

“Why are currency crises often accompanied by banking crises? Discuss with examples the effectiveness and desirability of capital controls as a means by which developing countries can manage sudden capital inflows and/or outflows.”

Introduction

The adverse economic effects of currency and banking crises are significant (Hutchison & Noy 2005). Consequently, twin crises, or the occurrence of currency and banking crisis substantially around the same time, have been examined in various studies for the existence of linkages between the two (Kaminsky & Reinhart 1999). This essay discusses the reasons for occurrence of twin crises, and the effectiveness and desirability of capital controls in managing the causative volatile capital flows. The mechanism that links currency and banking crisis is discussed with particular focus on the role of capital flows in causing the two crises. Various forms of capital controls, and their effectiveness and desirability are also discussed. It is concluded that currency and banking crisis are intricately linked, and capital controls have limited effectiveness over time. However, capital controls may be desirable in emerging market economies (EMEs) or developing countries where the financial system is relatively immature.

Links between currency and banking crises

Currency and banking crises are closely linked. This is because liberalization and implicit government support (e.g. deposit insurance and bailouts) often foster moral hazard among banks to take excessive risk (Glick & Hutchison 1999). Moral hazard in financial markets refers to the risk that the borrower might do things that may make the repayment of the loan to the lender less probable (Mishkin & Eakins 2012, p. 26). Excessive risk results in large unhedged foreign currency liabilities, and maturity mismatches between assets and liabilities. The mismatches increase the vulnerability of the banks to currency shocks. The balance sheets of the banks deteriorate as a consequence of currency depreciation or the rise in interest rates, and many banks become insolvent (Glick & Hutchison 1999). Currency mismatches are particularly pronounced in emerging market economies because they borrow in foreign currency, as against advanced economies that usually borrow in the domestic currency (Mishkin & Eakins 2012, pp. 182-183).

In the case of countries with a fixed exchange rate regime, worsening economic fundamentals (e.g. overvalued real exchange rates, inflation, budget deficits and rapid credit expansion) and speculative attacks force the authorities to abandon the fixed exchange rate when output and unemployment costs increase beyond acceptable levels. The creditors to the government (e.g. in Mexico and Brazil) and the private sector (e.g. in Asia) panic, and capital outflows increase (Glick & Hutchison 1999). Capital flows involve trade in financial and real assets between nations, and short-term capital flows (e.g. short-term borrowing) are particularly destabilizing in view of their potential volatility (Neely 1999). Change in sentiments lead to speculative attacks on the domestic currency (Kaminsky & Reinhart 1999). This is partly because the pegged exchange rate provides an assurance to foreign investors and any significant change in the exchange rate policy (e.g. move from a fixed to a floating exchange rate regime) increases the uncertainty (Mishkin & Eakins 2012, p. 180). Furthermore, sudden and significant devaluation may reduce the output through reduction in credit. This is because deterioration of balance sheets of companies and financial institutions that have large foreign currency liabilities, or a sudden stop in capital inflows may reduce output. Banking crises also reduce the availability of credit, thereby adversely impacting the output (Hutchison & Noy 2005). Illiquidity in the financial sector to repay short-term foreign currency denominated obligations increases the risk of such crises (Falcetti & Tudela 2008).

Consequently, banking sector problems, often caused by liberalization, usually precede a balance of payment and a currency crisis. The currency crisis accentuates the banking crisis because of the high interest rates required to defend the fixed exchange rate and the foreign currency assets of the banks. The crisis typically occurs when there is an economic recession after a boom catalyzed by credit, capital inflows, and an overvalued currency. The recession is a result of deteriorating trade terms¹, an appreciating currency and increase in interest rates. These linkages are evident from the fact that the balance-of-payments and banking crises became more linked in the 1980s when the financial markets were liberalized. The linkages were not so obvious in the 1970s when the markets were strongly regulated (Kaminsky & Reinhart 1999). In addition, exchange rate crises are sometimes preceded by signs of imminent banking crises. For example, the stock market values of the banking sectors had started declining before the currency crises in Korea, Thailand, Malaysia and the Philippines from their respective pre-1997 peaks. Moreover, failing financial sectors are associated with

¹ Terms of trade refers to the ratio of export to import unit values, with all variables measured at constant import prices (Mendoza 1995)

large prospective government deficits based on implicit liabilities to bail out insolvent financial institutions. Governments are either unwilling or unable to get the funds to bail out the institutions, leading to a crisis of confidence. These factors increase the likelihood of a currency crisis (Burnside, Eichenbaum & Rebelo 2001).

Various forms capital controls

As mentioned above, significant capital outflows can cause banking and currency crises. Large capital inflows overheat the domestic economy because of increase in aggregate demand. For example, the aggregate demand increases because the credit supports domestic consumption and investment. Capital controls on inflows and outflows are, therefore, used to reduce the volatility of the flows (Yan & Yang 2008). Capital controls refer to policy restrictions such as taxes, price controls and quality controls, and prohibitions on foreign transactions in assets designed to control or direct capital (financial) account transactions (Neely 1999). Capital controls take various forms. Capital controls can be permanent or episodic. Episodic controls are relatively more efficient than permanent ones because they are temporary and are focused on specific types of assets (Klein, Forbes & Werning 2012). Capital controls may be directed to control outflows or inflows. Capital controls on inflows provide room for higher interest rates so that expansion of money supply and inflation can be controlled. Controls on outflows facilitate lower interest rates and monetary expansion. For example, Malaysia attempted to control outflows in 1998, thereby increasing the room for loose domestic monetary policy. Capital controls can dissuade inflows or change their composition (e.g. Chile in the 1990s) (Neely 1999).

Examples of capital controls include taxes on remittances and depreciated exchange rates for capital account transactions (Edwards 1999). Quantity restrictions include ceilings, prohibitions, or regulatory requirements for borrowing from foreign entities, or on transactions such as repatriation of profits by foreign firms operating in the country. Controls on portfolio choice may also be used to direct capital inflows. Price controls can be taxes on returns from international investment (e.g. the U.S. interest equalization tax in the 1960s) and transactions, and mandatory reserve requirements akin to tax. For example, Chile required foreign firms to keep a percentage of the inflow with the central bank for some time without any interest. The central bank could buy foreign money market instruments, effectively making the deposit akin to a tax on short-term capital inflows. Furthermore, governments can

use rewards to encourage foreign investment in selected industries, or to prevent flight of capital (Neely 1999).

Effectiveness of capital controls

There have been several studies to measure the effectiveness of capital controls. Capital controls are typically ineffective during crisis because the investors find methods to avoid such controls. Over-invoicing of imports, under-invoicing of exports, and wrong labelling of the type of the capital flow are some common methods to skirt capital controls (Edwards 1999). Such controls increase corruption as investors bribe officials to circumvent the rules. Further, policy-makers become more complacent because of the controls and avoid taking up the necessary reforms to address the underlying causes of economic problems (Mishkin & Eakins 2012, pp. 391-392). The complacency was evident in 1997-98 in Brazil as controls could not prevent the currency collapse (Edwards 1999). Controls on inflows appear to be more effective as they are more akin to prevention than cure. This is because large scale outflow, especially of short-term speculative inflows, simply cannot take place if the initial inflow is controlled (Mishkin & Eakins 2012, pp. 391-392). The transitory, episodic controls are generally not effective in influencing macroeconomic variables such as GDP growth. This is because they are difficult to time and easier to evade. Moreover, because of political issues, they may not be so easily dispensed with immediately after they have ceased to be productive (Klein, Forbes & Werning 2012). Capital controls on inflows were imposed in Malaysia (1989-1995), Colombia (1993-1998), Chile (1989-1998) and Brazil (1992-1998). Malaysia achieved some success in reducing short-term capital inflows and stopping the domestic currency from appreciating. Colombia was less successful because investors were able to circumvent the rules, but the controls increased the independence of monetary policy of its central bank. The Chilean authorities succeeded in changing the composition of the capital flows in favour of longer maturity investments and in enhancing independence of monetary policy. However, they had limited success in impacting the exchange rate (Cordero & Montecino 2010). Chile imposed controls on inflows in 1978-82 and 1991-98 through reserve requirements (noninterest bearing deposits with the Central Bank). The effect on interest rates was also insignificant and Chile faced a currency crisis in 1981-82, with massive devaluation of the peso. Poor regulation facilitated banks to make speculative investments in real estate and grant loans to the bank owners. Many banks had to be bailed out. Nevertheless, the controls helped the central bank to conduct monetary policy independently. Higher interest rates, to the tune of 24% in pesos, increased the cost of credit for Chilean companies. The

stock market was stabilised, but the controls failed to isolate Chile from the financial shocks of the east Asian crisis in 1997-1999 (Edwards 1999).

Brazil achieved a reduction in the volume, and a change composition of the capital flows, though currency appreciation continued (Cordero & Montecino 2010). Thailand introduced capital controls to dissuade inflows and encourage outflows in 2003. The controls did not significantly impact the amount of inflows, but were able to encourage outflows. Malaysia introduced strict capital control measures during the Asian financial crisis in 1997-1998. The controls significantly impacted the volume of inflows in Foreign Direct Investments and portfolio investments. The controls were largely ineffective in altering the real exchange rate in both Malaysia and Thailand (Jongwanich, Gochoco-Bautista & Lee 2011). Results from a study on capital controls in 17 EMEs (Argentina, Egypt, Mexico, Thailand, Brazil, India, Peru, Turkey, Chile, Indonesia, Philippines, China, Korea, Russia, Colombia, Malaysia and South Africa during 2001-2011) also indicate that capital controls have a limited impact on net capital inflows, monetary policy autonomy and the exchange rate. The impact of the controls is lower in post-crisis period because of high level of global liquidity, and the opening of the fast growing EMEs (Pasricha et al. 2015).

Results of another study on capital controls in Brazil, Columbia, Korea and Thailand during 2000s also indicate that capital controls do not significantly impact the economic variables, including exchange rates. In addition, capital controls had limited desired impact in Croatia, India, Korea, Peru, Philippines, Romania, Russia, South Africa, Uruguay and Vietnam (Habermeier, Kokenyne & Baba 2011). Furthermore, post-crisis controls mostly result in unsatisfactory GDP growth after the currency crisis (Edwards 1999). Capital flows generally help countries to borrow funds to enhance their ability to produce goods and services. Capital controls may, therefore, adversely impact GDP growth (Neely 1999). Populist measures by countries such as Mexico (viz. nationalization of banks and taking over of dollar-denominated deposits), Argentina and Brazil (creation of new currencies), Peru and (tighter outflow controls) were detrimental to the economy (Edwards 1999). Moreover, capital controls increase risk premium and make foreign investors postpone or cancel investments. Inappropriate capital controls can exacerbate the balance of payments and banking crises, e.g. restriction on offshore borrowing by Korean corporations in 1997. Additionally, even when the negatively skewed cost-benefit ratio of such controls becomes evident, it is difficult to withdraw such controls due to political compulsions and administrative inertia (Neely 1999).

Desirability of capital controls

Free flow of capital allows nations to borrow funds and facilitates allocation of resources between nations that have different profiles (e.g. saving rates, investment opportunities, risk profiles, and technological capabilities) (Neely 1999). Going by this argument, capital controls lead to inefficient allocation of economic resources. However, international capital flows are volatile and respond to the macroeconomic situation in the country. Any adverse change in policies, decline in regulatory environment for banks, or untoward political developments can lead to flight of capital. In absence of complete information, market forces can react irrationally (Fischer 2004), and resources can be allocated more efficiently under capital restriction rather than with perfect capital mobility (Orlov 2005). Moreover, the relatively immature financial systems of EMEs are more conducive to channelling capital into consumption expenditures and sub-optimal investments. Such use of capital can prejudice the current account balance in the long run. Further, the 1990s' currency crises show that current account deficit for a prolonged period is a warning sign for a crisis. EMEs are, therefore, particularly susceptible to the negative impact of volatile capital flows (Yan & Yang 2008). Capital controls are, therefore, more desirable in EMEs.

Capital control is one of the several policy measures available with the authorities to rectify balance of payment problems. The others include allowing free exchange rate, practising unsterilized foreign exchange interventions, and sterilizing the monetary changes with a view to isolate the domestic economy from the capital flows (Neely 1999). Flexible exchange rate regime allows for automatic adjustment of the exchange rate over time, though sudden adverse economic changes and consequent speculative attacks on the currency may cause a currency crisis. In a fixed exchange rate regime, authorities may need to change the peg to align it with the economic realities (e.g. through devaluation). In such a case, the monetary policy is directed primarily at exchange rate stability and public confidence on the government's intent to control inflation is diminished. If the fixed exchange rate is to be maintained, the central bank can prevent devaluation by selling domestic bonds or foreign exchange (unsterilized foreign exchange intervention). Here, the domestic money supply contracts and interest rates rise. However, such intervention lowers domestic demand and increases unemployment (Neely 1999).

Sterilization may increase capital inflow because of higher domestic interest rates to exchange domestic assets with foreign ones. The inflows worsen the capital (financial) account imbalance (Yan & Yang 2008). Sterilizing of the foreign exchange sales does not help regain monetary independence. Moreover, if there are doubts on the ability or the intention of the central bank to defend the exchange rate, investors may sell domestic assets to avoid a loss in the event of devaluation. Such sales may accentuate the balance of payment deficit. Sterilization of inflows is also costly as the domestic bonds that are sold pay higher interest as compared to foreign bonds that are bought by the central bank. Fiscal contraction (e.g. lower government spending) prevents real appreciation because it reduces domestic interest rates, but such measures (e.g. increase in taxes) are not politically acceptable (Neely 1999). Considering the demerits of these alternatives, capital controls appear to be desirable as they can help maintain stable exchange rates, without having to sacrifice monetary independence (Neely 1999). Additionally, capital controls are desirable when banking regulation is not effective and moral hazard problems cannot be adequately addressed (e.g. in EMEs). Capital controls on outflows lower the demand for foreign assets without the use of contractionary monetary policy or devaluation. The investments remain within the domestic economy. On the other hand, controls on inflows correct a BOP surplus by reducing foreign demand for domestic assets without the use of expansionary monetary policy or revaluation, resulting in lower inflation (Neely 1999).

Conclusion

As evident from the above discussion, currency crises and banking crises are intricately linked and may form a vicious spiral. In twin crises, banking crisis usually precedes a currency crisis, and banking crisis is facilitated by moral hazard issues emanating from exuberant economic liberalisation and implicit government support (e.g. deposit insurance and bailouts). Banks gain access to cheap funds in foreign currency and incur unhedged foreign currency liabilities. Economic boom leads to unbridled credit expansion and short-term capital inflows cause asset bubbles in the economy. Once the economy slows down, capital outflows lead to devaluation of the domestic currency, deteriorating the balance sheets of the banks. Bailouts of failing banks increase government deficits, thereby putting more downward pressure on the domestic currency. The ensuing currency crisis accentuates the banking crisis and vice versa. Capital control is one of main methods to tame the volatility of the flows and avoid their adverse effects on the economy. However, capital controls, especially on outflows, have limited impact as the investors find methods to circumvent

them. The efficacy of the controls wanes over time. Nevertheless, some countries, such as Malaysia, have been able to reduce capital inflows and stop appreciation of the currency by capital controls. Capital controls in Chile altered the composition of the capital flows and increased the independence of monetary policy. In Brazil, both the volume and composition of the capital flows was impacted. Thailand manage to encourage outflows. Studies on other countries have found that capital controls have limited impact on net capital inflows, monetary policy autonomy or the exchange rates. Nevertheless, controls are desirable in EMEs where the financial system is immature, and free flow of capital may overheat the economy and adversely impact the stability of the banking system.

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