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# Global Finance Meets Neorealism: Concepts and a Dataset

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Leslie Elliott Armijo, Daniel C. Tirone and Hyoung-kyu Chey



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School for International Studies  
Simon Fraser University  
Suite 7200 - 515 West Hastings Street  
Vancouver, BC Canada V6B 5K3



## Global Finance Meets Neorealism: Concepts and a Dataset

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### Abstract:

How might one conceptualize the international political dimensions of money and finance? As the world moves from a post-Cold War “unipolar moment” toward the greater uncertainty associated with multipolarity – or bipolarity/multipolarity – the zero-sum aspects of economic resources may take on heightened significance in national calculations. The paper proposes five national financial characteristics that sovereign governments sometimes wield as power capabilities: the country’s (1) position as an international creditor, (2) home financial market attractiveness, (3) currency strength, (4) international debtor presence, and (5) leverage in global financial governance. A new dataset on the global monetary and financial powers of states (GMFPS), covering 180 countries and 27 indicators from 1995 to 2013, constructs indices for four state financial power concepts, and also provides an updated overall material capabilities index. After profiling the US, Britain, Germany, Japan, and China, we suggest a recurring, although not inevitable, financial life cycle of major powers.

### About the authors:

Leslie Elliott Armijo, researches international policy cooperation by emerging democracies. An Associate Professor of International Studies at Simon Fraser University, she has recently published *The BRICS and Collective Financial Statecraft* (with C. Roberts and S. Katada, Oxford, 2017) and *The Financial Statecraft of Emerging Powers: Shield and Sword in Asia and Latin America* (ed., with S. Katada, Palgrave, 2014).

Daniel C. Tirone is an Assistant Professor of political science at Louisiana State University. His research interests include the impacts of foreign aid and remittances, civil conflict and terrorism, and the power associated with state financial capabilities. His work has appeared in the *American Journal of Political Science*, *International Organization*, and the *Journal of Politics*.

Hyoung-kyu Chey is Associate Professor of International Political Economy at the National Graduate Institute for Policy Studies (GRIPS) in Tokyo. His main research area is the international political economy of money and finance. He is the author of the book *International Harmonization of Financial Regulation? The Politics of Global Diffusion of the Basel Capital Accord* (Routledge, 2014).

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## Global Finance Meets Neorealism: Concepts and a Dataset

For decades, the ideology of neoclassical economics has made it difficult to “see” state power in financial markets, although, as with trade relations, the power dimension has been more obvious to policymakers outside the advanced core economies (Armijo and Echeverri-Gent 2014; Drezner 2007; Norrlof 2014; Simmons 2001; Wade 2003). Especially in the Anglo-American-Commonwealth countries, the rhetoric of governments, academics, and financial market actors suggests that fast-moving and decentralized financial markets respond to impersonal imperatives of supply and demand, and thus are devoid of politics. Neoclassical economists patiently explain that conceptualizing large foreign exchange “war chests,” for example, as power capabilities potentially deployable by the state encourages countries to ration capital and block its free flows, undermining the efficiency gains from global financial integration (for example, Adler and Mano 2016). This is of course true.

Yet power pervades international financial and money markets: there is competition among firms, but also among countries. A large historical political economy literature links national financial characteristics, particularly the sophistication and reliability of public (government) finance, to overall state capacity and success (Tilly 1992; Calomiris and Haber 2014; Ferguson 2001). Presidents and prime ministers often assume that possession of large and internationally-respected banks or stock markets gives them advantages in international competition, while heads of smaller, weaker states hope for financial autonomy from richer, more powerful states or institutions dominated by them (Cohen 2006; 2015). Moreover, although leaders of emerging powers want to join the status quo powers in shaping global financial governance, the incumbent major powers may not welcome them (Roberts, Armijo, and Katada forthcoming 2017). Thus, the G7 major states extended participation in international financial crisis-management to rising powers in the G20 at the time of the global financial crisis of 2007-09—but only because the dominant Western powers recognized that they would need additional help to contain the spreading panic (Kirshner 2014; Helleiner 2014). A decade earlier, Japan, its membership in the G7 notwithstanding, was rebuffed by the United States when it tried to assert

leadership in managing the Asian financial crisis by founding an Asian Monetary Fund (Chey 2009; Laurence 2002).

The post-Second World War “long peace,” although it only ever applied among major powers, has engendered a hope that increasingly expansive and principled global governance, implemented by networked institutions and global markets, and backed by widespread norms of liberal internationalism, will endure whatever the domestic characters of major states and the distribution of capabilities among them (Gaddis 1986; Ikenberry 2009). This hopeful perspective captures important truths. Nonetheless, the more multipolar the interstate distribution of capabilities, the greater the number of other actors that each national player must monitor. Moreover, rising multipolarity undermines hegemonic willingness to pay the costs of system maintenance, as illustrated by the isolationist and nationalist impulses of U.S. President Trump, which place traditional alliances and loyalties under stress. Intriguingly, theorists operating within both a neo-dependency perspective and a neorealist viewpoint, who normally have little in common, would suggest that increasing multipolarity (or bipolarity/multipolarity) makes international specialization dangerous (for example, Otero, ed. 2008; Waltz 1979). Countries should beware dependence on others for secure access to food, energy, military protection, and finance. Instead, each nation needs to protect itself by remaining capable across all of these dimensions. One need not endorse this stance to comprehend it.

Publicly-available international financial data has not been collected with this competitive political economy perspective in mind, although the Economic Wealth of Nations dataset of Lane and Milesi-Ferreti (2007), on which we have drawn, comes closest. The project presented here makes available to researchers information on national financial capabilities in a format that more closely approximates a *political*, rather than an exclusively *economic*, conceptualization of their value to national governments. Section 1 explains our choice of the unfashionable “power index” approach, briefly reviewing conceptual and methodological issues associated with alternative understandings of political power, and introducing the dataset, the Global Monetary and Financial Powers of States (GMFPS), which builds on our earlier work (Armijo, Muehlich, and Tirone 2014) and tracks 27 indicators and 5 composite indices for 180 countries, covering 1995 to 2013. Section 2 provides a rough overall material capabilities index

for purposes of comparison. Sections 3 through 7 explore the five pillars of our financial power analysis: a state's profile as an international creditor, financial hub, global currency issuer, foreign debtor, and wielder of institutional leverage in global financial governance. The article's conclusions offer very preliminary observations on the financial life cycle patterns of hegemon and major powers.

## 1. State power and power indices: the rationale

States enter financial markets in multiple ways. First, states enter as direct borrowers and as lenders. A country's treasury, central bank, state-owned firms, and sub-national government units may each issue bonds. Public sector banks extend loans and purchase government bonds. Second, states wield regulatory authority over financial markets and institutions operating within the home economy, as well as regulating home country financial firms operating abroad. Third, the financial and monetary capabilities of some states permit them to impact the choices of other sovereign states. Major states – and often their financial institutions – take leadership in international financial governance and regulation. Political leaders also may employ the national regulatory and emergency levers they control in order to exercise “financial statecraft,” or the intentional employment of (or defense against) national financial and monetary capabilities in the service of general foreign policy ends (Armijo and Katada, eds. 2014). Classic examples of financial statecraft include the imposition of financial sanctions against foreign states and their nationals, the granting of subsidized credit to friends, or the promotion of solutions to cross-border financial crises that allocate more of the costs to others or benefits to oneself. Rational state leaders will prefer to have more, rather than fewer, capabilities to influence outcomes.

Power, by its very nature, is relative and implicitly zero-sum. If one state has more, then another state possesses less. Three distinct conceptualizations of “power” recur in the political literature, highlighting power understood as capabilities, realized influence (or the successful deflection of such influence: continued autonomy), and inhering within institutional structures (Finnemore and Goldstein, eds. 2013; Krasner 2013). The first conception – power as *capabilities* – dominates policymakers' national strategy discussions. National leaders continuously make rough and informal assessments of other countries' military or economic

strength. The assumption that counting battalions or comparing economic growth rates predicts winners in the event of a conflict, of course, is both naïve and inevitable. Therefore, and second, many scholars prefer greater precision, even if this means preferring conceptualizations that are more difficult to measure or may only be seen after the fact. In Robert Dahl's (1957: 202-203) classic understanding of power as *influence*, "A has power over B to the extent that he can get B to do something that B would not otherwise do." A rise in a state's financial capacities may boost its influence over foreign states by augmenting its ability to directly induce, persuade, or coerce them, that is, by strengthening a state's "relational power" vis-vis other states (Cohen 1998; Helleiner 1999; Kirsher 1995). State power may also lie in successfully resisting foreign influence, instead maintaining *autonomy*, or the capacity for acting independently (Cohen 2006: 32-33; 2015: 29-33). A third manifestation of state power is the ability to dominate global financial regulatory institutions, frameworks, and agendas, generating favorable norms and procedures which thereafter inhere in institutional and systemic *structure* (Drezner 2007; Gruber 2000; Kirshner 2008; Simmons 2001; Strange 1988). Power exercised through institutions may be direct and active, as when a country exercises its voting rights, which are proportional to its capital shares, to make decisions within the IMF or World Bank. But structural power also may be indirect and exercised passively and unobtrusively, as when a dominant country designs the founding rules of an international regulatory regime in ways that subsequently promote its own preferences, biasing the scope and agenda of the regime ever after.

The field of international relations has a long, and conflicted, relationship with the idea of quantitative assessments of national power capabilities. Capabilities are not the same as realized power, the components to be included are not consensual among scholars, and there is the inevitable question of how/when/why to combine the apples and oranges represented by different power capabilities. Yet, by definition, power as influence (or autonomy) is observable only *ex post facto*. Structural power is hard to quantify and typically investigated via dense case studies (as in Wade 2013). We might like to observe states' *potential* for exercising power vis-à-vis one another, which implies *ex ante* inquiry. In addition, one would like to track the shift in a state's potential financial power *over time*, particularly in an era in which there are ever more frequent references to a global interstate "power shift," probably from a North Atlantic to a Pacific Rim-centered world. While capabilities represent, at most, latent or potential power, it is difficult to



imagine an influential or structurally-dominant actor within an arena whose reach is not backed by significant issue-specific capabilities. Moreover, government policy planners repeatedly construct such indices as a rough aid to decision-making, as the likely alternative is an even less precise qualitative guesstimate. Edged round with the appropriate caveats, quantitative capabilities indicators and composite indices provide useful snapshots of shifting relationships. This project therefore proposes six theoretically-motivated power dimensions, each of which may be conceptualized and in principle measured as shares of a global (or regional) total.<sup>1</sup>

## 2. Material Capabilities Index

We begin with overall national capabilities. The **Material Capabilities Index (MCI)** is a traditional state power index, modeled on and constructed similarly to the venerable *CINC* (composite index of national capabilities) of the University of Michigan's Correlates of War Project, although with some different components.<sup>2</sup> Appendix A summarizes our data sources. Our *MCI* provides a quick summation of several standard material components of a country's capacity to exercise relational power internationally—should its leaders so choose. The hard power capabilities tracked should be understood as *necessary yet by no means sufficient* for a country to exercise international influence or preserve its autonomy—possession of these resources either enables certain choices by national leaders or places such choices out of leaders' reach. The *MCI* reports a country's percentage of global totals in any given year, and is calculated as the unweighted mean of five basic hard power capabilities: economic weight (*EW*), population (*POP*), importance to world trade (transactions share, trade, or *TST*), use and development of technology (*TECH*), and military spending (*MIL*).<sup>3</sup> The *MCI* provides a baseline against which to compare shifts in the various financial capabilities defined here.

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<sup>1</sup> The dataset presents indicators as shares of a global total, but they are easily recalculated at the regional level.

<sup>2</sup> Available at <http://correlatesofwar.org/data-sets/national-material-capabilities>.

<sup>3</sup> See technical Annex posted with the dataset for details.

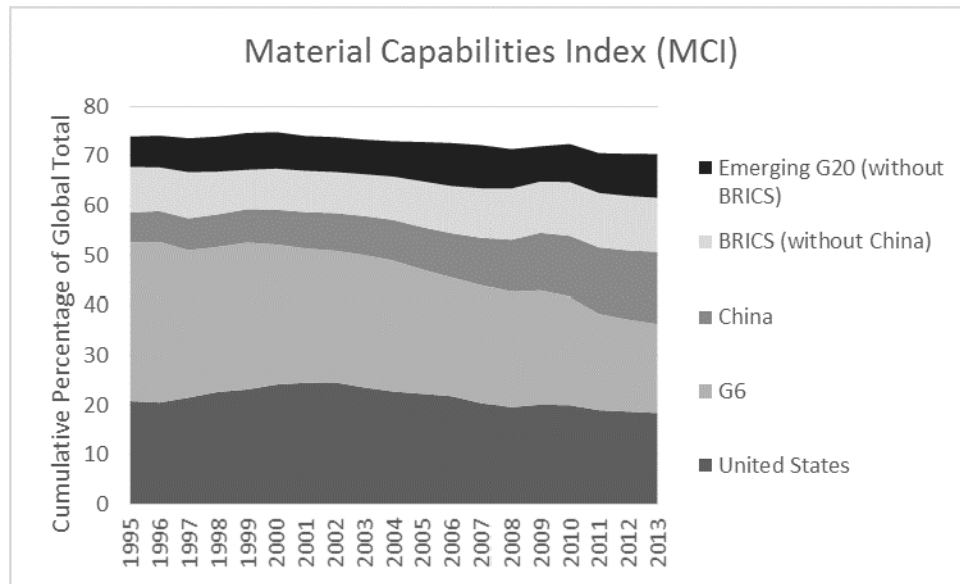


Figure 1. Material Capabilities Index: United States, China, and Aggregates.

Table 1. The Hard Power Capabilities of States: Key Countries and Aggregates.

		Economy	Population	Trade	Technology	Military	Material Capabilities Index
United States	1995	24.9	4.7	13.9	21.3	39.2	20.8
	2013	22.3	4.4	11.4	16.8	37.1	18.4
G6	1995	41.8	7.2	35.7	45.4	28.7	31.8
	2013	24.0	6.0	23.9	26.5	15.5	17.9
Japan	1995	18.1	2.2	7.3	28.7	7.2	12.7
	2013	6.5	1.8	3.9	18.7	2.8	6.7
Germany	1995	8.6	1.4	9.6	6.5	5.9	6.4
	2013	5.0	1.1	7.2	3.1	2.8	3.8
United Kingdom	1995	3.9	1.0	5.3	2.6	4.7	3.5
	2013	3.6	0.9	3.8	1.3	3.3	2.6
China	1995	2.5	21.1	2.3	2.3	1.8	6.0
	2013	12.6	18.9	9.5	19.7	11.1	14.4
Other BRICS	1995	5.7	23.0	4.0	7.1	6.3	9.2
	2013	8.9	23.4	6.6	5.8	9.9	10.9
Emerging G20 (no BRICS)	1995	5.4	7.9	6.5	4.6	6.2	6.1
	2013	7.5	8.0	8.8	11.6	8.2	8.8

Figure 1 shows the big picture of global evolution in the distribution of overall material power capabilities. The United States, clearly the premiere power at the end of the Cold War, still retains this position, although in a less stunning fashion than in earlier postwar decades. From 1995 to 2013, its share hovered between 21 and 18 percent. The G6 is the large loser on the composite index, falling by half, from about 32 to 18 percent over the period. Large emerging economies in the G20, particularly China, have expanded to fill most though not all of the hole left by the collapsing shares of the G6, while countries outside the G20 have increased their MCI shares from about 6 to 9 percent of the total. Table 1 provides further detail. Among the five component dimensions of the *MCI*, the apparent slippage of the United States has been greatest in technology, which the dataset measures as the mean of a country's annual share of total world industrial value-added and new patents granted to residents: true high technology capabilities clearly are under-represented.<sup>4</sup> When we locate an improved indicator, it will be incorporated into the dataset. Had we included structural influence in world institutions and the soft power capabilities residing in the spread of American norms, culture, and preferences (Nye 2004), the U.S. share of course would look substantially larger in any given year. Nonetheless, the trajectory of relative shifts should be similar. The G6 collapse is greatest in the economy, technology, and military categories, and Japan alone accounts for approximately half of the fall in each category. China's relative rise is anticipated, yet the magnitude is very large. Precisely during the two decades captured by the dataset, China more than doubled its share of these global hard power assets, with vertiginous rises in gross domestic product, technological achievements, and military spending.

The validation process for this index is qualitative. We conclude that the snapshot provided roughly coincides with our thick, qualitative observations about the shifting relationships of hard power capabilities among these larger countries as they have evolved from the mid-1990s to the present. The principal function of the *MCI* within the larger project is to

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<sup>4</sup> The data for this measure come from two sources; industrial value added was obtained from the World Bank's *World Development Indicators*, while data on patents granted to residents came from the World Intellectual Property Organization (WIPO). For the patent data, missing observations were calculated as the average of the values immediately preceding and following the missing data, by year. If either of these values were also missing, the observation was set to zero. However, not all instances of missing data represent zero patents granted, so some caution should be used when interpreting these values.

serve as a baseline against which one might compare trends in overall capabilities with those in various types of monetary or financial resources.

### **3. The Creditor Pillar**

The first international financial power dimension is the condition of being a creditor of other states or their citizens. A net creditor position has several potential uses for a security-conscious incumbent government. A large surplus gives a state the means to engage in foreign investment and lending. The return income streams of dividends, profits, and interest from a net foreign asset position can cushion the balance of payments: these payments are more predictable than inward foreign investments, thus bolstering autonomy. Foreign lending or investments also provide the creditor state with potential leverage over foreign states—historically offering an excuse to invade and occupy defaulters (“gunboat diplomacy”) or, both then and now, to extract privileges such as military base rights. The international lender, investor, or borrower need not be the state itself. Both private actors and their governments frequently face incentives to involve the respective governments. Governments of defaulting private debtors may disclaim responsibility, in which case (as in all contemporary emerging markets crises) private foreign creditors will attempt to call in their governments and the international financial institutions.

Creditors also may exert more subtle forms of influence. Political leaders in the capital-exporting country may decide to make continued financial flows contingent on political cooperation by the borrower country. Although expropriation by the host country is always a risk, imperial Britain, imperial Japan, post-Second World War U.S., and now a rising China all have used foreign direct investment by large industrial firms to complement a national security strategy of acquiring a far-flung chain of base rights and refueling stations along major trade and transportation routes (on contemporary Chinese expansion, see Kynge 2017). Moreover, and as has been the case for the United States since the Second World War, large creditor states may design international financial governance regimes and institutions, ensuring themselves structural governance powers going forward.

Concepts relevant to assessing creditor capability include a country’s current account surplus, foreign exchange reserves, and international investment position. The dataset includes

four indicators, one for each concept and a summary term. To become a large and enduring international creditor a state first needs a persistent current account surplus. Historically, the merchandise trade balance was by far the most important component of the current account. In recent decades other components, including trade in services, income from foreign direct and portfolio investments, and migrants' remittances, have become relatively more important for some countries. Neoclassical economists encourage countries to pursue balanced trade in the medium run, and in principle consider both external deficits and surpluses problematic (for example, Rajan 2010, especially pp. 46-67, 202-224). Nonetheless, many or most governments seek to run trade and current account surpluses, if they can, believing that this enhances their freedom of action (autonomy), for example, by enabling crucial food or energy imports during a crisis. While there is a *political* logic in taking such a position for an individual country, it undercuts aggregate global economic growth by making trade liberalization difficult and exchange rate levels more volatile. The indicator *CAS* (*current account share*) measures how significant a country is globally as a potential lender, and is calculated as a surplus country's share of the total current account surplus of all surplus countries in a given year. Countries with a deficit have a zero percent share.

With a persistent current account surplus a state increases its holdings of foreign exchange. Export revenues, along with the repatriated profits, dividends, and interest from foreign assets owned by nationals, may be conceptualized as a "national" resource, whether these returns are earned by the private sector or state companies, as citizens and firms that earn foreign currency typically exchange their earnings with the central bank, receiving the home currency instead. Official reserve holdings roughly track a country's annual current account position, as foreign exchange holdings increase automatically with a surplus unless the country sends capital abroad. *FWFX* (*financial weight, foreign exchange*) represents a country's foreign exchange holdings as a share of total global holdings in that year. *FWFX* is a leading indicator, reflecting contemporary conditions, which may be quite volatile. Although large reserves are useful in a crisis, many economists caution against their accumulation, as their opportunity costs may be high.

If a country instead invests its annual surplus abroad, then it gradually builds a stock of foreign financial assets. *CWI* (*creditor weight, international*) measures a state's share of the total global financial surplus of all countries with a net foreign asset position (including foreign direct investment and citizens' holdings of foreign portfolio equity, debt, and derivatives, but excluding official reserves) in a given year. The *CWI* thus shows which countries are large net creditors at the world level. If a country lacks a net foreign asset position (*CWI*) in a given year, then its score is zero. In contrast to the more volatile *FWFX*, *CWI* will be a lagging indicator, as countries' inward and outward investment positions (a stock of assets and liabilities) are built up over years and decades. Moreover, a net foreign asset position also may endure for years after a country's former current account surplus has melted away. In other words, *CAS* develops first, then *FWFX*, then, if policymakers so choose, they may allow or encourage net outflows of investment capital, resulting in a rise in *CWI*. The summary measure, ***Creditor Pillar*** (*Creditor-P*), is defined as the mean of a country's share of global foreign exchange holdings (*FWFX*), a leading indicator, and its status as a net international financial creditor (*CWI*), a lagging indicator. Although the *GMFPS* dataset reports *CAS*, we consider it an important background condition, rather than a direct financial capability, and do not include it in the calculation of a country's *Creditor-P*. *Creditor-P* thus reflects a country's accumulated ability to fund investment abroad out of its own national economic surplus. For an emerging power, an expanding *Creditor-P* may become a stimulus to attempt to extend its monetary influence in other ways, for example by trying to exert leadership of a regional monetary order (Kirshner 2014: 108-112; Subramanian 2011).

A brief review of the evolution of the distribution of balance of payments surplus and creditor capabilities among major states begins prior to our dataset. In the 19<sup>th</sup> century, Great Britain employed a large trade surplus to fund and invest in its Empire, while its colonies provided a source of raw materials and an important market for early industrial products. Britain's trade surplus disappeared with World War One, ultimately making it impossible for the country to maintain itself at the center of the Gold Standard monetary system (de Cecco 1975). The United States emerged from World War Two with a booming economy, a structural trade surplus, and as a huge creditor to its former allies. As part of the explicit and implicit international understandings of the Bretton Woods regime, not to mention the domestic political

benefits of a loose monetary constraint on government spending, the U.S. provided a market for exports of recovering countries as well as geostrategically-significant new industrializers, particularly in East Asia, consequently encouraging others to hold dollars and allowing its currency to become overvalued (Frieden 2006). The strategy worked: the industrial economies destroyed by the war recovered with historically unprecedented speed. However, by the early 1970s, the U.S. had lost its structural merchandise trade surplus, sparking the “Nixon shocks,” which ended the dollar’s convertibility into gold and imposed a blanket 10 percent tariff on imports. For a decade thereafter, the U.S. retained a surplus on the current account as a whole, but from 1982 onwards, the entire U.S. current account turned permanently negative. From the 1980s, Japan instead assumed the position as the country with the persistent and enormous external surplus (Mann 1999).

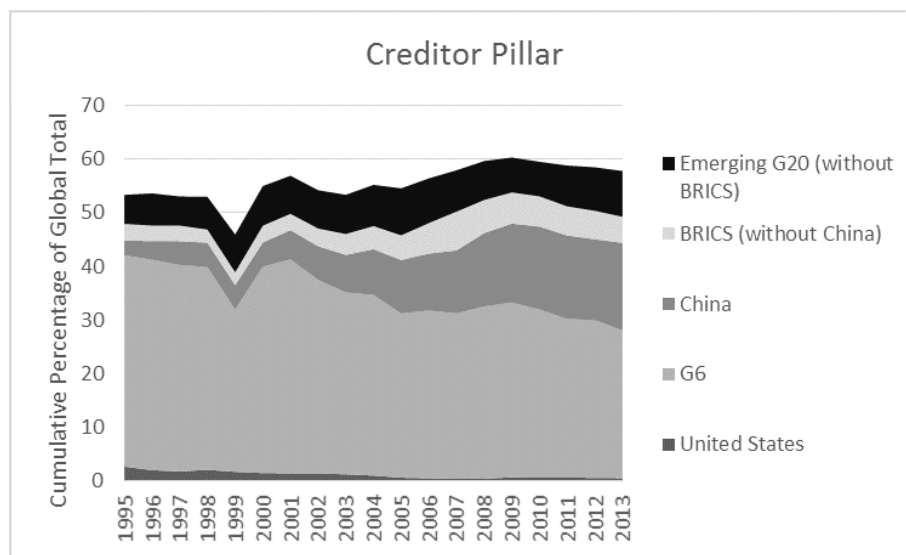


Figure 2. Creditor Pillar: United States, China, and Aggregates.

Table 2 and Figure 2 map the subsequent intercountry shifts in creditor status, beginning in 1995. There are two declining creditor powers. By the mid-1990s, the **United States** had no *CAS* or *CWI* at all. The country’s already modest share of the *Creditor-P* entirely derived from the foreign exchange reserves it held, mainly for transactions purposes. As emerging economies as a group built up their currency war chests in the wake of international financial crises, the United States’ *FWFX*, an indicator calculated in relative terms, shrunk to a tiny sliver by the end

of the period and its global presence as a creditor nearly disappeared. The **United Kingdom's** trajectory mirrors that of the United States, and reflects British policymakers' relatively successful determination to hold on to its once massive but long eroded creditor capabilities for as long as possible (Coutts and Rowthorn 2015).

Table 2. Creditor Capabilities: Key Countries and Aggregates (% of global totals).

		Current Account Surplus (CAS)	Foreign Exchange (FWFX)	Creditor Weight (CWI)	Creditor Capability
United States	1995	0.0	5.4	0.0	2.7
	2013	0.0	1.1	0.0	0.6
G6	1995	54.9	28.1	50.7	39.4
	2013	21.0	13.3	41.7	27.5
Japan	1995	41.5	13.3	47.3	30.3
	2013	2.3	10.5	23.1	16.8
Germany	1995	0.0	6.2	3.3	4.8
	2013	17.2	0.6	18.6	9.6
United Kingdom	1995	0.0	3.1	0.0	1.5
	2013	0.0	0.8	0.0	0.4
China	1995	0.6	5.5	0.0	2.7
	2013	12.5	32.6	0.0	16.3
Other BRICS	1995	2.6	6.2	0.0	3.1
	2013	2.3	9.7	0.0	4.9
Other Emerging G20	1995	0.0	7.2	3.7	5.4
	2013	14.6	12.6	4.5	8.5

**Japan** appears as a creditor state in transition. It began the period with a stunning *CAS* score of above 41 percent in 1995. Japan's subsequent dramatic export collapse (to a *CAS* of 2.3 in 2013) likely resulted from the combination of three factors: its intentional currency revaluation as a consequence of the 1985 Plaza Accords negotiated with the United States and Japan's other G7 partners, vigorous and state-promoted Chinese and other East Asian competition in world markets, and unrelated yet crucial domestic economic stagnation inside Japan (Bergsten and Green, eds. 2016; Hart 1992; Mikitani and Mikitani 2014). However, in 2013 Japan still retained large foreign exchange reserves (*FWFX* of 10.5) and net foreign



financial asset holdings (*CWI* of 23.1), and an overall *Creditor Pillar* score of almost 17 percent of the global total. Japan's position also underscores the distinction between a state that possesses large financial power capabilities, which Japan does, and a state that chooses to exercise those capabilities to exert influence and obtain structural power for itself, which Japan in the late 20<sup>th</sup> and early 21<sup>st</sup> centuries was either reluctant to do or unsuccessful at (Chey 2009; Laurence 2002).

We also see two rising creditor states. The data on **Germany** starkly reveal the underlying balance of payments contribution to the Eurozone's contemporary political tensions. Following European Monetary Union in 2000, it gradually became apparent that historically looser fiscal policies and lower productivity in the so-called European periphery—including Greece, Spain, Portugal, Italy, and Ireland—meant that these countries had entered the Eurozone at a level that gave them an effectively overvalued exchange rate, which sparked an initial period of overconsumption and flood of imports from countries such as Germany, followed by economic stagnation and eventual crises. In contrast to the choices enforced by East Asian and Latin American governments, Germans did not employ their ballooning *CAS* to increase their *FWFX*, which declined throughout the period, and only partially due to the 1999 transfer of some official reserves to the European Central Bank. Instead, Germans rapidly expanded their net portfolio of foreign financial investments, *CWI*.

Meanwhile, beginning in the 1980s, leaders in **China** took the unprecedented and dramatic step of reorienting that country's huge economy toward export-led growth while simultaneously continuing to constrain imports via a combination of inward capital and de facto import controls and repressed domestic consumer demand. Despite the second largest external surplus (*CAS* of 12.5 in 2013), which would seem to make a speculative attack on the renminbi unlikely, most of this external surplus went into a buildup of highly-liquid currency assets, resulting in a *FWFX* of nearly a third of the global total. China's increasing capabilities in this dimension are the most recent among our set of major states, and China ends the period with a *Creditor-P* score representing about a sixth of the global total. Other emerging economies have also thus far tended to prefer highly liquid official reserve assets (*FWFX*) to the longer-term international investments tracked by *CWI*, although policymakers' choices may become less risk-

averse over time. For example, recent Chinese initiatives, including its efforts to found BRICS' financial institutions, the Asian Industrial Investment Bank (AIIB), and its Belt and Road Initiative (BRI), indicate the Xi Jinping government's plans to deploy China's financial capital more lucratively and strategically in future.

The creditor state indicators in the GMFPS dataset also may be combined differently. For example, the user may identify both major and intermediate powers that the dataset show as having outsized capabilities in this arena by identifying states with large *Creditor-P/EW* or *Creditor-P/MCI* ratios. In 2013, standouts included Singapore, whose creditor status exceeds the size of its economy by almost nine times, Saudi Arabia, Switzerland, and Norway. In other words, these are countries whose profiles in terms of standard hard power capabilities are not globally significant, but which punch well above their weight in financial power capabilities.

#### **4. The Home Financial Market Pillar**

A second significant capability builds on the size and characteristics of a country's domestic financial markets. Deep domestic financial markets, especially efficient public debt markets, long have been essential to the rise of enduring and successful modern states, for example, by enabling them to raise funds quickly for national defense or foreign conquest (Tilly 1992; Ferguson 2001; Calomiris and Haber 2014). Moreover, if a government is perceived by the markets as a "good" borrower, then it need never repay the principal of the debt, but only the interest, as investors will be willing to continue lending indefinitely. If creditors suddenly need to access their funds, then they may sell the security in the secondary debt market. A solid and trusted home financial market thus contributes directly to a state's overall power capabilities, including its military capability, and enhances its likelihood of remaining autonomous or exercising influence abroad. Moreover, most economists accept that financial "depth," defined as a relatively large financial sector as compared to the overall national economy, is a necessary if insufficient component of economic growth (Rajan and Zingales 1998; Kalra 2010). However, the relationship probably is curvilinear, in that beyond a certain point further increases in the financial sector relative to the non-financial economy may be destabilizing (Arcand, Berkes, and Panizza 2012; Sahay et al. 2015). Even a home financial market that is not especially transparent,

liquid, or open to global investors can – if it is large and intermediates significant quantities of savings – provide an important national power capability in the form of autonomy from the volatility and contagion that periodically devastate global financial markets. A large domestic financial market, particularly one in which bank credit plays an important role, also enables the central government to influence national industrial policy.

*FWD* (*financial weight, domestic*) shows a country's total national financial assets, translated into U.S. dollars at the market exchange rate, as a percentage share of world financial assets. Financial assets are here defined to encompass both credit market assets, such as commercial bank deposits, and capital markets assets, including company shares and corporate and government bonds. *MSIF* (*market share, international finance*) measures a second but related capability: a country's importance to global investors as a jurisdiction for trading financial assets and purchasing financial services. The export of financial services may develop initially to accompany and facilitate trade and/or as a consequence of a country's international creditor status, as in 18<sup>th</sup> and 19<sup>th</sup> century Britain. However, a small and open trading state also may develop deep and wide domestic financial markets even in the absence of either a large economy or a significant external surplus, becoming a financial entrepôt facilitating international financial intermediation or offering other financial services, from banking secrecy to money laundering. *MSIF* is calculated as a national financial market's share of all major cross-border financial transactions, or those assets reflecting credits or debits to residents of countries other than the national jurisdiction where they are deposited, originated, or traded.<sup>5</sup> This indicator thus measures a nation's importance in the global processes of financial intermediation and trading—which may be large even when a country is not (or no longer is) a net creditor to the world.

The dataset also includes a summary indicator, the *Home Financial Market Pillar* (*Home-P*), defined as the mean of *FWD* and *MSIF*. We note that *Home-P* and *MSIF* (although not necessarily *FWD*) may serve as indicators of a country's structural power in global financial governance, as a state's domestic financial regulations often shape the behavior of the foreign

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<sup>5</sup> In calculating *FWD* and *MSIF* we rely on data from open sources that is available for most years and most countries. Inevitably, therefore, only some financial assets are included, while new, exotic, or sophisticated assets tend to be omitted. We surmise that the main effect of including more sophisticated financial products would be even greater concentration in this index.

actors participating in its domestic markets. Smaller countries may feel compelled to copy the financial regulations of dominant economies—even when such regulatory frameworks are not ideal for them (Chey 2007, 2014; Drezner 2007; Simmons 2001). A large *Home-P* share also strengthens a country’s ability to influence foreign actors directly, by limiting their access to its financial markets. For instance, it is essentially the United States’ still dominant *Home-P* capability that enables the U.S. to impose financial sanctions on countries such as Iran and Russia. Figure 3 and Table 3 present the important trends.

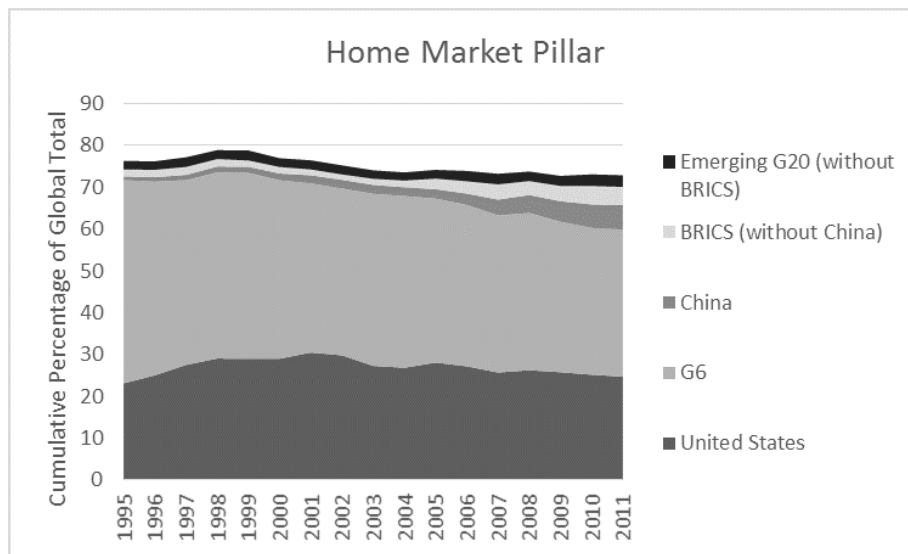


Figure 3. Home Market Pillar: United States, China, and Aggregates.

We observe these patterns. First, *Home Market Capability* remains quite concentrated in the advanced industrial countries, who accounted for just over half of world shares at the end of the research period. The **United States** remains the dominant country, with a very large home market (*FWD*), the largest share of international intermediation and sales of financial services (*MSIF*), and the greatest overall *Home-P* capability, assessed at just under a quarter of all such capabilities worldwide in 2013. **Japan**, which in 1995 had an even larger domestic financial system, as measured by market exchange rates, than the United States, shrunk substantially over the period, but retained the second position in both *FWD* and overall *Home-P* capability.

Table 3: Home Market Capabilities: Key Countries and Aggregates (% of global totals).

		FWD*	MSIF	Home Market Capability*
United States	1995	28.2	18.0	23.1
	2013	28.8	20.6	24.7
G6	1995	54.5	42.7	48.6
	2013	35.5	34.1	35.2
Japan	1995	31.4	10.6	21.0
	2013	17.2	4.2	10.8
Germany	1995	8.2	7.8	8.0
	2013	4.7	6.8	5.9
United Kingdom	1995	4.3	12.0	8.1
	2013	5.0	12.4	9.8
China	1995	0.9	0.8	0.9
	2013	9.6	2.5	5.8
Other BRICS	1995	2.0	1.9	1.7
	2013	6.6	2.4	4.4
Other Emerging G20	1995	1.6	2.8	2.0
	2013	3.5	2.3	2.8

\* Latest data are from 2011.

However, foreign users are not flocking to use Japan’s home financial services, as *MSIF* was only 4.2 percent in 2013. Instead, the second place global destination for international intermediation remains the **United Kingdom’s** City of London, with an *MSIF* of 12.4 percent—at least as of 2013, prior to the 2016 “Brexit” vote. Britain demonstrates a clear instance of national policymakers acting to maintain and expand an international financial capability, as a profit center, certainly, but also for reasons of national power and prestige. The dataset shows that **Germany**, although slightly less relevant than before the advent of the Euro, holds about 6 percent of this significant international financial capability. Once again, **China** is the standout country in terms of a rapid change in its overall profile, as its *Home-P* share increased from 1 to about 6 percent of the global total, mainly because of growth in domestic finance (like the United States and especially Japan including a substantial increase in the public debt), but also due to expanded links with global markets. Other large emerging economies also increased their

absolute size and relative global weight, although greater exchange rate volatility in many emerging markets makes their individual country shares more fluid.

## 5. The Currency Pillar

The third basic international financial capability refers to the influence and structural power associated with providing a currency that foreigners wish to use or hold. Currency may be a store of value (as when foreign private investors and foreign central banks flock to assets denominated in a “hard” currency), unit of account (as when international petroleum prices are quoted in U.S. dollars), or useful for transactions purposes (as when the currency of a regional trading hub becomes generalized for trade settlement, as increasingly is happening with the Chinese renminbi in East Asia) (Cohen 1998, 2015; Eichengreen 2012; Kirshner 2008).

What sort of international power options might high currency capabilities allow a country? The direct economic benefit is that of seigniorage, which refers to the revenue or profit to a government from printing currency that the public desires to hold, or more generally to the benefit to the national government derived from its ability to expand the nation’s money supply. Internationally, seigniorage is generated when foreigners are willing to hold the nation’s currency, or government financial assets denominated in it. Foreign holdings of cash and near-cash are equivalent to foreigners making an interest-free loan to the issuing country’s government. The government and citizens of a country whose currency is widely held abroad also confront lower borrowing costs and risks than others whose home currencies suffer from “original sin,” or the lack of a long-term loan market in that currency (Eichengreen, Hausmann, and Panizza 2003). Benjamin J. Cohen (2012: 16-17) estimates the benefit to the United States from being able to borrow abroad in US dollars as amounting to one to three percent of GDP.

Among the other benefits to a “top currency” state with an attractive reserve currency is the ability to run a persistent current account deficit—up to some tipping point, which is by definition unknowable in advance—because other states’ central banks and their citizens are willing to hold the reserve currency country’s money as a store of value (Cohen 2015: 82-94 and *passim*). The issuing state increases its autonomy, as it can avoid adjusting to external imbalances. A strong currency state also has leverage (influence) over foreign governments and

citizens who hold its currency, as they acquire an interest in the first country's prosperity in order to protect the value of their assets. There are of course costs, including the likelihood of currency overvaluation and reduced exports ("global imbalances"). International demand for a currency also enhances the issuing state's international structural power, by shaping the framework within which actors relate to one another (Kirshner 1995; Chey 2012). For example, monetary policy decisions in the United States are made with an eye to their domestic macroeconomic effects, yet have significant implications (economic externalities) for others.

*CDSRA* (*currency denomination share in reserves, allocated*), considers the shares of key currencies in total allocated official reserves held by all national central banks. Central banks, of course, are institutions with a fiduciary responsibility to invest conservatively. Central bank choices also will be subject to some calculations about what choices will be best for the country as a whole, for example, inducing policymakers to shy away from actions that could provoke a run on a currency in which the central bank is heavily invested. A second measure, *CDS* (*currency denomination share, debt*), records the shares of different major currencies in the stock of all outstanding international bonds and other debt securities. When a firm or government floats a global bond, it will select the interest rate, time period, and currency of issue with an eye to attracting large institutional investors. Market-driven choices on *CDS* thus may serve as a leading indicator of the direction in which official reserve holdings will move. We expect some divergence between our two currency indicators, as *CDS* reflects the collective choices of individual investors, whose clear incentives, in the case of any fears about the value of a given currency, are to exit first. Other good indicators for assessing currency capabilities would measure the annual shares of total trade settlements or foreign exchange turnover denominated in various currencies. Unfortunately, we were unable to locate publicly-available time series data covering multiple countries in these categories.

The composite indicator for this dimension, the dataset's *Currency Pillar* (*Currency-P*), has a 60 percent weighting for *CDSRA* and a 40 percent weighting for *CDS*, reflecting our judgment that observation that central bank choices may be intrinsically more politically significant than short term market choices. However, the size of global corporate debt markets (\$18 trillion in 2015:Q4) is close to twice the size of official foreign exchange reserves (\$11

trillion), and many other private financial assets not easily-tracked by currencies of issue, including corporate shares and financial derivatives, remain outside the dataset. If a researcher wished to weight the included components, *CDSRA* and *CDS* differently, the *GMFPS* dataset makes this easy.

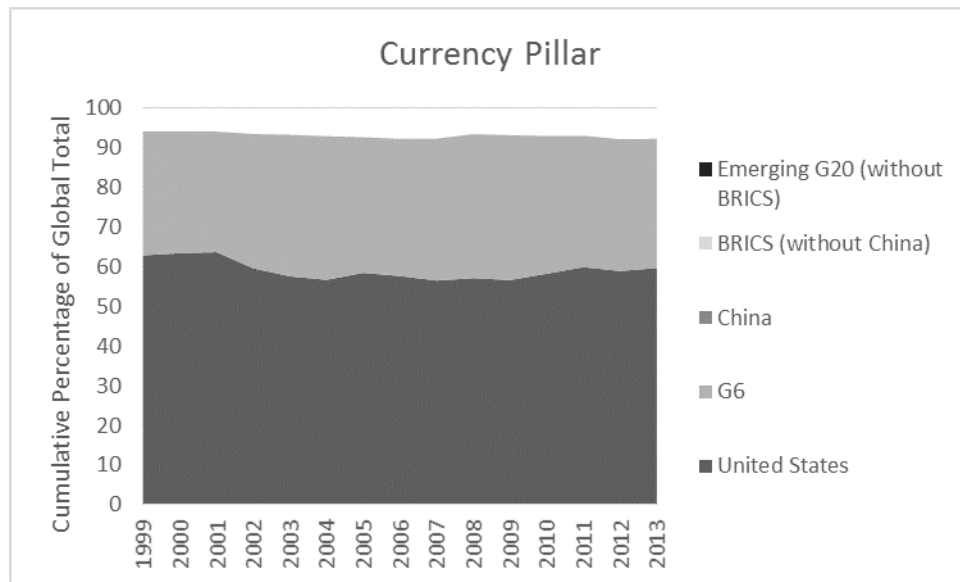


Figure 4: Currency Pillar: United States, China, and Aggregates.

Table 4: Currency Capabilities: Key Countries and Aggregates (% of global totals).

		CDSRA	CDS*	Currency Capability*
United States	1995	68.1	48.9	62.9
	2013	62.8	54.9	59.7
G6	1995	31.2	36.6	31.2
	2013	35.0	28.8	32.5
Japan	1995	7.8	16.0	10.3
	2013	3.9	3.5	3.8
Germany	1995	18.2	18.3	17.0
	2013	22.3	22.5	22.4
United Kingdom	1995	2.4	0.0	1.8
	2013	4.1	0.0	2.5
Non-G20: Switz.	1995	0.4	0.0	0.1
	2013	0.3	0.0	0.2
G7	1995	99.3	85.5	94.1
	2013	97.9	83.7	92.2

\* Series begins 1999.



Figure 4 and Table 4 show that the G7 countries continue to account for massively dominant shares of international currency capability in each of these categories, with almost 99 percent of global reserves (*CDSRA*) and 85 percent of international debt issues (*CDSI*). Over the study period, the **United States** dollar has a slightly decreased share in *CDSRA*, but increased its dominance in global corporate debt issues (*CDSI*), notwithstanding the fact that the 2007-09 global financial crisis began in the United States. Although the yen remains important, but its relative share, in common with most of the other indicators of **Japan's** national financial capabilities, has collapsed. We assess **Germany's** currency clout initially with shares for the German mark, and subsequently with shares for the Euro divided between Germany and France in the ratio of their respective shares of global *CDSRA* holdings in 2000, when the Euro first was implemented. Through 2013, global preferences for Euro-denominated sovereign and corporate debt increased, and Germany's *Currency-P* share represented about 22 percent of the notional global total. This said, the rise of the populist and nationalist right in key European countries threatens both the single currency and common market (Germain and Schwartz 2014). The **United Kingdom's** currency is intriguing and somewhat contradictory. Sterling continues to be held as an official reserve asset, approximately mirroring Britain's estimated overall share in global material power capabilities. Nonetheless, the global share of sterling-denominated business borrowing (*CDSI*) is negligible, and the Brexit will likely decrease the pound's global role. Through 2013, none of the emerging market currencies had made a dent in world currency demand.

The elephant in the room in any discussion of international currency capabilities is of course the future of **China's** currency. Much has been written on the renminbi's likely expansion in future (Chey 2012; Helleiner and Kirshner 2014; McNally and Gruen 2017; Rabinovitch 2016; Subramanian 2011; World Bank 2011:125-159). In a move with great symbolic significance although smaller immediate practical consequences, the IMF announced in late 2015 that, beginning in October 2016, it would collect data on RMB holdings in order to include it in the currency basket of the IMF's own quasi-currency, the Special Drawing Right (SDR), initially allocating it a weight of 10.9 percent (IMF 2016). Nonetheless, through 2013, neither China nor any other member of the BRICS or emerging G20 appeared in the official statistics on currency shares in official reserves or international bond holdings except in the category of "other."

## 6. The Debtor Pillar

The fourth concept we propose for conceptualizing the global financial resources potentially available to incumbent governments of sovereign states, hoping to pursue their larger foreign policy aims, is that of a *Debtor Pillar* (*Debtor-P*), aggregating the somewhat counter-intuitive power capabilities that nonetheless may be exercised by sovereign debtors. One normally thinks of creditors and investors possessing greater power capabilities than debtors, although this is always more true before a loan has been made than after. Once the transaction is made, however, the creditor has a strong interest in the borrower's behavior, as otherwise the loan funds disappear. Cross-border contract enforcement is always difficult and debtors, especially sovereign debtors, have many instruments, including even certain international norms, with which to exert pressure on creditors.

Clearly, being an international debtor country is not exactly a power capability in the same sense as having a strong economy, large population, many naval warships, or a huge foreign exchange reserve. Why include it in the dataset? One reason has been mentioned: large debtors acquire power over their creditors, as it is not in the latter's interest to have the former default. Moreover, a large international debt, arguably perversely, serves as a reputational indicator: countries able to borrow significant sums, particularly in global private markets, have convinced investors of their credibility. As noted in the earlier discussion of the *Home Financial Market Pillar*, states whose governments are able to borrow possess an enormous advantage in times of war or other emergency. A third reason to consider a large debtor state as potentially powerful is that countries with liberal, open capital markets may find themselves inadvertently "borrowing" internationally, as global investors react to volatility abroad by fleeing to the "safe haven" that their national markets appear to offer. International safe haven status is of course also linked to currency capability, as unsettled or uneasy investors flee tumultuous shores and currencies in favor of "hard currency" countries. A safe haven country is central to the functioning of the entire international financial system, and a dominant safe haven country possesses enormous potential structural power to set and interpret the rules for both overt (formal) and implicit (less obviously institutionalized) global financial governance. Moreover, a

country able to borrow increases its potential autonomy, as it can delay adjusting to external imbalances, just as it can by holding substantial shares in the *Currency-P*.

*GDWI* (*gross debtor weight, international*) represents the sum of a country’s financial liabilities to foreigners, as a share of the total international financial liabilities of all countries, in a given year. Such liabilities include foreign bank deposits within a country, foreign holdings of the corporate and sovereign loans and bond debt of the country’s government and citizens, and foreigners’ ownership of corporate equity (shares and foreign direct investment), but exclude foreign holdings of the country’s currency. *GDWI* thus assesses the relative size of a country’s actual foreign borrowings, irrespective of the country’s net external balance. *NDWI* (*net debtor weight, international*), however, applies only to countries whose overall holdings of international financial assets reveal a deficit. *NDWI*, constructed similarly to the *CWI* indicator described earlier, shows the share of a debtor country’s debt in the total international financial debt of all debtor countries. We define a country’s score on the *Debtor Pillar* as the mean of *GDWI* and *NDWI*.

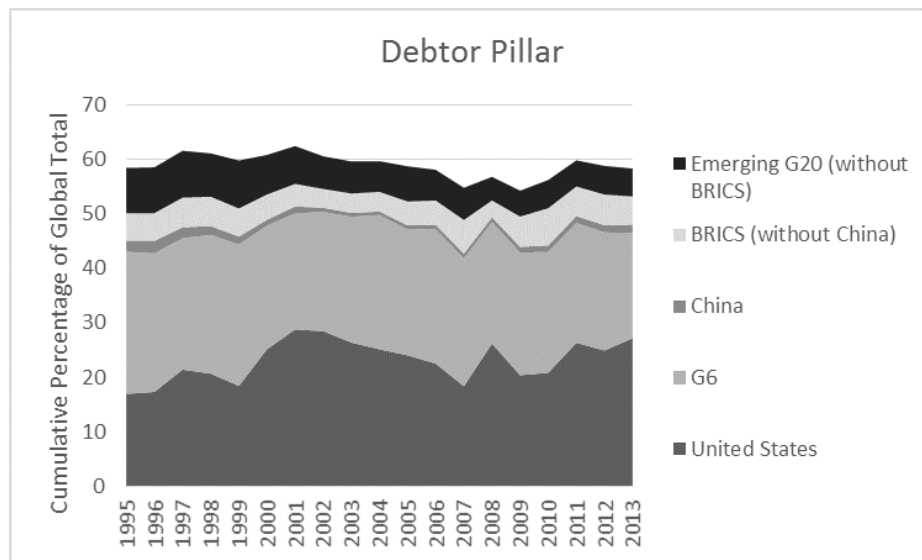


Figure 5: Debtor Pillar: United States, China, and Aggregates

Notwithstanding our long socialization to conceptualize poor and developing countries as the world’s champion debtors, it is advanced countries that oligopolize world debt markets.

Table 5: Debtor Presence: Key Countries and Aggregates (% of global totals).

		GDWI	NDWI	Debtor Presence
United States	1995	17.8	16.1	17.0
	2013	20.9	33.4	27.2
G6	1995	38.7	13.4	26.0
	2013	30.6	8.0	19.3
Japan	1995	8.3	0.0	4.1
	2013	3.2	0.0	1.6
Germany	1995	7.0	0.0	3.5
	2013	5.7	0.0	2.8
United Kingdom	1995	11.0*	0.8*	5.9
	2013	11.4*	0.5*	5.9
China	1995	1.2	2.9	2.0
	2013	3.0	0.0	1.5
Other BRICS	1995	2.5	7.5	5.0
	2013	3.0	7.3	5.2
Other Emerging G20	1995	3.4	12.9	8.3
	2013	2.7	7.6	5.1

The G7 went from a 43 to a 46 percent share of total global *Debtor-P* capabilities during the eighteen years tracked by the *GMFPS* dataset. The government and private firms and individuals in the contemporary but declining international financial hegemon, the **United States**, account for just over a fifth of all international borrowing (*GDWI*) and a full third of the world total of the borrowing of all net debtor countries (*NDWI*). The former financial hegemon, the **United Kingdom**, has an enormous gross debt but only a relatively modest net debt. **Japan** and **Germany** have gross debts but are not net debtors. However, the remaining G7 countries – Italy, France, and Canada – have *NDWI* scores of 4.3, 3.2, and 1.8 of global totals, respectively. Although **China** began the study period with a significant *NDWI* of almost 3 percent, by 2013 it had nearly tripled *GDWI*, but had no net borrowing. Figure 4 and Table 4 suggest that the large emerging economies as a group had several large debtors, and the *GMFPS* dataset provides easy access to information on specific countries.

## 7. Global Financial Governance Pillar

A final and important conceptual category for a state's international financial power capability is its de facto and de jure influence and representation in global monetary and financial governance institutions. International voice in global governance may be exercised overtly and directly, as via executive leadership or voting shares in formal international organizations. Arguably the informal agenda-setting and decision-making that occurs informally in loosely organized "clubs" of dominant actors in international regimes is even more important. Here sovereign states and their representatives, as well as a variety of capable non-state and sub-state actors (including firms, NGOs, national ministries, and subnational government representatives) constitute, implement, and arbitrate international rules, laws, procedures, and norms (Avant, Finnemore, and Sell 2010; Keohane and Nye 2001; Krasner, ed. 1983). In fact, some non-state financial actors, including large transnational banks and institutional investors, are so capable—for example, as creditors, oligopoly market-makers, investors, and within transnational financial regulatory or advocacy bodies—that one legitimately may wonder whether they represent states in the international sphere, or the reverse (as neo-Marxist analysts would have it). This project assumes that sovereign states, however their preferences come to be constituted, ultimately matter most in international relations.

At a later date we hope to add an indicator or several reflecting the capabilities of different states, and their citizens, in global financial and monetary governance. The dataset ideally will have measures reflecting the relative "voice" of different countries within multilateral institutions (whose only members are sovereign governments) and transnational organizations (whose members, in addition to sovereign states, may include subnational levels of government, functional units of the national government, and/or private actors, ranging from advocacy organizations to sectoral trade associations). Thus, in the international financial and monetary sphere global governance is provided by, *inter alia*, the G20 (a multilateral club with closed and exclusive membership yet no formal organization or bylaws), the International Monetary Fund and World Bank (multilateral organizations with elaborate rules, open to all sovereign governments), the Bank for International Settlements (whose members are mostly national central banks, some public and some privately-owned), the Asian Development Bank (a

multilateral bank with mostly regional membership), the International Organization of Securities Commissions (whose members are securities regulators, some reporting to the finance ministry but others only to their private sector members), and the Institute for International Finance (a transnational business association of the world's largest banks and institutional investors). Data on the nationality of senior technocrats in these and similar institutions, as well as the distribution of formal votes among countries or their citizens, would be one place to begin. One challenge is that of weighting the relative importance of different organizations, or of members and officers in a given body. In any case, it would be desirable to be able to compute a composite *Governance Pillar* (*Governance-P*), calculated to reflect a country's voice in global financial and monetary governance. This would be an important measure of structural power, defined as the ability to set agendas, determine standard operating procedures, and shape global regulatory and development norms.

## 8. Conclusions: comparisons and extending the argument

The preceding sections have explained multiple indicators, including five composites, touching on five of the six categories the authors judge essential to assess countries' relative power capabilities, overall, and in the sphere of global finance and money. We began with a traditional state power index. The *Material Capabilities Index* serves as a reality check and baseline against which to assess the somewhat different movement described in our other four realized indices. The remaining four composites – *Creditor Pillar*, *Home Financial Market Pillar*, *Currency Pillar*, and *Debtor Pillar* – each capture a distinct aspect of the types of international financial resources that incumbent national leaders sometimes attempt to employ in the service of their countries' larger foreign policy aims. There are of course many other ways in which both policymakers, global investors, journalists, and academic researchers assess the relative strengths of national financial institutions and markets, from credit ratings, to size and performance rankings of global banks and securities markets, to comparative quality assessments, usually based on surveys of global investors, of a country's business environment and rule of law.<sup>6</sup> In the main, these measures do not lend themselves to the type of analysis

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<sup>6</sup> For example, the World Bank's annual *Doing Business* reports, at [www.doingbusiness.org](http://www.doingbusiness.org)

facilitated by the *GMFPS* dataset, which calculates countries' relative shares as percentages of annual global totals. The *GMFPS* dataset is intended for explicitly political rather than economic research, and as such may supplement, not replace, the wealth of comparative ranking and rating data available on national financial and monetary capabilities.

Table 6: Five Relative Power Capabilities Compared: Key States and Aggregates (% of global totals).

		Political & Economic Capabilities (MCI)	Global Monetary & Financial Capabilities			
			Creditor Pillar	Home Market Pillar*	Currency Pillar**	Debtor Pillar
United States	1995	20.8	2.7	23.1	62.9	17.0
	2013	18.4	0.6	24.7	59.7	27.2
G6	1995	31.8	39.4	48.6	31.2	26.0
	2013	17.9	27.5	35.2	32.5	19.3
Japan	1995	12.7	30.3	21.0	10.3	4.1
	2013	6.7	16.8	10.8	3.8	1.6
Germany	1995	6.4	4.8	8.0	17.0	3.5
	2013	3.8	9.6	5.9	22.4	2.8
United Kingdom	1995	3.5	1.5	8.1	1.8	5.9
	2013	2.6	0.4	9.8	2.5	5.9
China	1995	6.0	2.7	0.9	0.0	2.0
	2013	14.4	16.3	5.8	0.0	1.5
Other BRICS	1995	9.2	3.1	1.7	0.0	5.0
	2013	10.9	4.9	4.4	0.0	5.2
Emerging G20 (no BRICS)	1995	6.1	5.4	2.0	0.0	8.3
	2013	8.8	8.5	2.8	0.0	5.1
Full G20	1995	74.8	53.8	77.4	94.0	62.2
	2013	71.7	58.0	74.8	93.3	64.5

\* Latest data are from 2011

\*\* Earliest data are from 1999

What is the value-added by this project and dataset? Tables 6 and 7 together summarize and modestly extend our main empirical findings and analytical claims. Table 6, which reviews

the scores of major countries and aggregates on all five indices, confirms that most of the action in both overall power and financial or monetary power capabilities lies with the set of G20 countries. Financial and overall power capabilities are being redistributed within this group. The **United States'** role as a global creditor, already small, has now shrunk to virtual insignificance. However, the United States' home financial market accounts for about a quarter of global capabilities throughout the period, its currency remains crushingly dominant, and its weight as an international debtor represents over a quarter of the global total. The remaining large advanced industrial countries in the G6 are still important creditors, yet this is entirely due to **Japan** and **Germany**, and Japan's relative importance as a global creditor shrunk by half in this short period. As a group, the G6 hold large but falling home market capabilities, again mainly due to a collapse in Japan's relative share. Nonetheless, almost all of the currency power not wielded by the United States lies with the G6, but mainly Germany, the dominant country in the Eurozone. G6 members also account for about a fifth of our international debt composite: all of the group have significant gross foreign borrowing (*GDWI*), and four are net debtors (non-zero scores on *NDWI*). **China**, meanwhile, notably increased its scores on the dataset's overall (*MCI*), creditor, and home market dimensions, yet as of 2013 lacked currency power, despite the buzz around renminbi internationalization. Finally, and as a group, the other emerging powers in the G20 increased their creditor status modestly, and the non-China BRICS (Brazil, Russia, India, and South Africa) more than doubled their home financial market resources, although from a low base. Given the fact that emerging economies are poorer in terms of income/capita, and have relatively labor-abundant and/or natural resource-abundant economies, neoclassical economics assumptions about global markets would imply that emerging economies should be debtors, not creditors – yet this seems not to be the case for many of the flagship emerging powers that are members of the G20.

Table 7, very tentatively and provisionally, extends the argument in a different direction. It combines broad themes of international monetary history, shown in four historical periods (19<sup>th</sup> century to the First World War, interwar period, the postwar Bretton Woods era, and the Bretton Woods era aftermath to the end of the Cold War), followed by post-1995 trends mapped



Table 7: The Financial Life Cycles of Major States: A Provisional Sketch.

	<b>Creditor Pillar</b>	<b>Home Market Pillar</b>	<b>Currency Pillar</b>	<b>Debtor Pillar</b>	<b>Governance Pillar</b> <i>[no index yet]</i>
<b>19<sup>th</sup> C. to WWI</b>	Britain/UK hegemonic?	Britain/UK dominant	Britain/UK hegemonic	Many countries	Britain/UK dominant
<b>Interwar period</b>	UK (↓)? US (↑)	UK dominant, but (↓)	UK (↓) US (↑)		
<b>Bretton Woods era (1945 - 1971)</b>	UK (↓) US hegemonic or dominant	US dominant UK significant	US hegemonic UK relevant	UK & W. Europe significant	US hegemonic? UK significant (but slow ↓)
<b>Bretton Woods aftermath (~1973 to ~1990)</b>	US rapid (↓) to gone UK still (↓) Japan (↑) to dominant	US dominant UK (↓) Japan (↑) to significant	US hegemonic Japan & Germany slowly (↑) UK (↓) to gone	US rapid (↑)	US dominant G6 jointly significant
<b>Post-Cold War era (GMFPS dataset coverage)</b>	<i>[UK, US gone]</i> Japan rapid (↓) to only significant Germany & China (each ↑ to significance)	US dominant & stable Japan rapid (↓) to barely significant Relevant: UK, Germany, France, China (rapid ↑)	US hegemonic & stable Japan rapid (↓) to gone Germany/Euro significant (& still ↑)	US rapid (↑) to dominant UK, France, Italy jointly significant	US dominant G6 jointly significant (but slow ↓) China (↑) Other emerging (e.g. BRICS) (↑)

Note: *Hegemonic* ( $x \geq 50\%$ ) > *Dominant* ( $50\% > x \geq 25\%$ ) > *Significant* ( $25\% > x \geq 10\%$ ) > *Relevant* ( $10\% > x \geq 5\%$ ) > *Gone* ( $x > 5\%$ )

through the *GMFCS* dataset. While we have plausibly identified levels and trends for major states throughout the table, the outcome cells characterizing relative state capabilities prior to the mid-1990s are guesstimates. Only the four initial cells of the bottom row are backed by the detailed calculations of our dataset. For the sake of a quick summary, the table identifies a country as “hegemonic” when it holds half or more of the total capabilities in a given financial pillar, as “dominant” if its share is between half and a quarter, as “significant” with a 10 to 25 percent share, and as “relevant” with a share between 5 and 10 percent. These cutoff levels are not determined by the distribution of the data, but instead reflect the authors’ conception of what share of total resources a single state would need to control in order to behave as a “hegemon,” for example.

In the late 18<sup>th</sup> and especially the 19<sup>th</sup> centuries, **Britain** displaced the Netherlands as the primary international trader, imperialist, and creditor, site of the most important financial market, and issuer of the major world currency (Eichengreen 1996; Ferguson 2001; Schwartz 2010). By the late 19<sup>th</sup> century countries throughout Europe and the Americas were aspiring to emulate Britain's success by implementing the Gold Standard. Britain was hegemonic in its currency capability and perhaps in its creditor power, and at least dominant in its home financial market share in the world, mainly through its colonial empire. The interwar years saw Britain's relative decline on all of these dimensions, and the rise of a former emerging economy and debtor country: the **United States**, which increased its overall and financial/monetary power to become the hegemonic capitalist state from the mid-20<sup>th</sup> century to the present.

Britain in the 19<sup>th</sup> century and the United States in the mid-20<sup>th</sup> century each followed a similar pattern of running current account surpluses (*CAS*), then accumulating net stocks of foreign financial assets (*CWT*), while the international use of their home currency also expanded. In these historical cases, export capabilities supported the subsequent and overlapping yet roughly sequential development by the economically and militarily dominant country of creditor, home market, and currency power (Subramanian 2011). As current deficits appeared, creditor power gradually declined, and both the former financial hegemon and the current one became weighty global debtors, while retaining substantial (in the UK) and dominant (in the US) home market capabilities. However, by about a decade after the end of the postwar Bretton Woods international monetary regime (roughly the mid-1980s, in the penultimate period tracked by Table 7), the accumulated net foreign asset holdings of both the US and UK had melted away. The UK has retained its still impressive home financial market presence by a conscious public policy focus on maintaining a strong international role: that is, its *MSIF* remains high, although its *FWD* continues to shrink.

By the 1980s, **Japan** developed a large and persistent current account surplus and become an enormous net creditor to the world. However, the implied financial life-cycle of major powers did not play out, suggesting that a dominant position in on the *Creditor Pillar* may, but does not necessarily, act as the precursor to significant shares in the *Home Financial Market Pillar* or *Currency Pillar*. Instead, Japan's home market capability remained strongly weighted

toward domestic participants (*FWD*), and never attracted significant international business (*MSIF*), even from its geographic region. Over the almost two decades covered by the *GMFPS* dataset (1995-2013), Japan's relative power capabilities declined in each of our indices. Over the same period **Germany** rose as the predominant *regional* financial and currency power in Europe—as well as a major power internationally—yet its future in a united Eurozone remains uncertain.

The period covered by the *GMFPS* dataset also provides insight into **China's** rise. China's increase as an international creditor is dramatic. Moreover, its shifting national financial profile results at least partly from conscious choices pursued by national leaders. Through the period covered by the dataset, the majority of China's foreign assets remained in low-yielding and liquid official reserves (*FWFX*), although since 2014 Chinese policymakers have announced, and begin to implement, a strategy of spending on building infrastructure and acquiring access to agricultural and natural resources abroad, in ways reminiscent of earlier imperial projects, which eventually will be reflected in an increase in *CWI*. China's leaders remain ambivalent about both domestic financial deregulation and capital account liberalization. Their larger home market capability rests uneasily on expanded domestic credit and capital markets (*FWD*), while links to global markets (*MSIF*) grow more slowly, as ruling elites fear external financial liberalization will bring loss of domestic political control (Vermeiren 2013; Volz 2014).

What might the future hold? The global debtor presence of the **United States**, which we have conceptualized, schizophrenically, as both a power resource and a clear marker of a declining hegemon, has exploded, and yet as noted, the United States' currency hegemony is as yet barely diminished. However, at some level of indebtedness (unknowable in advance), other dimensions of international financial and monetary capabilities will begin to decline, possibly gradually (as with the United Kingdom), but also possibly via an enormous global crisis. Arguably the inability (although not the unwillingness) of Britain to provide international monetary and financial leadership in the 1920s and 1930s, coupled with the unwillingness (although perhaps not the inability) of the United States to assume such leadership, played important roles in spreading and deepening the Great Depression (Frieden 2006; Kindleberger 1973; Eichengreen 1996). Since Donald Trump took office in January 2017, the United States

has demonstrated a markedly adversarial view of global governance institutions and achievements, seemingly unaware of both the benefits they have provided to the hegemon and their fragility. For the moment, nonetheless, the United States, along with its major allies in the G6, exercise dominant and jointly significant shares, respectively, in the *Global Financial Governance Pillar*, although the Chinese, sometimes assisted by other emerging powers such as the other BRICS, are quite eager to expand their influence and structural power (Roberts, Armijo, and Katada forthcoming 2017; Helleiner and Kirshner 2014; Stone 2011; Wade 2013).

These findings remain preliminary, and the composition of the *GMFPS* dataset itself is open to reform or expansion in additional directions. The main innovation introduced by the *GMFPS* dataset is that it is explicitly relational and systemic: through mapping relative global shares of various national credit, investment, currency, and borrowing capabilities it can help trace the fortunes of countries with respect to one another. For example, it sets into stark relief the comparative recent financial capabilities trajectories of major powers including the United States, Britain, Germany, Japan, and China. Full access to the dataset will be available to the research community by mid-2017, and the authors look forward to making useful modifications in it in accordance with suggestions from our colleagues.

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