
FRBSF ECONOMIC LETTER

Number 2001-25, August 31, 2001

Capital Controls and Emerging Markets

The financial crises in the 1990s resurrected the debate on whether emerging markets should stay open to foreign capital or impose capital controls. The stakes are high. Emerging markets that have been open to foreign capital have seen it contribute to sharply improved living standards; at the same time, the volatility of capital flows has made these markets vulnerable to economic boom and bust cycles. Under these circumstances, one may dispute whether the benefits of liberalizing capital controls outweigh the costs. To shed light on this question, this *Economic Letter* discusses the benefits and costs of liberalizing capital controls, cites some empirical evidence, and briefly reviews the recent experiences Chile and Malaysia have had with capital controls.

Why lift capital controls?

Capital controls are regulations or taxes that make cross-border financial transactions or investments costly or difficult, typically by restricting the access of a country's residents to foreign currency. Toward the end of the 1980s, many countries lifted such restrictions. Their reasons for liberalizing capital flows were partly pragmatic, as technological innovations, such as new financial instruments, made it easier to circumvent capital controls, and as, in a number of cases, economic instability provided large incentives for doing so. Their reasons also reflected a general shift in thinking among policymakers toward favoring greater reliance on market forces and less government intervention.

At least two benefits of a more open capital account have been cited. *First, more openness can stimulate growth by reducing distortions and enhancing access to foreign financing.* The wealthiest countries have open capital accounts, suggesting a relationship between openness and higher levels of prosperity. And it is apparent that foreign financing is very important for those emerging markets fortunate enough to attract it, accounting for a large share of their economic activity. According to Lopez-Mejia (1999), in 1996 (before the Asian crisis) capital flows were equivalent to about 4.5% of GDP in Asia and Latin America, or 20% and 30% of exports, respectively. The importance of these flows was

probably even larger for the top 12 emerging market recipients, who received 75% of total capital flows.

Second, an open capital account may improve economic performance over the business cycle by encouraging more prudent domestic macroeconomic and financial policies, as well as improved short-term access to financing. Policymakers in countries with open capital accounts must adopt prudent policies because investors are free to put their money elsewhere, whereas policymakers in countries with capital controls can pursue less prudent policies because investors cannot easily move their funds, at least in the short run. This may explain why, between the 1980s and the 1990s, a number of countries that opened their capital accounts simultaneously reduced budget deficits and dramatically reduced money growth and inflation. There is also evidence that over the business cycle, economies with more open capital accounts have more access to credit, implying that consumption or investment can be boosted more easily during a recession.

Costs of lifting capital controls

The potential long-run benefits of lifting capital controls must be weighed against two short-run costs. First, greater openness increases a country's vulnerability to global shocks or to sudden changes in investor sentiment. Moreno and Trehan (2000) find evidence indicating that shocks to global interest rates, inflation, and capital flows can explain a large proportion of the global incidence of currency crises. Capital flows are subject to pronounced cycles that may induce boom and bust cycles in production and investment among recipient countries and trigger financial or currency crises when financing is withdrawn. One source of vulnerability is mismatching of maturities or currencies, which makes recipient countries illiquid. As is well known, this illiquidity makes a system vulnerable to panics. For example, foreign financing may be in U.S. dollars, while the local borrowers' earnings are in local currency. A sudden withdrawal of funds could lead to a collapse in the currency, bankrupting local borrowers of foreign currency by raising their debt burdens in their own currency. The impact of cycles

PACIFIC BASIN NOTES

Pacific Basin Notes appears on an occasional basis. It is prepared under the auspices of the Center for Pacific Basin Monetary and Economic Studies within the FRBSF's Economic Research Department.

in capital flows may be more extreme in countries with weak financial systems, where government guarantees may encourage excessive risk-taking with foreign funds.

Second, greater openness also restricts policymakers' options. A country cannot simultaneously maintain an open capital account, peg the exchange rate, and adopt an independent monetary policy (that is, a money or interest rate target). This constraint, sometimes known as the "impossible trinity," complicates efforts to implement stabilization policy. For example, if, as a result of attractive returns, capital is flowing into a country and the central bank keeps the domestic interest rate high, the currency will tend to appreciate, which may hurt exporters and dampen economic activity. If the central bank chooses to stabilize the exchange rate instead, it must print money in order to buy up the foreign currency that is flowing in (allowing domestic interest rates to fall), which may lead to excessive domestic money creation, an unsustainable boom in economic activity, and inflation (and a crash if the capital inflow suddenly reverses). With capital controls, a central bank can set both the interest rate and the exchange rate simultaneously, at the cost of limiting capital inflows that could finance productive activity.

The constraints facing policymakers in countries with open capital accounts became painfully apparent during the East Asian financial crises of the late 1990s. According to the Institute for International Finance, the inflow of private capital to the region peaked at \$118 billion in 1996 and then fell to an outflow of nearly \$38 billion in 1998. The withdrawal of capital caused currencies to collapse and led to steep reductions in investment and growth. Some countries initially raised interest rates in order to stabilize the currency and reassure investors. However, in the uncertain environment, interest rates in some cases had to be raised very high, further weakening economic activity and the financial sector. In an open economy, aggressively lowering interest rates to stimulate economic activity also had disadvantages, as the prospect of further depreciation could keep investors away. Also, many firms had borrowed in foreign currencies without hedging their currency exposure, and the resulting depreciations could (and eventually did) cause widespread bankruptcies. Countries with capital controls in place, like China or Vietnam, were largely insulated from these pressures.

Do the benefits of liberalizing outweigh the costs?

There are few systematic studies on the growth effects of liberalizing capital controls, and the available evidence suggests that the impact is not the same for all countries. Edwards (2001) studied the experience of advanced and developing countries in the 1980s (but not the 1990s, due to the time span of the capital controls index he uses) and found

that, on average, countries with lower capital controls have faster real GDP or total factor productivity growth than countries with more stringent controls. (These results appear to be robust to outlying observations, but are sensitive to measurement error.) However, only countries, including some emerging markets, whose income exceeds a certain threshold benefit from lower capital controls (among these countries are Israel, Venezuela, Hong Kong, Singapore, and Mexico). Poorer countries with less stringent capital controls grow more slowly.

Evidence suggesting that capital controls are associated with less prudent macroeconomic policies is mixed. Grilli and Milesi-Ferretti (1995) found that such controls are associated with higher inflation, while Rodrik (1998) found no evidence of such a relationship. Glick and Hutchison (2001) report evidence that capital controls are associated with a higher, rather than lower, likelihood of currency crises. Their results suggest that economic policies are indeed less prudent in economies with capital controls and contribute more to crises than does the greater vulnerability to shocks that result from openness.

Case studies

Two case studies illuminate the benefits and costs of liberalizing capital controls: Chile's controls on capital inflows in the 1990s, and Malaysia's controls on capital outflows in September 1998.

In an effort to limit surging capital inflows, in June 1991 Chilean policymakers imposed an unremunerated reserve requirement (URR), first on foreign borrowing (except trade credit) and later on short-term portfolio inflows (foreign currency deposits in commercial banks and potentially speculative foreign direct investment). The reserve requirement rose from 20%, to 30%, but then fell to 0% when capital flows to Chile (and other emerging markets) dried up in 1998. A minimum stay requirement for direct and portfolio investment from abroad also was imposed (eliminated in May 2000), as were minimum regulatory requirements for corporate borrowing abroad. Banks also were required to report capital transactions. The controls do not appear to have been very effective. According to Ariyoshi, et al. (2000), capital inflows rose, despite the controls, from 7.3% of GDP in 1990–1995 to 11.3% in 1996–1997, before falling in 1998; investors found ways to circumvent the controls, leading policymakers to expand the program. It is also unclear whether the controls succeeded in shifting the composition of foreign capital towards longer maturities. Finally, the program did not seem to give Chile increased monetary autonomy. The real exchange rate continued to appreciate, at an average rate of 4% a year from 1991 to mid-1997. While the differential between domestic and foreign real interest rates rose (from 3.1% in 1985–91 to 5.2% in 1992–97), this may have been due to continued

sterilized intervention in foreign currency markets, not the capital controls.

In 1998, as capital flowed out of East Asia, uncertainty about the stability of the Malaysian currency (the ringgit) and the economic outlook generated speculation against the ringgit. As noted earlier, the openness of the capital account limited Malaysia's (and other East Asian economies') options to boost growth. The government eventually decided to stimulate the economy by easing monetary policy aggressively. To prevent the capital outflows such a measure might trigger, on September 1, 1998, capital controls were imposed, focusing on two broad areas. First, to prevent speculation against the ringgit, access to local currency by non-residents was restricted, and rules requiring all ringgit to be repatriated effectively closed the offshore market in ringgit. Second, the repatriation of portfolio capital held by non-residents was blocked for 12 months (this was subsequently replaced by an exit tax on short-term investments), and capital outflows by residents were restricted. Restrictions focused on short-term maturities and did not apply to international trade or long-term foreign investment transactions. The exchange rate was then pegged, interest rates were lowered, and commercial banks were encouraged to lend.

While Malaysia's capital controls successfully curbed capital flows, there is no agreement on whether they were needed to restore growth. The Malaysian economy recovered soon after controls were imposed, but strong demand for the region's exports brought about comparable recoveries in other East Asian economies that did not impose controls. For example, Malaysia's growth switched from -7.4% in 1998 to 5.8% in 1999. In Korea, which imposed no controls, the comparable figures are -6.7% and 10.9%. Some argue that Malaysia was more vulnerable than the other Asian economies in 1998, so that its performance would have been poorer without capital controls, but there is disagreement on this point.

Conclusions

Two broad conclusions emerge from the research and experiences surveyed here. First, recent research suggests that poorer countries face a tradeoff, as capital controls appear to be associated with faster growth (the reverse is true for wealthier countries), but less macroeconomic stability and a greater incidence of crises.

Second, studies of the experiences of Chile and Malaysia highlight some of the difficulties in the design and application of capital controls. Chilean policymakers attempted to minimize the costs of capital controls by designing restrictions that were not too onerous or distortionary. As a result, however, the effectiveness of these controls was apparently limited. Changes in conditions may also make controls unnecessary. For example, the pattern of recovery in East Asia after recent crises suggests that Malaysia might have done as well without imposing capital controls.

Ramon Moreno
Research Advisor

References

- Ariyoshi, A., K.Habermeier, B. Laurens, I. Otker-Robe, J. Canales-Kriljenko, and A. Kirilenko. 2000. *Capital Controls: Country Experiences with Their Use and Liberalization*. IMF Occasional Paper No. 190 (May).
- Edwards, S. 2001. "Capital Mobility and Economic Performance: Are Emerging Markets Different?" NBER Working Paper No. W8076.
- Glick, R., and M. Hutchison. 2001. "Capital Controls and Exchange Rate Stability in Developing Countries." *FRBSF Economic Letter* No. 2001-21 (July 20). <http://www.sf.frb.org/publications/economics/letter/2001/el2001-21.html>
- Grilli, Vittorio, and Gian Maria Milesi-Ferretti. 1995. "Economic Effects and Structural Determinants of Capital Controls." Staff Papers, International Monetary Fund. 42(September):517-51.
- Lopez-Mejia, Alejandro. 1999. "Large Capital Flows: A Survey of Causes, Consequences and Policy Responses." IMF Working Paper WP/99/7.
- Moreno, Ramon, and Bharat Trehan. 2000. "Common Shocks and Currency Crises." FRBSF Working Paper No. 2000-05. <http://www.sf.frb.org/econsrch/workingp/2000/wp00-05.pdf>.
- Rodrik, Dani. 1998. "Who Needs Capital Account Convertibility?" In Peter B. Kenen (ed.) *Should the IMF Pursue Current Account Convertibility? Essays in International Finance*, No. 207 (May). International Finance Section, Department of Economics, Princeton University.

Research Department
Federal Reserve
Bank of
San Francisco

PRESORTED
STANDARD MAIL
U.S. POSTAGE
PAID
PERMIT NO. 752
San Francisco, Calif.

P.O. Box 7702
San Francisco, CA 94120
Address Service Requested

Printed on recycled paper
with soybean inks



Index to Recent Issues of *FRBSF Economic Letter*

| DATE | NUMBER | TITLE | AUTHOR |
|-------------|---------------|--|----------------------|
| 1/12 | 01-01 | Will Inflation Targeting Work in Developing Countries? | Kasa |
| 1/26 | 01-02 | Retail Sweeps and Reserves | Krainer |
| 2/2 | 01-03 | Inflation: The 2% Solution | Marquis |
| 2/9 | 01-04 | Economic Impact of Rising Natural Gas Prices | Daly |
| 3/2 | 01-05 | How Sluggish Is the Fed? | Rudebusch |
| 3/9 | 01-06 | The Return of the “Japan Premium”: Trouble Ahead for Japanese Banks? | Spiegel |
| 3/23 | 01-07 | Financial Crises in Emerging Markets | Glick/Moreno/Spiegel |
| 3/30 | 01-08 | How Costly Are IMF Stabilization Programs? | Hutchison |
| 4/6 | 01-09 | What’s Different about Banks—Still? | Marquis |
| 4/13 | 01-10 | Uncertainties in Projecting Federal Budget Surpluses | Lansing |
| 4/20 | 01-11 | Rising Price of Energy | Daly/Furlong |
| 4/27 | 01-12 | Modeling Credit Risk for Commercial Loans | Lopez |
| 5/4 | 01-13 | The Science (and Art) of Monetary Policy | Walsh |
| 5/11 | 01-14 | The Future of the New Economy | Jones |
| 5/18 | 01-15 | Japan’s New Prime Minister and the Postal Savings System | Cargill/Yoshino |
| 5/25 | 01-16 | Monetary Policy and Exchange Rates in Small Open Economies | Dennis |
| 6/1 | 01-17 | The Stock Market: What a Difference a Year Makes | Kwan |
| 6/15 | 01-18 | Asset Prices, Exchange Rates, and Monetary Policy | Rudebusch |
| 7/6 | 01-19 | Update on the Economy | Parry |
| 7/13 | 01-20 | Fiscal Policy and Inflation | Daniel |
| 7/20 | 01-21 | Capital Controls and Exchange Rate Stability in Developing Countries | Glick/Hutchison |
| 7/27 | 01-22 | Productivity in Banking | Furlong |
| 8/10 | 01-23 | Federal Reserve Banks’ Imputed Cost of Equity Capital | Lopez |
| 8/24 | 01-24 | Recent Research on Sticky Prices | Trehan |