics* 88(2):235–251.

Frantz, Erica. 2018. "Elections and Capital Flight: Evidence from Africa." *International Studies Quarterly* 62(1):160–170.

Garcia-Bernardo, Javier, Jan Fichtner, Frank W. Takes and Eelke M. Heemskerk. 2017. "Uncovering Offshore Financial Centers: Conduits and Sinks in the Global Corporate Ownership Network." *Scientific Reports* 7(1):6246.

Gavin, Michael A. 2020. "Global Club Goods and the Fragmented Global Financial Safety Net." *International Studies Quarterly* 64(4):798–807.

GFI. 2020. Global Financial Integrity Annual Report. Dataset, Global Financial Integrity.

Goldsmith, Arthur A. 2020. "Out of Africa? Elections and Capital Flight Revisited." *International Studies Quarterly* 64(1):248–254.

Gould, Erica R. 2003. "Money Talks: Supplementary Financiers and International Monetary Fund Conditionality." *International Organization* 57(03):551–586.

Graham, Benjamin AT. and Jacob R. Tucker. 2019. "The International Political Economy Data Resource." *The Review of International Organizations* 14(1):149–161.

Greene, William. 2002. "The Bias of the Fixed Effects Estimator in Nonlinear Models." NYU Working Paper No. EC-02-05.
URL: *https://ssrn.com/abstract=1292651*

Guisinger, Alexandra, Bumba Mukherjee and Benjamin E. Bagozzi. 2016. "The IMF, Finance Interest Groups and Capital Flight in Developing States." *Kellogg Institute of International Studies Working Paper* 410(2):1–58.

Gygli, Savina, Florian Haelg, Niklas Potrafke and Jan-Egbert Sturm. 2018. "The KOF Globalisation Index – Revisited." *The Review of International Organizations* pp. 1–32.

Hale, David D. 1998. "The IMF, Now More Than Ever-The Case for Financial Peacekeeping." *Foreign Affairs* 77:7.

Heinrich, Tobias and Yoshiharu Kobayashi. 2020. "How do People Evaluate Foreign Aid to Nasty Regimes?" *British Journal of Political Science* 50(1):103–127.

Henning, C. Randall. 2019. "Regime Complexity and the Institutions of Crisis and Development Finance." *Development and Change* 50(1):24–45.

Hoff, Karla and Joseph Stiglitz. 2005. "The Creation of the Rule of Law and the Legitimacy of Property Rights: The Political and Economic Consequences of a Corrupt Privatization." NBER Working Paper No. 11772.

ICG. 2009. "Tajikistan: On the Road to Failure." International Crises Group Asia Report No. 162. **URL:** *https://www.refworld.org/pdfid/49952e692.pdf*

IMF. 2008. "Ukraine: Request for Stand-by Arrangement." IMF Country Report No. 08/384. **URL:** *https://www.imf.org/ /media/Websites/IMF/imported-full-text-pdf/external/pubs/ft/scr/2008/_cr08384.ashx*

IMF. 2011. "Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT) - Review of the Effectiveness of the Program." IMF Policy Paper No. 4571. **URL:** *https://www.imf.org/en/Publications/Policy-Papers/Issues/2016/12/31/Anti-Money-Laundering-and-Combating-the-Financing-of-Terrorism-AML-CFT-Review-of-the-PP4571*

Jayachandran, Seema and Michael Kremer. 2006. "Odious Debt." *American Economic Review* 96(1):82–92.

Jensen, Nathan and Leonard Wantchekon. 2004. "Resource Wealth and Political Regimes in Africa." *Comparative Political Studies* 37(7):816–841.

Kang, David C. 2002. *Crony Capitalism: Corruption and Development in South Korea and the Philippines*. Cambridge university press.

Kentikelenis, Alexander E., Thomas H. Stubbs and Lawrence P. King. 2016. "IMF Conditionality and Development Policy Space, 1985–2014." *Review of International Political Economy* 23(4):543–582.

Kubinec, Robert and Sonal S Pandya. 2019. "Political Economy of Offshore Capital Flows: Evidence from the Panama Papers." working paper presented at IPES 2019.

Laeven, Luc and Fabián Valencia. 2013. "Systemic Banking Crises Database." *IMF Economic Review* 61:225 – 270.

Le, Quan V. and Meenakshi Rishi. 2006. "Corruption and Capital flight: An Empirical Assessment." *International Economic Journal* 20(4):523–540.

Loungani, Prakash and Paolo Mauro. 2001. "Capital flight from Russia." *World Economy* 24(5):689–706.

Mattes, Michaela, Brett Ashley Leeds and Naoko Matsumura. 2016. "Measuring Change in Source of Leader Support: The CHISOLS Dataset." *Journal of Peace Research* 53(2):259–267.

McDowell, Daniel. 2017. "Need for Speed: The Lending Responsiveness of the IMF." *The Review of International Organizations* 12(1):39–73.

Miranda-Agrippino, Silvia and Hélène Rey. 2020. "US Monetary Policy and the Global Financial Cycle." *forthcoming* The Review of Economic Studies.

Moser, Christoph and Jan-Egbert Sturm. 2011. "Explaining IMF lending decisions after the Cold War." *The Review of International Organizations* 6(3-4):307–340.

Ndikumana, Léonce and James K Boyce. 2003. "Public Debts and Private Assets: Explaining Capital Flight from Sub-Saharan African Countries." *World Development* 31(1):107–130.

Ndikumana, Léonce, James K Boyce and Ameth Saloum Ndiaye. 2014. Capital Flight from Africa. In *Capital flight from Africa: Causes, Effects, and Policy Issues*. Oxford University Press pp. 143–171.

Nooruddin, Irfan. 2010. *Coalition Politics and Economic Development: Credibility and the Strength of Weak Governments*. Cambridge University Press.

Nooruddin, Irfan and Joel W. Simmons. 2006. "The Politics of Hard Choices: IMF Programs and Government Spending." *International Organization* 60(4):1001–1033.

Nye, Joseph S. 1967. "Corruption and Political Development: A Cost-Benefit Analysis." *American Political Science Review* 61(2):417–427.

Pepinsky, Thomas B. 2014. "The Politics of Capital Flight in the Global Economic Crisis." *Economics & Politics* 26(3):431–456.

Pond, Amy. 2018. "Financial Liberalization: Stable Autocracies and Constrained Democracies." *Comparative Political Studies* 51(1):105–135.

Powell, Jonathan M and Clayton L Thyne. 2011. "Global Instances of Coups from 1950 to 2010: A New Dataset." *Journal of Peace Research* 48(2):249–259.

Reinsberg, Bernhard. 2015. "Foreign Aid Responses to Political Liberalization." *World Development* 75:46–61.

Reinsberg, Bernhard, Alexander Kentikelenis, Thomas Stubbs and Lawrence King. 2019. "The World System and the Hollowing Out of State Capacity: How Structural Adjustment Programs Affect Bureaucratic Quality in Developing Countries." *American Journal of Sociology* 124(4):1222–1257.

Rickard, Stephanie J. and Teri Caraway. 2019. "International Demands for Austerity: Examining the Impact of the IMF on the Public Sector." *Review of International Organizations* 14(1):35–57.

Ross, Michael L. 2015. "What Have We Learned About the Resource Curse?" *Annual Review of Political Science* 18:239–259.

Scheubel, Beatrice and Livio Stracca. 2019. "What Do We Know About the Global Financial Safety Net? A New Comprehensive Data Set." *Journal of International Money and Finance* 99:102058.

Schneider, Christina and Jennifer Tobin. 2020. "The Political Economy of Bilateral Bailouts." *International Organization* 74(1):1–29.

Shaxson, Nicholas. 2019. "Tackling Tax Havens." *Finance & Development* 56:6–10.

Skrondal, Anders and Sophia Rabe-Hesketh. 2014. "Handling Initial Conditions and Endogenous Covariates in Dynamic/Transition Models for Binary Data with Unobserved Heterogeneity." *Journal of the Royal Statistical Society: Series C: Applied Statistics* pp. 211–237.

Smallwood, Joy. 2005. "Combating the Financing of Terrorism: The Roles of the IMF." *Villanova Law Review* 50:645.

Stone, Randall. 2002. *Lending Credibility: What Would We Like the IMF to Do?* Princeton University Press.

Swedlund, Haley J. 2017. *The Development Dance: How Donors and Recipients Negotiate the Delivery of Foreign Aid*. Cornell University Press.

Teorell, Jan, Stefan Dahlberg, Sren Holmberg, Bo Rothstein, Natalia Alvarado Pachon and Richard Svensson. 2018. "The Quality of Government Standard Dataset." Version Jan 2020.
URL: *http://www.qog.pol.gu.se doi:10.18157/QoGStdJan18*

UNHCR. 2020. UNHCR Statistical Online Population Database. Dataset, United Nations High Commissioner for Refugees.

Vreeland, James Raymond. 2003. "Why do Governments and the IMF Enter into Agreements? Statistically Selected Cases." *International Political Science Review* 24(3):321–343.

WDI. 2020. "World Development Indicators 2020." Dataset.
URL: *http://data.worldbank.org/data-catalog/world-development-indicators*

Winters, Matthew and Gina Martinez. 2015. "The Role of Governance in Determining Foreign Aid Flow Composition." *World Development* 66:516–531.

Wooldridge, Jeffrey M. 2005. "Simple Solutions to the Initial Conditions Problem in Dynamic, Nonlinear Panel Data Models with Unobserved Heterogeneity." *Journal of Applied Econometrics* 20(1):39–54.

World Bank, The. 2019. "World Development Indicators 2019." The World Bank, Washington; D.C.

Zucman, Gabriel. 2015. *The Hidden Wealth of Nations: The Scourge of Tax Havens*. University of Chicago Press.