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International Finance

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International finance touches nearly every aspect of the world economy, and it affects the welfare of billions of people. Foreign investors can contribute to economic growth, but they can also trigger severe economic crises. Governments and international organizations have similarly profound effects; their approaches to exchange rates, foreign aid, and financial regulations can mean the difference between prosperity and penury. Finally, the financial activities of firms and migrants can be crucial for economic welfare. Today, one cannot understand the world economy without studying international finance.

This essay focuses on one major aspect of international finance: foreign investment. I begin by considering the rules governing foreign investment, which have varied in interesting ways across countries and over time. For example, some governments have used taxes and regulations to discourage cross-border investment; others have permitted funds to enter and exit their countries freely. Before World War I, investors had considerable latitude to acquire equity in foreign enterprises and lend to foreign governments. Between the two world wars, most countries imposed capital barriers. Although many have now removed the barriers, some continue to regulate the inflow and outflow of investments.

I concentrate much of this essay on the theme of investment regulations for two reasons. First, research on the political and economic aspects of capital controls has proliferated in recent years. Scholars have amassed new data about regulatory policies and investment flows, and have used this newfound information to analyze the causes and effects of financial globalization. I introduce readers to the latest academic breakthroughs and suggest avenues for future research. Second, my focus on investment regulations complements the chapter by Milner in this volume on foreign trade. As Milner shows, there is a lively debate about why some countries are more protectionist than others, and about how protectionism affects economic performance. Academics have studied domestic and international influences on trade policy and assessed the explanatory power of ideology and material interests. I show that a parallel research program has taken place in international finance. Readers can, therefore, compare the uses of commercial and financial regulations.

After reviewing the literature on investment regulations, I examine one especially

important type of investment: sovereign lending. For centuries, bondholders and banks have lent money to foreign governments for a variety of objectives, including economic development, military procurement, and domestic consumption. The practice continues to this day. Private bondholders and banks now advance hundreds of billions of dollars per year to foreign governments around the world.

History is replete with examples of governments that defaulted on loans from foreign creditors. Some failed to pay interest and principal on schedule, as required by the loan contract; others took the more extreme step of repudiating their obligations altogether. Standard & Poor's, a rating agency that keeps track of sovereign defaults, reports that governments in more than 100 countries have shortchanged their private foreign creditors at least once in the past two centuries. Notwithstanding these numerous defaults, though, most countries honor their foreign debts most of the time.

This essay addresses some of the key questions about sovereign debt. In a condition of international anarchy, with no world government to enforce debt contracts, why do countries repay their foreign debts? Do they fear that foreign actors would deprive them of access to future loans? Are they worried about punishment in other spheres of world affairs, such as trade embargoes, diplomatic pressure, and even military intervention? Are they concerned that voters and interest groups would punish them for failing to pay in full and on time? The answers are important not only for understanding why capital moves across borders, but also for shedding light on the sources of international cooperation more generally.

My selective review of the literature on international finance proceeds in two sections. First, I describe regulations on international investment and consider how three factors – economic ideas, international forces, and domestic pressures – have shaped government decisions about capital controls. Second, I turn to the topic of sovereign debt, and analyze how both international and domestic forces have contributed to cooperation between governments and foreign lenders.

DESCRIBING REGULATIONS

Governments can take various steps to discourage the movement of capital across borders. First, they can regulate the quantity of financial flows. Governments might, for example, forbid international transactions, limit their amounts, or require investors to obtain permission before moving money cross-nationally. Second, governments can tax capital transactions. For instance, they could charge fees for the conversion of foreign currency (Tobin 1979) or levy "stamp duties" on the purchase or sale of foreign securities. Finally, governments can pass regulations that make international investments less profitable. Unremunerated reserve requirements (URRs), for example, mandate that foreigners who wish to invest in a country deposit some portion of their funds with the central bank, typically at no interest (Ostry 2010). Governments can achieve similar effects by maintaining multiple exchange rates and charging higher prices for the categories of foreign exchange operations they would like to discourage.

De Jure Measures of Capital Controls

Until recently, data about capital controls were limited in scope. Scholars had produced high-quality case studies about particular countries, but no comprehensive database described the policies of many nations over many years. The situation began to change in the mid-1990s, when researchers started compiling measures that were comparable across countries and over time. Their efforts contributed to a flood of statistical research about capital controls.

The new databases systematically organized information that the International

Monetary Fund had been publishing since 1950 in its *Annual Report on Exchange Rate Arrangements and Exchange Restrictions*. For each country and year, Grilli (1989) and Alesina, Grilli, and Milesi-Feretti (1994) recorded whether or not the IMF described the country as having capital controls. Subsequent researchers documented not only the presence but also the intensity of capital controls (Quinn 1997), and gathered precise information about the timing of reforms (Cardoso and Goldfajn 1998; Henry 2000; Kastner and Rector, 2003).

The detailed timelines advanced scholarship in several ways. First, they exposed midyear changes in policy, such as the capital controls that Malaysia imposed temporarily in September 1998. Second, they included government actions that reinforced the status quo, even when such reforms were not radical enough to change the aggregate scores developed by Grilli (1989) and Quinn (1997). Third, by dating reforms precisely, researchers could monitor how new policies moved markets on a daily basis. When reforms were measured annually, by contrast, it was difficult to distinguish the effects of liberalization from other influences on economic outcomes. Finally, timelines revealed who was governing when the reforms occurred, thereby contributing to research about the politics of financial globalization.

In another major development, researchers collected details about the subcategories of transactions to which capital controls applied. They obtained much of this information from the IMF, which in 1996 had begun publishing separate comments about controls on inflows versus outflows; on short-term versus long-term investments; on equity, debt, and foreign direct investment; and on domestic versus foreign actors (Brune et al. 2001; Johnson and Tamirisa 1998; Miniane 2004; Schindler 2009). These databases made it feasible to study each type of regulation individually.

Finally, researchers built measures that reflected the potential for evasion. It is well known that firms can use creative accounting to evade specific regulations (Garber 1998). To transfer money out of the country, for example, a firm might charge $900,000 for exports that should have cost $1 million, and ask importers to invest the surplus and share the returns. Given the ability of firms to evade narrow laws, Chinn and Ito (2008) constructed a de jure index that included not only restrictions on the capital account, but also restrictions on the current account (relating to payments for international trade) and foreign exchange. They touted their index as a "good proxy" for the overall intensity of capital controls because it addressed the possibility of evasion via the current account (see also Abiad and Mody 2005).

De Facto Measures of Openness

Other scholars have measured financial openness by looking at outcomes instead of rules. There can be an enormous gap, they note, between law and practice. Some governments enforce their laws effectively, but others lack either the motivation or the capacity to make private actors comply. Moreover, enforcement within a single country can change over time, causing the effective level of openness to vary even while laws remain the same. Finally, many laws have loopholes that are hard to summarize in cross-country indices. It may, therefore, be better to monitor the de facto decisions of investors and infer, based on their behavior, how much freedom they actually enjoy.

Feldstein and Horioka (1980) developed one of the first popular measures of de facto capital mobility. If there were no capital restrictions, they reasoned, people could invest anywhere in the world, rather than being limited to opportunities at home. Building on this insight, they computed the correlation between domestic savings and domestic investment for each country and interpreted it as a measure of impediments to capital flows. Critics objected, however, that savings and investment could covary even in the absence of restrictions (Bayoumi 1990).

Other researchers have compared interest rates across countries (e.g., Frankel 1991). If capital could flow freely, similar financial instruments would carry the same interest rates, otherwise there would be opportunities for arbitrage. Any observed differences in interest rates could, therefore, signal the existence of capital controls. Unfortunately, it has been difficult to find comparable financial instruments over many countries and years, and to ascertain how much of the disparity in interest rates is due to capital controls instead of differences in exchange rates, illiquidity, and the possibility of default.

Finally, researchers have used stocks and flows of international investments as de facto measures of globalization. Many have taken advantage of work by Lane and Milesi-Ferretti (2007), who summarized the external assets and liabilities of 145 countries beginning in 1970. Their data provide a convenient measure of capital mobility, under the assumption that mobility is proportional to the value of assets held abroad or the amount of money flowing across borders each year.

Patterns of Capital Openness

Thanks to Grilli, Quinn, and others, we now have a trove of data about capital controls. De jure regulations have changed markedly over the past century. Before World War I, there were few legal impediments to cross-border financial flows (Eichengreen 1996, 3). In fact, Quinn (2003, 190) estimated that "financial openness, measured as the absence of official restrictions on international financial transactions, was more extensive between 1890 and 1913 than at any time subsequently." After 1913, many countries imposed tough controls and maintained them for much of the century.

In the 1970s, rich countries began dismantling their legal barriers to capital. The United States abolished its already modest restrictions on capital movements in 1974, and the United Kingdom followed in 1979. Germany and Japan moved more haltingly but eventually rescinded their barriers, as well. Liberalization gained momentum in the 1980s, when members of the European Community endeavored to create a common market. By the end of the 1980s, both the EC and the OECD required open capital accounts (Abdelal 2007). Thus, according to all de jure measures, developed countries have liberalized considerably since the 1970s.

The same cannot be said of developing countries. Whereas nearly all OECD countries liberalized their investment laws in the 1970s and 1980s, developing countries split into three camps: some removed capital controls, others kept regulations constant, and still others added restrictions (Edison et al. 2004). Regional differences also emerged. Developing countries in Asia had, by the late 1970s, achieved high levels of de jure openness, but the crisis of 1997–1998 interrupted the trend. Latin America moved to a different beat, restricting capital flows in the 1970s but liberalizing them in the 1980s. The greatest changes came in the newly independent countries of Eastern Europe and the former Soviet Union, which opened their capital markets after the fall of Communism. In contrast, Africa, China, and South Asia maintained fairly significant legal restrictions (Chinn and Ito 2008).

De facto indicators show many of the same patterns. Financial flows as a share of GDP were higher before 1913 than at any subsequent time. Capital flows fell during the interwar and immediate postwar periods, but have surged in recent years (Lane and Milesi-Ferretti 2007). Between 1995 to 2005, gross global capital flows tripled, and the value of cross-border assets grew at a similarly impressive pace, from around 50% of world GDP in 1970 to more than 300% in 2006 (Schindler 2009). Thus, both de jure and de facto measures confirm that global capital markets have followed a U-shaped pattern, starting with high mobility before World War I, moving to low mobility between the 1920s and the 1970s, and returning to high mobility, especially among rich countries, since the 1980s.

In developing countries, however, de jure trends have recently diverged from de facto trends. De jure openness in the developing world has been fairly flat, on average, since the 1980s. Over that same time period, de facto openness, measured as the sum of foreign assets and liabilities to GDP, has grown. The picture gets even murkier if, following Kose et al. (2009), one partitions the developing world into emerging and non-emerging economies. De facto openness has skyrocketed in emerging economies but leveled off elsewhere. De jure openness has done the opposite: stagnating in emerging markets while rising in other developing countries. Clearly, more research is needed to document patterns in the developing world and to reconcile de jure and de facto measures of financial globalization.

EXPLAINING CAPITAL CONTROLS: THE ROLE OF ECONOMIC IDEAS

The Case for Capital Mobility

There are four classic arguments for capital mobility. The first says that capital mobility increases economic efficiency. If people are permitted to move capital freely, they will invest their money where it can be used most productively. Standard theories predict, for example, that unfettered capital will flow from rich countries, where capital is abundant and the marginal returns to investment are low, to poor countries, where capital is scarce and the potential returns to investment are high. Second, capital mobility can incentivize businesses to improve their performance. When a country opens itself to capital inflows, domestic firms that were previously insulated from foreign competition must go toe to toe with multinational corporations. The competition will compel domestic firms to become more productive.

Third, capital mobility can improve the performance of governments. Other factors being equal, people prefer to invest in countries where government policies are conducive to economic growth. This fact creates powerful incentives for policy makers to adopt business-friendly policies and create effective political institutions. Leaders might, for instance, cut taxes, streamline their bureaucracies, and stabilize their political systems to attract and retain foreign capital. The fourth argument says that capital mobility can smooth economic outcomes. Investors can build internationally diversified portfolios that provide insurance against economic shocks such as recessions, natural disasters, and financial crises that hit some countries more severely than others. And citizens and countries can smooth their consumption over time by borrowing and lending internationally. Nations with young and fast-growing populations, for example, can borrow from countries where populations are older and savings rates are higher.

The Case against Capital Mobility

Nevertheless, leaders might regulate capital flows in order to achieve other macroeconomic objectives. Many leaders want to conduct counter-cyclical monetary policy, i.e., manipulate the money supply and interest rates to prevent the economy from falling into recession, while simultaneously preventing it from overheating. Leaders might also seek to stabilize exchange rates between their own currency and the currencies of other nations. Stable exchange rates can contribute to trade and investment by reducing the uncertainty associated with international transactions.

These objectives are incompatible with capital mobility. Put simply, capital mobility, exchange rate stability, and monetary policy autonomy cannot coexist. At any given time, a country can achieve no more than two of these three goals (Fleming 1962; Mundell 1963). The fact that leaders must choose among these three desiderata has been called the macroeconomic policy "trilemma" (Obstfeld, Shambaugh, and Taylor 2005).

To see why the three goals form an impossible or "unholy" trinity (Cohen 1993), consider a country with a fixed exchange rate and complete capital mobility. If the government tried to stimulate the economy by lowering interest rates, investors would move their money to nations with higher rates. The domestic money supply would shrink, causing interest rates to rise and thwarting the intended stimulus. The financial exodus would continue until domestic interest rates climbed to levels in other parts of the world. A government that wants effective monetary policies must, therefore, let the exchange rate float and/or regulate the flow of capital.

A second economic rationale for capital controls is to correct for failures in the market. The classical case for capital mobility presumes that other parts of the market are working properly. It assumes that investors have good information about opportunities at home and abroad; that countries allow free trade in goods and services, since trade barriers would encourage investment in inefficient but protected industries; and that countries tax capital at similar rates, otherwise money would flow to jurisdictions because of their status as tax havens (Cooper et al. 1999).

When these assumptions do not hold, capital controls may be useful. For instance, governments might adopt capital controls to prevent speculative herding. Financial markets are prone to wild swings: if some investors move into a country, others may follow not because they believe the investments are fundamentally sound, but because they hope to ride the momentum and sell at the peak before the market crashes. Conversely, if some investors flee, others might rush for the exits, making the crisis a self-fulfilling prophecy. Taxes on international transactions can slow investors who are following the herd instead of acting on the basis of deep research on economic fundamentals. More generally, controls on inflows can prevent countries from getting exposed to crises, while controls on outflows can buy countries time when a crisis strikes.

Capital controls can also protect the health of the domestic banking system. When domestic institutions have free access to foreign capital, they may gamble by borrowing enormous sums from foreigners on a short-term basis, or by taking large positions in foreign currencies (Singer 2007). If the bets go bad, the resulting chain reaction could jeopardize financial institutions and the economy as a whole. By limiting access to foreign funds, capital controls may offer an attractive way to prevent banking crises. In summary, capital controls may be warranted not only to deal with the trilemma, but also to counteract market failures.

The Effects of Ideas about the Trilemma

To what extent have these kinds of economic arguments influenced policy making? Many authors cite the trilemma as an explanation for capital controls after World War II (Abdelal 2007; Eichengreen 1996; Helleiner 1994b; Kirshner 1999; McNamara 1998).[1] The leaders who reconstructed the postwar economy had several macroeconomic goals. They wanted to stabilize exchange rates, not only to increase certainty about international transactions but also to prevent the kinds of competitive devaluations that had disrupted trade during the Great Depression.[2] At the same time, postwar leaders wanted to restore full employment and insure citizens against economic shocks (Ruggie 1982).

As a step toward achieving these goals, they created the Bretton Woods exchange rate system. Countries pegged their currencies to the U.S. dollar, and the U.S. committed to swap dollars for gold at a fixed rate of $35 per ounce. This new exchange rate system had profound implications for capital mobility. To make monetary policy – and thereby sustain full employment – in a world of fixed exchange rates, leaders regulated capital. Restrictions on investment thus became prominent features of the postwar economy.

The Bretton Woods system stabilized exchange rates until the early 1970s, but it eventually became untenable. Several U.S. policies, including the Vietnam War and new social programs, contributed to high inflation, large budget deficits, and trade imbalances. Confidence in the dollar declined, and the U.S. eventually suspended convertibility of the dollar into gold. Other countries responded by decoupling their currencies from the U.S. dollar and allowing them to fluctuate with changes in supply and demand. Floating exchange rates added uncertainty, but they also reduced the need for capital controls, which leaders had previously adopted to sustain both fixed exchange rates and effective monetary policy. In the post–Bretton Woods era, leaders could liberalize their capital accounts without sapping the power of monetary policy.

In summary, it seems that economic theory has guided major decisions about capital controls. Leaders repeatedly did what seemed best for their own countries and the world economy, subject to the well-understood constraints of the trilemma. Having committed to exchange rate stability and monetary policy autonomy at the end of World War II, they restricted the flow of capital. After floating their currencies in the 1970s, leaders no longer faced the hard choice between monetary autonomy and capital mobility, so they decided to reap the benefits of both – while sacrificing stable exchange rates in the process.

This argument, though attractive, is incomplete. The trilemma requires hard choices about macroeconomic objectives, but it does not predict how leaders will choose. In recent years, U.S. leaders have opted for open capital markets and monetary policy autonomy while foregoing the potential benefits of a fixed exchange rate. European leaders, though sharing the U.S. commitment to free capital, have created a common currency. Today, the European Central Bank makes monetary policy on behalf of the continent as a whole. China has gone in a third direction: by limiting capital flows, it has maintained a fixed exchange rate and retained control over its money supply.

We are, therefore, left with a puzzle. Why do different leaders choose different elements of the unholy trinity? Much depends on how leaders weigh the relative advantages of capital mobility, fixed exchange rates, and monetary policy autonomy. Those weights depend not only on economic ideas but also on interest groups, a topic I explore later in this essay.

The Effects of Ideas about Market Failures

Many economists recommend capital controls not only to deal with the trilemma, but also as a second-best solution to market failures. Leaders at the end of World War II were deeply concerned about market failures. John Maynard Keyes, one of the principal architects of the postwar system, characterized investors as speculators and advocated permanent capital controls to minimize the risk of manias and crashes (Kirshner 1999). Others sympathized. As Cohen (2002) points out, nearly all the negotiators at Bretton Woods shared the view that the world needed protection against "mass movements of nervous flight capital." Thus, postwar leaders favored capital controls not only to maintain fixed exchange rates and monetary policy autonomy, but also because they believed that capital markets were inherently unstable. Their decisions reflected the prevailing Keynesian view that governments could increase welfare by intervening in the market.

In the 1970s and 1980s, the intellectual pendulum shifted, however; neoliberalism supplanted Keynesianism as the dominant economic paradigm. Neoliberals argued that government policies and regulations were inefficient in general, and that free enterprise, including the unfettered movement of international capital, would produce the best economic outcomes. The neoliberal tide was strongest in the developed world, where

"a wide consensus" emerged among professional economists that "capital account liberalization – allowing capital to flow freely in and out of countries without restrictions – was unambiguously good" (Tirole 2002, ix).

Authors argue that this shift in economic thinking propelled financial globalization. As neoliberalism gained prominence, leaders dismantled barriers to international capital. The most significant changes took place in countries where policy makers were under the influence of neoliberal ideas. Chwieroth (2007a) found that capital account liberalization was more likely in countries whose policy makers had been trained at universities known for neoliberal economic thinking, and Quinn and Toyoda (2007) added that financial openness was negatively correlated with support for Communist parties.

Neoliberal thinking became so influential that in 1997 leaders considered rewriting the charter of the International Monetary Fund. When the IMF was conceived in 1944, Keynesian ideas were still in vogue, and capital controls were considered orthodox. Consequently, the IMF was given no jurisdiction over the capital accounts of member nations. By 1997, ideas had changed so profoundly that leaders nearly declared capital liberalization to be a new *raison d'être* of the IMF. This was "as close as the world [had] come to a universal norm and legal rule in favor of capital mobility" (Abdelal 2006, 22).

At just that moment, though, two developments pushed the ideological pendulum back toward the Kyenesian camp. First, the world confronted a series of financial crises, beginning with the Asian crisis of the late 1990s. In the years leading up to the crisis, Asian banks, enterprises, and governments had borrowed extensively from abroad, causing foreign debt to soar as a share of national income. Against this backdrop, Thailand's decision to float the Baht in 1997 sparked a panic that spread throughout East Asia and precipitated a massive bailout by the IMF. The crisis touched every country in the region, but nations with capital controls fared better than others. Prominent economists began recommending new regulations on foreign investment (e.g., Bhagwati 1998).

The Asian crisis illustrated a general phenomenon: economic successes and failures can cause observers to update their beliefs about the wisdom of capital controls. Research shows that observers learn from the experiences of their own country. Chwieroth (2010), for one, documented how a crisis in Indonesia during the 1960s validated liberal ideas about capital. Other researchers tested whether countries learn from the experiences of other nations. In large-scale statistical studies, Simmons and Elkins (2004) found that governments did not mimic the policy innovations of countries with the highest rates of economic growth, but they did copy nations in their cultural reference group.

The second major development occurred within the ivory tower. Using newly available data, academics began quantifying the effects of capital account liberalization on economic performance. The first systematic study, by Quinn (1997), found that capital liberalization was positively related to economic growth in a sample of 58 countries during the years 1960–1989. When Rodrik (1998) examined a larger sample of countries over a different period of time, though, he found no connection between capital openness and economic performance. Subsequent studies failed to resolve the debate: some found that liberalization increased growth, but most failed to uncover any systematic relationship (for a review, see Kose et al. 2009).

These findings fueled an academic debate about the merits of capital liberalization. Some scholars concluded that capital liberalization was not beneficial. Others argued that the benefits would have been evident if researchers had known where to look. Neoclassical theory predicts that liberalization should cause investment and growth in developing countries to surge immediately, but not to continue rising indefinitely. Applying this insight, Henry (2000, 2007) found that investment jumped shortly after developing countries opened their stock markets to foreigners. Rodrik and Subramanian

(2009) responded that liberalization had not increased economic growth, even in the short run, nor had it increased the ratio of investment to GDP.

Other economists began asserting that the benefits of liberalization needed time to materialize. According to Kose et al. (2009), capital mobility helps countries indirectly by enhancing market discipline, deepening the financial sector, strengthening political institutions, and improving macroeconomic policy making. These reforms take time, however. Thus, capital liberalization may not bring immediate benefits, but it should improve economic performance in the long run.

Finally, some economists contended that capital liberalization should have different effects on different countries. If liberalization causes investments to flow from areas where capital is abundant to areas where it is scarce, then liberalization should increase growth in developing countries while having the opposite effect in developed ones. However, these benefits may not materialize in developing countries that lack the institutions to handle the inflows. This logic may explain why developing countries hesitated to open their capital markets, even as many rich countries were lowering barriers to international finance (Brooks 2004).

The Role of Ideas in Economic Policy Making

We have seen a striking correlation between economic ideas and capital account policies. After World War II, leaders imposed capital controls as a way to stabilize exchange rates while maintaining the effectiveness of monetary policy. With the return of floating exchange rates after the collapse of Bretton Woods, policy makers could open their capital markets while still maintaining macroeconomic autonomy. Today's economic thinking stands somewhere between those two extremes. Financial crises and academic research have undermined support for capital liberalization, but many economists and policy makers continue to believe that open markets are beneficial – at least for some countries, some of the time. Today, it is not obvious what policies a well-intentioned leader would adopt. Thus, the explanatory power of ideas may be lower now than at any point in the postwar period.

Future research should examine how policy makers behave when there is no intellectual consensus. How do well-intentioned leaders choose among competing ideas, especially when one can find theoretical and empirical support for various alternatives? Do leaders update their thinking in response to new information, or do they cling to views from earlier stages in their educational and professional careers? To the extent that leaders and social groups are self-interested, does intellectual dissensus make it easier to deploy ideas in self-serving ways?

INTERNATIONAL EXPLANATIONS FOR CAPITAL POLICY

International Trends in Technology

A large body of literature examines the effect of international forces on national policies. Some authors argue that technological changes at the international level have rendered capital controls ineffective. In the advanced technological age, they explain, it has become difficult to block capital flows. According to Ralph Bryant (1987, 69) technological changes "would have caused a progressive internationalization of financial activity even without changes in government separation fences."

Technology has undermined capital controls by reducing the cost of moving money. With improved telecommunications, the marginal cost of routing capital through third parties or changing the mode of transmission is trivial. At the same time, technology has increased the speed of financial flows. Capital now moves at the speed of light via fiber-optic cables. It has, therefore,

become easier for financiers to avoid regulators by rerouting their capital flows, and more difficult for regulators to keep up with transactions. Finally, investors have devised new ways to move money. Cross-border financial holdings have grown, in part, because of "securitization, the rise of hedge funds, and the widespread use of offshore special purpose vehicles by financial and nonfinancial corporations" (Lane and Milesi-Ferretti 2008, 327).

Proponents of "technological determinism" – the view that advanced technology and financial creativity have rendered capital controls obsolete – cite various trends to support their case. Cross-border financial flows surged many years before countries dismantled their financial regulations (Garrett 2000, 949; Goodman and Pauly 1993). Moreover, as noted earlier, de facto globalization has been increasing in developing countries, despite the persistence of de jure restrictions on capital. Nevertheless, there are signs that regulations have remained consequential. For example, recent laws have changed the composition of inflows by pushing investors toward equity instead of debt, and toward long-term positions instead of short-term ones (Ostry et al. 2010).[3]

Given the rapid pace of technological change, we need more research about whether and when capital controls are effective. This scholarly agenda is easier articulated than implemented, however. Despite great advances in data over the past decade, most measures of capital controls are not ideal for pinpointing the effects of specific policy reforms. Moreover, capital controls are often bundled with other policies, making it difficult to distinguish the effect of controls from the impact of other interventions. Nevertheless, more research in this area would benefit both scholars and policy makers.

International Trends in Trade Policy

The effectiveness of capital controls has declined not only because of technological innovations but also because of the global trend toward free trade in goods and services. Between the world wars, countries devalued their currencies to stimulate exports and retard imports. Looking back on this episode of competitive devaluation, postwar leaders concluded that "currency instability was incompatible with a multilateral system of free international trade" (Eichengreen 1996, 192–94). They erected capital controls to protect the new Bretton Woods system of fixed exchange rates, which in turn would contribute to the revival of world trade.

Postwar leaders took two other measures to foster trade. They signed the General Agreement on Tariffs and Trade (the GATT, now the WTO), which established a multilateral forum for reducing protectionism, and they urged nations to liberalize their current accounts, thereby allowing importers to obtain foreign exchange to pay exporters (Simmons 2000). These reforms took many years, but by the early 1960s developed countries had restored the convertibility of their current accounts.

As trade volumes grew and barriers to current account transactions dropped, it became easier to circumvent capital controls. Firms moved money across borders by falsifying trade invoices and exploiting leads and lags in commercial finance. Multinational firms were especially well positioned to engage in these forms of circumvention. As they became adept at evading capital controls, multinationals gained leverage over governments (Goodman and Pauly 1993). If multinationals disliked a government's policies regarding capital flows, they could threaten to move production offshore. Commercial liberalization made this threat credible by creating a world in which companies could produce in one location and sell in another. The credible and increasing threat of exit put pressure on governments to liberalize their capital accounts. Overall, the expansion of trade, the restoration of current account convertibility, and the growth of multinationals made circumvention of capital controls more feasible and widespread.

Competition for Foreign Capital

Another body of literature argues that capital liberalization is contagious: when some governments liberalize, others follow suit (Simmons and Elkins 2004). Follow-the-leader effects could arise for several reasons. First, liberalization by some countries could make it harder for others to keep capital in check. The European Community (EC) provides a case in point. In 1992, European countries agreed to create a single market in which not only goods but also capital could move freely among members. This structure opened new opportunities for investors to move money into and out of the EC. Investors could, for example, identify the EC member with the least restrictive rules vis-à-vis the rest of the world, and use that country as a conduit for dealing with partners outside the community. Knowing this, members of the community converged on the practices of their most liberal members; they allowed the free movement of capital not only within the EC but also in relations with nations outside the community.

Second, liberalization could create a competitive dynamic. When one government lowers its regulations on capital, other countries may feel compelled to match that move, lest they lose business and investment. Andrews (1994), Helleiner (1994b), and others cite competition as a principal cause of American and British deregulation. When the British "permitted the Euromarket to operate within its territory free of regulation," it attracted the participation of American banks and corporations. More and more multinationals shifted their financial activities to this offshore market, putting pressure on the U.S., which responded in 1974 by removing capital controls. The British, "driven in part by a desire to retain London's competitiveness vis-à-vis New York," relaxed its controls in 1979 (Helleiner 1994a, 301).

In deciding whether to follow the lead of others, governments have responded most strongly to liberalization by their economic peers. Simmons and Elkins (2004) classified countries as peers if they offered similar combinations of risks and returns (as judged by agencies such as Standard & Poor's), and were therefore interchangeable from the perspective of foreign investors. They showed that the capital account policies of countries moved in tandem with the policies of similarly rated nations.

Although countries seem to compete for capital, other possibilities deserve mention. Perhaps countries liberalized at roughly the same time as their economic peers, not because they were competing for capital, but because they were responding to common external shocks. Economic peers tend to experience similar technological breakthroughs, pursue similar trade policies, and face similar ideological and material pressures from foreign governments and international organizations. The tendency to behave like other countries at similar levels of development may be due to correlated changes in technology, commercial policy, ideas, and political pressure, rather than competition for capital.

To the extent that competition has spurred globalization, one would like to know how the process began. What motivated the first countries to liberalize, thereby creating pressure for peers to follow? Perhaps international organizations and domestic interest groups got the liberal ball rolling.

International Organizations and Foreign Governments

A significant literature examines the effect of the International Monetary Fund on financial globalization. In early work, authors assumed that the IMF wanted free-flowing capital and would compel borrowers to liberalize capital policies. Statistical tests of this hypothesis produced mixed results, however. Quinn and Toyoda (2007) showed that the estimated effect of IMF programs was sometimes positive and other times negative, depending on which variables they included in their statistical model, but was never distinguishable

from zero with a high level of confidence. Many other studies have reached similar conclusions (e.g., Abiad and Mody 2005).

There are at least four plausible explanations for the apparent absence of IMF influence. First, the organization never had much authority to push for capital liberalization. At its birth, the fund was authorized to promote trade and oversee exchange rates but not to liberalize capital flows. Although the IMF has imposed many conditions on borrowers over the years (Gould 2006; Stone 2008), researchers have found almost no cases in which the organization demanded capital liberalization as a *quid pro quo* for loans. Capital controls received mention in only 3% of conditionality agreements (Dreher 2002) and in scarcely any IMF letters of intent (Quinn and Toyoda 2007). In private meetings with foreign leaders, some IMF staff members apparently recommended capital liberalization and warned against clamping down on capital flows (Chwieroth 2008). Future researchers should look for direct evidence that these informal meetings contributed to capital liberation.

Second, the preferences of IMF officials have changed over time. The first cadre of IMF employees were Keynesians who thought that capital controls were beneficial (Chwieroth 2008). During their tenure, one would not expect an association between IMF programs and capital liberalization. As the IMF recruited new economists, though, its ideological complexion became increasingly neoliberal. Thus, the correlation between IMF programs and capital openness should have been stronger in the 1980s and 1990s than when Keynesian ideas held sway. Indeed, during periods when the staff was steeped in neoclassical theory, there was a positive correlation between IMF programs and capital liberalization (Chwieroth 2007b).

Third, previous scholars may have mischaracterized the fund's relations with developing countries. According to Mukherjee and Singer (2010), many governments want to remove capital controls but will not take that step unless they can minimize the political fallout by blaming the IMF. Mukherjee and Singer argue that countries use the IMF as a scapegoat for reforms they would have implemented otherwise. The authors find that IMF programs are correlated with capital liberalization, but only in countries that also have large enough welfare states to compensate citizens for the damage that reforms might cause. In follow-up research, scholars could investigate whether politicians publicly blame the IMF for capital liberalization, and whether citizens and interest groups accept the excuse. Researchers could also rethink the complex interaction between IMF programs and welfare states, since the need to blame the IMF should be particularly acute in countries that do not have strong safety nets.

Finally, the IMF may have appeared irrelevant in previous statistical analyses because the organization undertakes programs strategically, not randomly. IMF programs typically occur in response to financial crises. A null or negative correlation between IMF programs and capital liberalization could, therefore, reflect the fact that IMF programs occur at times when leaders would be most tempted to adopt emergency capital controls. This kind of "selection bias" is common in international relations research and can complicate inferences about cause and effect. No single method will solve the problem completely, but researchers can make progress by supplementing advanced statistical analyses with matched-case comparisons and, where possible, laboratory and survey experiments about the preferences of citizens and elites.

A smaller section of literature has examined the causal role of the U.S. and other developed countries. As the leading economic power in the world, the U.S. has a "hegemonic interest" in capital liberalization (Helleiner 1994b). It benefits when other countries use the dollar as a reserve currency, and when U.S. citizens and firms can invest freely. Consequently, the U.S. government might use its influence to promote capital liberalization around the world.

Research on the U.S. has produced mixed findings, however. Cohen (2002, 2003) concluded that U.S. policy was the "most decisive" reason why many countries kept their capital markets open in the 1980s and 1990s, despite pressure for closure. Abdelal (2007), in contrast, contended that the U.S. was "irrelevant" to the construction of liberal rules, whigh French and other European policy makers devised and promoted (Abdelal 2006, 1). Future research could reexamine these contradictory findings to clarify whether and how IMF and the U.S. have affected financial regulations.

DOMESTIC EXPLANATIONS FOR CAPITAL POLICY

Another important body of literature attributes capital liberalization to domestic forces, including interest groups. Contributors point out that capital liberalization has different effects on different groups: some groups gain, whereas others lose. These differential effects give people a motive to organize into pro-liberalization and anti-liberalization coalitions, and to lobby for or against capital controls.

Winners and Losers from Capital Liberalization

Who wins and who loses from financial globalization? Three groups have received considerable attention in the literature: liquid capital, fixed capital, and labor. Liquid capital refers to financial institutions and investors who have liquid assets and could, if permitted, move their money into and out of countries. Fixed capital, in contrast, refers to factories, land, and other assets that would be difficult or impossible to relocate abroad. Finally, labor refers to workers. When theorizing about capital controls, scholars generally assume that emigration would be prohibitively expensive, and therefore treat workers as internationally immobile.

The effect of capital liberalization on each group will vary by country. In countries where capital is abundant but labor is relatively scarce, liberalization will bring economic benefits to people with liquid capital (Frieden 1991). The logic is that controls trap capital at home, forcing people with liquidity to accept lower interest rates than they could earn in other parts of the world. If controls are lifted, investors will shift their assets to countries with higher returns. At the same time, liberalization opens new opportunities for diversification, enabling investors to reduce their exposure to risk. Overall, liberalization should help liquid investors in developed countries by offering a more attractive combination of risk and return.

In capital-poor countries, by contrast, liberalization will have both negative and positive consequences for people with liquid assets. On the one hand, liberalization will reduce returns on investment. As capital controls are removed, foreign money will rush in, driving down domestic interest rates and depriving local capitalists of the benefits they enjoyed when the economy was shielded from foreign competition. On the other hand, liberalization will give capital holders more options. Instead of investing entirely at home, they can assemble an internationally diversified portfolio that reduces the volatility of their income. The net effect could be either positive or negative, depending on whether the benefits of diversification outweigh the losses associated with lower interest rates.

Next, consider the owners of fixed capital. Under financial autarky, they can borrow at low interest rates in capital-rich countries but must pay higher rates in capital-poor countries. Globalization reverses this pattern: as money flows from capital-rich to capital-poor countries, interest rates in both areas will converge toward the world level. Consequently, liberalization will increase the cost of borrowing for industrialists and landowners in the capital-rich world, while having the opposite effect on capital-poor nations (Frieden 1991).

Finally, consider the effects on labor. Capital controls will benefit workers in capital-rich countries by ensuring that money is invested domestically. When controls are lifted, capital will rush for the exits, causing domestic employment and wages to fall. One can expect the opposite in capital-poor countries. Thus, liberalization should help workers in capital-poor countries but hurt workers in capital-abundant ones.

Table 28.1 summarizes the anticipated effects of capital account liberalization on liquid capital, fixed capital, and labor. If groups organized according to their economic interests, the owners of liquid capital would take one side of the policy debate, whereas workers and the owners of fixed capital would take the other side of the debate. The policy outcome – the extent of regulation versus liberalization – would depend on the relative power of these opposing camps.

The predictions in Table 28.1 assume that governments, after restricting cross-border capital flows, would let the domestic forces of supply and demand determine interest rates. In many cases, though, governments in the developing world not only regulate international investment but also practice domestic "financial repression." They force domestic capitalists to pay high taxes and/or to lend to the government at below-market interest rates. In such capital-poor countries, liberalization could give people with liquid assets cause for celebration, not only by creating opportunities for diversification, but also by allowing them to escape the financial repression that limited their earnings under autarky (Haggard and Maxfield 1996).

Table 28.1 The Effects of Liberalization on Economic Groups

Group	*Capital-rich country*	*Capital-poor country*
Liquid capital	Gain	Ambiguous
Fixed capital	Lose	Gain
Labor	Lose	Gain

Table 28.1 also rests on the premise that capital would flow from developed countries to developing ones. As Frieden (1991) acknowledges, though, the distinction between capital-rich and capital-poor countries may be too simplistic. Rich counties may, in fact, be capital importers. A notable example, the U.S., has in recent decades been drawing capital from the rest of the world.

Finally, the predictions Table 28.1 presume that capital controls are effective. This point is worth emphasizing because it exposes a tension between technological determinism and theories about domestic politics. If technology makes capital controls obsolete by enabling firms to evade restrictions at a low cost, then the distributional consequences of de jure controls should be modest. Put another way, technological advances should reduce domestic political conflict over capital controls.

Winners and Losers via Government Policy

Capital liberalization could affect domestic groups not only by changing interest rates and allowing financial diversification (the mechanisms in Table 28.1), but also by altering economic policies. First, openness could reduce the government's ability to redistribute income from capitalists to laborers. In the twentieth century, governments expanded welfare programs for the poor and unemployed, and provided retirement benefits for the elderly. Some believe that capital controls helped make redistributive policies feasible, by allowing governments to tax the incomes, transactions, and wealth of liquid capitalists. Without controls, they fear, capital might flee to jurisdictions with lower tax rates, leaving the government with less revenue for social programs.

Second, the free flow of capital could undermine government regulations. In the presence of capital controls, investors must accept labor laws that guarantee workers a minimum wage and shield them from unsafe working conditions. Sans capital controls,

investors could head for countries with weaker labor standards. Thus, capital liberalization could trigger not only a fiscal but also a regulatory "race to the bottom" that would benefit mobile capitalists at the expense of labor.

Much research has examined whether globalization has caused a race to the bottom. Surprisingly, scholars have not found much affirmative evidence. Garrett (2000) connected capital mobility with low public spending, but Quinn (1997) found that capital liberalization was positively correlated with corporate taxes and policies that redistributed income to the poor. Hays (2003) contended that globalization was causing convergence around moderate policies, and Mosley (2003) added that even in an era of globalization, governments had considerable "room to move." Indeed, corporate tax rates in OECD countries rose as a percentage of GDP between 1970 and 2005, the very years when OECD countries were dismantling capital controls (Freeman and Quinn 2012).

Why haven't governments raced to the bottom? The literature offers two explanations, one focusing on the preferences of governments and the other focusing on the preferences of capital. Authors in the first category, such as Plümper, Troeger, and Winner (2009), point out that governments have conflicting objectives: they want to compete for capital, but they also need support from domestic constituents, many of whom demand social welfare programs and equitable tax rates. Domestic pressures for welfare and equity may have prevented governments from racing to the bottom (see also Basinger and Hallerberg 2004).

Authors in the second category emphasize the preferences of capital. When deciding where to invest, investors consider not only tax policies but also political institutions, infrastructure, and the overall business climate. Perhaps capitalists tolerate high taxes as the price of doing business in countries that are attractive for other reasons (Maxfield 1998). The main problem with this argument is that investors normally can choose among several countries with similar infrastructures and political systems. Tax policy may be only one of many criteria in the minds of capitalists, but it should influence decisions at the margin.

The Likelihood of Collective Action

Although globalization creates winners and losers, it is not a given that affected groups would mobilize politically. Many people are neither aware of capital regulations nor sophisticated enough to understand their effects. Moreover, even people who understand the stakes may not coalesce if they perceive capital liberalization as a "nonexcludable" policy. A nonexcludable policy is a benefit that is impossible to provide selectively; if the benefit is supplied at all, it must be offered to everyone. An excludable policy, on the other hand, is a targeted benefit, which can be offered to some people while being withheld from others. As Mancur Olson (1965) explained, individuals are more likely to collaborate to obtain excludable goods than to obtain nonexcludable ones.

The concept of excludability is useful for predicting political action. Trade protection is commonly seen an excludable good, which governments can offer to some industries but withhold from others. The exchange rate, on the other hand, is archetypically nonexcludable. If the government opts for a fixed exchange rate, the fixed rate will be available for all citizens, whether they lobbied for it or not. Because fixed exchange rates are nonexcludable, individuals and businesses may feel tempted to leave the lobbying to others. Consequently, lobbying about the exchange rate should be less common than lobbying about trade policy (Gowa 1988).

Capital controls fall somewhere between these extremes. Unlike fixed exchange rates, capital controls can be – and often are – applied selectively; the government can regulate specific types of flows, or specific industries, while giving others freedom to move. In practice, though, governments often

make sweeping changes to the entire capital control regime. For that reason, we might expect more free riding on the question of capital controls than on trade protection for specific industries.

Evidence about Domestic Interest Groups

There has been surprisingly little empirical research about the role of domestic groups in capital liberalization. Haggard and Maxfield (1996) found that domestic groups shaped the capital account policies of four middle-income countries, and Goodman and Pauly (1993) reached a similar conclusion about four developed nations. Chwieroth (2007a), on the other hand, found no statistical support for interest-based theories, and noted that peak organizations in the U.S. (such as the Institute of International Finance, which represents the owners of mobile capital) have been remarkably circumspect about capital liberalization.

Other researchers have tested for a correlation between the ideological orientations of governments and the capital account policies they pursue. If left-wing governments favor workers whereas right-wing governments favor capitalists, then – at least in capital-rich countries, where liberalization would benefit capital – liberalization should be more common under right-wing governments.

When Alesina et al. (1994) tested this hypothesis on a sample of 20 OECD countries, though, they found no relationship between the ideological orientation of government and the use of capital controls. Subsequent research produced more definitive findings. Garrett (2000) concluded that capital restrictions in OECD countries were more likely under left-wing governments and in nations with powerful labor unions. Kastner and Rector (2003) probed the same question with fine-grained data from 19 OECD countries and confirmed that right-wing governments were more likely than left-wing ones to open the capital account.

Research has uncovered similar patterns in developing countries. After reviewing the experiences of 19 Latin American countries during the 1980s and 1990s, Brooks and Kurtz (2007) judged that right-wing executives were more likely to liberalize the capital account. Mukherjee and Singer (2010), too, found a positive association between right-wing governments and capital liberalization. These findings, though plausible, contradict standard theories about the distributional effects of capital controls. If capital liberalization in developing countries would help workers while hurting liquid investors (Table 28.1), then left-wing governments in the developed world should favor liberalization, whereas right-wing governments should oppose it.

Moreover, even in the developed world, it is unclear how to interpret the correlation between right-wing governments and financial liberalization. This correlation might arise because governments understand the distributional effects of capital controls and choose policies that are optimal for their constituents. Alternatively, the correlation could reflect neoliberal ideas, which are more prominent on the political right than on the left. Perhaps right-wing governments liberalize capital flows (and left-wing governments regulate them) not to promote the interests of favored domestic groups, but to implement policies that fit their ideological worldview.

Future research should proceed in several directions. We need more empirical studies about the effect of capital liberalization on groups, and the extent to which those groups organize politically. At the same time, we need more nuanced theories that address how different types of capital controls have different distributional effects. From a political and economic standpoint, it should matter whether capital regulations apply to residents or nonresidents, to inflows or outflows, and to portfolio or foreign direct investment. Finally, more work is needed to explain the seemingly anomalous behavior of developing countries, and to distinguish the effects of ideas from the effects of material interests.

The Effects of Democratic Institutions

Decisions about capital controls depend not only on interest groups, but also on political institutions. In most countries, the preferences of citizens and interest groups are not immediately reflected in government policy. Instead, those preferences get filtered through domestic institutions, which amplify the voices of some groups while dampening or even silencing the voices of others. A growing body of literature examines how political institutions affect the translation of social preferences into policy outcomes. Here, I review what researchers have discovered about the consequences of democracy for capital controls.

Democracy is a mechanism for making leaders accountable to the electorate. By empowering citizens to select leaders who share their preferences and to remove leaders who step out of line, democracy increases that chance that public policy reflects the will of the people. To predict how democracy affects the capital account, researchers first need to specify what voters want.

In the 1980s and 1990s, many observers assumed that citizens would oppose liberal reforms, including capital liberalization. They argued that opening the capital account would bring economic pain, which citizens would instinctively resist. The preferences of citizens would loom larger in some political regimes than in others, however. Democratic leaders might feel reluctant to liberalize for fear that they might alienate voters. Autocratic leaders, in contrast, would be more willing to implement painful reforms, because they could upset the populace without jeopardizing their hold on power.

This logic misses the fact that citizens might gain from capital liberalization and want leaders to pursue it. If the predictions in Table 28.1 are valid, workers in developing countries should support capital liberalization. To the extent that democracy empowers those workers, it should make developing-country governments more likely to open their capital accounts (for a similar argument about trade, see Milner and Kubota 2005). Conversely, democracy should impede liberalization in developed countries. Although rich countries have more capital than poor ones, the median voter in even the most advanced economies is a worker, not someone with abundant liquid capital. Workers in those countries would suffer from liberalization. Consequently, democracy should contribute to capital liberalization in developing countries but thwart liberalization in the developed world.

Many researchers have tested for a relationship between democracy and capital account openness, but no clear pattern has emerged. Instead, the estimated effect of democracy has varied from study to study, depending on the data and the statistical model. Simmons and Elkins (2003), for example, found some evidence that democracy slowed liberalization, but later reached the opposite conclusion (Simmons and Elkins 2004). Garrett (2000) contended that democracy was inconsequential for liberalization in OECD countries, but Brune et al. (2001) concluded that democracy caused liberalization in the developing world. Milner and Mukherjee (2009) detected a positive association between democracy and capital openness, but Mukherjee and Singer (2010) found that the effect of democracy was statistically indistinguishable from zero.

Long-run studies have not resolved the confusion. Although Eichengreen and Leblang (2008) found a positive relationship between democracy and liberalization over the sweep of an entire century, they did not report separate estimates for each time period in their sample. When Quinn (2003) broke his sample into periods, he estimated that democracy had a positive effect on capital openness after World War II, but a negative effect before World War I.

Why have researchers failed to find a clear connection between democracy and regulations on capital? One possibility is that voters do not understand how capital controls affect them (Brooks and Kurtz 2007).

A second conjecture is that capital controls are not salient enough to affect elections. Some aspects of globalization, including trade and immigration, have become central issues in political campaigns, but financial globalization has not figured so prominently. Even during the 1970s and 1980s, when developed countries opened their capital accounts, there was no "significant public debate of the type that regularly takes place concerning trade policy decisions" (Helleiner 1994a, 311).

Although obscure to most voters, capital account policies may nonetheless affect elections indirectly. In many models of democratic politics, citizens engage in retrospective economic voting: if the economy has improved, they retain the incumbent politicians, but if the economy has soured, they throw the incumbents out. Incumbent politicians therefore have incentives to adopt economic policies –including capital account policies – that would benefit the electorate. In still other models of economic policy, citizens take cues from interest groups and parties that understand the complex effects of globalization. More research is needed about how retrospective voting and cue-taking affect the likelihood of capital liberalization in democracies.

Another potential reason for the inconsistent empirical results is that the effect of democracy should vary across countries. For example, the association between democracy and capital liberalization should be stronger in capital-poor countries than in capital-rich ones (but c.f. Eichengreen and Leblang 2008, who make the opposite prediction). The impact of democracy may also vary with the cultural views of the electorate. A growing body of research shows that cultural variables such as ethnocentrism, isolationism, and nationalism predict attitudes toward trade and immigration (e.g., Mansfield and Mutz 2009). Perhaps cultural attitudes influence how voters think about financial globalization, as well. If so, democracy could either spur or retard globalization, depending on the cultural attitudes of voters.

Finally, democracy may be a consequence, rather than a cause, of financial liberalization. Maxfield (1998, 2000) argued that capital liberalization weakens authoritarian governments by depriving them of opportunities to buy political support in exchange for the right to move money across borders. In a large sample of countries, Eichengreen and Leblang (2008) discovered a two-way relationship, in which democracy caused globalization and vice versa. Milner and Mukherjee (2009), on the other hand, found that the effect ran in only one direction: from democracy to capital liberalization. Still other researchers have concluded that the effect of globalization on democracy depends on the size of the welfare state (Rudra 2005) and preexisting levels of inequality (Freeman and Quinn 2012). Clearly, more research is needed about the complex relationship between democracy and financial liberalization.

The Effects of Political Fragmentation

Other political institutions, in addition to democracy, could affect financial policy making. Some scholars have studied the effects of "veto players," which have the power to block policy changes. They hypothesize that veto players contribute to gridlock and "wars of attrition," wherein each player delays reforms as long as possible in the hope of extracting concessions from others (Alesina et al. 1994).

Empirical research about veto players has led to mixed results. In an admirably detailed study that assigned exact dates to reforms in OECD countries, Kastner and Rector (2003) found that countries with a large number of veto players changed their capital account policies less often than countries with concentrated authority. Mukherjee and Singer (2010) also found a negative relationship between veto players and financial liberalization. Alesina et al. (1994) and Brooks and Kurtz (2007), on the other hand, found a

positive connection between political fragmentation and capital liberalization.

Why these contradictory findings? In theory, the effect of veto players should depend on their preferences. If all veto players have similar preferences, their existence should not impede reform. If, on the other hand, veto players have heterogeneous preferences, their existence could contribute to deadlock. The general point is that political institutions – democracy, veto players, and the like – translate preferences into policy. The effect of institutions should, therefore, vary with the desires of the actors whose preferences are getting translated.

Another relevant institution is the central bank. Central banks are independent to the extent that they can make monetary policy without interference from the government. Under the trilemma discussed earlier, no country can simultaneously maintain capital mobility, fixed exchange rates, and monetary policy autonomy. Thus, governments that want to retain control over monetary policy should favor capital controls. Governments that have delegated power to an independent central bank, on the other hand, should be more willing to accept capital mobility, since the opportunity costs to the government (in terms of monetary policy) would be lower.

Indeed, Alesina et al. (1994), Henning (1994), Grilli and Milesi-Ferretti (1995), and others have found a negative correlation between capital controls and central bank independence. There are several interpretations for this pattern, however. Some might infer that central bank independence leads to capital openness, but others might conclude that the process runs the other way around. Still others might suspect that the correlation between central bank independence and capital mobility is spurious: a third factor, such as neoliberal ideology or the desire for monetary policy autonomy, could explain decisions regarding both the central bank and the capital account. Future research should arbitrate among these interpretations.

Finally, scholars have scrutinized the relationship between political stability and capital openness. In standard models of economic policy making, political instability shortens the time horizons of leaders, causing them to focus on the present instead of thinking about the long run. Leaders with short time horizons characteristically choose policies that bring immediate gains, even if doing so would risk disaster in the distant future. Way (2005) applied this logic to capital account liberalization. As financial barriers fell, he argued, capital would rush into developing countries, contributing to a short-term boom. A crash, if it occurred, would take place years in the future, beyond the reference point of myopic leaders. Indeed, Way found that unstable governments in the developing world were especially likely to open their capital accounts.

In summary, our understanding of capital controls has expanded tremendously in recent years. Aided by new data and sophisticated research methods, scholars have shown how economic ideas, international forces, and domestic pressures have shaped government decisions about the regulation of cross-border financial flows.

INTERNATIONAL EXPLANATIONS FOR SOVEREIGN DEBT

When investors can move money across borders, they engage in various types of foreign investments, including loans to foreign governments. International loans raise serious questions of credibility, however. After receiving funds from abroad, the government could refuse to pay interest and principal in full and on time, and in extreme cases it might even repudiate the debt. Moreover, without a world government to enforce property rights, it is not obvious to whom creditors would appeal, or how they could recover their money.

Why do governments ever repay their foreign debts, and what gives investors the confidence to lend? Much of the literature about sovereign debt has attempted to answer

this fundamental question.[4] In general, scholars have identified two categories of reasons for lending and repayment. Some argue that governments repay because default would trigger an adverse *international* reaction, such as the loss of access to foreign credit or punishment in another sphere of foreign affairs. Others attribute repayment to *domestic* political factors, including voters, interest groups, and institutions. I discuss international explanations first, and consider domestic explanations in the next section of this essay.

Loss of Access to Foreign Credit

In the seminal model by Eaton and Gersovitz (1981), creditors compel the foreign borrower to repay by threatening to apply a permanent credit embargo. Although intuitive, this form of punishment might not be credible. To bar a defaulter from global capital markets, an aggrieved creditor would need the cooperation of most – if not all – current and future lenders around the world. It is not obvious, however, why profit-seeking bondholders and banks would join forces to punish a government for defaulting on someone else's loans.

In theory, creditors might find ways to surmount this credibility problem, and thereby make the prospect of a credit embargo more plausible. Kletzer and Wright (2000) suggest "cheat the cheater" strategies in which each lender not only threatens to punish the borrower, but also threatens to punish lenders who fail to implement the retaliatory strategy. Wright (2004, 2005) adds that institutions, including syndicates, can help creditors coordinate their retaliatory efforts. Finally, major banks could coerce smaller ones, which depend on large partners for correspondent services and participation in international loans (Lipson 1985).

There is a second reason why defaulters might not be able to borrow. Perhaps defaulters lose access to funds, not because creditors are coordinating a vindictive embargo, but because default reveals negative information about the country's creditworthiness. Default could, for example, signal that leaders lack the political will and administrative competence to honor international obligations, or that domestic economic conditions are worse than previously thought (Sandleris 2008). Having received this bad news, investors might refrain from making new loans, not as an act of financial retribution, but simply because they now estimate that additional loans would not pay off (Cole, Dow, and English 1995; Tomz 2007).

What does the evidence say? One major study, by Peter Lindert and Peter Morton (1989, 40) concluded that "investors seem to pay little attention to the past repayment record of the borrowing governments … They do not punish governments with a prior default history, undercutting the belief in a penalty that compels faithful repayment." Subsequent research has painted a different picture, though. Over the centuries, defaulters have indeed been rationed out of capital markets, at least in the short run. Most eventually regained access, but not before settling at least some of their arrears (Gelos, Sahay, and Sandleris 2004; Tomz 2007).

Related research has asked whether investors demand higher interest rates from countries with a history of default. Here, too, the academic consensus has shifted. Eichengreen and Portes (1989) and Jorgensen and Sachs (1989) claimed that countries that fell into arrears during the Great Depression did not subsequently receive worse terms of credit than countries that had paid in full. Subsequent research found that defaulters do, in fact, pay significantly higher interest rates, but the premiums decline over time (Borensztein and Panizza 2009; Flandreau and Zumer 2004; Özler 1993; Tomz 2007).

Historically, investors have also charged higher interest rates to new borrowers than to more established entities, to cover the risk of lending to a potential "lemon." As borrowers acquired records (as they became more seasoned participants in capital markets), investors updated their beliefs and recalibrated the terms of credit. Countries that paid, thereby

distinguishing themselves from bad types, saw their risk premiums decline asymptotically toward a risk-free rate (Flandreau and Flores 2012; Tomz 2007). These patterns, too, are consistent with informational theories of sovereign debt.

Finally, we now know that investors do not respond to defaults in a knee-jerk fashion. Instead, as anticipated by Grossman and Van Huyck (1988), they examine the economic context in which the default took place and judge whether the default was excusable. Historically, investors have shown especially low regard for borrowers that defaulted without a valid economic excuse; they generally have not disparaged debtors for defaulting during hard times; and they have upgraded low-rated debtors that exceed expectations by servicing their debts under extreme hardship (Tomz 2007). Overall, countries have gained or lost access to loans based not only on their behavior but also on the circumstances they faced.

Other Negative Reactions by Foreigners

Beyond losing access to capital, a country that defaults could suffer costs in other areas of international relations. For instance, it could become a target of military intervention. The idea of using arms to extract repayment may seem odd today, but many scholars believe this mode of enforcement prevailed until the early twentieth century. Martha Finnemore (2003), for example, writes that militarized debt collection was "accepted practice" in the nineteenth century and fell from favor only after the Second Hague Peace Conference in 1907. Mitchener and Weidenmier (2010) claim, as well, that gunboat diplomacy was "effective and commonly used" to enforce debts before 1913. Tomz (2007) maintains, however, that creditor governments generally did not use – or even threaten to use – force on behalf of bondholders, and that investors and borrowers expected default to trigger military intervention. Notwithstanding these historical debates, all agree that today countries do not use military intervention to enforce debt contracts.

More commonly, scholars argue that default would lead to a decline in international trade (Bulow and Rogoff 1989). The trade of a defaulting country could suffer for at least three reasons. First, creditors could use tariff and nontariff barriers to reduce trade with the defaulter. As Philip Lane (2004, 2) notes, "The imposition of trade sanctions on the offending country" is "the classic punishment … in the sovereign debt literature." Second, default could lead to the collapse of commercial credit, thereby increasing the costs of trade (Kohlscheen and O'Connell 2007). Finally, creditors could seize the debtor's foreign assets, including goods that are sitting abroad.

Researchers have begun to compile systematic evidence about the effect of default on trade. When countries default on official Paris Club debt, they experience a decline in imports and exports relative to the levels one would expect given the standard "gravity" model (Rose 2005; see also Borensztein and Panizza 2010). It remains unclear why these changes in trade occur, though. If the decline were due to trade sanctions, trade with creditor countries would fall faster than trade with other countries, but Martinez and Sandleris (2011) found the opposite: default disproportionately depressed trade with *non*-creditors. Tomz (2007) found no evidence that default triggered trade sanctions in earlier periods, either.

Evidence for other trade-related mechanisms is equally ambiguous. Borensztein and Panizza (2009) found that default caused commercial credit to shrink, but only for a short period and not by enough to explain the drop in trade that Rose (2005) had observed. The seizure of assets has also proved to be an unlikely suspect in this "missing trade" mystery. For much of history, the principle of sovereign immunity prevented creditors from suing a defaulter in foreign courts. Moreover, even if creditors could win a judgment, they would find little to take, since most borrowing countries do not own extensive assets in

foreign jurisdictions. In general, creditors have little legal recourse against defaulters, and most attempts to attach assets have failed (Panizza et al. 2009).

Cole and Kehoe (1998) suggested a different mechanism by which default could lead to costs in other spheres of international relations. Default could signal that the government is unreliable, not just in debt, but in international affairs more generally. Foreigners might, therefore, be less willing to make direct investments or enter into trade agreements, environmental pacts, and military alliances with the offending state. The concept of reputational spillovers seems plausible, but few have tried to test it empirically (Fuentes and Saravia 2010; Rose and Spiegel 2009; Tomz and Wright 2010). This seems like an especially promising area for future research.

DOMESTIC EXPLANATIONS FOR SOVEREIGN DEBT

Most theories of sovereign debt assume that governments honor their commitments to avoid losing access to foreign capital or provoking other negative reactions by foreigners. In recent years, though, scholars have examined how domestic politics affects the calculation to repay. This is a welcome development. When governments appropriate funds to service the foreign debt, they are making a political choice to prioritize obligations to foreigners instead of reneging on the foreign debt and channeling the savings into domestic programs. In this section, I review recent work about the effect of domestic institutions on sovereign debt.

The Effect of Checks and Balances

Some authors argue that democracies are more creditworthy than autocracies, due to the higher frequency of checks and balances, or veto points, in democratic regimes. The classic reference in this literature is North and Weingast (1989), who argued that the Glorious Revolution enhanced the creditworthiness of the government by empowering the parliament as a counterweight to the crown. Extending this line of research, Cox (2011) has developed a model in which "bonds will be repaid when a blocking coalition of office-holders owns enough bonds, because such coalitions have the constitutional power to ensure repayment."

But the effect of checks and balances depends critically on the preferences of citizens and interest groups. As Stasavage (2003, 2007) rightly emphasizes, checks and balances will not change the outcome unless the groups with veto power have diverse attitudes about debt default. If, on the contrary, domestic groups concur about the best way to handle public debts, structural checks and balances will be irrelevant.

The effect of checks and balances should also depend on the reversion point, the policy to which government would revert if one or more players blocked action. Does default require an affirmative act by government officials, or could it occur passively, due to the failure of leaders to appropriate the funds for debt repayment? If repayment requires affirmative action, the presence of veto players could lead to a war of attrition (Alesina and Drazen 1991) between competing groups, which could delay or prevent payments to foreign creditors. Thus, the presence of veto players could either increase or decrease the probability of default, depending on the reversion point.

Preliminary research suggests that, on average, veto players increase creditworthiness. Coalition governments default less often than unified ones (Saiegh 2009), and parliamentary regimes pay their debts more often than other types of democracies (Kohlscheen 2010). It is not clear how to interpret these findings, though. After all, many presidential regimes – in which bills typically require the consent of both the executive and the legislature – have more veto points than parliamentary ones. We need more cross-country research about who enjoys veto power on issues of debt, and

what policies would prevail in the absence of agreement.

The Effect of Electoral Democracy

Some authors argue that democracies are more creditworthy than autocracies, not because of constitutional checks and balances, but because voters in a democracy would punish incumbents for defaulting on the foreign debt (Schultz and Weingast 2003). But why would voters want to repay foreigners? Some authors assume that the government's foreign-currency debt is held not only by foreigners, but also by domestic citizens, who acquire the bonds on the secondary market. They further assume that, in the event of default, the government could not discriminate by repaying domestic investors while defaulting on foreign ones. Under these assumptions, if a sufficient number of voters hold bonds, politicians might repay foreign currency debts to avoid upsetting local voters (Giordano and Tommasino 2011; Guembel and Sussman 2009).[5]

There are several problems with this argument, however. First, as an empirical matter, it has been possible to discriminate among creditors by paying some but defaulting on others. Over the past two centuries, defaults against foreign creditors have been more common than defaults on domestic citizens, and debtors have discriminated even across investors that hold identical assets (Tomz 2007). Second, if it were impossible to repay investors selectively, the government could default on all its debts, and then use fiscal policy to compensate the domestic losers from default. Third, these models assume that voters hold large amounts of their own government's foreign currency debt. It is not clear why this assumption would be plausible, especially in the developing world, where governments need access to capital markets precisely because the opportunities for domestic borrowing are limited.

Research about the effect of electoral democracy on debt has generated contradictory conclusions. Schultz and Weingast (2003) offer historical examples of democracies that could borrow more money, on better terms, than autocracies. In a large-scale statistical test, though, Saiegh (2005) found that democracies were more likely to reschedule their debts, and paid interest rates at least as high as autocracies. Parallel research found that democracies have not enjoyed higher credit ratings than autocracies (Archer et al. 2007). How can we reconcile these contradictory findings? Perhaps beliefs about creditworthiness are manifested most clearly in the volume of lending, rather than interest rates or default rates. Consistent with this idea, Nelson (2009) and Beaulieu et al. (forthcoming) show that democracies attract more foreign capital than autocracies.

I have focused this essay on two important aspects of international finance: capital controls and sovereign lending. These two literatures are representative of the quality of work on international finance, and they illustrate the pace at which knowledge is progressing. In finance, as in other areas of international affairs, the behavior of governments and private actors depends on ideas, international forces, and domestic politics. Theorists have explained how these variables operate and interact. At the same time, empirical researchers have brought new data to the table. With impressive datasets and clever research designs, they have shed new light on how finance works, with potentially profound implications for the future of the world economy. Given that international finance is one of the most active areas of research in international relations, we can expect many discoveries in the years ahead.

NOTES

1 Most research about the role of ideas has focused on the period since 1945. There have been comparatively few studies about the effect of economic ideas on financial policies during the nineteenth century and the interwar period.

2 A country can stimulate its exports and restrain its imports by reducing the value of its currency. Competitive devaluations occur when many countries employ this tactic, with each country trying to undercut the others.

3 Controlling outflows has proven much harder, however (Edwards 1999).

4 One could also ask why governments repay domestic-currency debts, and what economic and political factors contribute to domestic debt crises. Two major contributions in this area are Reinhart and Rogoff (2009) and Chinn and Frieden (2011).

5 One could reach the same conclusion, without voters, by assuming that the government wants to maximize the welfare of its own citizens. See Broner, Martin, and Ventura 2010.

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