

# D L : I P F C

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### *ABSTRACT*

Injecting over two trillion dollars into the international economy, the Federal Reserve effectively operated as an international lender of last resort during the 2008 financial crisis. Over half a trillion dollars went to foreign central banks through bilateral arrangements known as Central Bank Liquidity Swaps. While studies show that a key determinant of a country's chances of receiving Fed liquidity was the exposure of US banks to the foreign economy, the literature overlooks the ambiguous and politicised nature of the Fed's decision-making that explains the selection of emerging market swap recipients. Through a consideration of all economies that officially requested a swap line, including those rejected, this paper analyses the bilateral politics of Fed swaps. By evaluating transcripts of the Fed's deliberations, it identifies strategic motivations underlying the Fed's decision-making and argues the Fed was more likely to grant a swap to economies that shared its policy preferences for greater capital account openness. Further, the paper argues that the influence of shared policy preferences was mediated by political and diplomatic considerations. The paper concludes that the Fed strategically chose its emerging economy partners to reinforce economic alliances, particularly with those who experienced increased influence in economic governance post-2008.

**K** : Currency Swap Lines, Global Financial Crises, Federal Reserve, Emerging Markets, International Lender of Last Resort, Central Banking

### 1. IN ROD C ION

During the 2007-2010 global financial crisis, the United States Federal Reserve (the Fed) stepped up as an international lender of last resort (ILLR), injecting over two trillion dollars into the international economy.<sup>1</sup> Of this, over half a trillion dollars went to foreign central banks through bilateral arrangements known as 'Central Bank Liquidity Swap Lines'. These facilities proved crucial in easing global liquidity shortages, and preventing a second Great Depression. Moessner and Allen

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<sup>1</sup> The European Central Bank (ECB), the Bank of Japan (BoJ), and the People's Bank of China (PBoC) also extended currency swap arrangements. These arrangements were typically for modest amounts in comparison with these extended by the Fed.

(2010, 75) suggest, ‘... had the Fed not acted as it did, global financial stability would have been much more serious, and the recession would consequently have been deeper’. Studies find that countries where US banks were most exposed were more likely to receive a swap line during the crisis (Aizenman and Pasricha 2010; Broz 2015). The extension of liquidity swap lines by the Fed to emerging market economies (EMEs) was, however, a far more selective and opaque process. I find that in its selection of EME swap recipients, the Fed’s motivations were ambiguous and politicised.

This paper adds to our understanding of the Fed’s policy practices during the crisis, showing not only politics mattered, but . First, I consider the bilateral interactions between the Fed and its swap recipients by assessing the Fed’s internal deliberations prior to extending these swap lines. Second, the analysis includes economies that we know requested a swap line but were denied, not merely those that received it. By evaluating Fed transcripts of the discussions and deliberations during the crisis, I show the Fed’s strategic motivations in selecting its swap partners that existing literature does not consider. This paper unpacks the politics underlying the Fed’s choice of its emerging market partners and argues that the Fed favoured extending a swap line to economies that shared its policy preference for greater capital account openness. The influence of shared policy preferences was mediated by political and diplomatic considerations. The Fed strategically chose its emerging economy partners to reinforce alliances in the global economy, particularly those with greater influence in global economic governance.

Scholars have argued that the sensitivity and vulnerability of the US economy has implications for its ability to use monetary statecraft, particularly in relation to the growing international influence of financial actors (Hardie and Maxfield 2016). They argue that the Fed’s ILLR efforts could only serve US interests by supporting the global economy. The Fed’s liquidity provision to the global economy was motivated by defensive goals to address threats to the US economy that result from financial globalisation (Helleiner 2014; McDowell 2012). As such, this policy response by the Fed ‘demonstrates the centrality of the US dollar to the global financial system, but does not demonstrate the US’s active monetary power’ (Hardie and Maxfield 2016, 602). In contrast, the argument presented here supports the position that extending swap lines to economies with new influence in the world economy provided the US with a tool to primarily serve its own interests and take ‘actions to help out its friends’ (Cohen 2015, 183) who faced growing financial instabilities. Alan Greenspan once asserted, the US has long believed that ‘market capitalism [...] especially in the United States, is the superior model’ (quoted in Kirshner 2006, 160). Promoting financial liberalisation overseas has served US geopolitical interests (Kirshner 2006, 16). The selectivity of the Fed’s swap recipients in

2008 illustrates yet another instance of US monetary power and its capacity to strategically promote its interests following the global financial crisis. The Fed implicitly favoured, if not openly promoted, capital deregulation through its extension of dollar swaps to just a handful of EMEs during the crisis that shared this policy stance.

The rest of the paper proceeds as follows: in part II, I provide a background of the Fed's currency swap arrangements and existing explanations of the Fed's selection of swap recipients. Section III sets out the theoretical basis of the argument: signalling and institutional benefits of financial liberalisation, the lock-in of policy choices, and the geopolitics that influenced the Fed's policy response to 2008. In part IV, I provide qualitative case analyses of EME swaps to illustrate the theoretical argument. Section V introduces the data, models and the results of a statistical analysis of Federal currency swaps to show more general evidence of the argument. Section VI concludes with a discussion of the implications of these political forces that shaped the Fed's decision making on future crisis management.

## **II. CENTRAL BANK SWAP LINE**

Created in 1962 to provide central banks protection from unfavourable dollar positions, currency swaps are not new to the Fed's toolkit. Little appreciated at the time, swaps made a dramatic comeback following the 2007-2008 financial meltdown. As the only central bank capable of providing an unlimited supply of dollars, the Fed became the world's lender of last resort (Bordo et al 2015; Broz 2015; Helleiner 2014). With interbank funding frozen, it was clear that the Fed needed to ease dollar funding pressures in financial institutions abroad, as many had extensive linkages to the US. Swap lines were established with fourteen foreign central banks<sup>2</sup> of systemically important economies (United States GAO, 2011). This massive injection of dollar liquidity has been 'one of the most notable examples of central bank cooperation in history' (Obstfeld et al 2009). Especially unprecedented was the extension of swaps to four EMEs. These swaps provided up to US \$30 billion each, to Mexico, Brazil, South Korea (hereafter Korea) and Singapore,<sup>3</sup> a step that the US had not previously taken, with the exception of Mexico (Federal Reserve Press Release 2008). This

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<sup>2</sup> These are the central banks of the United Kingdom, Denmark, Norway, Sweden, Switzerland, Canada, Japan Australia, New Zealand, Brazil, Mexico, Korea and Singapore.

<sup>3</sup> Although Korea and Singapore are no longer emerging economies, and nor were they at the time of the crisis, they were referred to as emerging economies by the Federal Open Markets Committee and will therefore be classified as such for the purposes of this paper.

decision coincided with the International Monetary Fund's (IMF) decision to launch short-term financing to help EMEs weather the crisis (Lauder 2008).

Given the discretion of the Federal Open Markets Committee (FOMC) over who received a swap, the selectivity and opaqueness of the Fed's decisions is telling. The Fed subsequently faced severe criticism for its lack of transparency about its practices. Particularly contentious was that it stepped outside its domestic mandate 'bailing out European banks and putting US taxpayers' money at risk' (Prasad 2014, 206). The FOMC later published the economic and financial criteria on which it based its choices: an economy's financial 'mass', whether the country was a global financial centre, a country's importance as a trading partner, a central bank's record of sound economic management, a central bank's levels of foreign exchange reserves, and the exposure of US private financial institutions to the foreign economy (United States General Accounting Office 2011).

McDowell argues that most ILLR lending tends to be a defensive enterprise, predominantly motivated by defensive considerations. Given their central role in the global economy, US officials have long been motivated to assume leadership in crisis management to protect the vulnerability of US markets and financial institutions. These concerns mattered in the 1960s and still do today (Helleiner 2014). As American banks were heavily exposed, and were therefore vulnerable to dollar shortages abroad, the US bank exposure in foreign economies were most influential in the Fed's selection of swap partners. This result holds in Aizenman and Pasricha's (2010), empirical test of a narrow sample of emerging economies. Broz (2015) expands this test to a broader test of emerging, advanced and developing economies as of 2007. McDowell's (2011) qualitative assessment of the Fed's ILLR efforts during the crisis illustrates its defensive motivations from the threat of spill-over and defaults of internationally exposed US banks. In response to accusations of bailing out European banks, William Dudley, president of the New York Fed stated:

'I would like to clarify the purpose of the dollar-swap program recently undertaken by the Federal Reserve, which is to help insulate US market from the pressures in Europe and support the availability of credit to US household and businesses'

(Federal Reserve Bank of New York 2012).

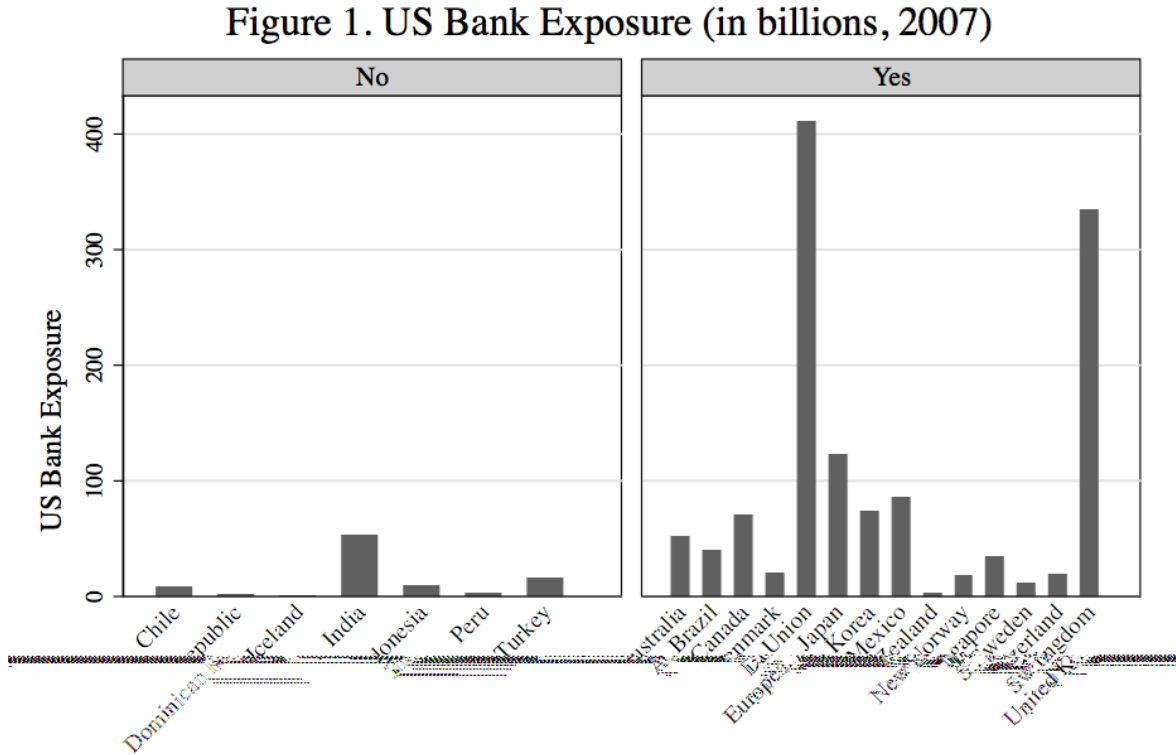
Understanding the motivations that influenced the Fed's decisions is crucial to understanding the implications of these facilities for the global financial system. Still, a large part of this picture is yet to be painted. Intriguing questions arise when looking at those economies whose requests the Fed

rebuffed. To the best of our knowledge, the FOMC rejected seven central banks' requests for swap lines (Prasad 2014, 207 – 209):<sup>4</sup> Chile, the Dominican Republic, Iceland, India, Indonesia, Peru and Turkey. Figure 1 shows the levels of US bank exposure in the twenty-one economies that requested swaps, illustrating substantial variation in levels of US bank exposure abroad across the known population of countries that requested them.

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<sup>4</sup> I have only listed those requests which have been independently verified through alternative channels. It remains unknown whether this list is exhaustive.

FIGURE 1. US Bank Exposure Amount (in billions, 2007)



US bank exposure to the Scandinavian economies, Switzerland and New Zealand is considerably lower than it was to the other selected countries. Barring their records of good economic management, these countries present unlikely choices for FOMC swap recipients on most fronts (see Appendix, Figures 6 and 7). This cross country comparison hints towards a more likely candidate for a swap – India – closely comparable to Brazil. Yet, while the Fed extended a swap line to Brazil, India’s request was denied. Similar discrepancies between the Fed’s selection criteria and the central banks with whom swaps were established further emphasise that the FOMC’s stated selection criteria do not adequately explain its decision making (see Appendix Figures 3- 7). In short, the exposure of US banks in a foreign economy remains crucial in explaining the Fed’s motivations for extending crisis finance. However, this factor alone does not adequately account for the variation among those countries that received a Fed swap line, and may not be a sufficient condition to receive Federal financing.

The FOMC statement also claimed that the recipient country’s importance to the US as a trading partner mattered. President Fisher of the Dallas Fed, and previously a senior trade negotiator with several EMEs, urged the FOMC to take into consideration the strategic importance of their

emerging market allies whilst selecting who would receive a swap. In considering only emerging markets, Aizenman and Pasricha (2010) find that trade links between a country and the US was negative and non-significant. This result holds when considering a larger sample of countries as well (Broz 2015). These findings are at odds with the claims of FOMC officials, suggesting little evidence that Fed swap decisions were based on US trade relations. As such, theories focusing on trade ties between the US and swap recipients fail to adequately explain the Fed's selection of the four EMEs that received swap lines during the global financial crisis.

The Fed also took into consideration the soundness of the central banks' economic management and reserve levels. Given that ILLR lending is motivated by defensive considerations, it is important that the borrowing country can credibly repay the amount. However, neither of these criteria produce conclusive findings over the extent to which central banks' competence shaped its chances of getting a swap. With regards to levels of inflation, existing studies are consistent with the Fed's claim that it considered central banks as competent subcontractors to channel liquidity into their jurisdiction (Broz 2015; Obstfeld 2009). Countries that experienced high levels of inflation in the decade running up to the crisis were less likely to receive a swap line than those that exhibited good economic management. When comparing the data on inflation between those that did and did not receive a swap, this result weakens. Brazil, Mexico and even Korea, to an extent, experienced high levels inflation prior to 2007 than a handful of countries whose swap requests were denied (See Appendix). The argument for having low or high reserves is less clear. William Poole expressed concern that central banks with large international reserves should not be granted a swap line by the Fed. This makes sense, given that the primary function of swap lines was to ease liquidity pressures faced by the receiving country, and those that had large international reserves arguably did not need them. FOMC discussions contradict this position, particularly regarding EMEs. While swap lines came with no strings attached, EMEs that received a swaps required substantial collateral in the form of assets in the Fed or in dollar reserves. One might therefore expect that country's that pursued self-insurance strategies would be perceived as more reliable swap partners. Essentially, considerations of sound economic management are not, in and of themselves, sufficient in unambiguously explaining the Fed's motivations in extending liquidity to a sovereign country.

### **III. POLICIGNALLING AND ECONOMIC GOERNANCE**

During the recent crisis, liquidity shocks were magnified by financial contagion through credit markets and investment in EMEs. Further impetus to liquidation would stem from terms of trade

shocks. As the primary purpose of swap lines was to prevent costly liquidation in foreign economies, there would be a natural tendency for the Fed to gravitate towards economies that are more deeply integrated in global finance. I argue that the Fed favoured economies with greater capital account openness convertibility. In this section, I sketch out the theoretical rationale supporting this position. I also argue that in cases where economic factors alone did not fulfil the Fed's criteria for a swap, politics mattered: that is, historical, diplomatic and geopolitical considerations were emphasised by the FOMC to sway the Fed's discretion most notably in favour of some economies over other. These considerations are prevalent in FOMC discussions over relatively more financialised economies.

The jury is still out on whether there is an upside to financial liberalisation (Gabel and Gallagher 2014; Kose et al 2009b, Kirshner 2003). Scholars have argued that increasing financial liberalisation and deregulation has posed a significant impediment to financial stability globally (Kirshner 2003; Rodrik 1998; Stiglitz 2000). Others have argued that capital account openness has been crucial to countries looking to graduate from lower, to middle-income economies (Fischer 1998; Summers 2000). Bartolini and Drazen (1997) argue that by providing greater flexibility for current allocation of capital, capital account liberalisation may signal that imposition of capital controls in the future is less likely to occur. Given imperfect information of governments' future intentions, the future course of policies is likely inferred from current policies towards investment. Liberalisation thus represents 'ingredients of broad reforms' (Bartolini and Drazen 1997, 7), that Kose (et al 2006) characterise as the 'collateral benefits' of liberalisation. These can take place through domestic reforms, development of financial markets, knowledge transfers or increased access to credit. As such, access to swaps may be another consequence of these 'collateral benefits'. Through domestic and institutional reforms, liberalisation can signal a commitment to reform to international markets. This signalling mechanism lends a simple hypothesis that economies with relatively higher levels of capital account openness were more likely to receive a swap line from the Fed.

The lock-in of such policies could mitigate doubts on an economy's inability to carry out dollar liquidity operations on behalf of the US. Financial integration has been disproportionately demanding on EMEs, increasing their vulnerability to sudden stops of capital flows and ability to spread risks. Following their experiences in the 1980s and 1990s, some EMEs have taken extensive self-insurance strategies and domestic reform required by the IMF. The Fed's extension of currency swap lines was not conditional on specific policy or institutional reforms. However, favouring capital account convertibility could present itself as a precondition for having a swap request granted. IMF reform following emerging market crises have impacted policy reforms in highly repressed



economies. These governments adopted reforms responding to crises in the external sector, and the adoption of these programs may themselves be a commitment device. Following IMF programs or policy changes decontrolling capital accounts may ‘serve as a signalling device for governments to establish their reliability within global capital markets’ (Joyce and Noy 2008, 415). I would therefore expect that countries that have previously undergone IMF deep structural adjustment or domestic deregulatory programs signalled credibility in international markets and were thus more likely to receive a swap.

The Fed also had an interest in maintaining and strengthening strong alliances in the global economic governance sector. In questions concerning influence and monetary power in international capital markets, what matters is the ‘ability to commit credibly to market access and compliance with agreed market opening measures’ (Kahler 2013, 720). The Fed’s preference towards economies with higher levels of capital account convertibility and financial integration may have interacted with its strategic and diplomatic considerations during this time.

Trailing 2008, new forms of multilateral economic governance, such as the G-20 summit, emerged to facilitate coordinated crisis management among systemically important economies. The US came under increasing pressure from the EU, particularly from France and Great Britain, who voiced criticism over the unique centrality of the dollar in the global economy (Parker 2008; Quaglia 2014a; 2014b). Any attempts at forging an international consensus over regulation could turn into finger-pointing. As the crisis originated in the US, it was likely that US policy-makers faced a possibility of declining influence in the international governance community. At the November 2008 G-20 Summit, Sarkozy stressed, ‘this is a global crisis and we have to remember where it started’ (Parker 2008).

The US also faced pushback from major emerging economies. China and India demanded a more radical reform of the governance system (Chey 2012; Kahler 2013; Woods 2010). China pushed for monetary reform in the G20 and took steps towards the internationalisation of the renminbi with the aim of creating an alternative to the dollar (Kirshner 2014). India shared China’s belief in their ‘entitlement to a more influential role in world affairs’ (Narlikar 2013, 562). China and India’s preferences within the global economic governance system has been one of capital controls and maximum policy discretion to deal with globalisation (Narlikar 2013; Kahler 2013). Both powers have indicated their preferences for greater agenda-setting influence in international organisations (Narlikar 2013; Prasad 2016). It was likely that the US was incentivised to strengthen its relationship

with EMEs that acted more favourably towards it, particularly those that experienced an increased influence in global economic governance.

I now test these propositions through case studies on EME swap line selection. I discuss the Fed's justification for its choices, identifying specific factors that swayed decision-making in the FOMC. These cases allow me to include variables such as relations with central bank governors, or negotiating and diplomatic histories with various EMEs, that cannot be captured in the statistical model. I then run a larger statistical analysis to see more general evidence of the influence of financial openness on the likelihood of receiving a swap from the Fed.

### I . ELEC ING AP PAR NER

In October 2008, as financial pressures intensified, at least four EMEs – Brazil, Mexico, South Korea and Singapore – expressed interest in temporary assistance from the Fed. The Fed's concern about EMEs as less reliable was clear. Deliberations inside the Fed at the time of selecting its swap recipients show that these decisions were contentious among FOMC officials. EME swaps had 'several safeguards' to insure against the political concerns associated with them (The Federal Reserve Press Release, 2008). They also came with additional provisions under which these central banks could not draw on these lines without further authorisation and each withdrawal was capped at 5 billion dollars. While it was unable to deny assistance to some emerging players in the global economy, the Fed could negotiate the terms and conditions of its EME swap lines in its favour.

One reason why the Fed chose the EMEs that it did was that Mexico, Brazil and Korea were objectively large, each having a GDP of around or over 1 trillion dollars. They have been classified by the IMF as three of the 25 'biggest, most interlinked economies' (IMF 2014; Duran 2015). Singapore, while smaller, is an important global financial centre. These four candidates were 'top tier' economies that 'set the bar quite high' (FOMC 2008, 11). The Fed focused on the prudent economic policies followed by these countries, and that the financial stresses experienced in these countries originated from advanced economies. However, these considerations do not apply uniformly in all four EMEs. FOMC discussions over individual candidates illustrate greater ambiguity in their decision-making. More evident were other political considerations. National security, geopolitics, historical interactions and diplomatic relations also factored in to the Fed's decision-making, particularly for EMEs with greater capital account openness.

## **1. MEXICO:**

Mexico was the only EME to have received Federal assistance prior to 2008 and is not an entirely surprising choice. We should expect that the Fed was more likely to extend a swap line with Mexico as it exhibited greater financial openness. We would also expect that political motivations were heavily weighted in favour of Mexico as it was a more open economy.

Through the 2000s, Mexico had higher levels of inflation than most other swap partners, as well as some economies whose requests were denied. Moreover, American banks were not heavily exposed to the Mexican economy. However, since the 1994 Tequila Crisis, Mexico undertook capital account liberalisation policies, associated with IMF assistance. By 2008, Mexico was highly exposed to cross-border capital flows with a capital account openness index of 0.6, on a scale of 0 to 1 (Aizenman et al 2013). Further political and diplomatic considerations were also influential in the Fed's decision-making. As a long-term ally of the US, interdependencies with Mexico were 'particularly pronounced' as noted by Nathan Sheets, an economist in the FOMC. This was not solely in economic terms; politics mattered. Sheets argued that Mexico posed an obvious choice, for it was a ' (FOMC 2008, 17, emphasis added). Some Fed officials, such as President Fisher of the Dallas Fed, also indicated a reluctance in creating any bad blood between Banco de Mexico (Banxico) and the Fed in this 'special arrangement': 'I don't see any reason why we should differentiate between them and Canada, for example. It would stigmatize them in a way, and it would be an insult to these people' (FOMC 2008, 23).

Not everyone in the FOMC shared Fisher's view, however. Several Fed chairpersons from across the United States indicated a substantial amount of hesitation in extending a swap line to its most 'obvious' EME partner. Others argued that stringent conditionality and safeguards be institutionalised into the agreement. Several factors played against Mexico in this circumstance. First, most large Mexican banks, barring Banamex (that belongs to Citi), were European owned. Moreover, Mexico already had a standing swap line with the US, through the North American Framework Agreement, the financial counterpart to NAFTA. Moreover, the 'home-host' balance regarding who would be responsible for increasing pressures in these financial institutions was a delicate one, particularly since these pressures could be sourced to the US. There was a general preference for requiring institutions to have 'lendable collateral' with 'substantial market value relative to their needs' (FOMC 2008: p. 31). Fed's decision to allow Banxico to draw on its swap line depended on where the institution lay on the 'liquidity-solvency spectrum' (FOMC 2008, 32).

Much faith in the Mexican swap stemmed from their central bank governor, Guillermo Ortiz, who took a tough stance on inflation in during his term. Fisher argued that ‘they have a sophisticated central bank and have a very good central bank governor’ (FOMC 2008, 17). Throughout his term that followed a severe crisis and IMF re-structuring, Ortiz was also a strong proponent of currency

York Fed was given ‘set-off rights’, which implied first that the swap line could not be drawn on without approval from the Foreign Currency Subcommittee. Additionally, in case Brazil did not make good on the swap, the Fed could take hold of Banco Central do Brasil’s assets the New York Fed to ‘extinguish the obligations from the swap’ (FOMC 2008, 19).

Unlike Mexico, Brazil is a less systemically important trading partner to the US. In the years following the 1999 currency crisis, Brazil undertook rapid financial liberalisation efforts, although it left the option of reinstating capital controls on the cards (Gallagher 2015). In fact, Brazil has had a history of high inflation and default, and the crisis of the 1990s was soon followed by further devaluation following the 2002 presidential election. Its political ties with the US have been all but smooth. In fact, Fisher proclaimed Brazil to be ‘the dodgiest of the lot’ (FOMC 2008, 17). Despite it’s ‘unique negotiating history’ with the Fed, FOMC staff argued that it was also a ‘critical part of [the Western] hemisphere’ (FOMC 2008). Fed officials used additional vague terms and political reasoning to justify their decision. Despite it being a risky choice, economically, it had arguably made ‘significant progress since Cardoso was president, and it is a robust economy, relatively speaking’ (FOMC 2008, 17). The US-Brazil swap line can be explained by the Fed’s preferences for economies that exhibit higher levels of financial integration, even though American banks were not highly exposed here. Following a currency crisis in the mid-1990s, Brazil rapidly de-regulated its financial sector, with IMF-encouraged reforms. The Brazilian economy was substantially more open than several emerging economies, and thus has a policy structure more closely aligned with the US.<sup>5</sup>

During the crisis, several G-20 economies pushed for a reform of the global economic governance system in the early days of the crisis (Kahler 2013). These calls grew louder around the same time as the Fed began to extend swaps to Europe and other advanced economies. Brazil was scheduled to take the rotating summit chair in 2008, and would therefore be part of the G-20 ‘troika’<sup>6</sup> during the crisis (Chey 2012). Brazil was now in a position to play a more significant role in the G-20. Although frequently clubbed together with India and China, Brazil has been far less vocal in its preferences for further increased agenda-setting power. Even Lula’s isolationist ideas have been ‘fundamentally predicated on maintenance of the existing global governance structures’ (Narlikar

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<sup>5</sup> The level of Financial Openness for Brazil is 0.653, while that for India is .164 as per the Aizenman, Chinn and Ito (2013) ‘Trilemma’ Index measures. The index is an updated version of the Chinn-Ito index, normalized between zero and one. Higher values of the index indicate that a country is more open to cross-border capital transaction. The data set does not include the US.

<sup>6</sup> To ensure continuity, the Presidency each year is supported by a ‘troika’ made up of the current, immediate past and future host countries.

2013, 570). Burges (2013, 585) identifies that Brazilian diplomats frequently ‘drift from the coalition script’, to present itself as a bridge between the global North and South. In fact, the Fed’s stance on assisting these emerging economies and extending swap lines only became positive after October 2008 when it was established that the G-20 summit would take place (Chey 2012). Until then, the Fed had not been swayed by the possibility of reverse spill-over from increasing instability in emerging markets that could hit advanced economies (MSFK 2008).

In a context in which economic indicators were evidently unfavourable to receiving a swap, strategic and geopolitical considerations mattered. The crisis was a unique moment for the US, particularly in challenging its ability to maintain its stronghold in global economic governance. One way to do this was by strengthening alliances with EMEs that were not vocally opposed to US policies and practices. Such an opportunity arose with Brazil: a country exhibiting high levels of financial integration that had increased influence in governance and agenda-setting. Nevertheless, the political dynamics illustrated suggest that the decision to extend a swap facility with Brazilian central bank was clearly influenced by political motivations in the Fed as financial pressures worsened in 2008.

### ***3. KOREA AND SINGAPORE:***

The Korean and Singaporean cases, although less surprising choices in economic terms, also provide support for the argument that geopolitical and diplomatic considerations matter. On several fronts, Korea posed a more suitable partner for a swap line on several economic and diplomatic reasons. Like Mexico and Brazil, Korea was also a large and systemically important economy, with a GDP over \$1 trillion. Singapore is a global financial centre and a major economic hub in Asia. US banks were highly exposed to the Korean economy, but less so in Singapore. From having an almost closed economy until 1987, Korea began freeing up capital controls in the 1990s, and has continued to do so since the crisis broke out. Singapore, being a financial centre, has had full capital account convertibility since the Asian financial crisis of 1997-1998. Furthermore, both economies experienced greater agenda-setting influence in economic governance. These political and diplomatic factors arguably reinforced the Fed’s view of these countries as reliable swap recipients.

Fisher, of the Dallas Fed, stated that Korea was ‘an underrepresented country in terms of discussions about developments in that part of the globe, and yet it is inordinately successful’ (FOMC 2008, 17). With high levels of foreign exchange reserves, and relatively sound fundamentals, Korea demonstrated its capacity to manage contagion effects. The Korean Finance Minister Kang Man-soo commented that Korea had no plan to apply for an IMF facility, due to Koreans’ (hostile) sentiment towards it (MSFK 2008). Dollar funding pressures had been increasing rapidly as contagion spread

outside the US and the Koreans had been requesting a swap facility from the Fed throughout September. Reasoning that the Korean won was not an international currency and it had a low (below triple A) credit rating, the Fed rejected its early swap requests, fearing a pile-on effect of more EME requests (Chey 2013). At that time, however, there were two developments in US-Korean relations. First, for some time, the US and Koreans had been negotiating a trade deal, the Korea-US (KORUS) trade agreement, which when finally concluded in 2012, was one of the most commercially significant US free trade agreement since NAFTA (Gallagher 2015; Office of the United States Trade Representative). By late 2008, however, KORUS negotiations faced several obstacles, many of which were due to the ongoing crisis. With contagion and growing pressures, concluding an agreement was looking increasingly difficult, yet the US was eager to conclude the deal.

The other, more immediate development was the announcement of the Korean Presidency in the G20 Summit. Chey (2013) suggests that in exchange for Korean support at the G-20, the US changed its position from previously denying Korea a swap line. Korea did not support European and Chinese calls for a fundamental restructuring of the international order in the G-20 (Gallagher 2015). Days after the announcement, the Bank of Korea was asked to submit a request for a Fed swap, that was approved that same day (Chey 2013; Park 2008). The ordering of events does not seem to be a coincidence. Paulson commented that swap facilities with EMEs demonstrated strong cooperation in the G-20, and President Bush requested that Korea step in to the governance realm to help overcome the crisis (Chey 2013). In Korea, the establishment of these swap lines were perceived as a ‘US request for support of its position in the forthcoming reform of the international financial system’ (Park 2008). The sequence of events illustrates the geopolitical and diplomatic considerations that swayed the US to support the Korea through swaps in exchange for Korea’s support in the G-20.

These considerations are also apparent in the case of Singapore. Fed officials acknowledged that financial pressures in Singapore at the time were not significant, but protecting it from future pressures was valuable, as it was a major financial centre. Given Singapore’s strong economic fundamentals and ‘unique’ position in global finance, this swap line is less surprising. Yet, political justifications were also made, pointing to the Fed’s interest in strengthening in its EME alliances. FOMC officials recognised that it would be beneath Lee Kuan Yew’s dignity to go back to the IMF, and protecting this vital international link was important to the US (FOMC 2008, 17).

The case of Singapore, in primarily economic terms, seems far more intuitive a choice than the other three. Being home to the second largest dollar market, and a vital link to Asian financial markets, Singapore’s potential to impinge of the US economy was primarily through financial

linkages, and less in the political sphere. Extending a protectionary credit line to provide dollar funding to US banks based in Singapore made it a seemingly obvious choice. Nonetheless, this cannot be said of all EME swap recipients. For the range of cases discussed here, political, historical and diplomatic considerations also carried substantial weight. In fact, the same can be said for those cases that were considered and denied such a facility.

#### ***4. POLITICS AND POSSIBILITIES – CHILE? INDIA?***

The most interesting cases really are the ‘non-events’: those countries whose requests were turned down by the Fed, and the hypotheticals considered by the FOMC. For the most part, the correspondence between the Fed and foreign central banks, particularly those whose requests had been denied, remained classified. In discussions over Chile and India, the foreign policy concerns as well as the goals of the Fed become clear. The descriptive macroeconomic data on the Indian economy are comparable to that of Brazil. Chile, on the other hand, was substantially smaller in its economic size, and subsequently, it was less systemically important to the US. Yet, at the time of the crisis, Chile was a highly financialised economy, with full convertible currency. Although it was ultimately denied a swap line during the crisis, it presents an ‘almost’ case: The Fed’s deliberations in choosing its swap partners considered Chile, the relatively more open economy, in a more favourable light than its discussions over India. We would expect that the political aspects considered in the selection process would be more favourable towards Chile than India, despite the size and systemic importance of the Indian economy.

Given the macro-prudential policies of the select four economies and their large reserve holdings, Fed officials argued that they were the ‘top-tier’ EMEs. Additionally, their recent history with the IMF following the crises of the 1990s made them reluctant to approach the institution for assistance in 2008. With stringent safeguards added on to these swap lines, the FOMC judged these lines to be of low risk to its own resources. However, a prominent source of risk to the Fed was that expanding the scope of swap lines left the Fed ‘increasingly vulnerable to a ‘pile-on’ effect, which might manifest itself either in a large number of additional swap line requests or in political pressure’ (FOMC 2008, 12). Consequently, Fed officials were emphatic that in establishing these four EME swap lines, they signalled a clear stance on their willingness to consider other EME requests. They considered directing some countries to the IMF, stressing that the high bar for EME swap facilities implied that they would only consider requests were the case comparable to the other four. Ben Bernanke summed it up nicely: ‘... these are the right four economies and we probably shouldn’t do more, both from an economic and diplomatic perspective’ (FOMC 2008, 16).



Concurrently, FOMC staff were also concerned that conditionality or refusals could insult heads of foreign institutions, and impact market perceptions of these economies. As Eric Rosengren, of the Boston Fed, put it: ‘I do think going to the IMF will attach a fair amount of stigma to the organization. So I am worried that the spill over benefits to other countries will be negative, not positive, because of that stigma’ (FOMC 2008, 25). The intensification of financial stresses was already a pressing concern, and much of the stresses that EMEs faced reflected contagion effects from advanced economies. Furthering such pressure ‘could trigger unwelcome spill overs for both the US economy and the international economy more generally’ (FOMC 2008, 10).

The uncertainty and disagreement of FOMC officials was evident in the back-and-forth deliberation of who else they might consider, and the ‘boundary problems’ around swap lines. The FOMC meeting in October 2008 raised a few ‘hypothetical’ requests from Chile and India. Under these circumstances, India, was next country that could ‘make a case’, and yet, had ‘about as much gap as you’re going to find’ between itself and the other four economies (FOMC 2008, 29). Where this gap really lay, is unclear in both the data and debates.

The discussions around this potential case speaks to the ‘collateral benefits’, or lack thereof, of financial liberalisation. The Indian economy demonstrated low levels of capital account openness (about 0.164 on the ‘Trilemma Index’). Yet, it shared many attributes that worked favourably for the other four EMEs. India’s trade levels with the US were comparable to Brazil; inflation had decreased in the run up to 2008, and it possessed large reserves. Most importantly, US banks were more greatly exposed to the India economy than they were to Brazil or Singapore. Along with Mexico, Brazil and Korea, India has also been listed as one of the 25 biggest, most interlinked economies by the IMF (2014). With a clear need to discern where to draw the line with EME swaps, India’s size and importance in the global economy gave way to pressures in the Fed to constrain the scope of EME facilities. Duvvuri Subbarao, the governor of the India’s central bank, reported that the main reservation of the US against extending a swap line to India was that the rupee was not a fully convertible currency (Prasad 2014). Political considerations were not used favourably in discussions over potentially extending a swap line to India. Despite its relatively sound economic fundamentals, India’s financial markets were not very well developed. It was acknowledged that at the time, India was ‘well run and had shown a lot of progress in their domestic policies and their domestic economies’ (FOMC 2008, 117). Moreover, sudden capital outflows and currency concerns were not necessarily justified simply by poor economic fundamentals, but contagion from the US. At the same time, Indian officials had been vocal in their calls for policy adjustment in the US. A rapidly growing economy,

India's GDP also surpassed the 1 trillion dollar benchmark the Fed had identified was a sign of a systemically important economy. Yet, within multilateral institutions, India had not presented itself as a strong ally in support of the status quo, seeking a greater role agenda-setting in global economic governance (Narlikar 2013). Despite improvements in the domestic economy, India's policy of capital account restrictions influenced the Fed's decision unfavourably to the Indians. Instead, the Committee showed a greater willingness to subject the Indians to the 'stigma' of the IMF package.

Interestingly, the Fed gave due consideration to the possibility of extending a swap line with Chile. In 2008, Chile's macroeconomic position was not consistent with most of the economic criteria that Fed sought in its swap partners. It therefore posed as an unlikely candidate for a Fed facility. Fisher argued vaguely, that 'although it is tiny its representation is important and its nature unique' (FOMC 2008, 17). Since the early 2000s, Chile had come to be seen as one of Latin America's success stories, with moderate inflation and strong growth (Prasad 2014, 71). Unlike India, Chile was a highly open economy with a fully convertible currency and did not typically intervene in foreign exchange markets (Prasad 2014). We would therefore expect the Fed to view it more favourably in its discussion of whether or not it made a case for a swap line. FOMC transcripts suggest that although Chile did not receive a swap line in the end, the Fed paid greater attention to diplomatic and geopolitical factors while assessing the case. The key aspects that were considered were its immediate impact on the US economy, its unique role in the Western hemisphere, the unlikeliness that they 'would want to go to the IMF in the first place' (FOMC 2008, 18). Few details of its uniqueness and impact of the US economy were provided, however. In the early years of the crisis, Chile did not enjoy increased privileges in global economic governance. Additionally, given its small size and relatively lower economic ties with the US, Chile's preference for capital account convertibility was insufficient to sway the Fed's decision in its favour. Domestic economic and institutional improvements may have signalled the collateral benefits of liberalization that put Chile in higher standing with the Fed. In October 2008, Governor De Gregorio, of the Chilean central bank requested the US ambassador to Chile to issue a public statement from a senior Fed official saying that although Chile was not in need of a swap line, it would be eligible for one, should the need arise (Prasad 2014). De Gregorio sought to gain recognition for Chile's economic performance and 'positive handling of the crisis'. Somewhat surprisingly, despite the Fed's positive discussion of the Chilean case, no such statement was forthcoming (Harris 2015; Prasad 2014).

Although the final vote was "unanimous", some officials such as Plosser or Stern, remained doubtful of the value of these swap lines, and expressed reluctance in their 'yea' votes for the four

EME swap recipients. Others emphasized that their consent was conditional on ‘meaningful and real’ safeguards, and their concern over the language of the criteria that swayed decisions, ‘given how circumstances can change quickly’ (FOMC 2008, 42 – 43). It was evident that the Fed was concerned about the immediate economic impact of the crisis not only in the US, but internationally. Policies and personnel who provided greater credibility to the use of these facilities provided more credible choices. Although disagreement within the FOMC over who should receive swaps was clear, a general pattern does emerge to explain how the Fed negotiated its boundary problem in extending swaps to EMEs. The economic criteria set out by the Fed, especially those of systemic importance, integration with US banks, and sound macroeconomic fundamentals, did matter. However, it was important that these countries could signal credibility of economic management to the extent that the FOMC could trust these facilities would not be abused. The cases indicate that countries with higher levels of capital account convertibility were favoured by the Fed in its selection of swap recipients, giving us greater confidence in the collateral benefits of financial liberalisation and the effectiveness of this policy in signalling the credibility of the economy. That said, for some EMEs, a policy mix of capital account openness was not an adequate enough signal. Policies and practices were emphasized in a way that Fed discretion was extremely politicised, accounting for diplomatic, political and historical concerns, particularly in circumstances where the immediate impact on economic interests was neither apparent nor clearly justified. These considerations were largely used to sway decisions in favour of economies that were relatively more open.

#### . A A I I C A L E O F F E D A P

Having considered in detail, the politics underlying the Fed’s swap facilities with EMEs, I test for more general evidence of the effect of capital account openness in the Fed’s decision-making. I would expect that higher levels of financial openness are associated with a higher probability of receiving a Fed swap line than lower values of openness. Using a maximum likelihood approach, I estimate the effect of the degree of financial integration on a country’s chances of receiving a swap line. I run a probit regression on the dependent variable  $Y_{it}$  that measures the cross-country variation in receiving a swap in 2008, taking a value of 1 where the Fed established swap lines with a foreign central bank, and 0 otherwise. I use data ranging from 1997–2007 for the explanatory variables are measures of key economic and financial criteria that the Fed publicly stated

were taken into consideration in their decision-making.<sup>7</sup> In the absence of the full list of who requested a swap from the Fed, the model is based on the assumption that swap lines were extended regardless of a prior request.<sup>8</sup> Such an assumption is not misplaced as first, in some cases, the Fed urged some foreign central banks, such as the ECB or the Bank of Korea that it believed needed liquidity to request a swap that it immediately granted (Chey 2012). Second, it is possible that we do not have an exhaustive list of all countries whose swap requests to the Fed were denied.

To measure the influence of economic and financial integration and currency convertibility on the Fed's choice of swap partners, my focal explanatory variable is  $KAOPEN_{it}$ .<sup>9</sup> This index ranges from 0 to 1, where a value of 1 indicates full currency convertibility, and a country with a closed economy takes a value of 0. In both models, I drop nine individual European Union (EU) economies and include only the ECB in the statistical tests, as the swap lines to Europe were received by the ECB and not individual Eurozone member states. I draw controls from the existing literature that lists the FOMC's selection criteria to estimate the economic, financial and political covariates that influence both  $KAOPEN_{it}$ , and the outcome,  $SWAP_{it}$ . I present two models to test the influence of capital account openness on the likelihood of receiving a swap with and without controls. Model 1 presents a bivariate analysis of the effect of  $KAOPEN_{it}$  on  $SWAP_{it}$  alone, to test for more general evidence of the argument. In Model 2, I control for the Fed's stated selection criteria taken from the United States GAO audit<sup>10</sup>.

A first control is  $WEIGHT_{it}$ , which I have generated using the first standardised principal component of the four variables that measure a country's weight in the global economy measuring and its economic significance to the US. While the results hold for the  $WEIGHT_{it}$  variable when  $WEIGHT_{it}$  is disaggregated, I create this variable to mitigate a multicollinearity problem from these four variables – US Bank Exposure, Bilateral Trade, GDP Share and Liquid Liabilities – that are highly correlated, and effectively indicate different aspects of a country's weight and systemic importance to the US and the world economy (See Table 3 in the

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<sup>7</sup> I thank J.L. Broz for sharing the data and supplemental material used in the analysis.

<sup>8</sup> Without an exhaustive list of countries that requested swaps, we cannot infer the influence of financial openness on whether or not a country would request a swap in the first place. It is of course possible that countries with lower levels of openness were unlikely to request Fed assistance. These results must therefore be taken with a degree of caution.

<sup>9</sup> Measured using the Chinn-Ito KAOPEN index of capital account openness based on information regarding cross-border economic and financial restrictions in the International Monetary Fund's

<sup>10</sup> The Chinn-Ito KAOPEN index is normalised to range from 0 to 1, where higher values indicate more openness. The data are sourced from the Aizenman, Chinn and Ito (2008; 2013) 'Trilemma Index', measuring the degree of achievement along three dimensions of the 'trilemma' hypothesis, updated July 1, 2016.

<sup>10</sup> These results hold when dropping the EU and UK (See Appendix, Table 2 and Figure 9.)

Appendix). Given the centrality of the US economy and the US dollar in the global economy, most countries that are of economic or political significance to the US tend to be those that are of systemic importance to the global economy as well. The measures of an economy's importance to the US – bank exposure and trade – likely capture the same dynamics and relationships of interest as measures of economic importance in a global context – GDP share and liquid liabilities share in the global economy. Models incorporating these variables may therefore be overdetermined and unable to capture the true effect of these factors given the concerns of multicollinearity and small sample size.

More specifically, *Bank Exposure* accounts for financial linkages to the US. This is measured as the value of the consolidated claims of US banks in a foreign economy as a proportion of total of the consolidated claims of US banks in all countries as of December 2007.<sup>11</sup> Since US banks would benefit in those countries to which the Fed provided dollar liquidity, as previous studies suggest, higher levels of US bank exposure in a foreign economy are associated with a greater likelihood for that economy to receive a swap. *Trade* which is calculated as US bilateral trade (imports plus exports) with an economy as a fraction of total US trade (imports plus exports) in 2007.<sup>12</sup> Openness to trade is a key aspect of overall economic and financial openness. It is also associated with exposure to dollar liquidity in the global economy, since most global trade is conducted in dollars. Bilateral trade therefore provides a good measure of a country's economic significance to the US. To account for a country's weight in the global economy, I use GDP share and liquid liabilities share.<sup>13</sup> GDP Share is measured as a country's GDP as a proportion of global GDP (in US dollar billions) as of 2007. To measure financial mass, I used Liquid Liabilities<sup>14</sup> – an economy's liquid liabilities as a share of total liquid liabilities in the world (in US dollar billions) as of 2007.<sup>15</sup>

Finally, I include *Openness* as a proxy measure to control for a country's record of economic management. *Inflation* is measured as the annual percentage change of CPI inflation averaged over

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<sup>11</sup> Bank of International Settlements (BIS), Consolidated Banking Statistics, Table 9B, Foreign claims by nationality of reporting banks, immediate borrower basis.

<sup>12</sup> These data in Barbieri and Keshk (2012), *Journal of International Money and Finance*, Version 3.0.

<sup>13</sup> These data are available from the World Economic Outlook (WEO) Database and from Beck et al (2000) Financial Structure Database. For the Eurozone, the values for the twelve countries under the ECB's jurisdiction are summed together, as of 2007 (Broz 2015).

<sup>14</sup> These data are available in the WEO Database and from Beck et al (2000) Financial Structure Database.

<sup>15</sup> This variable is also highly correlated with *Openness* as the larger economies are, on average, more internationalised. Given that the Fed considered both the exposure of US banks as well the systemic importance of foreign economies in its selection process, creating an index of these variables is not theoretically viable. As such, this analysis does face a problem of multicollinearity.

the previous decade (1997 – 2007).<sup>16</sup> Financial openness tends to be associated with higher inflation, and inflation is generally more sensitive to monetary policy under a regime of financial openness. When central banks are responsible for and maintain stable and low inflation, it would signal its capacity for sound economic management.

I would expect \_\_\_\_\_ to have a positive effect on the outcome, suggesting that countries with higher levels of \_\_\_\_\_ would have a higher probability of receiving a swap. Table 1 presents the two models: Model one tests the effect of Financial Openness on Swap Agreement alone. In Model 2, I control for \_\_\_\_\_ and \_\_\_\_\_. As expected, in Model 1, \_\_\_\_\_ has a positive and significant relationship on the likelihood of receiving a swap, supporting the argument that the Fed acted favourably to economies with greater capital account convertibility. The Model shows that \_\_\_\_\_ alone explains 18% of the variation in the data.

In Model 2, I estimate the effects of \_\_\_\_\_ while controlling for \_\_\_\_\_ and \_\_\_\_\_. The coefficient for \_\_\_\_\_ is positive and significant. This is unsurprising given the FOMC’s focus on the systemic importance of its swap partners, and the multiplicative effects that contagion through global financial centres could have on the international economy. Of course, this catch-all measure loses nuance in that we cannot tell the marginal influence of banking and financial linkages over those of trade. However, the high correlation between the size of an economic and its financial ties to the US cannot be ignored and as such, it is essential to addressing the problem of multicollinearity. The distinct effects of these forces is evident in FOMC discussions, as illustrated previously. Given this concern, questions regarding the ambiguity and discretion the Fed had in addressing its ‘boundary problems’ remain wanting. Other questions about which countries were likely to request the Fed’s assistance in the first place, and what other motivations may have driven central banks to request a swap besides an immediate need to ease dollar funding pressures, also remain.

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<sup>16</sup> Inflation data are taken from the IMF’s International Financial Statistics.

TABLE 1. The Fed's Selection of Foreign Central Banks for Currency Swap Lines

	M	1	M	2
	A		A	
<b>F</b>			<b>1.93**</b>	<b>2.07**</b>
<b>O</b>			<b>(0.58)</b>	<b>(0.78)</b>
Economic Significance				0.93**
				(0.34)
Inflation				-0.14*
				(0.08)
Constant			-2.68**	-2.08**
			(0.50)	(0.73)
Observations			154	129
Pseudo R-Squared			.18	0.45
P-Value			0.00	0.00
Log Likelihood			-38.26	-23.18
LR Chi-Squared			17.30	37.95

Standard errors in parentheses

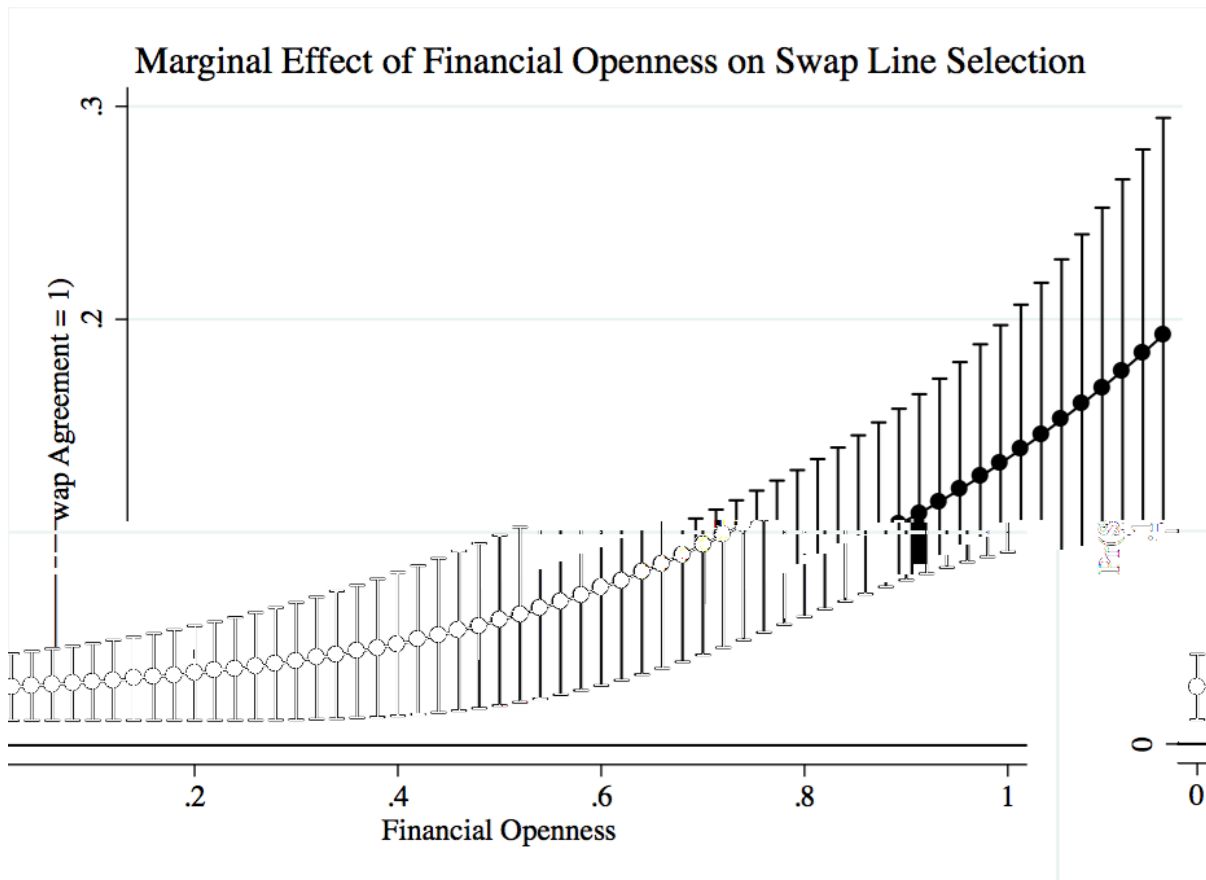
\*\* p<0.01, \* p<0.05

Note: The outcome variable is Swap Agreement which equals 1 if the FOMC selected a foreign central bank for a dollar swap line, 0 otherwise. Since the ECB received a swap line, I code a single observation for the Eurozone and the sum (or aggregate, where appropriate) covariate values for its twelve member countries in 2007.

Figure 2 illustrates the marginal effects of  $\alpha$  on the likelihood of a country receiving a swap line based on Model 2 above. Figure 2 shows that the likelihood of receiving a swap for economies with lower measures of  $\alpha$  is negligible. Economies with a

indicator of below 0.2 would have about a 3 percent chance of receiving a swap line, in comparison with a 20 percent chance for fully open economies. Although modest, this estimate does shed some light in the Fed's unwillingness to extend a swap line to countries with limited capital account convertibility. The models show that  $\alpha$  can explain some of the inconsistencies between the FOMC criteria for selecting swap partners and the final selection of these fourteen economies. The estimates support the argument in the paper that the variation in selected swap partners based on vastly different ties to US banks can be explained by relatively higher levels of capital account openness. Likewise, countries whose currencies are not fully convertible were less likely to be considered for a Fed swap.

FIGURE 2. Marginal Effects of Financial Openness on Swap Line Selection



Note: Predictive margins (with 95% confidence intervals) of a central bank receiving a Fed swap line using Model 2 from Table 1, holding covariates to their means while increasing from 0 to 1.

### I. CONCLUSION

In conclusion, the selectivity and opacity of Federal liquidity swaps reflected the Fed’s preference for economies that share its policy preference for greater financial openness, mediated by its strategic interests in the global economy. Understanding the political dynamics underlying the Fed’s currency swap arrangement has far-reaching implications for global economic governance and crisis management. The recent global financial crisis showed that the IMF lacked the capacity to put out the fire. Instead, major central banks stepped up to assist economies that were coming under increasing pressure. The coordinated management among central banks through swap lines provided a preferable source of liquidity for economies under strain. It was also the first time that the Fed stepped in as a dollar lender of last resort to support emerging economies, barring Mexico. The US enjoyed a unique position as the only economy capable of injecting a large amount of dollars into the



global economy. In turn, the Fed's use of swaps in and after 2008 afforded it a new tool for the US to hone its monetary power in international finance and enhance its interests in global economic affairs.

The selectivity and opacity of the Fed's policies and practices during the crisis has been a key source of contention over these facilities, at home and abroad. Consequently, it remains in question whether systemically important economies can rely on obtaining US assistance in the case of another global meltdown, and which economies these might be. The future availability and reliability of swaps as a source of financing to economies facing growing pressure is uncertain. Based on current assessments of these arrangements, it seems as though this resource is only available to economies of not only economic, but strategic importance to the US.

The paper finds that a country's policy mix – that is, openness and currency convertibility – influenced an economies' chances of receiving a Fed swap. Countries whose ideas were more closely aligned with the US's preference for liberalisation and convertibility had a higher probability of receiving a swap line from the US. Additionally, political considerations were especially effective in swaying decisions for some economies, where FOMC officials disagreed. At the same time, the Fed also showed preference towards those economies that, at the time, had a greater influence in the governance and management of the global economy. The divide between the US and Europe at the time of the first G-20 summits and the origin of the crisis in the US itself required that the US strengthened its alliances with emerging markets with increasing weight in the global economy.

A key implication of this contingent need of the US to branch out is that we cannot know whether these emerging economies can bank on US support in the future. Much has changed since the crisis, in terms of individual countries' macroeconomic policy preferences as well as relationships between the US and its swap partners. Since the crisis, Brazil has reverted to its policy stance favouring capital controls and heavy-handed state-intervention in domestic markets. Political upheavals in Brazil, with the recent impeachment of Dilma Rousseff has spurred a political crisis. Korea's efforts to institutionalise swap lines with the Fed did not come to fruition as the crisis evolved. The crisis in the US has now more or less abated, and ties with its Western allies are being restored. The US's strategic needs to reinforce its relations with emerging economies may be less consequential to it in the future. Finally, emerging economies are increasing their role in the global governance arena through alternate collaborative funds and initiatives. The prospect of crisis financing for many growing economies is risky, and relies substantially on US discretion. Alternative institutional arrangements for global economic governance may offset the Fed's affinity to its emerging economy partners, and as a result, can have the effect of reducing these countries' chances of receiving Federal

assistance in the future. This paper finds that closer alignment with US policy preferences – increased financial liberalisation and currency convertibility – and greater weight in governing institutions are crucial to being perceived as systemically and strategically important to the US. The uncertainty over the prospect for the future availability of Fed swaps has implications for emerging economies’ access to global financial safety nets and might suggest the need to strengthen domestic preventative measures to prevent the recurrence of systemic shocks and protect bystanders from global contagion.

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APPENDI

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FIGURE 3. US Trade Share (2007)

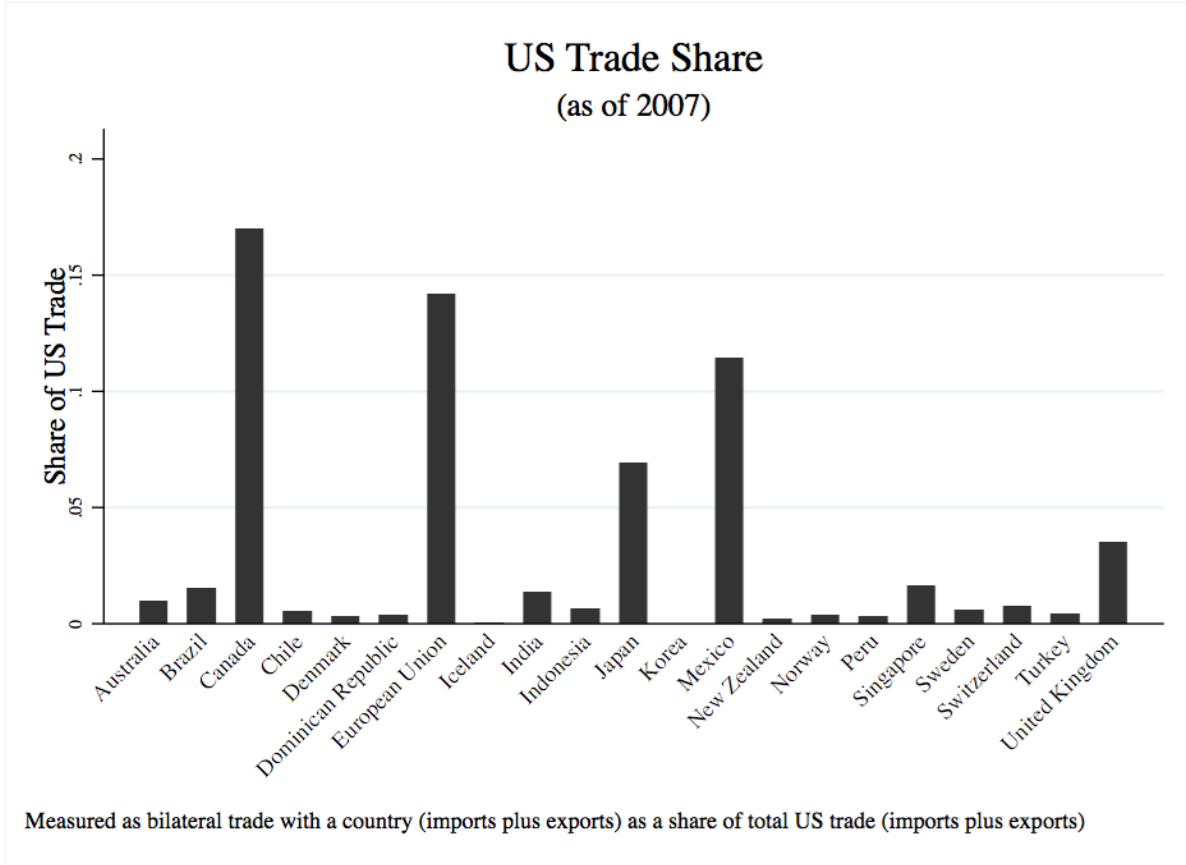


FIGURE 4. Liquid Liabilities Share

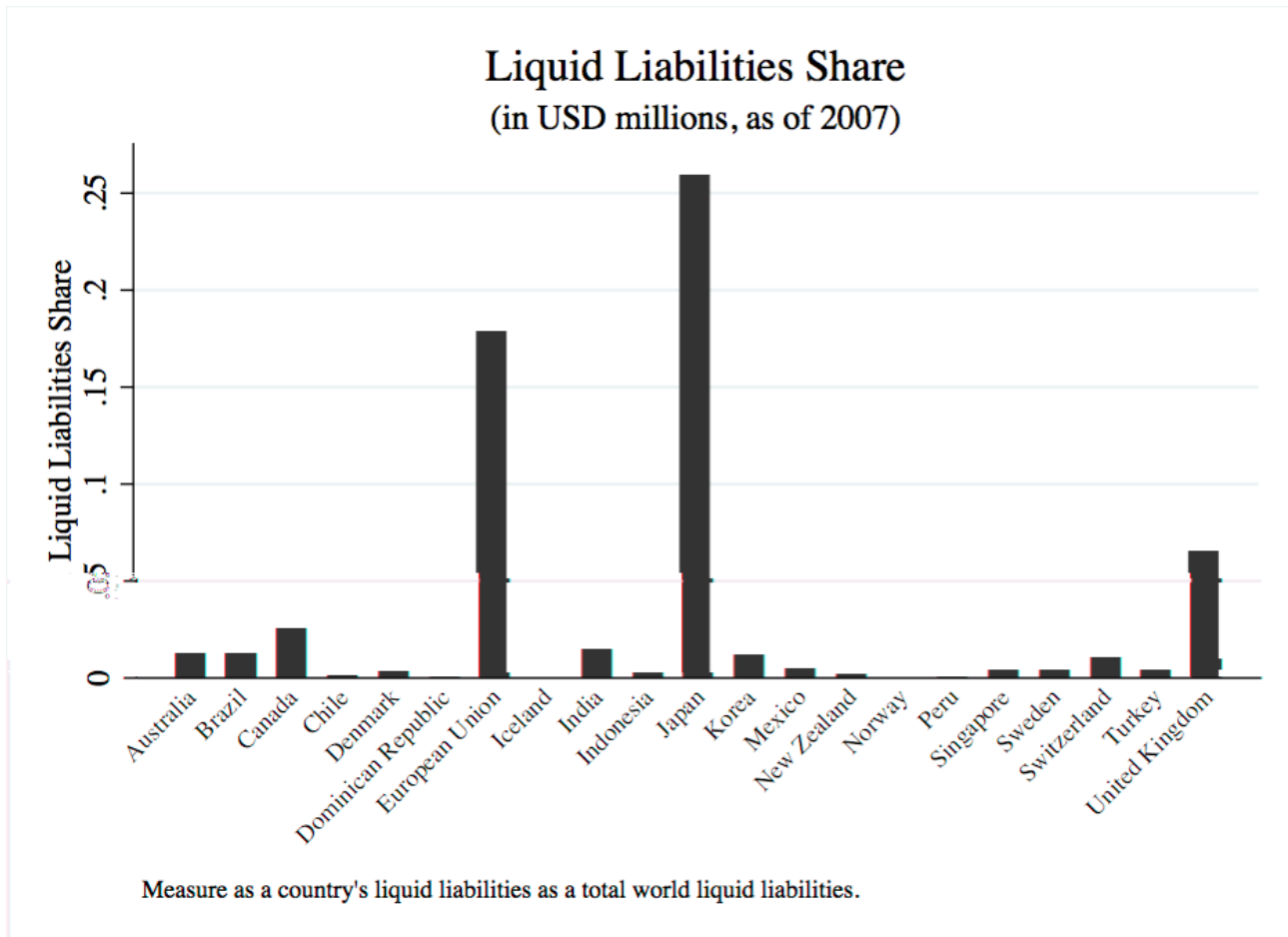
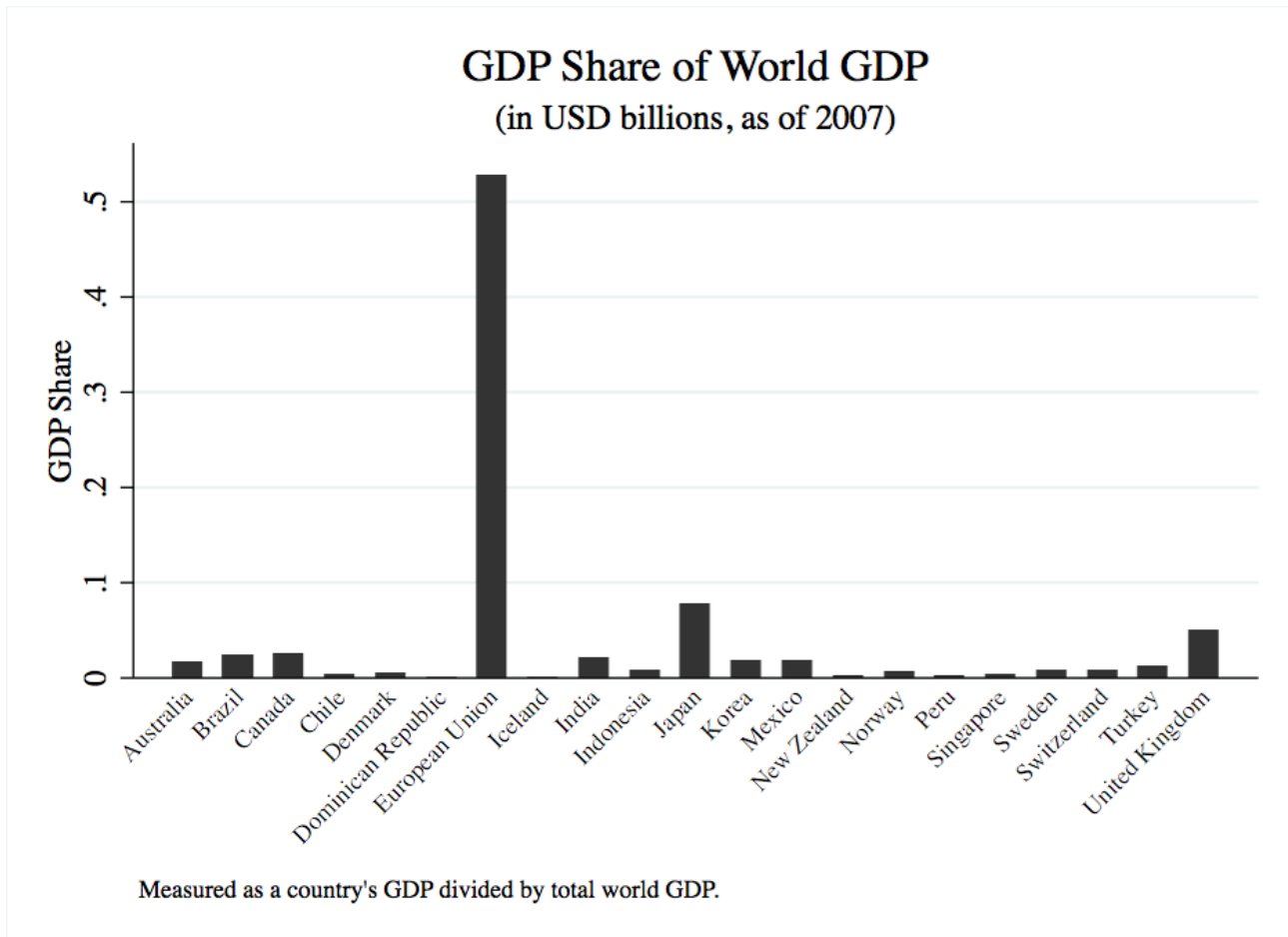


FIGURE 5. GDP Share





**FIGURE 6. Inflation**

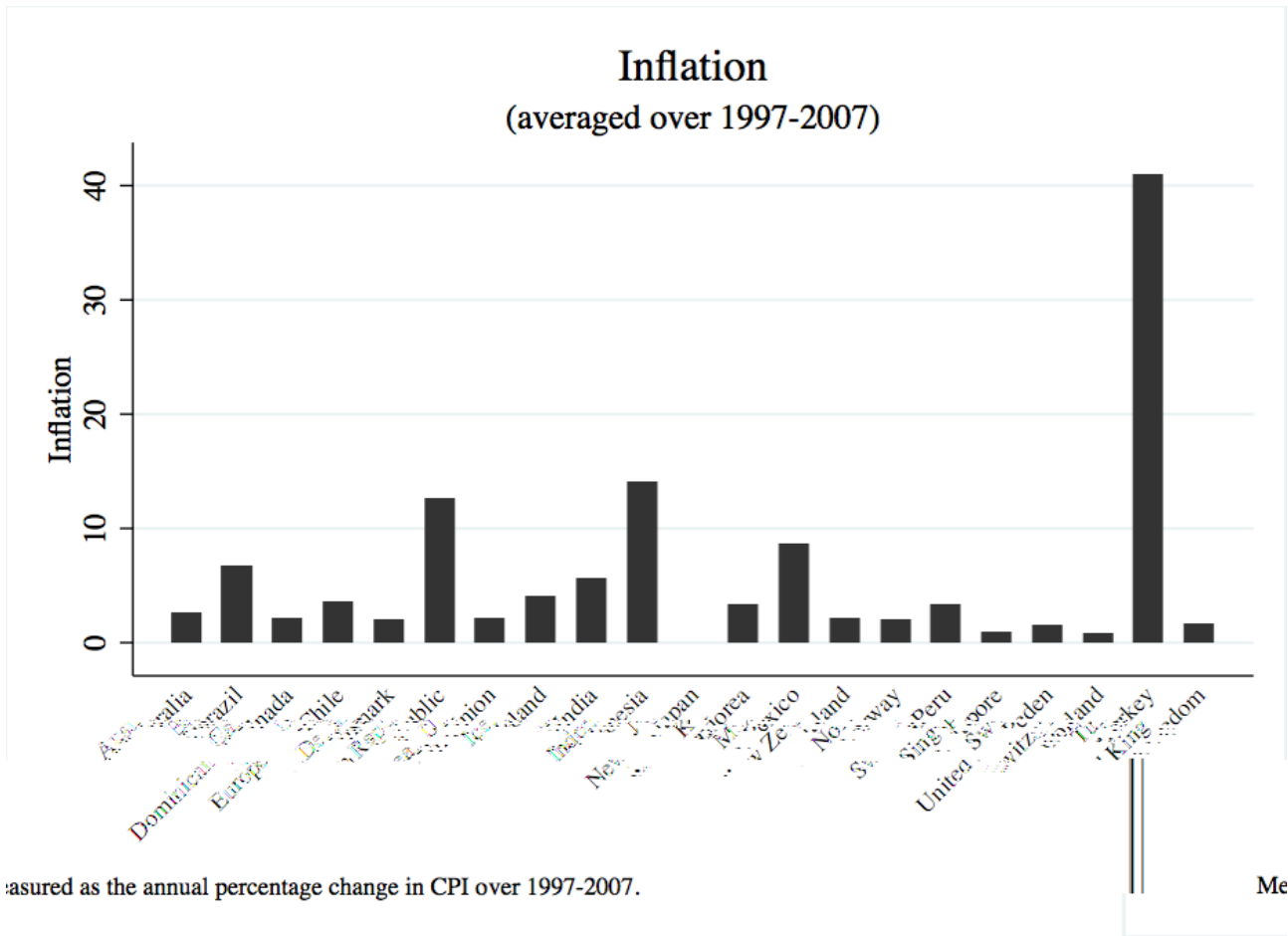


FIGURE 7. International Reserves

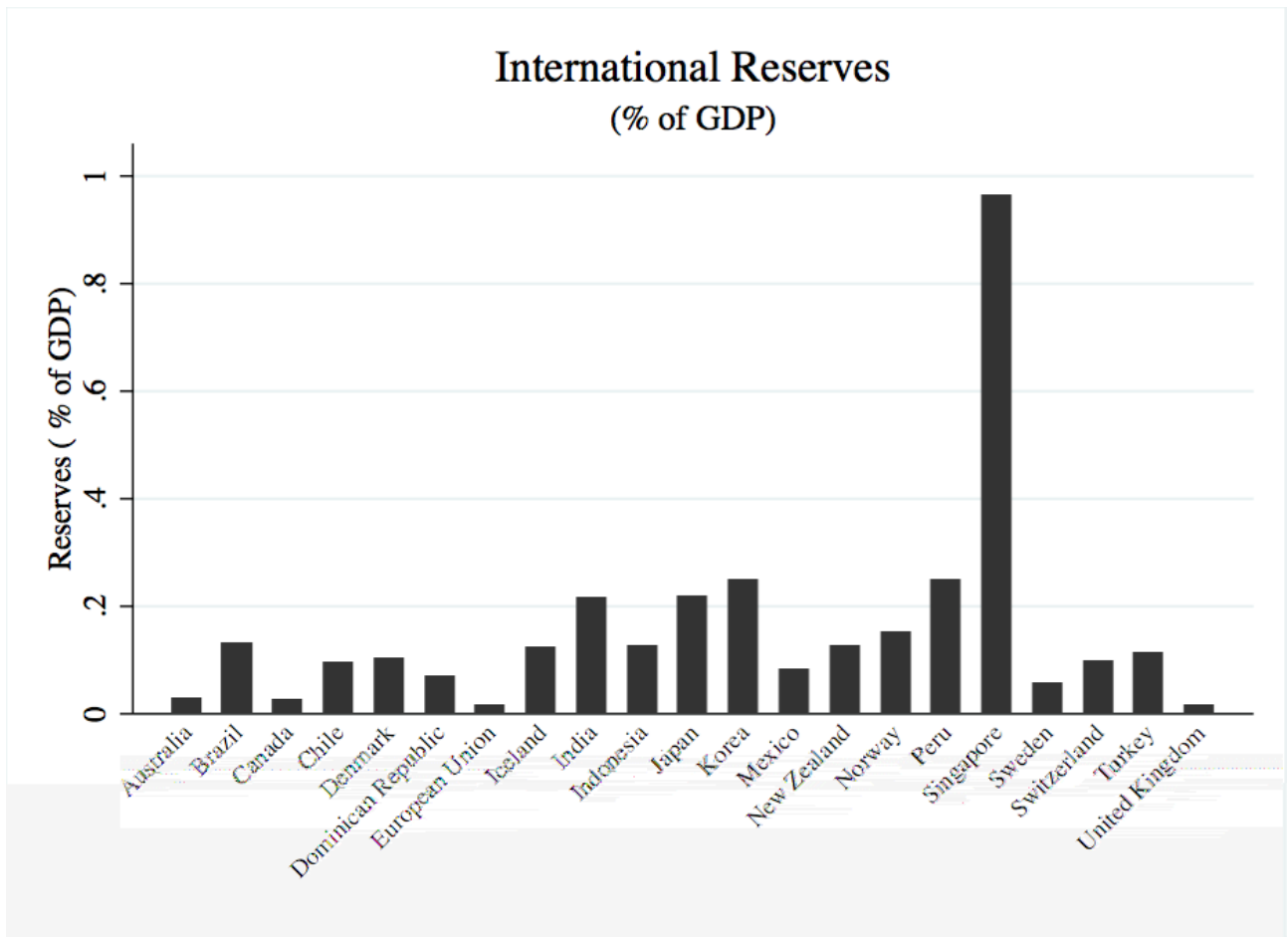
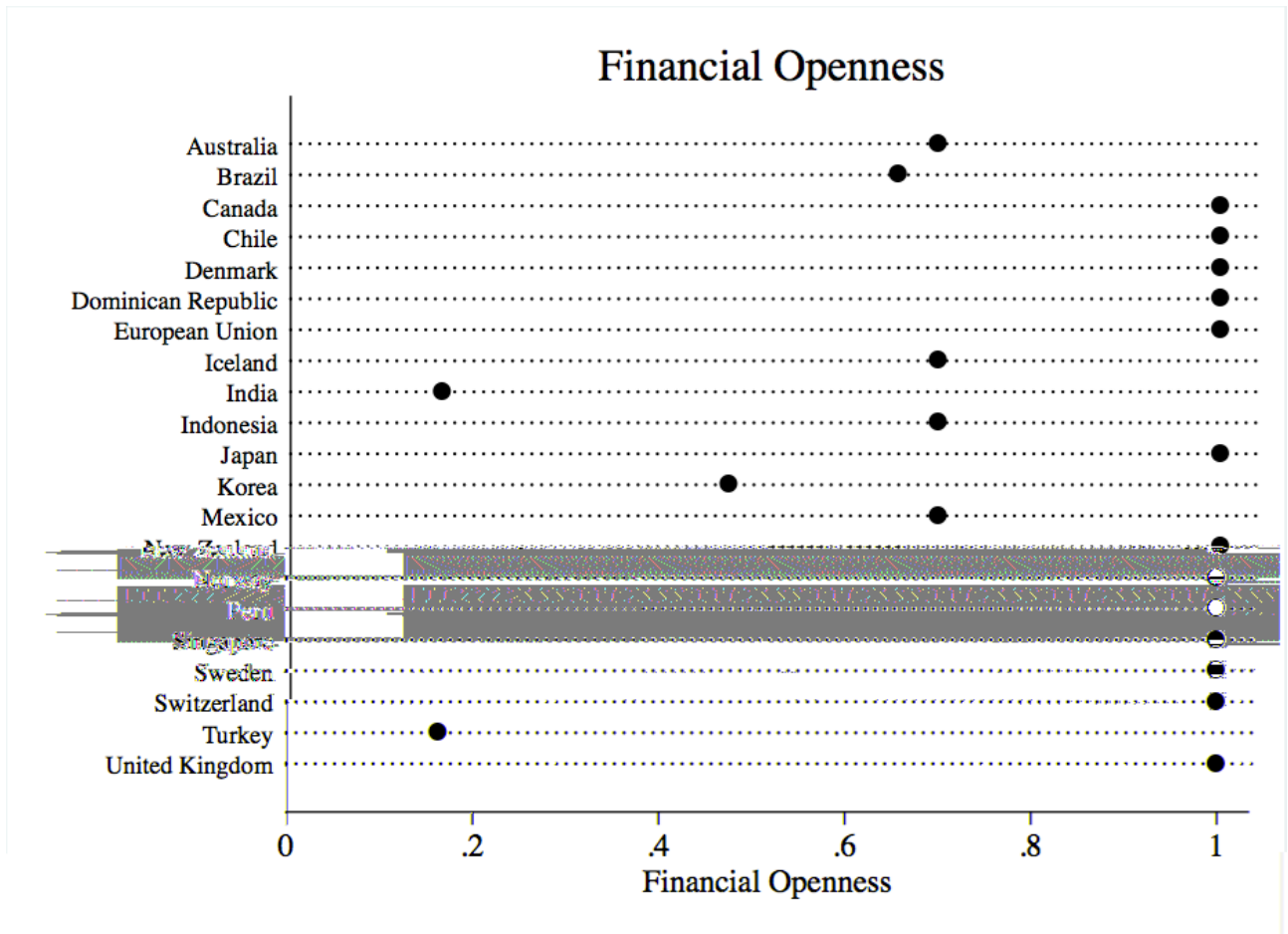


FIGURE 8. Financial Openness (Eurozone aggregated)



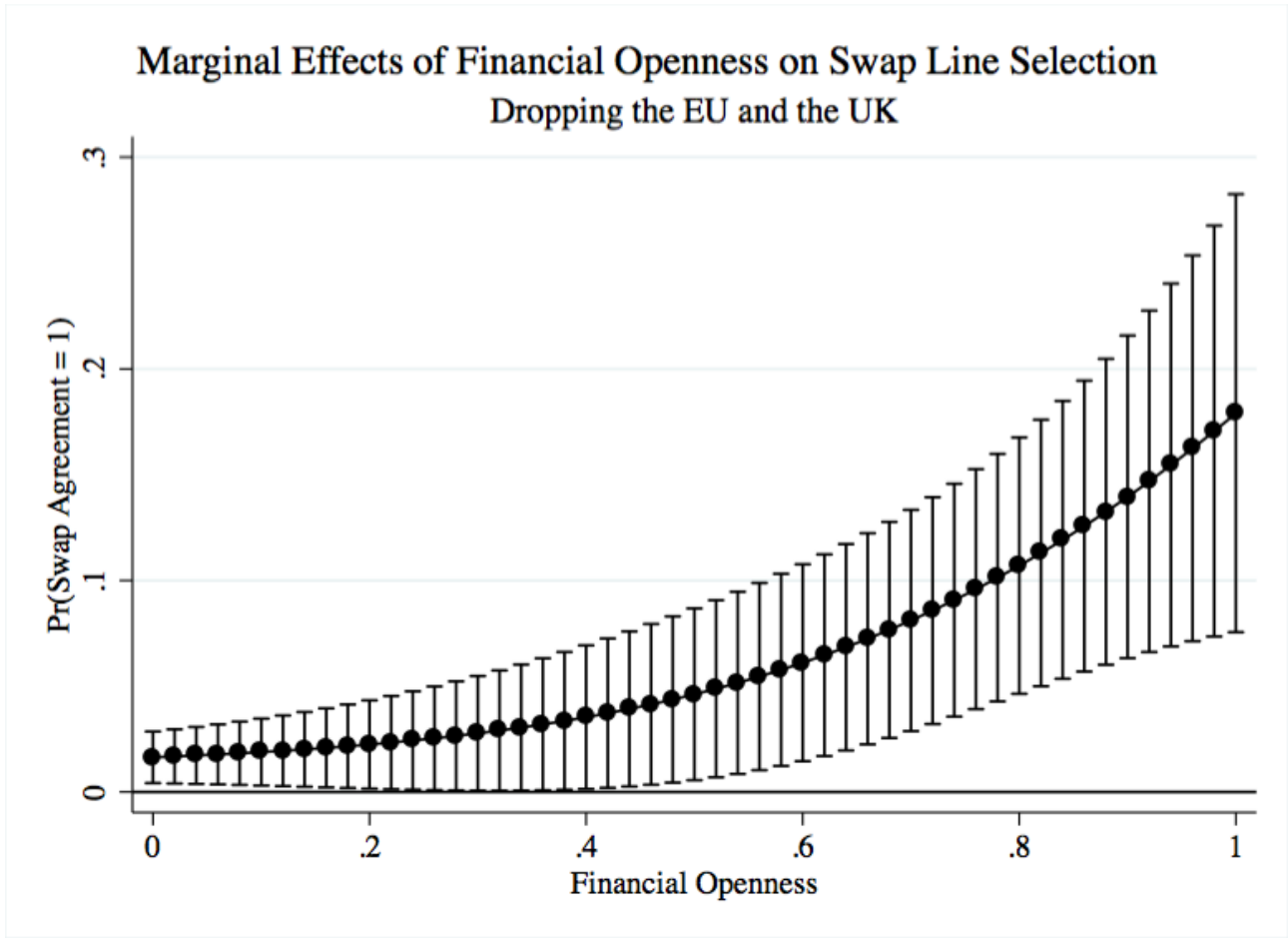
APPENDI 2

F                      F            C            B            C                      L            D                      E  
K

TABLE 2. The Fed's Selection of Foreign Central Banks for Currency Swap Lines  
Dropping the EU and UK

	<u>M</u>	<u>1</u>	<u>M</u>	<u>2</u>
	<u>A</u>		<u>A</u>	
	<u>N</u>	<u>E</u>	<u>N</u>	<u>E</u>
<b>F</b>				
<b>O</b>				
	<b>1.76**</b>		<b>2.031**</b>	
	<b>(0.57)</b>		<b>(0.787)</b>	
Economic Significance			0.901*	
			(0.359)	
Inflation			-0.141	
			(0.0754)	
Constant	-2.62**		-2.055**	
	(0.49)		(0.725)	
Observations	152		127	
Pseudo R-Squared	.16		0.45	
P-Value	0.00		0.00	

FIGURE 9. Marginal Effects of Financial Openness on Swap Line Selection Dropping the EU and UK



Notes: Predictive margins (with 95% confidence intervals) of a central bank - excluding the ECB and Bank of England - receiving a Fed swap line using Model 2 from Table 1, holding covariates to their means while increasing from 0 to 1.

TABLE 3. Correlation Matrix for Variables

	<i>Financial Openness</i>	<i>Bank Exposure</i>	<i>GDP Share</i>	<i>Liquid Liabilities</i>	<i>Bilateral Trade</i>	<b>I</b>	<b>R</b>
<i>Financial Openness</i>	1.0000						
<i>Bank Exposure</i>	0.1873	1.0000					
<i>GDP Share</i>	0.1264	0.8168	1.0000				
<i>Liquid Liabilities</i>	0.1510	0.6881	0.6762	1.0000			
<i>Bilateral Trade</i>	0.1329	0.6114	0.5952	0.6231	1.0000		
<i>Inflation</i>	-0.1242	-0.0842	-0.0597	-0.0936	-0.0786	1.0000	
<i>Reserves</i> <sup>17</sup>	0.0618	-0.1174	-0.1169	-0.0278	-0.0298	-0.0746	1.0000

<sup>17</sup> Measured as a central bank's total international reserves (excluding gold) as a share of GDP. Available in the IMF International Financial Statistics, series RAXGFX.

Scree Plot for First Principal Component: Economic Significance

