# Crisis, Intervention and the Politics of Central Bank Independence

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**Abstract**

The United States Federal Reserve became the world's "lender of last resort" during the Global Financial Crisis of 2008, a role it has yet to relinquish. What effect has the globalization of the Fed's jurisdiction had on its legitimacy as an independent, public institution? To answer this question, we develop a theory of institutional legitimacy after domestic institutions expand their reach transnationally—an increasingly common phenomenon in global economic governance. We test our theory using a preregistered survey experiment examining the effect of informational cues on both policy-specific support and institutional trust. We find that policy support is influenced by informational cues concerning the effectiveness and geopolitical implications of transnationalization but is unaffected by potential costs. Alternatively, only procedural cues influence overall institutional trust. Our findings contribute to debates on the popular sources of central bank independence as well as the growing literature on the legitimacy of global governance institutions.

**Word count:** 9,322

# 1 Introduction

The United States Federal Reserve (the Fed) is increasingly a misnomer. When global governance institutions such as the International Monetary Fund (IMF), created to play the role of international lender of last resort, were ill-equipped to do so, the Fed assumed this role during the 2008 Global Financial Crisis (GFC) by injecting nearly $6 trillion into the global financial system through financial arrangements with foreign central banks such as currency swaps. With the expansion of its international operations after the GFC, the Fed has transformed itself from the "lender of last resort" for the United States into an international lender for the globe. While initially portrayed as a limited, crisis-era emergency measure to promote financial stability, the Fed has continued to use these instruments since the crisis, even when global financial conditions present few if any major risks to the US.

The Fed's ability to act depends on its independence, which in turns depends on public trust. But the crisis has challenged popular trust in the institution (Roth, 2009; Tucker, 2018; Schnabel, 2021). While Fed officials and others offer legal and economic justifications for the Fed's international operations, these justifications elide deeper political concerns and skepticism.[1] Critics have called out the Fed for acting beyond its mandate, with no political accountability or transparency in a manner that is "troublesome in a democracy," and for "bailing out" foreign banks outside of its US jurisdiction (O'Driscoll, 2011). Others point to the risks of these programs to the US economy, or for exacerbating concerns of moral hazard by reducing incentives to reform the banking system (Council on Foreign Relations, N.d.). While the independence of the Fed has a solid foundation, Congress has a history of intervening when public trust wanes (Binder and Spindel, 2017). Indeed, as Balls, Howat and Stansbury (2018) note, Congress only narrowly rejected Sen Rand Paul's "Audit the Fed" plan which would curb the independence of the Fed. To prevent such encroachments on its independence, the Fed itself actively works to maintain high levels of public trust (Powell,

[1] For a variety of conflicting legal analyses of the Fed's authority in this arena see Dudley (2012*b*); Baker (2013); Perry (2020)

2018). Still, we know little of what about the Fed's practices influences public support for its policies and popular trust in the institution in the first place.

Given the backlash against the Fed's foreign lending during the crisis, we ask, have the Fed's international lending activities put public trust in the institution at risk? We answer this question through a pre-registered survey experiment in which we provide informational cues to respondents concerning various aspects of the Fed's globalization of its jurisdiction.[2] We examine the effect of information about the Fed's international lending on support for the policy itself and overall trust in Fed as an institution. Our survey also tests whether learning of the geopolitical implications for these practices (i.e. to preserve the US dollar's financial hegemony against the rise of China) influences policy support or institutional trust. We find that policy support is influenced by informational cues concerning the effectiveness and geopolitical implications of international lending but is unaffected by potential costs. Instead, we find that only procedural cues influence overall institutional trust.

Our findings contribute to two broad debates concerning, first, central bank independence (CBI) and, second, the politics of domestic institutions in global economic governance. Early scholarship focused on the rationale of CBI to insulate monetary policy from inflationary political pressures ignores questions of legitimacy and anti-democratic consequences of this institutional choice (McNamara, 2002), even though the CBI relies on the public's acceptance of its legitimacy and authority (Lockwood, 2016; Tucker, 2018). More recent studies evaluate the impact of domestic policy effectiveness (Wälti, 2012; Ehrmann, Soudan and Stracca, 2013) and transparency, and accountability (van der Cruijsen and Eijffinger, 2010; Kaltenhaler, Anderson and Miller, 2010) on public trust in independent central banks. However, these studies set aside the wider range of central bank activities that have come under fire since the crisis, and we know of no studies that identify the impact of central banks' international policies on public trust in these institutions. We therefore focus on evaluating policy support and public trust in the Fed's foreign operations to maintain global liquidity

[2]Preregistration materials can be found at https://osf.io/axq5c/.

during the crisis, also focusing on its second-order consequences of reaffirming US primacy in global finance (Helleiner, 2014), while expanding its mandate at its own discretion.

Second, our findings contribute to the growing literature on the legitimacy of global governance institutions (Hooghe, Lenz and Marks, 2019; Hurd, 2019) as well as the growing backlash against international institutions (Colantone and Stanig, 2018). These questions engendered a series of studies on the legitimacy of international organizations (IOs) (Dellmuth and Tallberg, 2015; Dellmuth, Scholte and Tallberg, 2019) as well as the effects of international organizations on domestic politics (Anderson, Bernauer and Kachi, 2019; Madsen et al., 2021). We present a new angle on this question, however. While much of the literature has thus far focused on international institutions, we shift our focus instead onto an increasingly important source of authority in global governance: namely, *domestic* institutions that—through both transnational cooperation and expansive jurisdictional claims—extend their domestic authorities abroad (Slaughter, 2002; Farrell and Newman, 2014). Indeed, the crisis highlighted the pivotal role played by central banks, especially the US Federal Reserve, in global financial governance. We argue that the Fed's power to influence economies overseas has blurred its jurisdictional boundaries. We suggest that the legitimacy of such arrangements depends crucially on domestic public support for these global governance initiatives at home. While some have examined the effects of transnationalization of domestic authority on behavior or political outcomes abroad (e.g., Christensen, Maffett and Rauter, Forthcoming; Kalyanpur and Newman, 2019), we know little about the second-order effects of the transnationalization of domestic authority on policy support and institutional legitimacy that is key to maintaining this new and increasingly prominent form of global governance.

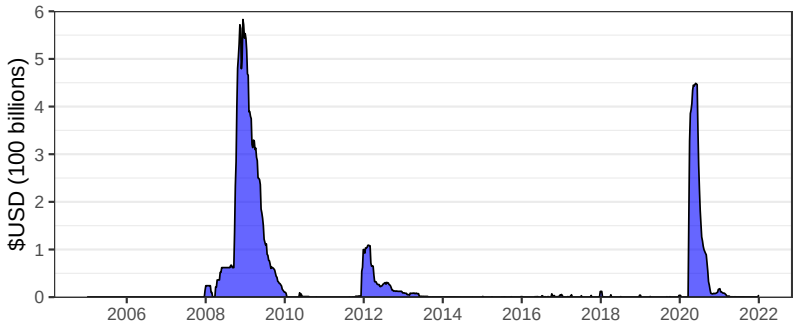
The structure of this paper is as follows. In the next section, we elaborate on the Fed's position as an acutely powerful domestic institution in global governance. In Section 3, we evaluate the scholarship on CBI, trust and institutional legitimacy. Based on these discus-

sions, we set out our hypotheses in Section 4. In Section 5, we describe our survey design and question wording. And finally, in Section 6, we present our results before concluding.

## 2 The Fed & Global Economic Governance

As the financial system has grown increasingly interconnected and complex, policymakers across the world look for new solutions to stabilize global markets under stress. In the mid-twentieth century, the IMF and the World Bank were created to maintain financial stability. However, in the early 1960s, the Fed used instruments known as central bank swap lines that played a crucial role in crisis management (Bordo, Humpage and Schwartz, 2015; McCauley and Schenk, 2020). Swaps made a more permanent return in 2007, with the onset of the crisis. Between 2008-2010, the Fed injected almost $6 trillion into the global financial system through swaps with foreign central banks, effectively assuming the role of an international lender of last resort, by providing dollar liquidity to foreign banking systems via transnational central bank lending arrangements—currency swap lines. Although these swaps generally peak in crisis conditions (see figure 1), on closer examination, we see a more sustained use, albeit in smaller amounts through the 2010s. Foreign central banks have been quietly tapping into these lines to sustain their financial systems in the last decade. In effect, the Fed has not relinquished this role of banker to the world, nor does it save this role for crises only; it now uses these emergency powers in new ways and swaps have evolved into a key feature of the global financial safety net.

Given the dollar's international reserve currency status, it makes sense that the Fed plays the role of an international lender of last resort. But the swap program in its current form is not without issues, and its creation has been controversial. These international operations incited criticisms of the program's legal basis, and for its domestic costs and economic risks, from all sides of the political spectrum. Even those who agree with the Fed's need to play the role of an international lender of last resort have expressed concerns with the potential risks




**Note:** Weekly average value of outstanding swap lines between the Federal Reserve and foreign central banks. Data retrieved from FRED, Federal Reserve Bank of St. Louis.

Figure 1: Weekly Value of the Fed's Liquidity Swap Lines

and public costs associated with these arrangements in their current form (Baker, 2013). Baker also notes that the Fed also does not rely on any emergency legal or Congressional authority to activate these lines, but instead on "interpretation of statutory provisions in the Federal Reserve Act dating from the Act's enactment in 1913. These provisions are primarily focused on market activities with private actors, but the current swap lines are with public actors" (Baker, 2013, 610). Obstfeld (2009, 44) notes that the expansion of these facilities in the crisis represented an "unprecedented delegation of the Fed's powers to foreign policymakers." Even stronger accusations have been made by O'Driscoll (2011), a former Dallas Fed official, for bailing out the European economy, or for overstepping and expanding its mandate with no legal basis (Perry, 2020).

In response, the Fed has justified the use of these swaps as critical to protecting the US economy (Dudley, 2012*a*,*b*). Officials at the New York Fed, the main institution orchestrating the arrangement of these lines, emphasized that swaps play a key role in insulating US markets from financial pressures in Europe and for ensuring the supply of credit to American households and businesses. The Fed emphasized that these instruments successfully protect these financial interests "while fully protecting the taxpayer" and that their current use is consistent with the Federal Reserve's mandated responsibility to provide liquidity to the financial system in times of stress in order to shield the U.S. economy" (Dudley, 2012*b*).

Notably, these crisis-time efforts have expanded the reach of the Fed's direct influence overseas. Fleming and Klagge (2010) at the New York Fed portray the swap lines as an extension of the Term Auction Facility (TAF), part of the Fed's domestic lender of last resort program. These interventions "stood out for their size, scope, and departure from past precedents" (Jacobs and King, 2016, 31), and the radical expansion of its jurisdiction outside the US is politically controversial. By acting as a de facto international lender of last resort, the Fed now embodies the unique role identified in Farrell and Newman's (2014) *new interdependence approach*, as a domestic institution with an increasing ability to govern interdependent economic relations and influence policy making in foreign jurisdictions. Others even suggest that through its swap program, the Fed engages in geopolitics to support US allies (Sahasrabuddhe, 2019), or to exert leverage over states to influence economic policy overseas (Vaughn, 2020). In fact, the geopolitics of central bank swaps is not limited to the Fed: a key element of China's campaign to promote the international use of the RMB is the People's Bank of China's swap network (Liao and McDowell, 2015).

The Fed is keenly aware of the domestic concerns among both policymakers and the public of its global activism. In a Congressional hearing in July 2009, when Ben Bernanke, then chair of the Fed's Board of Governors, was questioned about who received the money from the swaps, he acknowledged that he did not know (Baker, 2013; Perry, 2020). Both during and since the crisis, the Fed indicated its concerns over its diminishing public support and has taking active steps to enhance its legitimacy and popular trust in the institution. In a 2010 discussion on reopening the swap lines with a few advanced economy central banks, the Fed's Director of Communications, Michelle Smith, said to the Federal Open Markets Committee (FOMC), "If we could somehow say that we're doing this in some newer, more transparent, quicker way, I think that would help us to mitigate some of the political risk," going on to note, "You saw the kinds of things that members of the Congress said in some of the hearings. Anything that we're keeping secret is just going to fuel their speculation" (FOMC, 2010, 21-22). Even about its specific policies, Bernanke (2013) noted, "Ultimately,

the legitimacy of our policies rests on the understanding and support of the broader American public, whose interests we are working to serve."

Since the crisis, the Fed has taken an active stance in repairing its reputation, to be more open and transparent amid threats to squash its independence. As Binder and Spindel (2017) suggest, these heightened pressures from Congress have forced the Fed to become more transparent about its unconventional practices. The growing list of responsibilities and activities undertaken by central banks, together with their expanding balance sheets has created a strong demand for central banks "to better explain what they do, how, and why" (Adrian, Shabisgh and Khan, 2020). In order to protect their necessary independence, central banks should strengthen their accountability through greater transparency around their policies, "a vital component allowing independent central banks to prove their effectiveness and public accountability" (Adrian and Khan, 2019).

But despite the unique position the Fed occupies today and related concerns around its foreign lending, we have little sense of whether the globalization of the its jurisdiction shapes public trust in the central bank. Specifically, we have a limited understanding of the public's perception towards the Fed's international operations, despite the scale of these programs and the backlash they incited at home. Next, we evaluate the existing literature on central bank independence, public trust and the legitimacy of both domestic and global governance institutions or IOs. We find that this literature overlooks the role of key domestic institutions such as the Federal Reserve as a global governance actor and contend that such institutions are distinct to both domestic and international institutions because the legitimacy of such globalized domestic institutions relies on the support of its domestic constituents even though the effects of its policies are felt at home and abroad. We thus situate our focus on the Fed's international policies within this discussion, given its unique position as a key institution in the global financial governance system, but with a domestic mandate.

# 3 Trust and Legitimacy of Independent Institutions

Many modern central banks today are public but independent agencies, delegated to pursue specified public policy goals, while "insulated from short-term political considerations, influence, or direction" (Tucker, 2018, 11). Delegation to independent agencies may be a better strategy when a) the goal is specified; b) society's preferences are stable; c) when the agency cannot credibly commit to sticking to a policy regime; and d) when there are not significant distributional consequences (Alesina and Tabellini, 2007, 2008). Tucker (2018, 101) also adds that the agency's policy instruments "should be confidently expected to work. (Where there is radical uncertainty about the costs and benefits of deploying an instrument, having insulated technocrats experiment is less acceptable than politicians taking risks, because the regime can hardly be one of credible commitment and because the technocrat's choices might entail unexpected distributional consequences that they cannot remedy.)" Meeting these criteria affords central banks their legitimacy, which Tucker (2018) defines as broad public acceptance of the authority of state institutions.

Legitimacy in democratic governance is thus evaluative and relies on *public trust* in policy-making institutions (Kaltenhaler, Anderson and Miller, 2010; Tucker, 2018). Several studies have found that public trust "is essential for the successful conduct and implementation of monetary policy" (Schnabel, 2021). A lack of public trust can undermine the authority and legitimacy of an institution, and this is especially pertinent for independent agencies, such as central banks. In that vein, Dietsch (2020) highlights the distributional impact of the post-2007 unconventional monetary policies to argue that the independence of central banks can in fact undermine their legitimacy. Similarly, Balls, Howat and Stansbury (2018) highlight Adam Posen's observation that "too much discretion over too many instruments is likely to lead to distrust about motives." Thus, the impact central banks' expanding mandates and discretion through these new and unconventional crisis policies on public trust has important implications for the legitimacy and independence of central banks today.

The legitimacy of political institutions has long been of interest in political science. This research has identified key normative sources of institutional legitimacy based on two broad aspects of institutional governance—performance (or effectiveness, or substantive concerns) or procedure—also referred to as input and output legitimacy (Scharpf, 1999). Procedural concerns are premised on the notion that institutional processes are important for legitimacy. In line with Scharpf's (1999) view that democratic governance qualities—representation, transparency and accountability—foster institutional legitimacy, Dellmuth, Scholte and Tallberg (2019, 630) suggest that the support for an institution's exercise of authority is based on "how it is set up and operates." Performance, or output legitimacy is premised on the idea that perceptions of legitimacy and institutional trust are rooted in "audience evaluations of the governing institution's outcomes" (Dellmuth, Scholte and Tallberg, 2019, 631). Institutions can gain legitimacy if their audience sees it successfully provide problem-solving outcomes, and lose it when the audience believes the institution has failed to do so.

In the context of domestic institutions, a growing literature has emerged along these lines to understand public trust and central bank legitimacy. These studies have focused primarily on decline of public trust in central banks since the 2008 Global Financial Crisis (Wälti, 2012). In light of these trends, Roth (2009) argues that this decline in trust threatens the democratic legitimacy of these independent governance institution. Several studies have found that this decline in trust is derived from central banks' poor performance indicators. For instance, Wälti (2012) finds that not only inflation and unemployment, but rising sovereign bond yields and economic distress have led to a decrease in trust in the European Central Bank (ECB). Ehrmann, Soudan and Stracca (2013) also find that performance and output concerns have contributed to declining trust in the ECB, namely, the large and sudden economic contraction following the crisis, a generalized loss of trust in European political institutions, and because the ECB may be viewed as responsible for bailing out banks.

On the other hand, van der Cruijsen and Eijffinger (2010) find in a survey of Dutch house-

holds, that greater transparency is positively correlated with trust in the ECB, but also that the public has little knowledge of its central bank and many respondents have a weak desire to be better informed about it. Kaltenhaler, Anderson and Miller (2010) evaluate whether citizen's trust their institutions because they like their policies or because they think they can control the institution. They find that both concerns around accountability, particularly the ability to influence policy-making and access information, and policy outcomes shape public support for the ECB. Like van der Cruijsen and Eijffinger (2010), they find that a lack of knowledge about the ECB feeds distrust in the institution. In a survey of German households, Hayo and Neuenkirch (2014) find that knowledge and a desire to be informed about the ECB foster citizens' trust in the central bank.

Despite a similar decline in trust in the Fed since the crisis, we know little of what about the Fed's policies and practices shape public trust in the institution. Indeed, similar concerns to those in Europe—inflation, unemployment, bank bailouts, or not preventing the crisis in the first place–all signalling the loss of the Fed's output legitimacy, are apparent. However, others point to the Fed's lack of *input* legitimacy (Binder and Spindel, 2017; Jacobs and King, 2016). The secrecy surrounding the Fed's crisis activities and expanding its discretion to undertake unilateral actions has undermined its accountability and trust in the Fed on which its legitimacy depends. Even Fed Officials, including the current Chair of the Board of Governors, Jerome Powell, have acknowledged this concern.

Powell (2018) notes that central to the Fed's financial stability and monetary policy mandates is transparency and accountability, and the Fed now works "hard to explain them to the public." Yet, given the public backlash to the Fed's crisis policies, we know little of the American public's support for these policies and how they shape popular trust in its central bank. Because this decline in trust was in large part driven by the crisis of 2008, we seek to understand the extent to which the declining trust in the Fed is derived from its crisis policies. Given the Fed's unique position as a domestic institution that has evolved into a

pivotal actor in the global financial governance framework, we focus on trust in the Fed and support for its international lending policies during the crisis. As the reach of IOs has grown several fold in response to a growing number of transnational policy challenges, scholars have turned their attention to evaluating public trust and support in global governance institutions (Zürn, 2018; Hooghe et al., 2017). Given the Fed's unique role as a domestic institution that is also a pivotal global governance institution, these studies also inform our question of public trust in and support for the Fed's international operations.

Tallberg and Zürn (2019) distinguish sources of IO legitimacy between procedures for decision-making and performance in undertaking effective policies. Dellmuth, Scholte and Tallberg (2019) find that both procedure- and performance-based evaluations of IO policy-making matter for legitimacy perceptions among the public. Similarly, Anderson, Bernauer and Kachi (2019) find that in the context of climate governance, it is neither the shift of authority to the international level nor the implementation of international policy that affect public perceptions of the legitimacy of global governance institutions. Rather, per Scharpf (1999) and Dellmuth, Scholte and Tallberg (2019), even at the IO level, legitimacy perceptions are shaped by performance and procedure qualities. However, Dellmuth, Scholte and Tallberg (2019) do find that institutions with farther-reaching authority and pursing more contested goals, such as the IMF, must meet more demanding legitimacy standards than climate or security issues. Economic governance IOs also tend to incite more criticisms of injustices, policy ineffectiveness and democratic deficit.

Dellmuth and Tallberg (2015) also question the sources of the social legitimacy of IOs: the acceptance of their right to rule, and what drives citizen's perception towards them. Focusing on the United Nations, they test whether support for IOs is derived from representing popular interests of the citizenry, evaluations of the IO's contributions toward individual and general welfare, or whether these perceptions are rooted in and extrapolated from citizens' views of domestic institutions. The author's find little evidence in support of interest representation

as a source of the UN's legitimacy, thereby arguing that more democratic procedures need not lead to greater legitimacy. Instead, the social legitimacy of the UN is rooted in its capacity to deliver and the public's general confidence in political institutions.

A key feature of these governance institutions is that these studies focus on IOs defined as formal, multilateral, and bureaucratic arrangements, and a central concern underlying these studies is of widespread support across participating nations, taking into consideration institutions' voting structures and representation. However, adopting Anderson, Bernauer and Kachi's (2019) broader conceptualization of global governance institutions to include private, bilateral and informal pacts, certain central banks also fit this role in varying degrees, and thus face unique legitimacy concerns. For instance, the European Central Bank is essentially a supranational central bank, with a cross-border reach and a "domestic" mandate in the euro area. Jones (2009) identifies a decline in trust in the ECB, which is compounded by concerns around the EU's democratic deficit: that Europe has neither a coherent polity nor a contested leadership, and thus cannot be democratically legitimate. However, Jones finds that these debates overlook the notion that legitimacy should be based on what a policy should produce, not who evaluates it. Focusing on input concerns could mean that "that no matter how successful the ECB is in responding to moments of crisis, public opinion may begin to reflect the perception that it has failed" (Jones, 2009, 1085); this focus has influenced how the ECB is treated by national politicians and thus violates its independence.

At the same time, Högenauer and Howarth (2019) point out that during the crisis, the ECB, not unlike the Fed, took on range on activities that expanded the interpretation of its narrow mandate and engaged in redistributive policies that undermined the provisions of the Maastricht Treaty. They argue that "the ECB's nonconventional monetary policies and the perception thereof increasingly undermined the traditional basis of its legitimacy: the clarity and transparency of the central bank's mandate; the redistributive implications of its policies; and the non-politicization of its policy-making" (2019, 82). As such, they call

for greater efforts to improve the accountability of the ECB to the European and national parliaments in order to prepare it for the next crisis outbreak.

The Fed's scaled up version of toeing this line between its domestic mandate and its transnational reach is even more complex. The bilateral swap network fills a similar position of a global governance institution as defined by Anderson, Bernauer and Kachi (2019) and is one of the Fed's numerous "unconventional" tools deployed during the crisis. It varies from most IOs in that it's consensus rules and other procedures are domestic, but swap agreements require the support of its bilateral counterparty. The "implementation" of these agreements essentially occurs overseas, where the counterparty is seen to assume the risks of borrowing once the Fed has agreed to a swap. The Fed also differs from most global governance institutions in that although the impact of its policies is transnational, its primary audience is the American public, and concerns around these policies are felt at home. Thus, whether legitimacy concerns are derived from procedure or performance, the legitimacy of the institution and its policies depends on the the American public.

# 4 Hypotheses

Drawing on the discussions above, while keeping in mind the our narrow focus on the Fed's international policies, we generate several hypothesis to identify the sources of trust in the Fed. We hypothesize that the sources of opposition towards or trust in the Fed, in response to its foreign lending, are again procedure- and performance-based. We also explore whether geopolitical or defensive motivations to protect US financial hegemony against the rise of China, might engender greater support for these policies and trust in the Fed.

## 4.1 Risk

Our first hypothesis is based in Tucker's addendum to the Alesina-Tabellini model for delegation of policy authority to independent central banks: that their policies should be "confi-

dently expected to work" and the potential unacceptability of independent agencies deploying instruments where there is uncertainty about its costs and benefits. In addition to admitting that he did not know which banks benefits from the swap lines, Fed Chair, Ben Bernanke, also did not know ahead of time, whether these instruments would work: "'this may not work. I don't want to oversell it,' [Bernanke] told the FOMC. If we do it, we are just going to have to give it a try and see what happens"' (Bernanke, 2015).

The uncertainty around the unconventional policies deployed during the crisis challenges a core tenet of delegating authority to an independent agency. While the Federal Reserve further mitigates this risk by denominating its agreements in US dollars, it nevertheless bears the risk of the recipient country's currency collapsing (Allen and Moessner, 2010). Such a collapse would decrease the value of the collateral held by the Fed and increase the odds of the recipient bank being unable to pay back the Fed, leading us to our first hypothesis:

> **Hypothesis 1a (Risk):** When informed about the domestic costs and risks of the Fed's foreign lending practices to the US economy, the public is less likely to trust the Federal Reserve.

## 4.2 Moral Hazard

Our second hypothesis is grounded in general moral hazard concerns around lending practices. Bevilacqua et al. (2021) and Tran (2020) argue that the COVID-19 central bank response has strengthened the Fed's global role, possibly at the cost of increased moral hazard, thus further reinforcing the global role of the Fed. This echoes concerns voiced in the wake of the Fed's announcements of its domestic and international lending programs during the crisis, viewed by some as bailouts. Scholars and even some Fed officials feared that the swap lines extended overseas removes incentives for foreign banks to guard against the risks of the reckless practices that led to the crisis (FOMC, 2008; Vaughn, 2020). The Fed's swap lines, while effective, required no policy conditionality or reform away from pre-crisis practices, raising concerns for the longer-term effectiveness of central bank policy and their ability

to prevent future crisis, which generates our second hypothesis on policy effectiveness:

> **Hypothesis 1b (Moral Hazard):** When informed about the moral hazard concerns of the Fed's foreign lending practices, the public is less likely to trust the Federal Reserve.

## 4.3 Democratic Accountability

Our third hypothesis turns to evaluate how procedural concerns affect public perceptions of central banks. We draw on the discussions above on that shows that the democratic legitimacy of political institutions is derived from transparency and accountability. Concerns ranging from the lack of accountability to the questionable legal basis of the Fed's swap lines indicate that policymakers and the public are troubled by the undemocratic nature of the Fed's crisis practices. These debates on the role of accountability and transparency in fostering public trust in institutions inform our third hypothesis:

> **Hypothesis 1c (Accountability):** When informed about the lack of transparency and undemocratic nature of the Fed's foreign lending practices, the public is less likely to trust the Federal Reserve.

## 4.4 Performance versus Procedure

We also seek to identify whether policy support and trust in the Fed are rooted more in performance or procedural concerns. We draw on the global governance backlash literature, which identify IOs' lack of representation and accountability, and the domestic backlash against the Fed for acting without any transparency and over-stepping its mandate. We expect that among these three treatments, given concerns around the contradictions between CBI and democratic governance, the magnitude of the effect of the Accountability treatment on low support in the Fed's international activities and lower trust in the Fed will be greater than among respondents who receive the Risk and Moral Hazard treatments:

> **Hypothesis 1d (Procedural Concerns):** The negative effect of procedural

concerns (Accountability) on public trust will be great than that of the substantive concerns (Risk and Moral Hazard.)

## 4.5 Geopolitics and RMB Internationalization

Finally, the Fed's pivotal role in the global financial system emerges from the US dollar's position as a global reserve currency. Since the crisis, however, new concerns have emerged regarding the decline of dollar hegemony, and more so from the internationalization from China's RMB . The crisis generated a new debate about the resilience of the United States as a global financial leader, and the strength of the US dollar as a global reserve currency. We therefore expand on our question of how exposure to the Fed's international role and practices, trust and support for the Fed changes when situated in a context of geopolitical rivalry and US decline.

In the last decade, the People's Bank of China (PBOC) has extensively deployed bilateral currency swaps denominated in its local currency, renminbi (RMB). These policies directly support China's policy of increasing the RMB's international use in its efforts to enhance its currency's power, and reduce its dependence on the US and the dollar. While these agreements remain relatively small, this swap network has incorporated several key US economic allies, including Canada and the United Kingdom, and US rivals, such as Russia. Taking into consideration the growing tensions between the US and China, we explore the question of whether this expected lack of public support for the Fed's foreign lending may be curbed when the public is exposed to the geopolitical motivations for these activities, to secure US financial hegemony against the threat of China's growing economic strength. We also expect that the magnitude of this support for the Fed's international practices will be greater for respondents who express more nationalistic sentiments:

> **Hypothesis 2 (China):** Respondents will report increased trust in the Federal Reserve when informed about the role of the Fed's foreign lending practices in upholding the US dollar's leadership against the rise of China.

**Hypothesis 2a (Heterogeneity: nationalism):** More nationalistic respondents will trust the Fed more on receiving the China treatment than those with less nationalistic sentiment (i.e. the marginal effect of the China treatment will increase with increases in a respondents nationalistic sentiment.)

# 5 Data

To test these hypotheses we conducted a preregistered survey experiment on a nationally representative sample of United States adults using the Lucid Theorem platform. We surveyed roughly 4,200 respondents in early February 2022. In this section, we describe the text-based treatments employed in the survey. We begin by describing our control condition before discussing the two treatment arms—labelled Policy and Geopolitical arms—designed to evaluate Hypotheses 1a-d and Hypotheses 2a and b, respectively, and the wording of our outcome questions on policy support and institutional trust.

## 5.1 Control Condition

All respondents are first given a brief paragraph explaining what the Federal Reserve is and does.[3] On the next page, all respondents are then shown the following text:

> Since the financial crisis in 2008, the Federal Reserve has lent billions of dollars to foreign central banks. Some experts say these activities are necessary to stabilize global financial markets.

Those in the control condition are only shown this text, all other treatments are appended to this sentence. This statement was designed to provide a simple overview of the Fed's foreign lending activities, its scale along with the Fed's most common justification for the policy. This was done in order to present text similar to what respondents might see written about the Fed's policies in popular media. For that reason, we chose to include the Fed's standard justification for its actions (i.e. promoting financial stability) within the control

[3]For the full text see Appendix A.

condition.[4] This way we do not present respondents with criticisms out of context from the Fed's own messaging. That is, we are estimating the effect of *additional* information about the Fed's international operations when set against the Fed's standard messaging.

## 5.2 Policy Treatment Arm

We randomly assigned the remaining three fourths of the sample to one of three treatment conditions. In the first treatment condition, we treat respondents with information about the potential for domestic costs associated with global governance (Hypothesis 1a). In the case of central bank liquidity swaps, these domestic costs come from the risk of counterparty default (Allen and Moessner, 2010). Respondents assigned to this treatment condition will be shown the following sentence immediately following the control condition:

> **Risk treatment:** Other experts have expressed concerns that the Fed is taking on too much risk by lending so much money to foreign governments.

To probe respondents' sensitivity to concerns about the effectiveness of the Fed as a global governance actor (Hypothesis 1b), we present criticisms regarding the unconditionally of swaps (unlike other kinds of lending such as from the IMF) and the potential for creating a moral hazard. We modelled our text partly on a widely-cited op-ed published in the *Wall Street Journal*, in which Gerald O'Driscoll, a former vice-president of the Federal Reserve Bank of Dallas, criticized the crisis-era swap agreements for creating a moral hazard. He wrote, "No matter the legalistic interpretation, the Fed is working through the ECB, bailing out European banks and, indirectly, spendthrift European governments."[5] Our treatment condition reads as follows:

[4] See an article called "What Are Fed Swap Lines and What Do They Do?" from the *Wall Street Journal*, which notes in its lede that "The Federal Reserve moved in coordinated action with foreign central banks this morning in order to provide a pressure-release valve for funding markets without exposing the U.S. central bank to much risk." Or this a letter by the President of the Federal Reserve Bank of New York responding to an op-ed critical of the Fed, "Their [i.e. swaps] current use is consistent with the Federal Reserve's mandated responsibility to provide liquidity to the financial system in times of stress in order to shield the U.S. economy, to the extent possible, from the severe effects of financial instability, regardless of its source." see https://www.newyorkfed.org/newsevents/statements/2012/0105_2012

[5] https://www.wsj.com/articles/SB10001424052970204464404577118682763082876

> **Moral Hazard treatment:** Other experts say that these activities bail out foreign governments without requiring them to change the economic policies that led to the crisis.

Our last policy-oriented treatment does not concern the effect of the policy itself but instead emphasizes procedural concerns (Hypothesis 1c), namely the non-transparent and undemocratic character of the Fed's foreign lending operations. This was a common criticism of the Fed's handling of the crisis and its swap program in particular. Indeed, it is a long-standing criticism against many elements of the transnational regulation of international finance (Porter, 2001). And the concern is not purely academic, either. Take, for example, a 2009 Congressional hearing concerning the Fed's foreign lending activities during the GFC. In a widely-publicized and heated exchange, Representative Alan Grayson, Democrat from Florida, asked Ben Bernanke, then Chair of the Fed: "Do you think its consistent with the spirit of that provision of the Constitution for a group like the FMOC [sic] to hand out a half trillion dollars to foreigners without any action by this Congress?" Our Accountability treatment reads as follows:

> **Accountability treatment:** Other experts say that the Fed's international operations are undemocratic because they lack transparency and do not require Congress to approve them.

## 5.3 Geopolitical Treatment Arm

Our final treatment arm is assigned independently of the Policy treatment arm. We refer to this treatment arm as the Geopolitical treatment arm as it is designed to cue respondents to the potential geopolitical consequences of the Fed's foreign lending operations. We constructed this treatment condition as a separate treatment arm on half (versus one fourth) of the sample in order to increase the statistical power of our design as we planned to analyze the interaction between this treatment and the Nationalism Index.

We prime respondents to the geopolitical benefits of the US swap lines by noting their

| | $\text{Control}_{\text{Pol.}}$ | Accountability | Moral Hazard | Risk | $\text{N}_{\text{Geo.}}$ |
|---|---|---|---|---|---|
| $\text{Control}_{\text{Geo.}}$ | 410 | 391 | 379 | 414 | 1,594 |
| China | 417 | 422 | 393 | 394 | 1,626 |
| $\text{N}_{\text{Pol.}}$ | 827 | 813 | 772 | 808 | 3,220 |

Table 1: Overview of Treatment Assignment

ability to support the US Dollar's role as the world's preeminent currency for sovereign reserves and conducting international trade against the growth of the China Renminbi.[6] The text reads as follows:

> **China treatment:** Still others argue that these activities are crucial for preserving the US Dollar's global leadership against the rise of China.

In summary, our design yields 8 distinct treatment blocks. Table 1 provides the number of respondents assigned to each treatment block in the final sample. In the analysis below, we compare respondents in the Policy arm's control group (the column labeled $\text{Control}_{\text{Pol.}}$) against the Accountability, Moral Hazard and Risk columns to evaluate Hypotheses 1a-d. And in the Geopolitical treatment arm, we compare the row in Table 1 that did not receive the China treatment (the row labeled $\text{Control}_{\text{Geo.}}$) against the row that did receive the China treatment to evaluate Hypotheses 2a and b.

## 5.4 Measuring Nationalism

Nationalism has been shown in prior work to predict attitudes towards various international economic issues such as trade (Mayda and Rodrik, 2005; Mutz and Kim, 2017). We use three questions derived from Mutz and Kim (2017) and Brutger and Pond (2021) to measure respondents' level of nationalistic sentiment. Specifically, we ask respondents to rate how many things about America make them feel ashamed; how superior the United States is compared to other countries; and whether they would rather be a citizen of the United

[6]Many thanks for Paul Tucker for suggesting this approach.

States versus another country. Each of these questions provides four response options. We assign each response option an integer value from 0 to 3, sum them up and divide by 9 to get a scale running from 0 to 1, with greater values indicating more nationalistic sentiment. The resulting index has a good degree of internal validity (Cronbach's alpha = .66).[7]

## 5.5 Outcome Variables

We include two outcomes variables designed to measure both respondent's support for the individual policy of foreign lending as well as their overall level of trust in the Fed to carry out its mandate. After presenting the treatment text, we ask respondents to indicate:

> Do you support or oppose the Federal Reserve's policy of providing financial assistance to foreign central banks during times of crisis?

Respondents can respond on a six point scale from strongly support to strongly oppose (we did not provide "do not know" or "neither agree nor disagree" options). Following our pre-analysis plan we construct a binary variable equal to 1 if the respondent supports the policy and 0 if they oppose. To measure the level of trust respondents have in the institution itself we then ask respondents to rate their level of trust on a scale from 0 (no trust at all) to 10 (complete trust). This is meant to measure the overall level of trust or confidence the public has in the institution to perform, distinct from any immediate opinion on some specific policy. It is this long-term trust that is tied to respondents overall attitudes towards the viability of the Fed as an independent and autonomous government agency. This wording thus allows us to relate our findings not only to the broad literature on CBI but also studies on institutional trust in other domains (e.g., Voeten, 2013; Dellmuth, Scholte and Tallberg, 2019; Dellmuth and Tallberg, 2021).

For each treatment category (Policy and Geopolitical), we estimate a separate equation

[7]For more information, including the full question wording, see Appendix A.2.

of the following form using OLS:

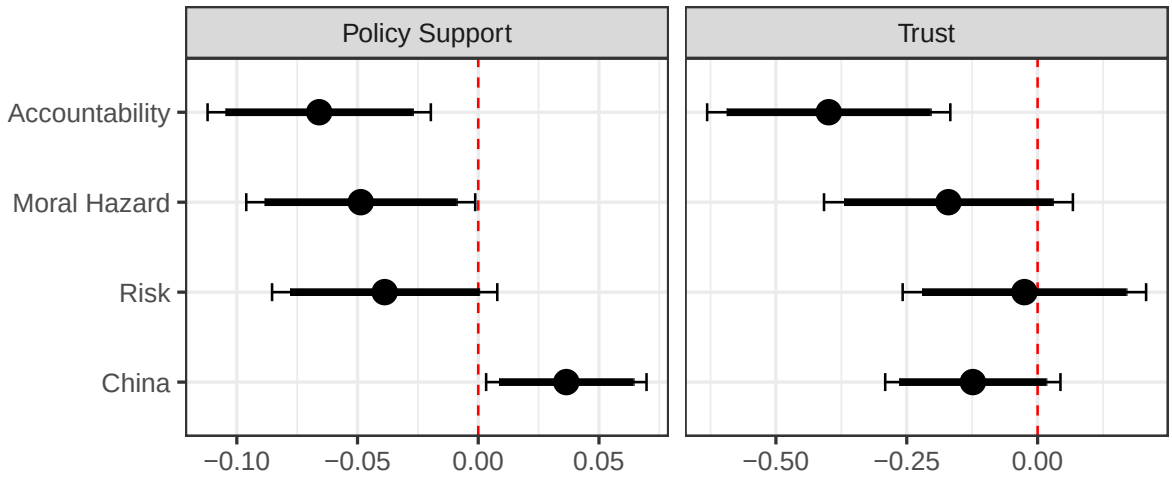
$$Y_i = \alpha + \beta D_i + \theta \mathbf{X}_i + \varepsilon_i$$

$Y_i$ denotes the outcome variable, which is either a binary variable indicating support for the policy or the 11-point trust scale. $D_i$ denotes a vector containing either the 3 Policy treatment indicator variables or the China treatment indicator. We interact $D_i$ with the nationalism index to evaluate Hypothesis 2b. In order to improve the precision of our estimates, we also include a vector of preregistered pre-treatment covariates, denoted $\mathbf{X}_i$.[8] We cluster standard errors at the respondent level. Finally, we drop all respondents who did not pass both attention checks included in the survey (Aronow et al., 2020). Dropping inattentive respondents reduces our sample by roughly 21%, resulting in a final sample of 3,220 respondents.

# 6 Results & Discussion

The average treatment effects are presented in Figure 2. Beginning with the dichotomous Policy Support outcome, we find that all Policy treatments are associated with a decline in support for the Fed's foreign lending operations. Accountability and Moral Hazard exert the largest effects and are both statistically distinguishable from 0. Each is associated with a decline in support for the Fed's foreign lending operations by roughly 6.6 ($se = 0.024, p = .005$) and 4.9 ($se = 0.024, p = .044$) percentage points, respectively, relative to the control. We find a smaller but still negative effect for the Risk treatment, equal to a 3.9 percentage point reduction, though this estimate does not achieve conventional levels

[8]The covariates are gender, partisanship, age, income level, college completion and stock ownership. Given our relatively large sample size, we believe the potential bias introduced from covariate adjustment does not outweigh the efficiency gains from adjustment. To assess the sensitivity of our results to alternative specifications, we report the results from three robustness checks that were not preregistered. Unadjusted estimates can be found in Table D1. Table D2 presents estimates using the estimator proposed by Lin (2013). Table D4 reports results after weighting the data across various factors to US population targets using entropy balancing (Hainmueller, 2012). The results hold across all alternative specifications.

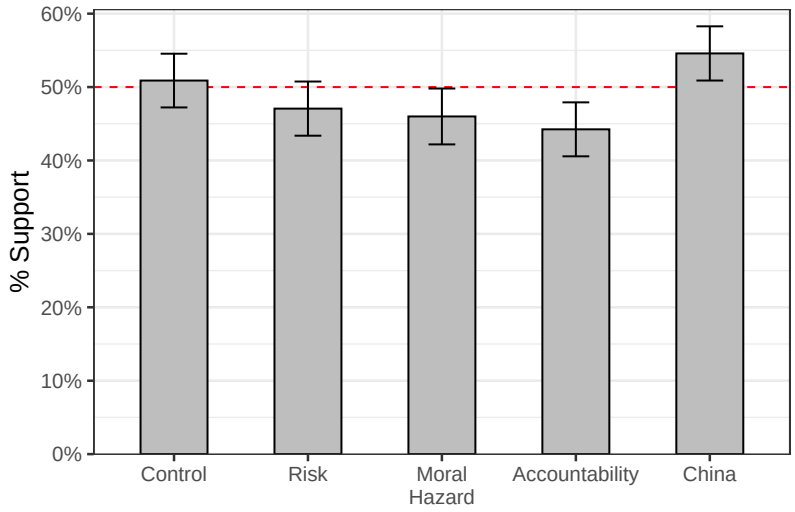



**Note:** This graph plots the average treatment effect across the policy support and institutional trust outcomes. Standard errors are clustered on respondent. Full table of results can be found in Table C1.

Figure 2: Main Results

of statistical significance ($se = 0.024, p = .103$). We also find no evidence for Hypothesis 1d with respect to the Policy support outcome (see the first 2 columns of Table 2). The differences between the Accountability treatment and the Moral Hazard and Risk treatments are on the order of 2-3 percentage points though both estimates are highly statistically insignificant. Finally, for the Geopolitical treatment arm, we find that the China treatment is estimated to increase support for the policy by 3.6 percentage points and does achieve statistically significance ($se = 0.017, p = .031$).

These estimates suggest that respondents do indeed respond negatively to common criticisms of the Fed's lending practices, even when paired with the Fed's standard defense of the practice (i.e. promoting global financial stability). We see the largest effects when the treatments concern either procedural concerns (Accountability treatment) or the potential for the policy to be ineffective or even counter-productive (the Moral Hazard treatment), while finding no effect for the Risk treatment, meant to cue respondents to the potential costs of the policy. We consider three explanations for this null finding. First, respondents may simply find the benefits to outweigh the risks—they support the policy despite being informed of the potential costs. Second, because the risks of the Fed's foreign lending were




**Note:** Predictions calculated using estimates from combined model, see Columns 5 and 6 of Table C1.

Figure 3: Predicted levels of support for the Fed's foreign lending operations

not actualized in the US economy, they may not contribute to the public's evaluation of these policies. Alternatively, it is possible that the Risk treatment is not contributing much to respondents' assessments of the policy due to the large amounts at stake. Perhaps respondents are intuiting the risks involved in these transactions from the information provided in the control condition. If so, this may mitigate any effect of the Risk treatment as the treatment may not be perceived by many respondents as providing additional information. Finally, the increased support found in the China treatment group suggests that respondents find value in the side-benefit of maintaining the Dollar's position as world's preeminent currency.

To illustrate the substantive significance our of findings, we plot the model predictions of level of support for the Fed's foreign lending operations across all treatment groups in Figure 3. In the base Control condition support sits just below 51% with a 95% confidence interval of $[.472, .545]$. The Moral Hazard and Accountability treatments bring the estimates and the upper bounds of their confidence intervals below 50%: 44% $[.406, 0.479]$ and 45% $[.422, .498]$, respectively. Meanwhile, the China treatment effect generates majority support for the policy, even at the lower bound of the 95% confidence interval. We estimate approval to be at around 55% $[0.509, .583]$ for respondents in this treatment condition.

| $H_0: \beta_{\text{Accountability}} - \beta_X = 0$ | | | | |
|---|---|---|---|---|
| | Policy Support | | Trust | |
| $\beta_X$ : | $\beta_{\text{Risk}}$ | $\beta_{\text{Moral Hazard}}$ | $\beta_{\text{Risk}}$ | $\beta_{\text{Moral Hazard}}$ |
| Estimate | −0.027 | −0.017 | −0.374 | −0.229 |
| P-value | 0.254 | 0.476 | 0.002 | 0.063 |

Table 2: Differences between treatment effects

We see a different picture on the institutional trust outcome. Here we only estimate a treatment effect that is statistically distinguishable from 0 for the Accountability treatment. We estimate a reduction in institutional trust of about 0.399 points ($se = 0.118, p = .001$). This comes out to a decline in trust of roughly 15% of a standard deviation. While all other treatment groups also exhibit lower trust scores, none is statistically significant at conventional levels. The Moral Hazard treatment effect is less than half that of the Accountability treatment, with an estimated reduction of 0.17 points ($se = 0.121, p = .160$). As with the Policy Support outcome, the Risk treatment group exhibits the smallest treatment effect, about $-0.025$ points ($se = .119, p = .831$). The China treatment group too is only weakly negative and is insignificant at the 90% level. Moreover, and in support of Hypothesis 1d, we find that the Accountability treatment effect is also significantly larger than the effects of the other treatments (see Table 2). We estimate that the Accountability treatment exerts a further roughly 2-4 tenths of a point reduction relative to the Risk and Moral Hazard treatments. These estimates are significant at the 99% and 90% levels, respectively.

Taken together with the Policy Support estimates, we find that while various informational treatments influence respondents' support for the Fed's foreign lending operations (both positively and negatively), institutional trust is only affected by information pertaining to how the Fed operates (i.e. the Accountability treatment). This suggests that the debates surrounding various Fed policies may—despite how heated these can get—nevertheless be limited to influencing the public's attitudes towards the policies themselves. But when those criticisms reach in areas concerning the governance of the Fed itself—e.g. its lack

of transparency—they risk harming public trust in it as an autonomous and independent government agency.

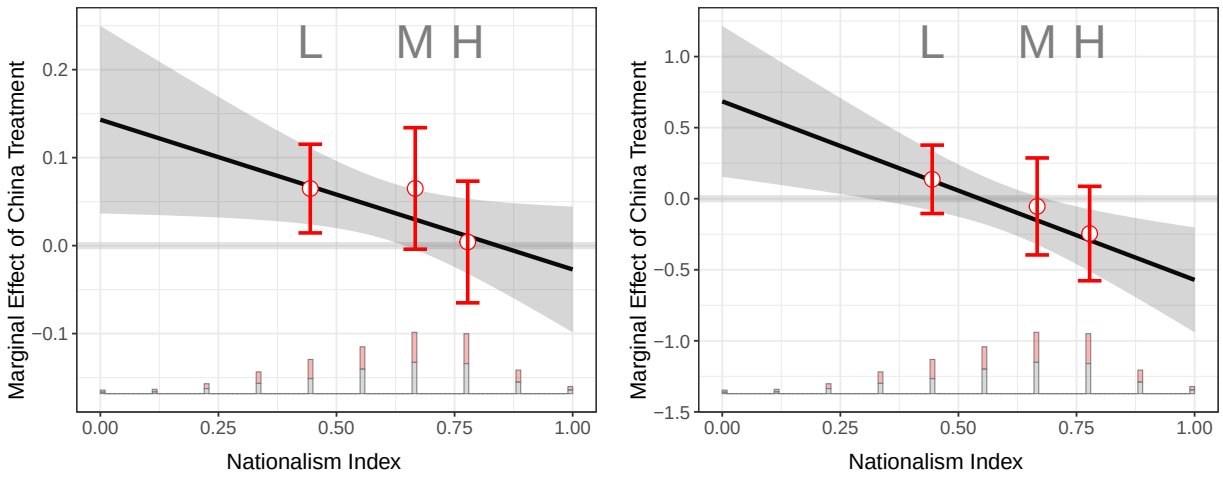
We now turn to our assessment of Hypothesis 2b concerning heterogeneity in the China treatment across varying levels of nationalistic sentiment. In Figure 4 we plot the average marginal effects of the China treatment on Policy Support and Trust, conditional on the level of nationalism index. To test our assumption that the marginal effect of the treatment is a linear function of the moderating variable (nationalism index) we compare these results to those generated using the binning estimator proposed by Hainmueller, Mummolo and Xu (2018).[9] By comparing the linear marginal effect (the black line with 95% confidence intervals represented by the shaded area) to the red, binned estimates (in which the sample is segmented into terciles based on the nationalism index) we see that our models exhibit some nonlinearity. This is particularly true in the Policy Support model (Figure 4a).[10] In general, though, the binning estimator supports substantive interpretations that are similar to the linear-interactive model in each case.

First, while we do find evidence of heterogeneity, it is in the opposite direction of our expectation that more nationalistic respondents would respond more positively to the China treatment than low-nationalism respondents. On the Policy Support outcome (Figure 4a), we instead estimate that the China treatment exerts a larger positive effect on respondents with lower levels of nationalistic sentiment, and no effect on respondents exhibiting higher levels of nationalism.

The null effect for highly nationalistic respondents might be explained by within-group heterogeneity. Nationalism can express itself through either internationalist or isolationist modes. And they may be in conflict in this case. It is possible that respondents are interpreting the Fed's foreign lending operations as being at the expense of domestic economic development. In that case, we would expect the China treatment to lower support for the

[9]Full results for the linear interactive model can be found in Table C2.

[10]Note that the estimates for the lower- and middle-tercile bins are roughly equal equivalent in Figure 4a.




(a) Policy Support (b) Trust

**Note:** These graphs plot the marginal effect of the China treatment conditional on the level of nationalist sentiment. We plot both the standard conditional marginal effects with 95% confidence intervals (black line and shaded region), as well as the results from the binning estimator proposed by Hainmueller, Mummolo and Xu (2018). The binning estimator segments the data based on terciles of the Nationalism Index labelled L(ow), M(edium), and H(igh). At the base of the graph we plot a stacked histogram of the Nationalism Index, shaded by treatment status.

Figure 4: Marginal effect of China treatment conditional on nationalism index

policy. This logic comports with other work identifying a correlation between nationalistic attitudes and trade protectionist attitudes (Mayda and Rodrik, 2005). Non-economic nationalistic attitudes concerning cultural threat from foreign engagement would also be consistent be with this finding (Margalit, 2012). Alternatively, a subset within the high nationalism group may believe that the US's economic well-being is enhanced by the dollar's position as the preeminent reserve currency in the world. These respondents may instead increase their support for the Fed's foreign lending policies upon learning of their geopolitical implications.

We see a similar trend on the Trust outcome measure (Figure 4b). Estimates from our pre-registered linear interactive model suggest that the China treatment increases institutional trust amongst respondents with low nationalism scores, while it decreases trust among the highly nationalistic. We caution against this interpretation, however. While the binning estimator also demonstrates a downward slope that roughly aligns with the linear estimate,

the binned estimates are insignificant at the 95% level in all terciles. This suggests that the estimates of the linear interaction effect are likely driven by respondents at the extremes of the Nationalism index, where common support is weakest. Indeed, the marginal effect of China becomes insignificant at all levels but the next highest (.89) after removing extreme Nationalism values of 0 or 1 (125 responses, or just 4% of the sample).[11] Overall, the evidence supporting a heterogeneous effect of the China treatment with respect to institutional trust is weak.

# 7 Conclusion

The Global Financial Crisis highlighted the unique role and inordinate power and financial capacity of central banks, especially that of the United States Federal Reserve. Central banks undertook new and innovative policies to prevent the global recession from turning into a second Great Depression. In addition to playing its crucial function of lender of last resort in the US, the Fed effectively transformed itself into an *international* lender of last resort through its network of bilateral currency swaps with a select few partner economies. While successful, these efforts incited criticism for their scope and the legitimacy of the Fed's actions. With the crisis emerged new debates about the legitimacy of central banks and the contradictions of central bank independence and democratic governance.

The crisis was also followed by a decline in public trust and support for the Fed in the US, which is detrimental for the legitimacy of independent agencies such as central banks. Despite the outcry following the Fed's unprecedented international lending and cooperation, this is the first study to our knowledge, that explores the impact of these foreign activities on public trust in the Fed. Our study enhances our understanding of the sources of trust in domestic institutions, in particular, those uniquely positioned as pivotal players in global financial governance. Our study makes important contributions to the growing literature on

[11] See Figure D1

the democratic politics of central banking, institutional legitimacy and public trust:

First, when it comes to *policy support* for the Fed's international lending, the public is most concerned when the policy enacted goes against democratic norms, and when it is ineffective or even counter-productive, and less so about the risks of these policies. Our results align with prior studies that both procedure and effectiveness matter for policy support: citizens support policies that adhere to norms of democratic governance and are effective in preventing future crises. We also see more support for policies that are effective in achieving specified goals: learning about the utility of the swap program in preserving US dollar hegemony against the rise of China is associated with increased support for these policies. In general, the public is less likely to support undemocratic and ineffective policies, but are more supportive of policies that do provide benefits such as securing US dollar primacy.

Second, when it comes to popular *trust* in the Fed, public perceptions are shaped primarily by institutional processes: the Fed's acting without transparency and accountability is associated with a decline in trust in the Fed. However, substantive concerns of risk and moral hazard and even the side-effect of preserving US financial hegemony, have little effect on public trust in the institution. This study aligns with survey findings on trust in the EU and resonate with recent studies that raise concerns around the Fed's ability to act with no transparency and accountability and the legitimacy crisis it faces today. In other words, public trust in the Fed, which affords it its legitimacy and its authority to act independently depends on its adherence to democratic principles rather than the effectiveness of the institution. Notably, the influence of effectiveness on trust is equally limited when concerned with the Fed's geopolitical role and its ability to secure the US from the rise of China.

Together, these findings highlight important nuances in public perceptions of independent agencies. Public support for specific policies relies on both democratic process and policy effectiveness. Because the risks of the Fed's foreign lending were not actualized in the US economy, or because they are outweighed by the benefits these policies, the impact of policy

risk on public perceptions is negligible. However, support or opposition to specific policies does not necessarily align with overall trust in the institution. We find that the effect of defying democratic norms far outweighs policy effectiveness in shaping public trust in the institution. Thus, for an independent agency such as the Fed to regain and retain popular trust to uphold its authority and legitimacy, it must act in accordance with principles of accountability and transparency.

To conclude, these findings add important insights to the conversation about central bank legitimacy and democratic governance today. Notably, it raises concerns about the Fed's authority to carry out policies that have been critical to maintaining international financial stability. As we show, these policies, which are implemented overseas, rest on shaky support from the American public at best. In undertaking these policies, the Fed cannot even identify who received the money distributed to foreign central banks during the crisis. Moreover, its lack of accountability has worrying implications for trust in the institution and therefore the legitimacy of its authority and independence.

This study highlights a need for more scholarly work on trust and the legitimacy of domestic institutions that effectively expand their mandates and jurisdictions by adopting policies that exert significant influence outside of their national boundaries. The paper thus draws attention to the predicament of global financial governance, which increasingly relies on the inordinate authority of one independent *national* central bank, accountable to a *national* public, that nonetheless plays a pivotal leadership role in *international* financial governance. However, it is apparent that for assuming this role and doing so in contradiction to norms of democratic governance, the Fed faces low levels of public trust, a lack of policy support and therefore a crisis of institutional legitimacy. And still, in the absence of an alternative and reliable international lender of last resort, the most alarming consequence of this declining policy support and trust in the Fed is of curbing its ability to undertake such actions to rescue the global financial system in the likely event of a future crisis.

# References


Adrian, Tobias and Ashraf Khan. 2019. "Central Bank Accountability, Independence, and Transparency.".

Adrian, Tobias, Ghiath Shabisgh and Ashraf Khan. 2020. "Transparency Makes Central Banks More Effective and Trusted.".

Alesina, Alberto and Guido Tabellini. 2007. "Bureaucrats or Politicians? Part I: A Single Policy Task." *The American Economic Review* 97(1):3–179.

Alesina, Alberto and Guido Tabellini. 2008. "Bureaucrats or Politicians? Part II: Multiple Policy Tasks." *Journal of Public Economics* 92(3):426–447.

Allen, William A. and Richhild Moessner. 2010. Central Bank Co-Operation and International Liquidity in the Financial Crisis of 2008-9. Working Paper No 310 Bank for International Settlements.

Anderson, Brilé, Thomas Bernauer and Aya Kachi. 2019. "Does International Pooling of Authority Affect the Perceived Legitimacy of Global Governance?" *The Review of International Organizations* 14(4):661–683.

Aronow, Peter Michael, Joshua Kalla, Lilla Orr and John Ternovski. 2020. Evidence of Rising Rates of Inattentiveness on Lucid in 2020. Preprint SocArXiv.

Baker, Colleen M. 2013. "The Federal Reserve's Use of International Swap Lines." *SSRN Electronic Journal* .

Balls, Ed, James Howat and Anna Stansbury. 2018. Central Bank Independence Revisited: After the Financial Crisis, What Should a Model Central Bank Look Like? Working Paper No. 87 Harvard Kennedy School.

Bernanke, Ben. 2015. *The Courage to Act: A Memoir of a Crisis and Its Aftermath*. First edition. ed. New York, NY: W.W. Norton & Company.

Bernanke, Ben S. 2013. "Concluding Remarks by Chairman Bernanke at the Ceremony Commemorating the Centennial of the Federal Reserve Act." https://www.federalreserve.gov/newsevents/speech/bernanke20131216b.htm.

Bevilacqua, Mattia, Lukas Brandl-Cheng, Jon Danielsson and Jean-Pierre Zigrand. 2021. "Moral Hazard, the Fear of the Markets, and How Central Banks Responded to Covid-19.".

Binder, Sarah and Mark Spindel. 2017. *The Myth of Independence: How Congress Governs the Federal Reserve*. Princeton: Princeton University Press.

Bordo, Michael D, Owen F Humpage and Anna J Schwartz. 2015. "The Evolution of the Federal Reserve Swap Lines since 1962." *IMF Economic Review* 63(2):353–372.

Brutger, Ryan and Amy Pond. 2021. International Economic Relations and American Support for Antitrust Policy. Working Paper.

Christensen, Hans B., Mark Maffett and Thomas Rauter. Forthcoming. "Policeman of the World: The Impact of Extraterritorial FCPA Enforcement on Foreign Investment and Internal Controls." *The Accounting Review* .

Colantone, Italo and Piero Stanig. 2018. "Global Competition and Brexit." *American Political Science Review* 112(2):201–218.

Council on Foreign Relations. N.d. "Central Bank Currency Swaps." http://www.cfr.org/currency_swaps/.

Dellmuth, Lisa M. and Jonas Tallberg. 2021. "Elite Communication and the Popular Legitimacy of International Organizations." *British Journal of Political Science* 51(3):1292–1313.

Dellmuth, Lisa Maria, Jan Aart Scholte and Jonas Tallberg. 2019. "Institutional Sources of Legitimacy for International Organisations: Beyond Procedure versus Performance." 45(04):627–646.

Dellmuth, Lisa Maria and Jonas Tallberg. 2015. "The Social Legitimacy of International Organisations: Interest Representation, Institutional Performance, and Confidence Extrapolation in the United Nations." *Review of International Studies* 41(3):451–475.

Dietsch, Peter. 2020. "Independent Agencies, Distribution, and Legitimacy: The Case of Central Banks." *The American political science review* 114(2):591–595.

Dudley, C., William. 2012*a*. "Dollar-Swaps Protect U.S. Markets." *Wall Street Journal* .

Dudley, C., William. 2012*b*. "Letter to the Editor Regarding Central Bank Liquidity Swaps - FEDERAL RESERVE BANK of NEW YORK." https://www.newyorkfed.org/newsevents/statements/2012/0105_2012.

Ehrmann, Michael, Michel Soudan and Livio Stracca. 2013. "Explaining European Union Citizens' Trust in the European Central Bank in Normal and Crisis Times." *The Scandinavian Journal of Economics* 115(3):781–807.

Farrell, Henry and Abraham L. Newman. 2014. "Domestic Institutions Beyond the Nation-State: Charting the New Interdependence Approach." *World Politics* 66(2):331–363.

Fleming, Michael J. and Nicholas Klagge. 2010. "The Federal Reserve's Foreign Exchange Swap Lines." *Current Issues in Economics and Finance* 16(4).

FOMC. 2008. Meeting of the Federal Open Market Committee on October 28–29, 2008. Federal Reserve Bank, FOMC: Transcripts and Other Historical Materials, 2008, Washington, DC. Technical report Washington, DC.: .

FOMC. 2010. Conference Call of the Federal Open Market Committee on May 9, 2010. Technical report.

Hainmueller, Jens. 2012. "Entropy Balancing for Causal Effects: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies." *Political Analysis* 20(1):25–46.

Hainmueller, Jens, Jonathan Mummolo and Yiqing Xu. 2018. "How Much Should We Trust Estimates from Multiplicative Interaction Models? Simple Tools to Improve Empirical Pracitce." *Political Analysis* 27(2):163–192.

Hayo, Bernd and Edith Neuenkirch. 2014. "The German Public and Its Trust in the ECB: The Role of Knowledge and Information Search." *Journal of international money and finance* 47(Journal Article):286–303.

Helleiner, Eric. 2014. *The Status Quo Crisis: Global Financial Governance after the 2008 Financial Meltdown*. Oxford: Oxford University Press.

Högenauer, Anna-Lena and David Howarth. 2019. "The Democratic Deficit and European Central Bank Crisis Monetary Policies." *Maastricht journal of European and comparative law* 26(1):81–93.

Hooghe, L., G. Marks, A. H. Schakel, S. Niedzwiecki, S. Chapman Osterkatz and S. Shair-Rosenfield. 2017. *Measuring Regional Authority: A Postfunctionalist Theory of Governance*. Number Volume III Oxford University Press.

Hooghe, Liesbet, Tobias Lenz and Gary Marks. 2019. "Contested World Order: The Delegitimation of International Governance." *The Review of International Organizations* 14(4):731–743.

Hurd, Ian. 2019. "Legitimacy and Contestation in Global Governance: Revisiting the Folk Theory of International Institutions." *The Review of International Organizations* 14(4):717–729.

Jacobs, Lawrence R. and Desmond King, author. 2016. *Fed Power: How Finance Wins*. Number Book, Whole New York, New York: Oxford University Press.

Jones, Erik. 2009. "Output Legitimacy and the Global Financial Crisis: Perceptions Matter." *Journal of common market studies* 47(5):1085–1105.

Kaltenhaler, Karl, Christopher J. Anderson and William J. Miller. 2010. "Accountability and Independent Central Banks: Europeans and Distrust of the European Central Bank." *JCMS: Journal of Common Market Studies* 48(5):1261–1281.

Kalyanpur, Nikhil and Abraham L. Newman. 2019. "Mobilizing Market Power: Jurisdictional Expansion as Economic Statecraft." *International Organization* 73(1):1–34.

Liao, Steven and Daniel McDowell. 2015. "Redback Rising: China's Bilateral Swap Agreements and Renminbi Internationalization." *International Studies Quarterly* 59(3):401–422.

Lin, Winston. 2013. "Agnostic Notes on Regression Adjustments to Experimental Data: Reexamining Freedman's Critique." *The Annals of Applied Statistics* 7(1):295–318.

Lockwood, Erin. 2016. The Global Politics of Central Banking: A View From Political Science. Report Mario Einaudi Center for International Studies.

Madsen, Mikael Rask, Juan A. Mayoral, Anton Strezhnev and Erik Voeten. 2021. "Sovereignty, Substance, and Public Support for European Courts' Human Rights Rulings." *American Political Science Review* Online:1–20.

Margalit, Yotam. 2012. "Lost in Globalization: International Economic Integration and the Sources of Popular Discontent1." *International Studies Quarterly* 56(3):484–500.

Mayda, Anna Maria and Dani Rodrik. 2005. "Why Are Some People (and Countries) More Protectionist than Others?" *European Economic Review* 49(6):1393–1430.

McCauley, Robert N and Catherine R Schenk. 2020. "Central Bank Swaps Then and Now: Swaps and Dollar Liquidity in the 1960s." *Working PaperBIS* (No 851):47.

McNamara, Kathleen. 2002. "Rational Fictions: Central Bank Independence and the Social Logic of Delegation." *West European Politics* 25(1):47–76.

Mutz, Diana C. and Eunji Kim. 2017. "The Impact of In-group Favoritism on Trade Preferences." *International Organization* 71(4):827–850.

Obstfeld, Maurice. 2009. "Lender of Last Resort and Global Liquidity." *Development Outreach* 11(3):43–46.

O'Driscoll, Jr., Gerald P. 2011. "The Federal Reserve's Covert Bailout of Europe." *Wall Street Journal* .

Perry, Alexander R. 2020. "The Federal Reserve's Questionable Legal Basis for Foreign Central Bank Liquidity Swaps." *Columbia Law Review* 120(3):729–768.

Porter, Tony. 2001. "The Democratic Deficit in the Institutional Arrangements for Regulating Global Finance The New International Financial Architecture." *Global Governance* 7(4):427–440.

Powell, Jerome H. 2018. Financial Stability and Central Bank Transparency. In *Financial Stability and Central Bank Transparency*. Stockholm, Sweden: p. 9.

Roth, Felix. 2009. "The Effect of the Financial Crisis on Systemic Trust." *Intereconomics* 44(4):203–208.

Sahasrabuddhe, Aditi. 2019. "Drawing the Line: The Politics of Federal Currency Swaps in the Global Financial Crisis." *Review of International Political Economy* 26(3):461–489.

Scharpf, Fritz. 1999. *Governing in Europe: Effective and Democratic?* Oxford: Oxford University Press.

Schnabel, Isabel. 2021. "Societal Responsibility and Central Bank Independence.".

Slaughter, Anne-Marie. 2002. "Global Government Networks, Global Information Agencies, and Disaggregated Democracy." *Michigan Journal of International Law* 24:1041.

Tallberg, Jonas and Michael Zürn. 2019. "The Legitimacy and Legitimation of International Organizations: Introduction and Framework." *The Review of International Organizations* 14(4):581–606.

Tran, Hung. 2020. "As Central Banks Implement Coronavirus Rescue Plans, Has Moral Hazard Been Forgotten?".

Tucker, Paul M. W. 2018. *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State*. Princeton: Princeton University Press.

van der Cruijsen, C. A. B. and S. C. W. Eijffinger. 2010. "From Actual to Perceived Transparency: The Case of the European Central Bank." *Journal of economic psychology* 31(3):388–399.

Vaughn, Abigail. 2020. "Ties That Bind: The Geopolitics of Bilateral Currency Swaps.".

Voeten, Erik. 2013. "Public Opinion and the Legitimacy of International Courts." *Theoretical Inquiries in Law* 14(2):411–436.

Wälti, Sébastien. 2012. "Trust No More? The Impact of the Crisis on Citizens' Trust in Central Banks." *Journal of International Money and Finance* 31(3):593–605.

Zürn, 1959-author, Michael. 2018. *A Theory of Global Governance: Authority, Legitimacy, and Contestation*. Number Book, Whole first ed. New York, NY, USA;Oxford, United Kingdom;: Oxford University Press.

# Online Appendix for "Crisis, Intervention and the Politics of Central Bank Independence"

# A Survey Text

## A.1 Setup and Control/Treatment text

All respondents are first presented with the following basic information about the Federal Reserve:

> We would now like to ask you a few questions about your opinion of the United States Federal Reserve.
>
> As you may know, the Federal Reserve is an independent national government body tasked with keeping prices stable, managing inflation and maintaining high levels of employment within the United States. It accomplishes these goals by setting interest rates. Interest rates affect what people pay for things like car loans, mortgages, and credit cards as well as the amount of interest received on savings deposits and returns on investments.

Respondents will click through to the next page and be randomly assigned to one of 8 possible control/treatment conditions. Respondents be presented with text reads as follows:

> Since the financial crisis in 2008, the Federal Reserve has lent billions of dollars to foreign central banks. Some experts say these activities are necessary to stabilize global financial markets. [Risk/Moral Hazard/Accountability treatment]. [China treatment].

See main text for the text of the treatments. All respondents were then asked the following two questions:

> Do you support or oppose the Federal Reserve's policy of providing financial assistance to foreign central banks during times of crisis?
>
> ❍ Strongly support
>
> ❍ Support
>
> ❍ Slightly support
>
> ❍ Slightly oppose
>
> ❍ Oppose
>
> ❍ Strongly Oppose
>
> How much trust do you have in the Federal Reserve, on a scale from 0 (no trust at all) to 10 (complete trust)?
>
> - [Slider from 0-10, with 0 labeled as "No trust at all" and 10 labeled as "Complete trust."]

## A.2 Nationalism Index

To measure nationalist sentiment we ask respondents the following three questions, with responses ranging from more to less nationalistic. We recode each response on a 0-3 scale with 4 indicating the more nationalistic sentiment. We then sum the responses and rescale the variable so that is is on a range for 0-1. We derive these questions from Mutz and Kim (2017) and Brutger and Pond (2021). Figure A1 summarizes the index's distribution.

How many things about America make you ashamed?

- ❍ Very many (3)
- ❍ Many
- ❍ Not many
- ❍ None (0)

How superior is the United States compared to other nations?

- ❍ Vastly superior (3)
- ❍ Very superior
- ❍ Not so superior
- ❍ Not at all superior (0)

To what extent to agree with the following sentence: I would rather be a citizen of America than of any other country in the world.

- ❍ Strongly agree (3)
- ❍ Somewhat agree
- ❍ Somewhat disagree
- ❍ Strongly disagree (0)

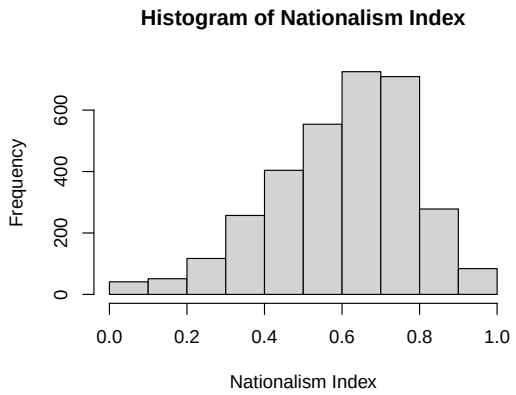



Figure A1: Nationalism Index

# B Descriptive Statistics

| | Control | Risk | Accountability | Moral Hazard |
|---|---|---|---|---|
| Democrat | 0.422 (0.494) | 0.433 (0.496) | 0.432 (0.496) | 0.409 (0.492) |
| Republican | 0.381 (0.486) | 0.365 (0.482) | 0.385 (0.487) | 0.376 (0.485) |
| College | 0.501 (0.500) | 0.535 (0.499) | 0.519 (0.500) | 0.536 (0.499) |
| Female | 0.511 (0.500) | 0.538 (0.499) | 0.504 (0.500) | 0.509 (0.500) |
| Stock | 0.487 (0.500) | 0.485 (0.500) | 0.471 (0.499) | 0.484 (0.500) |
| Age | 47.382 (17.154) | 47.063 (16.983) | 47.485 (17.170) | 46.956 (16.555) |
| Income | 9.586 (6.742) | 9.754 (6.534) | 9.662 (6.371) | 9.891 (6.687) |
| Nationalism | 0.615 (0.202) | 0.610 (0.206) | 0.608 (0.209) | 0.615 (0.201) |

Table B1: Policy Treatments

| | Control | China |
|---|---|---|
| Democrat | 0.428 (0.495) | 0.420 (0.494) |
| Republican | 0.370 (0.483) | 0.383 (0.486) |
| College | 0.528 (0.499) | 0.517 (0.500) |
| Female | 0.528 (0.499) | 0.504 (0.500) |
| Stock | 0.477 (0.500) | 0.486 (0.500) |
| Age | 47.263 (17.140) | 47.189 (16.800) |
| Income | 9.809 (6.594) | 9.634 (6.572) |
| Nationalism | 0.618 (0.201) | 0.606 (0.208) |

Table B2: China Treatments

# C Full Tables

| | Policy | | China | | Combined | |
|---|---|---|---|---|---|---|
| | Support | Trust | Support | Trust | Support | Trust |
| Accountability | $-0.066^{***}$ | $-0.399^{***}$ | | | $-0.066^{***}$ | $-0.397^{***}$ |
| | (0.024) | (0.118) | | | (0.024) | (0.118) |
| Moral Hazard | $-0.049^{**}$ | $-0.170$ | | | $-0.049^{**}$ | $-0.170$ |
| | (0.024) | (0.121) | | | (0.024) | (0.121) |
| Risk | $-0.039$ | $-0.025$ | | | $-0.038$ | $-0.027$ |
| | (0.024) | (0.119) | | | (0.024) | (0.119) |
| China | | | $0.036^{**}$ | $-0.124$ | $0.037^{**}$ | $-0.118$ |
| | | | (0.017) | (0.085) | (0.017) | (0.085) |
| Democrat | $0.177^{***}$ | $1.337^{***}$ | $0.176^{***}$ | $1.332^{***}$ | $0.176^{***}$ | $1.337^{***}$ |
| | (0.024) | (0.120) | (0.024) | (0.120) | (0.024) | (0.120) |
| Republican | $-0.094^{***}$ | $-0.015$ | $-0.095^{***}$ | $-0.019$ | $-0.094^{***}$ | $-0.013$ |
| | (0.024) | (0.130) | (0.024) | (0.130) | (0.024) | (0.130) |
| Female | $-0.046^{***}$ | $-0.073$ | $-0.045^{***}$ | $-0.071$ | $-0.045^{***}$ | $-0.076$ |
| | (0.017) | (0.086) | (0.017) | (0.086) | (0.017) | (0.086) |
| Age | $-0.002^{***}$ | $0.011^{***}$ | $-0.002^{***}$ | $0.011^{***}$ | $-0.002^{***}$ | $0.011^{***}$ |
| | (0.001) | (0.003) | (0.001) | (0.003) | (0.001) | (0.003) |
| Income | 0.001 | $0.021^{***}$ | 0.001 | $0.021^{***}$ | 0.001 | $0.021^{***}$ |
| | (0.001) | (0.007) | (0.001) | (0.007) | (0.001) | (0.007) |
| Intercept | $0.576^{***}$ | $3.825^{***}$ | $0.519^{***}$ | $3.744^{***}$ | $0.557^{***}$ | $3.887^{***}$ |
| | (0.035) | (0.178) | (0.033) | (0.171) | (0.036) | (0.185) |
| $R^2$ | 0.081 | 0.094 | 0.079 | 0.091 | 0.082 | 0.095 |
| Adj. $R^2$ | 0.078 | 0.092 | 0.077 | 0.089 | 0.079 | 0.092 |
| Num. obs. | 3,220 | 3,220 | 3,220 | 3,220 | 3,220 | 3,220 |

**Note:** Standard errors in parentheses are clustered by respondent.

Table C1: Main Results

| | Support | Trust |
|---|---|---|
| China | $0.143^{***}$ | $0.685^{**}$ |
| | (0.054) | (0.271) |
| Nationalism | $0.278^{***}$ | $3.742^{***}$ |
| | (0.061) | (0.309) |
| China×Nationalism | $-0.170^{**}$ | $-1.256^{***}$ |
| | (0.084) | (0.427) |
| Democrat | $0.180^{***}$ | $1.407^{***}$ |
| | (0.024) | (0.115) |
| Republican | $-0.108^{***}$ | $-0.234^{*}$ |
| | (0.024) | (0.128) |
| College | $0.037^{**}$ | $0.311^{***}$ |
| | (0.018) | (0.090) |
| Female | $-0.042^{**}$ | $-0.029$ |
| | (0.017) | (0.084) |
| Own Stock | $0.055^{***}$ | $0.293^{***}$ |
| | (0.018) | (0.090) |
| Age | $-0.003^{***}$ | 0.002 |
| | (0.001) | (0.003) |
| Income | 0.001 | $0.016^{**}$ |
| | (0.001) | (0.007) |
| Intercept | $0.376^{***}$ | $1.891^{***}$ |
| | (0.047) | (0.227) |
| $R^2$ | 0.086 | 0.148 |
| Adj. $R^2$ | 0.083 | 0.145 |
| Num. obs. | 3,220 | 3,220 |

**Note:** Standard errors in parentheses are clustered by respondent.

Table C2: Interaction Results

# D Alterative Specifications

| | Policy | | China | |
|---|---|---|---|---|
| | Support | Trust | Support | Trust |
| Accountability | $-0.065^{***}$ | $-0.384^{***}$ | | |
| | (0.025) | (0.125) | | |
| Moral Hazard | $-0.048^{*}$ | $-0.179$ | | |
| | (0.025) | (0.127) | | |
| Risk | $-0.035$ | $-0.005$ | | |
| | (0.025) | (0.123) | | |
| China | | | $0.035^{**}$ | $-0.138$ |
| | | | (0.018) | (0.089) |
| Controls? | No | No | No | No |
| $R^2$ | 0.002 | 0.004 | 0.001 | 0.001 |
| Adj. $R^2$ | 0.001 | 0.003 | 0.001 | 0.000 |
| Num. obs. | 3,220 | 3,220 | 3,220 | 3,220 |

**Note:** Standard errors in parentheses are clustered by respondent.

Table D1: Unadjusted Estimates

| | Policy | | China | |
|---|---|---|---|---|
| | Support | Trust | Support | Trust |
| Accountability | $-0.067^{***}$ | $-0.404^{***}$ | | |
| | (0.024) | (0.119) | | |
| Moral Hazard | $-0.048^{**}$ | $-0.170$ | | |
| | (0.024) | (0.121) | | |
| Risk | $-0.041^{*}$ | $-0.033$ | | |
| | (0.024) | (0.119) | | |
| China | | | $0.037^{**}$ | $-0.118$ |
| | | | (0.017) | (0.085) |
| Controls? | Yes | Yes | Yes | Yes |
| $R^2$ | 0.086 | 0.100 | 0.083 | 0.099 |
| Adj. $R^2$ | 0.077 | 0.091 | 0.079 | 0.093 |
| Num. obs. | 3,220 | 3,220 | 3,220 | 3,220 |

**Note:** Standard errors in parentheses are clustered by respondent. Estimates for controls are not shown.

Table D2: Results from estimator proposed by Lin (2013)

## D.1 Survey weights

In this section we present estimates after weighting the sample based on the population targets described in Table D3, obtained from the US Census Bureau. We estimate the survey weights using entropy balancing (Hainmueller, 2012). Results are reported in Table D4.

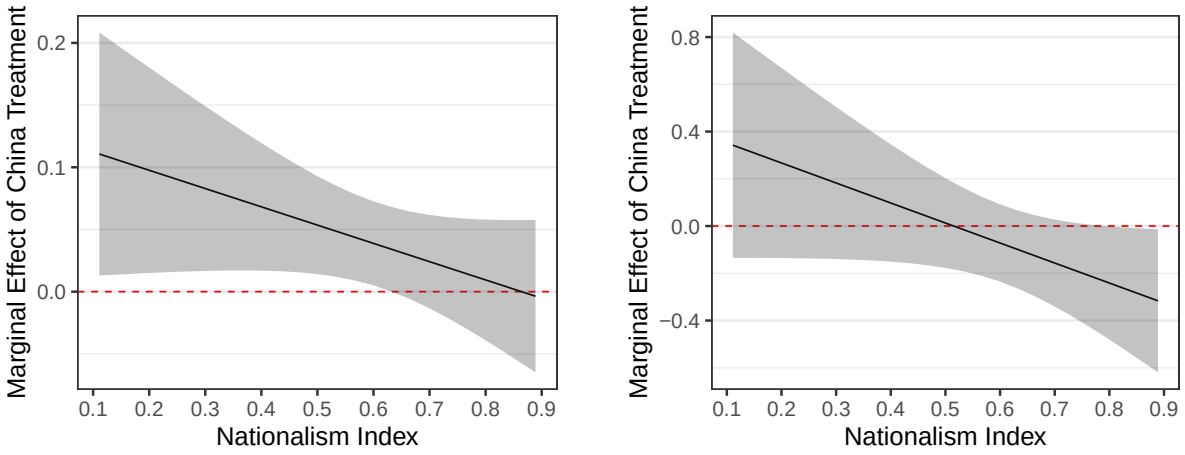
| Variable | Sample | Target |
|---|---|---|
| Female | .52 | .51 |
| Completed College | .52 | .45 |
| Household Income | | |
| $0-49k | .49 | .38 |
| $50-99k | .36 | .29 |
| $100-149k | .06 | .15 |
| $150k+ | .09 | .18 |
| Age | | |
| 18-24 | .11 | .13 |
| 25-39 | .33 | .27 |
| 40-59 | .29 | .32 |
| 60+ | .27 | .29 |

Table D3: Sample and population target means

| | Policy | | China | |
|---|---|---|---|---|
| | Support | Trust | Support | Trust |
| Accountability | $-0.071^{***}$ | $-0.392^{***}$ | | |
| | (0.026) | (0.135) | | |
| Moral Hazard | $-0.061^{**}$ | $-0.195$ | | |
| | (0.028) | (0.146) | | |
| Risk | $-0.065^{**}$ | $-0.106$ | | |
| | (0.027) | (0.141) | | |
| China | | | $0.045^{**}$ | $-0.099$ |
| | | | (0.019) | (0.100) |
| Controls? | Yes | Yes | Yes | Yes |
| Adj. $R^2$ | 0.087 | 0.100 | 0.086 | 0.098 |
| Observations | 3,220 | 3,220 | 3,220 | 3,220 |

**Note:** Standard errors in parentheses are clustered by respondent and estimated in Stata. SEs in all other tables are CR2 standard errors.

Table D4: Survey weights




(a) Policy Support

(b) Trust

Figure D1: Marginal effect of China treatment conditional on Nationalism with 0 and 1 values dropped