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Should Financial Flows Be Regulated? Yes*Gerald Epstein*

Abstract

As the international financial crisis spreads, some governments are using “unconventional tools” of monetary and financial policy to protect themselves. Should policies to control international capital flows be part of the government “toolkit” in these difficult times? This essay answers: YES. It describes the economic arguments for and against using capital controls, prudential regulations and other “capital management techniques” to manage international financial flows, presents empirical evidence on their impacts, and describes the variety of policies that many countries have successfully applied to enhance macroeconomic and financial stability, create policy space, and achieve other national development goals.

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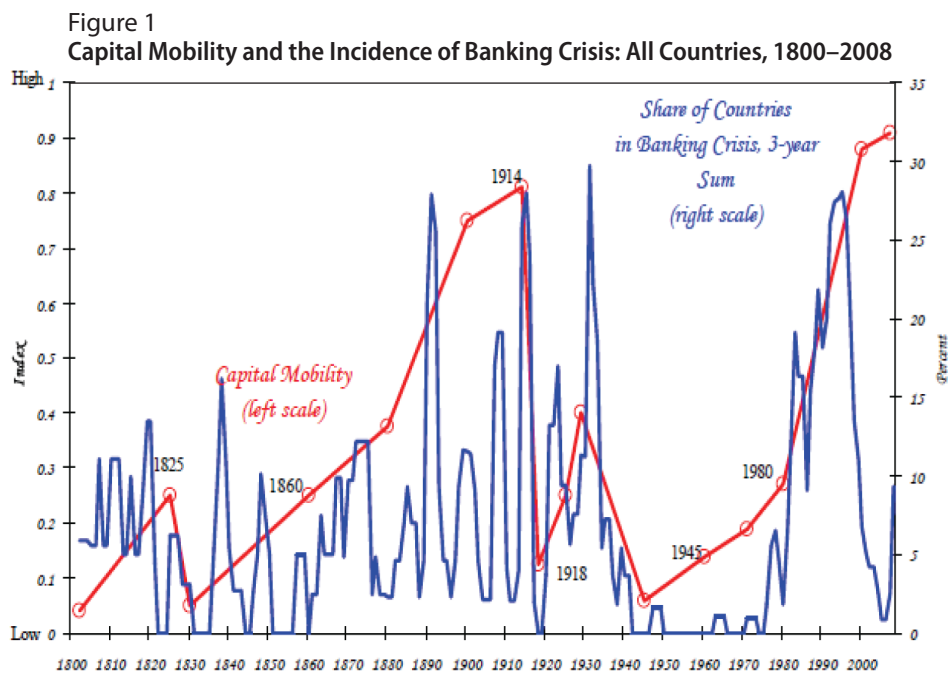
Should Financial Flows Be Regulated? Yes

Gerald Epstein¹

Introduction

Prior to the First World War—in the late 19th and early 20th centuries—the industrialized economies of Europe and the United States were characterized by a high degree of global financial integration, a relatively large role for markets, and a philosophy based on limited government regulation (*laissez-faire*). Capital could flow freely with very light regulation both within and between countries, and there were relatively low barriers to trade in goods and services. Many countries' monetary systems were based on a gold standard, which fixed countries' exchange rates relative to one another. The Bank of England “orchestrated” the system with help from central banks in France and elsewhere on the European continent. This system helped bring great wealth to bankers and industrial capitalists in the richer countries, and spread investments in infrastructure and other projects to the colonial and semi-colonial countries of the New World, enriching some elites in those countries as well.

However, in the 1930s, this system of free capital mobility collapsed, as did most of the world economy. Figure 1, due to Reinhart and Rogoff, shows the rise of capital flows in the late 19th and early 20th



Source: Reinhart and Rogoff (2008, p. 23).

- 1 The author thanks his co-authors and colleagues James Crotty, Ilene Gabel, Arjun Jayadev, and Jomo K. S. for their contributions to his understanding of capital management techniques and for their work, on which he draws liberally here. Of course, they are not responsible for any errors. A version of this paper will be published in *Macroeconomic Debates: Competing Views*, edited by Mario Seccareccia and Hassan Bougrine. Ottawa: Emond Montgomery Publications Ltd, 2009.

century, and then their dramatic collapse in the 1930s. Among the key causes of the collapse were the excesses allowed by the *laissez-faire* approach to financial markets, which led to excessive accumulations of debt and highly speculative investments—a significant number of which failed spectacularly. Equally important was the role of international capital flows in worsening the crisis as it broke out, with capital fleeing those countries perceived to be in trouble and flooding into those seen as safe havens (Block 1974; Kindleberger 1986 Eichengreen 1992). Figure 1 also shows that international capital flows tend to precede banking crises.

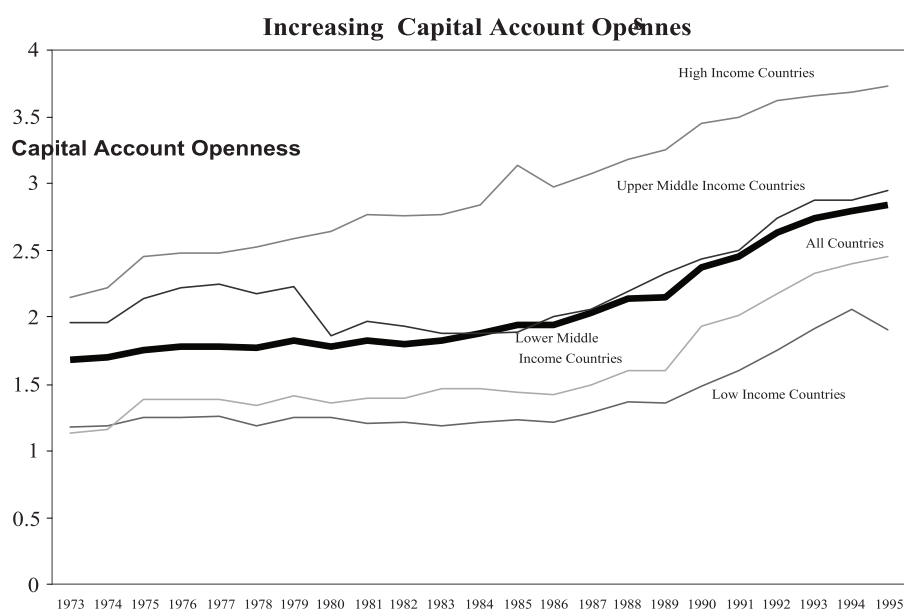
In the aftermath of the collapse and the ensuing, catastrophic Second World War, governments in most of the world—with the reluctant blessing of the newly created International Monetary Fund (IMF)—adopted government controls (exchange and capital controls) to manage the international flows of money and capital. This policy had been strongly advocated by John Maynard Keynes, the most important economist of the 20th century and co-architect of the Bretton Woods agreements that, in 1944, had established the IMF and the World Bank as well as a global system of fixed exchange rates (Crotty 1983). For at least the first three decades following the Second World War, controls over the international flow of capital became the norm in most of the world.

Over time, as the world economy recovered and much of the developed world flourished in the so-called “golden age” of economic growth in the 1950s and 1960s, memories of the financial crises of the Great Depression faded, and governments began to relax restrictions on the international flow of capital and money (Helleiner 1984). From 1971 to 1973, the post-war Bretton Woods system of fixed exchange rates broke down and exchange rates became more flexible. A general shift in economic fashion occurred, from an approach (prevalent from the 1940s to the 1960s) based on financial regulation of the market aimed at maintaining stability and achieving social goals to a return to a more *laissez-faire* approach in which the market dominates. This movement back toward *laissez-faire* accelerated with the oil crises and stagflation of the 1970s and the coming to power of Margaret Thatcher in the United Kingdom and Ronald Reagan in the United States—both very strong advocates of smaller government, less regulation, and more promotion of market dominance and the interests of business as the best approach for economic development (Diaz-Alejandro, 1985; Glyn, 1986). Naturally, these policies were strongly supported by banking and business interests, as well as by some workers and members of the middle class who had suffered during the stagflationary period of the 1970s.

The next 20 years witnessed a secular move toward more financial deregulation and the reduction of controls over financial flows in the United States, Canada, and Europe, as well as in many developing countries. Figure 2 shows the reductions in capital regulations and the corresponding increases in capital mobility, which rose in most types of countries in the 1980s. Note that figure 2 is based on capital flow (account) *regulations* (de jure capital controls), whereas figure 1 is based on *actual* flows of capital (de facto capital flows). At the same time, the frequency and severity of banking and financial crises accelerated as well, most, but not all of them, primarily afflicting developing countries (figure 1). Still, the majority of economists and the IMF continued to press for financial liberalization and the elimination of capital controls in the developing world.

Then, in 1997, the so-called Asian financial crisis hit, creating havoc in many highly successful Asian countries including Thailand, South Korea, and Malaysia. This crisis was soon followed by the Russian financial crisis. Figure 1 reflects these crises and illustrates a general rule. Prior to crises, international financial flows accelerate. Then, when the crisis hits, international capital flows tend to drop precipitously (so-called “sudden stops”), the inflows exacerbating the build-up to the crisis and then the outflows worsening its severity.

Figure 2
Capital Account Liberalization, 1973–1995



With the Russian and Asian crises, continued pressure for financial liberalization by bankers and economists collided head-on with the reality of unstable financial flows, which were clearly contributing to—and even causing—financial crises with alarming frequency. This clash was perhaps most apparent in the debate over a proposed amendment to the IMF bylaws that would have made capital account liberalization a requirement of membership; the proposal was made just as the Asian financial crisis was hitting. Dani Rodrik (1998) has been critical of full capital account liberalization, and has offered the following analogy:

“Imagine landing on a planet that runs on widgets.² You are told that international trade in widgets is highly unpredictable and volatile on this planet, for reasons that are poorly understood. A small number of nations have access to imported widgets, while many others are completely shut out even when they impose no apparent obstacles to trade. With some regularity, those countries that have access to widgets get too much of a good thing, and their markets are flooded with imported widgets. This allows them to go on a widget binge, which makes everyone pretty happy for a while. However, such binges are often interrupted by a sudden cut-off in supply, unrelated to any change in circumstances. The turnaround causes the affected economies to experience painful economic adjustments. For reasons equally poorly understood, when one country is hit by a supply cutback in this fashion, many other countries experience similar shocks in quick succession. Some years thereafter, a widget boom starts anew. Your hosts beg you for guidance: how should they deal with their widget problem? Ponder this question for a while and then ponder under what circumstances your central recommendation would be that all extant controls on international trade in widgets be eliminated. Substitute “international capital flows” for “widgets” above and the description fits today’s world economy quite well.”

Indeed, during the Asian financial crises, countries that had strong controls over international financial flows (for example, China and India) were much less negatively affected by the financial crisis than were

2 At the time this article was written, “widgets” simply meant “things”; this was before the current use of the term for cool programs connected to your desktop, blog, or cellphone.

countries that had few controls (see the discussion below). This observation led some economists in academia, the IMF, and other policy circles to question the conventional wisdom that free flows of international capital will lead to the best outcomes.

More than a decade after it was written, Rodrik's analogy is still highly relevant—perhaps even more so than in 1998. The financial crisis, which spread in 2008 from the “sub-prime” housing markets of the United States to many other financial markets via international capital (and trade) flows, has placed in focus once again the instability and difficulties that can be created across national borders by the unregulated flow of finance. Once again, then, the question is raised: Should financial flows be regulated? This essay answers the question with a “yes.”

The remainder of this essay is organized as follows. The next section includes a brief discussion of the arguments for unregulated (“free”) capital mobility and a comparison of these with the empirical evidence. The following section discusses the goals of regulating international capital flows and the types of controls that governments can use to manage these flows. The next section presents evidence regarding the costs, benefits, and effectiveness of different types of controls. The final section presents my conclusions.

Arguments for Unrestricted International Capital Flows

Economists' arguments in favour of minimal government restrictions on the international flows of money and capital stem from their basic faith in the efficiency of the market and the inefficiency and/or inefficacy of government regulation. While this faith is quite general, it is usually applied more specifically in specific contexts. In the case of financial markets, the arguments are rooted in the following perceived “functions” of money, finance, and financial markets: 1) to provide a medium of exchange, means of payment, and unit of account; 2) to allocate credit to its most productive uses; 3) to serve as an efficient intermediary between savers and investors; 4) to allow savers to reduce the risks associated with making investments; and 5) to provide an efficient means to save for the future (what economists refer to as “smoothing the consumption stream over time”). In effect, these economists argue that financial markets “free from government regulation” can achieve these aims better than regulated markets can (Neely 1999).

Economists make a leap when they apply these arguments for the efficiency of the free flows of capital, taken from an analysis of a national economy, and apply them to international flows of finance between countries, despite the fact that there are big differences between purely domestic financial transactions and international ones. Moreover, these arguments are based on a *microeconomic* logic and do not take into account many key *macroeconomic* concerns, such as the impact on unemployment, and financial instability.

In any event, the upshot of these claims is that free capital mobility should be associated with the following, all relative to contexts in which there are more regulations and controls over capital flows:

- higher levels of output and investment;
- more rapid productivity growth and economic growth overall;
- an allocation of financial resources away from those who need them less (rich countries) to those who need them more (poor countries);
- less risk; and
- an improved ability to smooth consumption over time.

What does the evidence show? There is now a large body of empirical literature that investigates these claims over time and across countries (see Lee and Jayadev 2005; Reinhart and Rogoff 2008; Rodrik and Subramanian 2008; and Kose *et al.* 2006).³ A number of studies have attempted to examine the link between free capital mobility and growth. Overall, this literature shows a lack of any compelling evidence for a positive link between capital account liberalization and growth. Perhaps the most careful and detailed summary of this literature is provided by Kose and others, who conclude that, “taken as a whole, the vast empirical literature provides little robust evidence of a causal relationship between financial integration and growth” (2006, 8).

As figure 1 shows, there is a strong correlation between capital mobility and financial crisis. Moreover, there is strong evidence that financial crises result in permanent losses of output (Cerra and Saxena 2007).

In short, capital account liberalization and integration do not appear to increase economic growth or investment; instead, they contribute to financial crises that can have devastating short-term effects as well as costly long-term effects on output. Furthermore, capital account liberalization and crisis can increase inequality (Lee and Jayadev 2005). There is very little to no evidence that free capital mobility delivers the benefits suggested by advocates. Still, it is possible that controlling flows with government regulation could make the situation even worse, or, at best, is unnecessary. Moreover, there are many different ways to manage flows and many different types of flows to manage.

In light of these findings, it is not surprising that many countries use capital controls to manage the flows of finance across borders. What are the main goals of these policies? What types of policies work best, and under what circumstances?

Goals and Mechanisms for Controlling International Financial Flows⁴

Types of Controls

First, it is important to be aware of the techniques that are available for controlling and managing the quantity, type, and impact of international financial flows. Table 1 presents a list and typology of controls. Controls, first of all, are simply types of government regulations or taxes that affect inflows or outflows of capital or the effects of the latter on the domestic economy. Types of capital flows that are affected are most easily thought of as the buying by domestic residents of foreign assets (outflows) or the selling of assets by domestic residents to foreigners (inflows). These assets are usually financial assets—stocks, bonds and securities of various types, currency, and bank deposits—but they can also refer to real assets, such as land. These securities and assets can be short term and highly liquid, such as bank deposits and short-term government bonds, or they can be longer term and less liquid, such as significant ownership of businesses (foreign direct investment), long-term government bonds, or real estate. Currency itself (dollars, euros, pesos, and so on) is the most short term and liquid. Increasingly, complex financial assets and liabilities (debts) called derivatives are involved in the flows of capital in and out of countries; these are hard to control, mostly because they are almost completely unregulated and relatively little is known about the roles of these securities in many financial transactions (Dodd 2002; Garber 1998).

³ Thanks to Arjun Jayadev for sharing some of his unpublished work in this area, which I have drawn on here.

⁴ This section draws heavily on my joint work with Ilene Gabel and Jomo K. S. (2004) and on the separate work of Gabel (2003, 2004).

Table 1. Objectives and Types of Capital Management Techniques

	<i>Objectives</i>	<i>Price-based</i>	<i>Quantity-based</i>	<i>Prudential</i>
Inflows	<ul style="list-style-type: none"> • Keep a stable and competitive real exchange rate • Limit excessive debt and maturity or locational mismatch to prevent financial instability • Alter the composition of inflows to attract desired inflows • Limit foreign ownership of assets for sovereign purposes or to protect domestic industries 	<ul style="list-style-type: none"> • Tobin tax (tax on foreign exchange transactions) • Reserve requirements on inflows of capital (e.g., URR, unrequited reserve requirements) • Taxation of capital inflows 	<ul style="list-style-type: none"> • Quantitative limits on foreign ownership of domestic companies' assets • Reporting requirements and quantitative limits on borrowing from abroad • Limits on ability to borrow from offshore entities 	<ul style="list-style-type: none"> • Keynes tax (tax on domestic financial transactions) • Reporting requirements and limitations on maturity structure of liabilities and assets • Reserve requirements on deposits • Capital requirements on assets and restrictions on off-balance-sheet activities and derivatives contracts
Outflows	<ul style="list-style-type: none"> • Protect tax base by reducing capital flight • Maintain stability of exchange rate • Preserve savings to finance investment • Help in credit allocation mechanisms in order to support "industrial policy" and investments for social objectives • Enhance the autonomy of monetary policy in order to reduce inflation or expand employment and economic growth 	<ul style="list-style-type: none"> • Tobin tax • Multiple exchange rates 	<ul style="list-style-type: none"> • Exchange controls • Restrictions on purchase of foreign assets including foreign deposits • Limits on currency convertibility 	<ul style="list-style-type: none"> • Limits on asset acquisition • Asset-backed reserve requirements
Inflows and Outflows	<ul style="list-style-type: none"> • All of the above 	<ul style="list-style-type: none"> • "Trip wire and speed bump" approach (Grabel, 2004): identify a set of early warning signals and implement these various qualitative and quantitative policies gradually and dynamically, with an emphasis on controls on inflows. 		

Source: Epstein (2009).

Typologies for understanding controls usually distinguish between controls on *outflows* (domestic buying of foreign assets, including foreign currency) and those on *inflows* (the buying by foreign residents of domestic assets, including domestic currency). Another key distinction is between controls that work mainly through price measures, such as taxing inflows or outflows, and those that work primarily through quantitative measures, such as placing a quota on buying or selling assets, restricting the types of assets that can be bought or sold, or placing an absolute ban on the buying or selling of particular assets. This distinction is similar to the distinction in international trade, where economists distinguish between restrictive measures that rely on tariffs (price-based measures) and those that rely on quotas (quantity-based measures). (See Neely 1999).⁵

Finally, regulations that affect the inflows or outflows of capital directly can be distinguished from those that affect them and their impacts indirectly, by implementing *prudential regulations* on financial institutions. . These prudential regulations can be capital regulations, regulations concerning maturity mismatches between short- and long-term assets and liabilities, regulations concerning derivative contracts, regulations

⁵ Another distinction concerns measures that affect only the flows of capital (the so-called "capital account") and those that affect trade and inflows and outflows of returns from holding investments (the so-called "current account"). Since we will not discuss this distinction further, it is not reflected in table 1.

concerning the borrowing of domestic currency from offshore banks, and so on. While such regulations might not affect the flows of foreign assets and liabilities directly, they will often affect them indirectly. In many countries, derivative contracts are often entered into with foreign counterparties maturity mismatches often involve foreign flows; dealing with offshore banks often involve buying and selling foreign assets and liabilities, and so on.

The term “capital management techniques” is used to refer to the combination of capital and exchange controls plus the financial prudential regulations that indirectly affect these flows and their impacts. In the discussion that follows, we will move interchangeably between the terms “capital controls” and “capital management techniques” for ease of exposition.

Examples of controls that involve taxes are direct taxes on the buying or selling of foreign exchange. An example of this is the so-called “Tobin tax,” named after Nobel prize-winning economist James Tobin, who proposed such a tax in the 1970s (see Tobin 1978). The Tobin tax would place a small tax on all foreign exchange transactions, thereby discouraging the buying and selling of foreign exchange for very short-term purposes, which some economists argue tends to be for speculative purposes. The tax could raise significant amounts of revenue if implemented on an international scale. If that were to happen, some economists and policy-makers have urged that any revenues generated be used for a variety of purposes, including aid for economic development (Chang and Grabel 2004). A “Keynes” tax would implement a small tax on all domestic transactions and would serve similar purposes to the Tobin tax but on a domestic scale (Pollin 2005).

Another example of a tax-based control is the so-called “unremunerated reserve requirement” (URR), or *encaje*, used in Chile and Colombia. In Chile, this policy required foreign investors who wanted to invest in the country to place some of the funds in a bank account for a period of time; they received no interest on the funds. This policy works like a tax, since the investors lose out on the interest they could have received if they were able to invest in interest-bearing securities or bank accounts.

Quantitative regulations include quotas on buying foreign exchange, limits on buying equity in certain industries, limits on ownership shares of firms, and an inability to borrow money from offshore banks unless the funds are used for particular purposes.

Another important distinction is whether countries utilize controls in a rigid or flexible way. Importantly, countries often use controls in a *dynamic* fashion, tightening or loosening them as circumstances demand rather than keeping them in place in a fixed—and therefore *static*—way. For example, when a crisis hits, countries may tighten controls; when the crisis eases, they may loosen them again.

Objectives of Capital Management Techniques

There are many ways to categorize the goals of capital management techniques (see table 1 for a detailed list of goals). More generally, capital management techniques are used to achieve the following four objectives: to promote financial stability; to encourage desirable investment and financing arrangements; to enhance policy autonomy, including the maintenance of stable and competitive exchange rates; and to enhance national sovereignty and democracy. The more specific goals in table 1 can be seen as particular means of achieving these objectives.

In order to understand the goals, challenges, and trade-offs associated with capital management techniques, we first need to understand the so-called “trilemma” problem of international finance.

The “Trilemma”

Capital mobility creates challenges for countries that want to set interest rates for domestic purposes. For example, central banks may want to lower interest rates to reduce the cost of borrowing in order to increase investment, employment, and economic growth. At other times, governments and central banks may want to raise interest rates to slow down an “overheated” economy and reduce inflation. International capital mobility can undermine these policies because, in integrated, global financial markets, domestic interest rates are strongly affected by foreign interest rates. Domestic and foreign investors will move capital from countries that have lower interest rates—adjusted for political and exchange rate risks—to countries that have higher interest rates. So if a central bank lowers its interest rate to try to encourage domestic investment, capital might leave the country in search of higher interest rates abroad, counteracting the policy. Similarly, if central banks try to raise interest rates to fight inflation, then investors might send capital flowing into the country, thereby driving down interest rates and undermining the policy.

Capital mobility also causes problems for countries wishing to fix or smooth their exchange rates. If investors think that risk has increased in a country, then they might sell their investments and take their money out of the country. When they do this, they sell their domestic currency assets and buy foreign exchange, thereby lowering the value (depreciating or putting pressure for a devaluation) of the domestic currency. If the country does not want its currency value to go down, then it will have to raise its interest rates to try to keep domestic assets more attractive and prevent the capital from leaving. But what if the country does not want to raise interest rates, because, say, it is facing a recession and wants lower interest rates to promote domestic investment?

Here, we see the “trilemma.” Countries have a very difficult time maintaining all three of these goals—free capital mobility, autonomous monetary policy directed to domestic concerns, and fixed (or highly managed) exchange rates—at once. In general, they can have at most two out of the three. For example, they can choose free capital mobility and autonomous monetary policy, but then they must let the market determine the exchange rate. Or they can have free capital mobility and a fixed exchange rate, but then they must give up the autonomous monetary policy and use it to keep the exchange rate fixed in the face of market-determined capital flows.

This problem can also be explained by the so-called “interest parity relation,” which says that in a financially integrated international economy, domestic interest rates are tied to foreign interest rates (adjusted for expected changes in exchange rates and risks associated with default or political instability).

If a country wants to have domestically oriented monetary policy and a fixed or highly managed exchange rate, then it must control capital mobility. That is where capital controls or capital management techniques come in.

Objectives of Capital Management Techniques

Capital management techniques can promote financial stability

Capital management techniques can promote financial stability through their ability to reduce currency, flight, fragility, and/or contagion risks. Capital management can thereby reduce the potential for financial crisis and attendant economic and social devastation (Grabel 2003; Epstein, Grabel and Jomo 2003).

“Currency risk” refers to the risk that a currency will appreciate or depreciate significantly over a short period of time. “Investor flight risk” refers to the likelihood that holders of liquid financial assets will sell their holdings en masse in the face of perceived difficulty. “Lender flight risk” refers to the likelihood that lenders will terminate lending programs or will only extend loans on prohibitive terms. “Fragility risk” refers to the vulnerability of an economy’s private and public borrowers to internal or external shocks that would jeopardize their ability to meet current obligations. Fragility risk arises in a number of ways: borrowers might employ financing strategies that involve maturity or locational mismatch; agents might finance private investment with capital that is prone to flight risk; or investors (domestic and foreign) might over-invest in certain sectors, thereby creating overcapacity and fuelling unsustainable speculative bubbles. Finally, “contagion risk” refers to the threat that a country will fall victim to financial and macroeconomic instability that originates elsewhere. Capital management techniques can reduce contagion risk by managing the degree of financial integration and by reducing the vulnerability of individual countries to currency, flight, and fragility risks.

Capital management techniques can promote desirable types of investment and financing arrangements and discourage less desirable types of investment/financing strategies

Capital management techniques can influence the composition of the economy’s aggregate investment portfolio and the financing arrangements that underpin these investments. Capital management techniques—particularly those that involve inflow controls—can promote desirable types of investment and financing strategies by rewarding investors and borrowers who engage in them. Desirable types of investment are those that create employment; improve living standards; and promote greater income equality, technology transfer, learning by doing, and/or long-term growth. Desirable types of financing are those that are long term, stable, and sustainable. Capital management can discourage less desirable types of investment and financing strategies by increasing their cost or precluding them altogether (Nembhard 1996).

Capital management techniques can enhance the autonomy of economic and social policy

Capital management techniques can enhance policy autonomy in a number of ways. They can reduce the severity of currency risk, thereby allowing authorities to protect a currency peg. They can also keep exchange rates at competitive and stable levels. Capital management can create space for the government and/or the central bank to pursue growth-promoting and/or reflationary macroeconomic policies by neutralizing the threat of capital flight (via restrictions on capital inflows or outflows). Moreover, by reducing the risk of financial crisis in the first place, capital management can reduce the likelihood that governments will be compelled to use contractionary macro- and microeconomic policies, as well as social policy, as a signal to attract foreign investment back to the country or as a precondition for financial assistance from the IMF. Finally, capital management techniques can reduce the spectre of excessive foreign control or ownership of domestic resources.

Capital management techniques can enhance national autonomy and even democracy

It follows from the third point that capital management can enhance democracy by reducing the potential for speculators and external actors to exercise undue influence over domestic decision-making either directly or indirectly (via the threat of capital flight). Capital management techniques can reduce the veto power of the financial community and the IMF and create space for the interests of other groups (such as advocates for the poor) to play a role in the design of economic and social policy. Capital management techniques can thus be said to enhance democracy because they create the opportunity for pluralism in policy design.

Costs of Capital Management Techniques

Critics of capital management techniques argue that they impose four types of costs: they reduce growth; reduce efficiency and policy discipline; promote corruption and waste; and aggravate credit scarcity, and uncertainty. Critics argue that the benefits that derive from capital management (such as financial stability) come at an unacceptably high price.

In sum, many critics argue that there are significant costs associated with capital management techniques. However, there is little consensus in the empirical literature on the size—or even the existence—of these costs. More importantly, researchers have largely failed to investigate the relative weight of costs and benefits.

Evidence on the Costs, Benefits, and Effectiveness of Capital Management Techniques

There have been many studies of the impact, effectiveness, and costs and benefits of capital controls and capital management techniques (for recent surveys, see Epstein, Grabel and Jomo 2003, and Magud, Reinhart, and Rogoff 2005). Some of these offer a statistical/econometric analysis, while others rely on case studies.

*Case Study Evidence*⁶

I first present case study evidence compiled by Epstein, Grabel, and Jomo (2003) (See tables 2 and 3). The researchers undertook case studies of capital management techniques in seven countries: Chile, Colombia, China, Taiwan, India, Malaysia, and Singapore. As table 2 shows, these countries used quite specific combinations of the types of controls listed in table 1, and for a variety of purposes (mostly those listed in table 1).

First, consider six commonly held—and mistaken—ideas about capital management techniques. One is that these techniques can only work in the short run, not the long run. However, with the exception of Malaysia, all of the cases show that management *can* achieve important objectives over a significant period of time. Taking China and Singapore as two cases at different ends of the spectrum in terms of types of controls, both countries effectively employed capital management techniques for more than a decade in the service of important policy objectives.

A second common view is that, for capital management to work over a long period of time, measures have to be consistently strengthened. In fact, the reality is much more complex than this. In Malaysia, Chile, and China, during times of stress it proved necessary to strengthen controls to address leakages that were being exploited by the private sector. However, as these same cases demonstrate, controls can be loosened when a crisis subsides or when the international environment changes, and then reinstated or strengthened as necessary. In short, dynamic capital management techniques have been successfully utilized across a range of countries.

A third common (but misleading) view is that, for capital management to work, there must be an experienced bureaucracy in place. It is certainly true that having experience helps; China, India, and Singapore are all examples of countries that have long-term experience with government direction of the economy. Malaysia, however, is an important counter-example. The country was able to successfully implement capital management even without having had a great deal of experience in doing so. In the case

6 This section draws heavily on Epstein, Grabel and Jomo (2003).

Table 2. Summary: Types and Objectives of Capital Management Techniques Employed During the 1990s

	<i>Types of capital management techniques</i>	<i>Objectives of capital management techniques</i>
Chile	<p>Inflows:</p> <ul style="list-style-type: none"> • FDI and PI: One year residence requirement • 30% URR-tax on foreign loans: 1.2% per year <p>Outflows:</p> <ul style="list-style-type: none"> • no significant restrictions <p>Domestic financial regulations:</p> <ul style="list-style-type: none"> • strong regulatory measures 	<ul style="list-style-type: none"> • Lengthen maturity structures and stabilize inflows • Help manage exchange rates to maintain export competitiveness • Protect economy from financial instability
Colombia	Similar to Chile	Similar to Chile
Taiwan	<p>Inflows:</p> <p><i>Non-residents</i></p> <ul style="list-style-type: none"> • Bank accounts can only be used for domestic spending, not financial speculation • Foreign participation in stock market regulated • FDI tightly regulated <p><i>Residents</i></p> <ul style="list-style-type: none"> • Regulation of foreign borrowing <p>Outflows:</p> <ul style="list-style-type: none"> • Exchange controls <p>Domestic financial regulations:</p> <ul style="list-style-type: none"> • Restrictions on lending for real estate and other speculative purposes 	<ul style="list-style-type: none"> • Promote industrialization • Help manage exchange rates to maintain export competitiveness • Maintain financial stability and insulate itself from foreign financial crises
Singapore	<p>Inflows:</p> <p>“Non-internationalization” of the Singapore currency (Singapore\$)</p> <p>Outflows:</p> <p><i>Non-residents</i></p> <ul style="list-style-type: none"> • financial institutions can't extend S\$ credit to non-residents if they are likely to use for speculation • if they borrow for use abroad, must swap first into foreign currency <p>Domestic financial regulations:</p> <p>restrictions on creation of swaps, and other derivatives that could be used for speculation against S\$</p>	<ul style="list-style-type: none"> • prevent speculation against S\$-support “soft peg” of S\$ • help maintain export competitiveness • help insulate itself from foreign financial crises
Malaysia (1998)	<p>Inflows:</p> <ul style="list-style-type: none"> • Restrictions on foreign borrowing <p>Outflows:</p> <p><i>Non-residents</i></p> <ul style="list-style-type: none"> • 12-month repatriation waiting period • Graduated exit levies inversely proportional to length of stay <p><i>Residents</i></p> <ul style="list-style-type: none"> • Exchange controls <p>Domestic financial regulations:</p> <p><i>Non-residents</i></p> <ul style="list-style-type: none"> • Restrict access to Malaysian currency <p><i>Residents</i></p> <ul style="list-style-type: none"> • Encourage to borrow domestic borrowing and investment 	<ul style="list-style-type: none"> • Maintain political and economic sovereignty • Kill the offshore ringgit market • Shut down offshore share market • Help reflate the economy • Help create financial stability and insulate the economy from contagion

Table 2 (cont'd)		
	<i>Types of capital management techniques</i>	<i>Objectives of capital management techniques</i>
India	<p>Inflows: <i>Non-residents</i></p> <ul style="list-style-type: none"> • Strict regulation of FDI and PI <p>Outflows: <i>Non-residents</i></p> <ul style="list-style-type: none"> • None <p><i>Residents</i></p> <ul style="list-style-type: none"> • Exchange controls <p>Domestic financial regulations:</p> <ul style="list-style-type: none"> • Strict limitations on development of domestic financial markets 	<ul style="list-style-type: none"> • Support industrial policy • Pursue capital account liberalization in an incremental and controlled fashion • Insulate domestic economy from financial contagion • Preserve domestic savings and foreign exchange reserves • Help stabilize exchange rate
China	<p>Inflows: <i>Non-residents</i></p> <ul style="list-style-type: none"> • Strict regulation on sectoral FDI investment • Regulation of equity investments: segmented stock markets <p>Outflows: <i>Non-residents</i></p> <ul style="list-style-type: none"> • No restrictions on repatriation of funds • Strict limitations on borrowing Chinese renminbi for speculative purposes <p><i>Residents</i></p> <ul style="list-style-type: none"> • Exchange controls <p>Domestic financial regulations:</p> <ul style="list-style-type: none"> • Strict limitations on residents and non-residents 	<ul style="list-style-type: none"> • Support industrial policy • Pursue capital account liberalization in incremental and controlled fashion • Insulate domestic economy from financial contagion • Increase political sovereignty • Preserve domestic savings and foreign exchange reserves • Help keep exchange rates at competitive levels

Source: Epstein, Grabel and Jomo (2003: 304-305).

of Chile, to take another example, the central bank had no previous experience implementing the reserve requirement scheme, though it had had some negative experiences trying to implement capital controls in the 1970s. What is more important than experience is *state capacity* and *administrative capacity* more generally.

A fourth view, which has recently become popular, is that controls on capital inflows work but those on outflows do not. However, in our sample we have seen examples of policy success in both dimensions. For example, Chile and Colombia maintained controls on inflows, while China, India, and Malaysia maintained controls on outflows. In addition, Singapore and Taiwan maintain controls on the ability of residents and non-residents to use domestic currency offshore for purposes of “speculating” against the home currency. This is a control on outflows that has successfully insulated these countries from crises and helped their governments manage their exchange rates.

We now turn to the lessons to be drawn from the case studies, which are summarized in tables 2 and 3. First and most generally, capital management techniques can contribute to currency and financial stability, macro- and microeconomic policy autonomy, stable long-term investment, and sound current account performance. There may also be some costs associated with capital management techniques, such as the fact that they can create space for public corruption.

Second, successful implementation of controls over a significant period of time depends on the presence of a sound policy environment and strong fundamentals. These include a relatively low debt ratio, moderate rates of inflation, sustainable current account and fiscal balances, consistent exchange rate policies,

Table 3. Summary: Assessment of the Capital Management Techniques Employed During the 1990s

<i>Country</i>	<i>Achievements</i>	<i>Supporting factors</i>	<i>Costs</i>
Chile	<ul style="list-style-type: none"> • Altered composition and maturity of inflows • Currency stability • Reduced vulnerability to contagion 	<ul style="list-style-type: none"> • Well-designed policies and sound fundamentals • Neo-liberal economic policy in many domains • Good returns offered to foreign investors • State and administrative capacity • Dynamic capital management 	<ul style="list-style-type: none"> • Limited evidence of higher capital costs for Small and Medium sized Enterprises
Colombia	<ul style="list-style-type: none"> • Similar to Chile, but less successful in several respects 	<ul style="list-style-type: none"> • Less state and administrative capacity than in Chile, meaning that blunter policies were employed • Economic reforms in the direction of neo-liberalism 	<ul style="list-style-type: none"> • No evidence available
Taiwan	<ul style="list-style-type: none"> • Competitive exchange rate and stable currency • Insulated from financial crises • Enhanced economic sovereignty • Debt burdens and financial fragility are insignificant 	<ul style="list-style-type: none"> • High levels of state and administrative capacity • Policy independence of the central bank • Dynamic capital management 	<ul style="list-style-type: none"> • Limited evidence of concentration of lending to large firms, conservatism of banks, inadequate auditing of books, and risk and project assessment capabilities • Large informal financial sector • Limited evidence of inadequate liquidity in financial system
Singapore	<ul style="list-style-type: none"> • Insulated from disruptive speculation • Protection of soft peg • Financial stability 	<ul style="list-style-type: none"> • Strong state capacity and ability to use moral suasion • Strong economic fundamentals 	<ul style="list-style-type: none"> • Possibly undermined financial sector development • Loss of seigniorage
Malaysia (1998)	<ul style="list-style-type: none"> • Facilitated macroeconomic reflation • Helped maintain domestic economic sovereignty 	<ul style="list-style-type: none"> • Public support for policies • Strong state and administrative capacity • Dynamic capital management 	<ul style="list-style-type: none"> • Possibly contributed to cronyism and corruption
India	<ul style="list-style-type: none"> • Facilitated incremental liberalization of capital flows • Insulated from financial contagion • Helped preserve domestic saving • Helped maintain economic sovereignty 	<ul style="list-style-type: none"> • Strong state and administrative capacity • Strong public support for policies • Experience with state governance of the economy • Success of broader economic policy regime • Gradual economic liberalization 	<ul style="list-style-type: none"> • Possibly hindered development of financial sector • Possibly facilitated corruption
China	<ul style="list-style-type: none"> • Facilitated industrial policy • Insulated economy from financial contagion • Helped preserve savings • Helped manage exchange rate and facilitate export-led growth • Helped maintain expansionary macro-policy • Helped maintain economic sovereignty 	<ul style="list-style-type: none"> • Strong state and administrative capacity • Strong economic fundamentals • Experience with state governance of the economy • Gradual economic liberalization • Dynamic capital management 	<ul style="list-style-type: none"> • Possibly constrained the development of the financial sector • Possibly encouraged non-performing loans • Possibly facilitated corruption

Source: Epstein, Grabel and Jomo (2003: 328-329).

public sectors that function well enough to be able to implement coherent policies (administrative capacity), and governments that are sufficiently independent of narrow political interests to be able to maintain some degree of control over the financial sector (state capacity).

Third, we can see that causation works both ways: from good fundamentals to successful capital management techniques, and from successful capital management techniques to good fundamentals. Good fundamentals are important to the long-run success of capital management techniques because they reduce the stress on these controls and thereby enhance the chance that they will be successful. On the other hand, capital management techniques also improve fundamentals. Thus, there is a synergy between capital management techniques and fundamentals.

Fourth, the dynamic aspects of capital management techniques are perhaps their most important feature. Policy-makers need to retain the ability to implement a variety of management techniques and alter them as circumstances warrant.

Fifth, capital management techniques work best when they are coherent and consistent with the overall aims of the economic policy regime, or—better yet—when they are an integral part of a national economic vision. To be clear, this vision does not have to be one of widespread state control over economic activity. Singapore is a good example of an economy that is highly liberalized in some ways, but where capital management techniques are an integral part of an overall vision of economic policy and development.

Sixth, there is not one type of capital management technique that works best for all countries; in other words, there is no single “best practice” when it comes to capital management techniques.

As I suggested earlier, despite the economic crisis, there is still pressure on developing countries to liberalize their capital accounts more than they already have. Epstein, Grabel and Jomo (2003) suggest that, in many cases, it is not in the interests of developing countries to seek full capital account liberalization. The lesson of dynamic capital management is that countries need to have the flexibility to both tighten *and* loosen controls. Thus, if countries completely liberalize their capital accounts, they might find it very difficult to re-establish any degree of control when the situation warrants or even demands it. This is because market actors might see the attempt to re-establish capital management as *abandonment* of a liberalized capital account, and might then react rather radically to this perceived change. By contrast, if investors understand that a country is maintaining a system of dynamic capital management, they will expect management to tighten and loosen over time. It is therefore less likely that investors will overreact if management techniques are tightened in these circumstances.

Statistical Analysis of Capital Controls

Magud, Reinhart, and Rogoff (2005) recently summarized and synthesized more than 30 statistical studies of the impact of capital controls. Their results are instructive, though subject to further scrutiny. They distinguish between controls on inflows and outflows, and find that while capital controls on inflows appear to “make monetary policy more independent; alter the composition of flows (to longer term); [and] reduce real exchange rate pressures,” they “seem not to reduce the volume of net flows.” As for outflows, the authors find that “there is Malaysia and there is everybody else. In Malaysia, controls reduce outflows and may give room for more independent monetary policy. There is little evidence of ‘success’ in other countries attempting to control flows, either in terms of altering the volume or regaining monetary independence” (Magud, Reinhart, and Rogoff 2005: 21–22.)

Hence, there is a great deal of evidence in support of the ability of inflow controls to help achieve important goals; the evidence on the impacts of outflow controls is more mixed. One lesson from this is that capital management techniques that control the quantity—and especially the quality—of inflows are likely to reduce the necessity of countries engaging in outflow controls for lengthy periods of time if problems arise.

Conclusions

As the instability and difficulties associated with uncontrolled international financial flows become more apparent in the crisis of 1997, and now 2007–2009, interest in capital management techniques has been revived. Studies reveal that there are many different types of capital management techniques that can be custom fit to different countries' needs and circumstances. Of course, capital management techniques are no panacea for economic problems, and they will not work well unless they are part of an overall, appropriate framework of economic management. For countries navigating the treacherous waters of international finance, however, they can be useful components of the macroeconomic toolkit.

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