

Akyuz, Yilmaz

Working Paper

Managing Financial Instability and Shocks

Discussion Paper, No. 2004/11

Provided in Cooperation with:

Turkish Economic Association, Ankara

Suggested Citation: Akyuz, Yilmaz (2004) : Managing Financial Instability and Shocks, Discussion Paper, No. 2004/11, Turkish Economic Association, Ankara

This Version is available at:

<http://hdl.handle.net/10419/83231>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



TURKISH ECONOMIC ASSOCIATION

DISCUSSION PAPER 2004/11

<http://www.tek.org.tr>

MANAGING FINANCIAL INSTABILITY AND SHOCKS

Yılmaz Akyüz

May, 2004

MANAGING FINANCIAL INSTABILITY AND SHOCKS

*Yilmaz Akyüz**

I. Global financial instability and the vulnerability of developing countries

The issue I will address is of concern not only to Central Bankers or the business community, but also to ordinary people in the street: how to manage financial instability and shocks so as to prevent severe and virulent crises that can hit, as seen here in East Asia, even some of the most successful and strongest developing countries, and push millions of people to the brink of poverty.

This is a daunting task for a number of reasons. First of all, instability is an inherent feature of international financial markets; it is global and systemic. However, the international community has so far been unable to establish effective institutions and mechanisms at the global level to reduce the likelihood of crises and better manage them when they occur. Rather, the ball has been put in the court of developing countries to take care of themselves. But while developing countries are much more vulnerable to external financial disruptions, their ability to respond is limited for a number of structural reasons.

* Tun Ismail Ali Professor of Monetary and Financial Economics, University of Malaya, and former Director of the Division on Globalization and Development Strategies, and Chief Economist, UNCTAD. An earlier version of this paper was presented as a public lecture jointly organized by Bank Negara and University of Malaya, on 6 February 2004, Hotel Mandarin, Kuala Lumpur.

Financial instability is characterised not only by short-term volatility in exchange rates and financial and real asset prices, but also by boom-bust cycles which are often mirrored in sharp swings in the level of economic activity and living conditions. In currency markets the major problem is not daily or weekly volatility of exchange rates, but gyrations wherein currencies are moved from one level to another by rapid turnarounds in capital flows. With increased financial liberalization, such boom-bust cycles have also become common features of stock and property markets. In a typical boom, stock prices have a tendency to rise to levels not justified by long-term earning capacities of firms. Such bubbles are often followed by sharp declines and stagnation. In the property market, price booms are usually associated with overproduction, leading eventually to breaks and glut. Capital market booms can also contribute to excessive investment in certain industries, such as information technology, as seen during the 1990s in East Asia, and during the dot.com bubble in the United States. Boom-bust cycles have become more frequent in the credit market too, which tends to go up and down with equity and especially property prices. Rapid expansion in bank lending is more often than not followed by increases in non-performing loans and defaults, and even by difficulties in meeting the demand of depositors.

In a world of unstable capital flows driven by herd behaviour, every country with an open capital account and which is closely integrated into the global financial system, whether developed or developing, creditor or debtor, is vulnerable to sharp and unexpected swings in the external value of its currency. However, in industrial countries currency instability rarely spills over to domestic capital and credit markets. For instance during the 1992 EMS crisis, there were sharp drops in the lira and pound sterling, but these did not provoke serious financial crises in Italy and the United Kingdom. Again in recent years there have been sharp swings in the dollar vis-à-vis other reserve currencies, but these did not generate destabilizing spillovers to domestic financial markets of the

countries concerned. For instance, at the end of the 1990s the dollar-yen rate was seen to change by over 20 per cent within a matter of a week. Such swings are comparable to those experienced in East Asia in 1997, but they did not lead to widespread defaults and bankruptcies. This is also true for the more recent boom- bust cycle of the dollar. The United States financial markets have been little correlated with the rise and the fall of the dollar during the past four years.

On a few occasions currency turmoil in industrial countries resulted in serious difficulties in domestic financial markets, but the impact on economic activity was limited. The best example is the 1987 stock market collapse, caused by the inability of G7 to come to a viable agreement on how to address the trade imbalances and currency instability after the Plaza meeting in 1985. However, a serious economic contraction was avoided as the Fed pumped considerable liquidity into the United States financial markets- a kind of intervention quite different from the policy advice given by the IMF to developing countries facing similar difficulties. If current instability in the dollar and trade imbalances are not handled properly by the G7, there is a risk of a similar break occurring in global financial markets.

By contrast, in developing countries domestic financial cycles are often associated with sharp swings in external capital flows and exchange rates. It is very rare that currency crises in developing countries are contained without having a significant impact on domestic financial conditions, economic activity and living standards.

The greater vulnerability of domestic financial conditions in developing countries to currency instability is due primarily to the existence of large stocks of public and/or private debt denominated in foreign currencies; i.e. the so-called liability dollarization. This is the main difference between developing and industrial countries, and the principal

reason why currency crises in emerging markets spill over to domestic financial markets.

Liability dollarization is not a problem if (a) dollar debt is concentrated in sectors with foreign exchange earning capacity, such as export industries; and (b) if maturities are sufficiently long. Under these conditions debtors are, in effect, fully hedged; they do not suffer from currency or maturity mismatches between their assets and liabilities. They would lose from a currency depreciation as debtors but gain as exporters. But if maturities are short, sharp devaluations can create liquidity problems even for such sectors because of the absence of a lender-of-last-resort to provide international liquidity, and this can easily lead to defaults and insolvencies. If, on the other hand, liability dollarization is widespread in sectors with little foreign exchange earning capacity, currency declines can create problems of insolvency, and the impact will be immediate when maturities are short.

By the same token, currency appreciations generated by surges in capital inflows would add to or generate bubbles in domestic asset and credit markets by creating windfall gains for dollar debtors, and encouraging borrowing and spending.

Since in most developing countries liability dollarization pervades many sectors of the economy and maturities are often short, preventing boom-bust cycles in capital flows and exchange rates is essential for monetary and financial stability. In particular, unsustainable surges in capital flows and currency appreciations would need to be checked if costly financial crises are to be avoided. On the other hand, to the extent that capital flows are successfully managed and widespread accumulation of short-term dollar liabilities is prevented, the vulnerability of the economy to swings in exchange rates would be greatly reduced. Such a management of capital flows requires a high degree of

consistency between the exchange rate and the capital account regimes, as well as a judicious combination of countercyclical monetary and regulatory policies.

II. The debate on the exchange rate regime

Exchange rate regimes in emerging markets have attracted considerable attention in the debate on factors contributing to currency and financial crises in recent years. Adjustable pegs (or the so-called soft pegs) have come to be seen as a major cause of crises in emerging markets. Consequently, the mainstream advice has been either that these countries adopt a regime of floating exchange rates, or that they go for a hard-peg by locking into a reserve currency through currency boards or by simply adopting a reserve currency as their national currency. Since the breakdown of the Argentinian Convertibility Law, however, currency boards have fallen from grace, and greater emphasis is now placed on floating.

The recent debate on appropriate exchange rate regimes for emerging markets has focussed primarily on problems faced by a certain group of developing countries, notably in Latin America. Common features of these countries include lack of credible macroeconomic policies; absence of monetary and fiscal discipline; a history of rapid and persistent inflation; high levels of domestic and external public debt; chronic current account deficits; a high degree of dependence on external capital flows; open capital account regimes; and weak industrial export capacities. In many such countries fixed rates have been used to provide a credible anchor to combat inflation and to facilitate external borrowing to close fiscal and current account deficits.

Clearly these are not the conditions that characterise the large majority of

countries in East Asia with track records of successful development and macroeconomic discipline. These countries have sought exchange rate stability as a key ingredient of export-oriented development strategy, rather than as a substitute for credible macroeconomic policies. Thus, the debate on the other side of the Ocean sheds little light on appropriate exchange rate regimes in this part of the world.

The role of adjustable pegs under free capital mobility in emerging market crises is well established. When inflation is high and productivity growth is slow, a nominal peg causes a real appreciation of the currency and a widening of the current account deficit. Higher inflation also leads to higher nominal interest rates, creating short-term arbitrage opportunities for international investors and lenders, as well as incentives for domestic firms to reduce their costs of finance by borrowing abroad. If external deficits and debt are allowed to mount, the currency risk will rise rapidly. The worsening fundamentals eventually give rise to expectations of devaluation and a rapid exit of capital. Sooner or later, the exchange rate peg is abandoned, leading to a free fall which, together with the hike in interest rates, causes enormous dislocations in the economy.

The problem is that none of these difficulties would be avoided under free floating. Indeed, boom-bust cycles have been the dominant features of the freely floating exchange rates of major reserve currencies since the breakdown of the Bretton Woods system. Evidence suggests that crises are as likely to occur under floating as under adjustable pegs. Under free capital mobility, nominal exchange rates fail to adjust to differences in inflation rates: i.e. the purchasing power parity is not preserved. But adjustment of interest rates to inflation is quite rapid. As a result, currencies of high-inflation countries tend to appreciate over the short term. These reinforce – rather than temper – capital inflows and aggravate the loss of competitiveness caused by high inflation. Although appreciations also heighten currency risks, markets can ignore them

when they are driven by herd behaviour. For instance, if the currencies in East Asia had been allowed to float in the early 1990s, when inflows were in excess of current-account needs, the result could have been further appreciations. Again, if Malaysia and China had been floating today under a regime of free capital flows, it is quite likely that they would both have been experiencing nominal appreciations against the dollar.

If, on the other hand, floating is really successful in deterring arbitrage-seeking capital inflows by creating significant currency risks, it would be doing so by discouraging the holding of domestic currency assets and encouraging dollarization. In other words, floating can be detrimental to the development of domestic financial instruments and markets. Indeed, almost all industrial countries achieved financial deepening and development behind closed doors, under various regimes of fixed exchange rates.

Another argument in favour of floating is that it would allow greater autonomy for monetary policy in pursuing domestic objectives of price stability and growth while leaving the external adjustment to currency movements. Nevertheless, under widespread liability dollarization, the exchange rate becomes a more important variable affecting domestic monetary and financial conditions than the interest rate. A depreciation would not only have a positive effect on growth through improved competitiveness and exports, but also a negative effect due to the increased debt burden. If this negative balance-sheet effect dominates, currency depreciations will be recessionary. Similarly, during boom conditions appreciations could add to demand pressures despite their adverse effects on the trade balance. Thus, stabilizing domestic economic conditions may require stabilization of the currency; i.e., monetary policy cannot simply ignore the exchange rate.

Certainly, currency adjustments may be needed in response to external shocks even in an economy with monetary and fiscal discipline and price stability. The conventional theory suggests that because wages and prices are not fully flexible downwards, this should best be done through nominal adjustment in the exchange rate. True, but this does not mean that floating would always secure orderly adjustments to external shocks. On the contrary, unsustainable capital flows attracted by short-term profit opportunities can delay adjustment, keeping the currency at misaligned levels for prolonged periods, and then leading to sharp declines and overshooting in the opposite direction. This has been the case for the dollar on many occasions in the past three decades. It has also been happening in some emerging market economies which have opted for floating in recent years.

Clearly, most developing countries need a regime that combines stability with flexibility. Stability is needed to avoid destabilizing financial impulses from sharp changes in the external value of the currency as well as to provide a reliable anchor for traders. Such a regime should also allow considerable flexibility in responding to external shocks in an orderly way without sacrificing stability and growth.

The problem is that no such regime exists under free mobility of capital. Even if monetary policy were fully geared towards the management of the exchange rate, it would face dilemmas as long as the capital account is fully open. Consequently, attention should be paid to the role that can be played by prudential and capital-account regulations in preventing build-up of financial fragility and unsustainable booms in capital flows, as well as in facilitating orderly exchange rate adjustments in response to external shocks.

Given the high degree of regional integration in East Asia, the prospects of securing relatively stable exchange rates may be greatly enhanced by regional monetary

cooperation. In this respect useful lessons can be drawn from the experience of Continental Europe over the past three decades. Europe has never had much appetite for floating among the currencies of the countries in the region. Its first response to the collapse of the Bretton Woods system in the early 1970s consisted of “snake” and “snake in the tunnel” arrangements that were designed to stabilize the intra-European exchange rates within relatively narrow bands in an environment of extreme volatility. This was followed by the creation of the EMS in 1979, and eventually by the introduction of the euro and the establishment of the EMU in 1999. This experience, which took some 30 years to pass from soft pegs to hard pegs, is worth examining in this region.

III. Monetary policy and financial stability

Turning to the role of monetary policy in securing financial stability; until recent bouts of financial boom-bust cycles in industrial and developing countries, it was generally believed that price stability was both necessary and sufficient for financial stability. Indeed, over the past two decades Central Banks have had a tendency to focus exclusively on price stability through various forms of inflation targeting, to the neglect of asset prices, exchange rates and financial stability. However, in many countries in East Asia, as well as in the industrial world, asset price bubbles, excessive credit creation and currency appreciations all occurred under conditions of price stability. In the more extreme cases, as in Latin America, price stability has been bought at the expense of financial stability, through exchange-rate- based stabilization programmes, relying on unstable capital flows.

The coexistence of reduced price instability with increased financial instability has created a debate on whether monetary policy should pay attention to conditions in

financial markets rather than focussing on price stability alone. This issue is by no means confined to emerging markets. It has been equally important in the debate over monetary policy in Japan and the United States where economic difficulties that followed the earlier boom in the late 1980s in Japan and the dot.com bubble in the United States in the 1990s are traced to the benign neglect of financial market conditions in the design of monetary policy.

The current debate in industrial countries has focussed on the role of monetary policy in preventing stock and property market bubbles. One proposal is to abandon inflation-targeting altogether, and to promote financial stability as the prime objective of monetary policy. Another one is to set a broader range for tolerable inflation rates and allow monetary policy within that range to focus on financial stability. Finally, there are proposals to use other means, such as counter-cyclical prudential measures, to deal with financial bubbles.

For the reasons already mentioned, in emerging markets avoiding boom-bust cycles in capital flows and attaining a reasonable degree of stability in exchange rates should be a central component of any policy strategy aiming at greater financial stability. However, in this respect monetary policy on its own is not very effective. The main difficulty arises in large part because monetary tightening needed to check asset price bubbles tends to attract short-term capital flows and appreciate the currency. On the other hand intervention in the foreign exchange market to stabilize the currency runs up against a number of hurdles.

If intervention is not sterilized, domestic liquidity will expand, leading to faster inflation and higher nominal interest rates. Thus, it would need to be sterilized by issuing government or central bank debt. But, this could lead to higher domestic interest rates,

attracting even more arbitrage flows. Furthermore, since interest earned on reserves is usually much lower than interest paid on public debt, there will be fiscal (or quasi-fiscal) costs. These can be large when interest rate differentials are wide and the surge in capital inflows is strong.

There are less costly methods of sterilization such as raising the non-interest-bearing reserve requirements of banks. This would also raise the cost of borrowing from banks, thereby checking domestic credit expansion. However, it could encourage firms to go to foreign creditors. Banks may also shift business to offshore centres and lend through their affiliates abroad, particularly in countries where foreign presence in the banking sector is important.

These dilemmas arise largely because counter-cyclical monetary tightening and interest rate increases tend to attract arbitrage-seeking, fixed-income capital flows. But the impact is different for equity flows. If capital flows are primarily in FDI or portfolio equity, monetary tightening will have discourage capital inflows by lowering both current incomes and discounted expected earnings of corporations.

It therefore follows that a capital-account regime designed to reduce the sensitivity of fixed-income flows to interest rate changes would allow greater space and autonomy to monetary policy in dealing with boom-bust cycles in financial markets and capital flows.

Various market-based regimes exist to achieve such an outcome, widely used by industrial countries in the past. In the 1960s the United States levied interest equalization tax on outflows attracted by high rates abroad while Switzerland imposed negative rates on foreign deposits in the early 1970s when money seeking security was pouring in after

the breakdown of the Bretton Woods arrangements.

The dilemmas faced by monetary policy are harder when the bust comes. In the absence of large reserves or an international lender-of-last-resort, currency cannot be stabilized by monetary policy. As seen in East Asia and elsewhere, pro-cyclical hikes in interest rates will only deepen the recession. While taxing inflows may work in eliminating arbitrage margins, there is no counterpart in a downturn when capital is exiting because of perceptions of increased currency and default risks- perceptions that often prove to be self-fulfilling. Under such conditions, temporary exchange controls and standstills may be the only viable way out to prevent financial meltdown, as done in Malaysia.

IV. Prudential and capital-account regulations

A. Scope and limits of prudential regulations

Given the constraints faced by monetary policy in managing financial instability and shocks, prudential and capital-account regulations could provide effective mechanisms in dealing with the problems at hand. This they can do in two ways. First, they can directly prevent excessive risk-taking and build-up of fragility at times of boom and avoid meltdown at times of bust. Second, they can widen the space for monetary policy in managing financial cycles.

Weak credit evaluation and excessive risk-taking are often seen to be at the origin of financial crises in emerging markets. There is thus general agreement that regulatory reform is essential for strengthening the financial sector. Regulations should ensure the

solvency of financial institutions by establishing adequate capital requirements, appropriate standards for risk assessment and diversification, and sufficient provisions for non-performing and questionable portfolios. They should also ensure adequate levels of liquidity for financial intermediaries to handle maturity mismatches between assets and liabilities, particularly in view of increased interrelation between solvency and liquidity problems.

In recent years there has been widespread reform at the national level, accompanied by a proliferation of international initiatives, particularly in the Basle Committee on Banking Supervision, to raise standards for prudential regulations. Nevertheless, the continuing incidence of financial instability in industrial countries with state-of-the-art prudential regulation and supervision suggests that reform of the kind promoted in the BIS is unlikely to provide fail-safe protection in this area. The limits to the effectiveness of regulation and supervision have various sources:

First, financial regulation is constantly struggling to keep up with financial innovation, and in this struggle it is not always successful. There is a danger that new practices in financial markets not adequately covered by the regulatory framework may prove a source of instability. Indeed it is often remarked that regulators deal with the causes of the last crisis not the next one.

Second, prudential rules themselves can be a source of instability. For instance in determining capital adequacy, the 1988 Basle Accord assigned low risk weights to interbank claims, encouraging short-term interbank lending. As we now know, such borrowing driven by interest-rate arbitrage was a major factor in excessive exposure to short-term bank debt in the East Asian crisis.

Third, prudential regulations are quite powerless against macroeconomic shocks. No asset on a bank's balance sheet can be classified generically as good. As long as business cycles are features of the economic system, there will always be unforeseeable deteriorations in the status of many bank assets. During such cycles, risks take time to build up and become widely evident. For a while the quality of loans can actually be enhanced by the very financing boom of which they are a part. Eventually, the excess capacity generated by the boom and the over-extended position of banks are likely to lead to a reversal, causing a collapse of values of assets and collaterals.

Finally, many of the traditional risk assessment methods and prudential rules may simply serve to amplify cyclicity. This is clearly the case for loan-loss provisions based on current rates of loan delinquency. At times of boom when asset prices and collateral values are rising, loan delinquency falls and risks are perceived to be low. These lead to inadequate provisioning and overexpansion of credit. When the down-turn comes, loan delinquency rises rapidly, and can lead to credit crunch. There are also concerns that the new Basle proposals for rating-based risk assessment could introduce a pro-cyclical bias in international lending to developing countries, since, as we all know, credit ratings tend to be highly pro-cyclical, going up with the markets during boom, collapsing rapidly when the trouble starts.

B. Counter-cyclical use of prudential tools

One way of dealing with these problems is to design prudential regulations in such a way that they provide built-in stabilizers so as limit the cyclicity of the financial system. Forward-looking rules may be applied to capital requirements in order to introduce that automatically limit the cyclicity of the financial system. Forward-

looking rules may be applied to capital requirements in order to introduce a degree of counter-cyclicality. This would mean establishing higher capital requirements at times of financial booms, based on estimation of long-term risks over the entire financial cycle, not just on the actual risk at a particular phase of the cycle.

The same principles can also be applied to provisioning. In fact Spain has been using a forward-looking system whereby not current but future losses are taken into account in making loan-loss provisions, estimated on the basis of long-run historical loss experience for each type of loan.

Similarly, long-term valuation may be used for collaterals in mortgage lending in order to reduce the risks associated with ups and downs in property markets. This is practised in the EU where property valuation in mortgage lending reflects long-term trends in the market for real estate.

It is also possible to make forward-looking discretionary changes in prudential requirements in order to smooth out financial cycles. The main problem here is whether policy-makers can correctly identify financial cycles and imbalances. In this respect past experience may not always be a reliable guide to future difficulties, since booms can be driven by different dynamics in different cycles. However, this is a general problem encountered in establishing effective prudential regulations of any kind, not just in forward-looking mechanisms.

C. Reducing currency risks

While very useful in containing the damage that may be inflicted by financial

crises, none of these measures could adequately deal with risks associated with sharp swings in capital flows and exchange rates. Such risks can be restricted in a number of ways by more stringent application of prudential rules to positions and transactions entailing currency risks.

First, a distinction can be made between domestic currency and foreign currency liabilities of banks in applying measures such as capital adequacy, provisioning, and liquidity and reserve requirements, using more stringent provisions for foreign exchange liabilities.

Second, restrictions may be imposed on currency mismatches in the banking system. These can be formulated as quantitative limits on open forex positions or penalties in the form of higher reserve requirements. Indeed, in most developing countries outright prohibition of currency mismatches may be the best way to deal with the problem.

Third, eliminating currency mismatches does not necessarily remove risks for banks but can translate currency risks into credit risks- that is, it simply migrates risks. This would be the case when banks lend in foreign currencies to sectors without foreign exchange earning capacity. In East Asia, for instance, banks lent heavily for investment in property and infrastructure, and in Latin America and Turkey for private consumption. Such practices could be discouraged by applying higher risk weights and more stringent standards of provision, or prohibited altogether.

Fourth, while one of the main functions of the financial institutions is to provide maturity transformation between ultimate lenders and borrowers, such a function cannot be automatically extended to international lending and borrowing. Therefore it is

important to restrict maturity mismatches between forex assets and liabilities in the banking system.

D. Capital-account regulations

While prudential regulations can act, in certain instances, as adequate substitutes for capital-account regulations, they may not be able to prevent excessive risk-taking in cross-border borrowing and investment. Thus, better targeted capital-account measures may be needed in order to reduce vulnerability to swings in capital flows and exchange rates. These can also be used in a forward-looking manner, tightened or eased according to the underlying conditions.

There are a number of techniques available, with different degrees of restrictiveness and effects, widely used in industrial countries in the 1960s and 1970s. These measures differentiate among different sources and types of capital such as loans, portfolio and equity flows; among different maturities; different domestic uses; different types of lenders and borrowers; and between inflows and outflows.

I have already pointed out that a regime restricting fixed-income flows allows greater space for monetary policy in dealing with financial instability. Such measures should be applied not only to financial institutions, but also to foreign borrowing by non-financial firms. This would be needed since restrictions imposed on bank lending to firms operating in non-traded sectors could redirect them to foreign markets. Arrangements for this purpose could include rules on the type of firms that can borrow abroad; restrictions on the terms and conditions of their borrowing such as maturities and spreads; and tax treatment of interest on foreign debt. Perhaps a simple guiding principle

here is that large foreign borrowing by firms without foreign exchange earning capacity should be discouraged or subject to approval.

While equity flows do not present serious dilemmas for counter-cyclical monetary policy, they may still be problematic. In countries where there are no restrictions on borrowing by transnational corporations in domestic markets and the capital account is fully open, FDI can be as volatile as other categories of capital flows. While bricks and mortar do not move, direct foreign investors can borrow in order to export their capital.

Portfolio equity flows, like FDI, are seen as less problematic since the currency risk is borne by foreign investors. However, such inflows can establish strong destabilizing linkages between stock and currency markets whereby loss of confidence in one can create rapid exit in the other. Even though in such cases investors will be hurt by declines in both stock prices and the currency, this would not always stop panics and prevent rapid exit.

There have been only a few attempts in emerging markets in recent years to slow down unsustainable capital inflows. Of these, perhaps the best known case is the unremunerated reserve requirements used in Chile and Colombia in a counter-cyclical manner; imposed at times of strong inflows in the 1990s and phased out when capital dried up at the end of the decade. This was a price-based, non-discriminative measure, applied to all loans. It effectively taxed arbitrage inflows with the implicit tax rate varying inversely with maturity. Evidence suggests that these measures were effective in improving the maturity profile of external borrowing but not in checking aggregate capital inflows. In other words, they were effective in reducing fragility in the event of a currency crisis, but not in improving macroeconomic policy space to prevent such a crisis.

By contrast, direct measures appear to be more effective in allowing greater space for macroeconomic policy. One such experiment was in Malaysia during 1994 when a number of restrictions were imposed on the acquisition of securities by non-residents which lasted for a period of one year. Empirical research suggests that these restrictions were more effective than Chilean reserve requirements in improving external debt profile and preventing asset-price bubbles. Again China and India have been successful in using traditional exchange controls and capital-account measures in preventing instability while continuing to receive large amounts of foreign capital, primarily in FDI.

V. Conclusions

In closing I would like to emphasize five points. First, financial rules and regulations should be designed to widen the space for growth- and stability-oriented macroeconomic policies, not to sustain unsound fiscal and monetary postures or unviable exchange rates, as was often the case in the 1960s and 1970s in both developing and industrial countries. Historical experience clearly shows that capital controls are no answer when the underlying policies are not sustainable. But it also shows that sound policies do not assure stability of capital flows and exchange rates.

Second, there is a need to avoid sharp swings in capital account regimes, introducing *ad hoc* restrictions at times of crisis and having a hands-off approach when money is flooding in. It is more effective to have a permanent system of control, with instruments being adjusted according to cyclical conditions.

Third, it should also be kept in mind that regulations can be problematic not only because they can themselves be a source of instability but also they can have adverse

effects on financial intermediation and development as well as on animal spirits. These aspects of regulations should be taken into account in designing prudential and capital-account regimes.

Fourth, while there are a number of general principles that can guide regulatory regimes in developing countries, there is no one-size-fits-all solution. As noted, appropriate content and mix of policies, and capital account and exchange rate regimes depend on the institutional capacities and structural characteristics of the countries concerned. Institutions may need to be strengthened or created before new policies and regulatory measures are introduced, but this is often a slow process.

Finally, coordination will be needed among various public offices including authorities with responsibilities for monetary policy, regulation and supervision of the financial system, disclosure and accounting standards, and taxation. In order to improve coordination, some of these responsibilities may be put under the same roof. This is particularly true for monetary policy and financial regulation and supervision. Given that the task of attaining stability in a world characterised by sharp and unexpected shifts in capital flows, exchange rates and interest rates is a daunting one, a high degree of coherence and consistency among policy actions affecting currency and financial markets is absolutely essential for a successful outcome.