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# Stabilization Policy in Emerging Markets: How Different Is It?

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Within the United States, perspectives on counter-cyclical stabilization policy have progressed substantially over the past quarter century. Something close to a consensus has emerged which is characterized by the following major elements: (1) the emphasis on monetary policy as the major tool of short-run stabilization, (2) policy goals that assign primacy to the maintenance of low inflation, but with significant room for the stabilization of real outcomes, (3) transparency in policy decision-making, and (4) a strong focus on balance in the domestic economy versus the foreign sector – exchange rates and the current account play little or no direct role in the determination of policy. The net result is an activist view of policy in which the Federal Reserve intervenes quickly and strongly to keep the economy on a path consistent with low inflation and minimal fluctuations in output.

Other industrial countries share similar views, albeit with some significant differences of emphasis. As a prelude to monetary union, European governments were understandably more focused on the convergence of inflation and interest rates. As a new monetary institution, the European Central Bank (ECB) has also faced greater issues of credibility which have driven it to enunciate a more explicit inflation target than is the case in the United States. Moreover, the stability pact of the European Monetary Union places somewhat greater restrictions on the use of fiscal policy. But, as in the United States, the focus of ECB policy is on balance within the Euro countries, and it has adjusted policy in response to both inflation and deviations of real output from potential. Similarly, Japan has made extensive use of both counter-cyclical fiscal and monetary policies.

[1] I am indebted to Benjamin Keys for the compilation and analysis of the data.

However, the discussion of stabilization policy for emerging markets is far more chaotic and notable for its lack of consensus. To begin with, the abandonment of an independent monetary policy with a shift to dollarization is viewed as a real policy option for a number of countries (Calvo, 2000, and Mendoza, 2000). At the opposite extreme, some researchers have urged the adoption of flexible exchange rate regimes like those of the major industrial countries (Larrain and Velasco, 2001). Many economists have argued that countries should move to one of the polar positions and that intermediate positions are no longer tenable. That is at odds with the fact that that nearly all emerging-market economies remain in the middle with managed exchange rate systems.[2] The debate over the exchange rate regime is critical for counter-cyclical stabilization because it raises the question of whether monetary policy could be part of the stabilization mix.[3]

Second, monetary policy has dominated the discussion of stabilization issues – particularly in Latin America -- despite the fact that the lack of a well developed financial system implies that fiscal outcomes often dictate the monetary policy, as governments turn to the central bank to finance budget deficits. As pointed out by Gavin and Perotti (1997), fiscal policy appears to have been procyclical in several Latin American countries and differs substantially from that observed in OECD economies.

Third, governments of several emerging-market countries are being urged to reject stabilization in favor of the pursuit of policy credibility. It is alleged that because many of these countries have not developed the economic and political institutions required to use discretionary stabilization policies successfully, they have little to lose. Having removed most restrictions against cross-border capital flows, they have become highly vulnerable to the sudden loss of access to international capital markets. Such interruptions can be very disruptive given that many of their debts are short-term and denominated in a foreign currency. Thus, the argument is made that priority should be given to preventing the sudden stoppage of credit rather than stabilization

[2] The question of whether there is a hollowing out of the middle position is addressed in Masson (2001). He concludes that there is little evidence in practice of such a trend.

[3] Even the call for flexible exchange rates is often combined with advocacy of a simple rule for monetary policy such as inflation targeting. To the extent that the target is dominated by the prices of tradable goods, inflation targeting is equivalent to a fixed exchange rate regime.

of the domestic economy. Dollarization or equivalent measures that remove discretion from domestic policymakers are seen as the best means of achieving that objective.

The objective of this paper is to compare the framework for stabilization policy in emerging-market countries with that in the industrial countries and to address the source of the differences in the policy discussion. The next section elaborates on the policy framework in the industrial countries. The following section extends some prior empirical work by Gavin and Perotti (1997) comparing the conduct of fiscal policy in Latin America and the industrial economies to include the emerging markets of Asia. A similar framework is used to explore some differences in the conduct of monetary policy. The objective is to determine if there are identifiable differences in the response of stabilization policy to economic disturbances. In the final section I explore the question of what makes the emerging-market economies different for the management of stabilization policy.

**Stabilization Policy in Industrial Economies**

Stabilization policy as conducted in the G-7 countries and discussed at meetings of the G-7 ministers incorporates several common themes. First, monetary policy has clearly emerged as the dominant and preferred tool of short-run stabilization. The contribution of fiscal policy is largely reflected in reliance on automatic stabilizers, as embedded in the rules of the tax and transfer systems. While discretionary fiscal policy is still viewed as an important backstop for situations of severe short-run instability, its focus has shifted to a longer-term concern with economic growth -- promoting productivity growth, national saving and capital formation. The shift in emphasis has been driven in part by changes in economists' perspectives as to the relative effectiveness of the two policies. But it also reflects a growing awareness of the political constraints on the active use of fiscal policy: it is very difficult to build a consensus for action in a timely fashion; and among the politicians, stimulus is always more popular than restraint.[4] The implementation lags are clearly much longer for fiscal policy even though the response lags may be of similar duration.

[4] Within the European Union, governments have gone even further to constrain the potential for fiscal action at the state level, without the offset of a large central government fiscal system as in the United States.

Second, monetary policy has become more transparent with a clear primacy assigned to maintaining low inflation. While some academics might argue for an inflation target as the single guide for policy, it seems evident that policymakers do concern themselves with developments in the real economy. There is considerable agreement that monetary policy does affect the real economy (as opposed to nominal magnitudes only) over a long enough period of time to be relevant to policy. As a result, the objective of monetary policy can most easily be summarized as maintaining the growth of aggregate demand in line with the growth in potential supply when inflation is on target. At the same time, central banks make a considerable effort to inform private markets about their objectives. This policy framework is so clearly understood in the United States that in many cases the Federal Open Market Committee is simply adopting policy changes that have already been anticipated and incorporated in market interest rates.

Some economists have called for adoption of more formal policy rules, but most of these proposals, like the Taylor rule (Taylor, 1993), incorporate targets for both the real economy and inflation. And, by allowing for some discretion the line between rules and guidelines has become blurred. The primary objection to a formal rule continues to be uncertainty about the precise level of potential output to associate with price stability, and corresponding doubts about its constancy over time. The benefit of some discretion is reflected in the progressive reductions in the level of unemployment that U.S. policy makers came to associate with price stability over the 1990s. Without a role for judgement, the U.S. unemployment rate would have leveled out at about six percent after 1995, instead of declining to near four percent.

Third, the focus of stabilization policy is on the performance of the domestic economy. The United States in particular has sought to limit the objectives to low inflation and low unemployment, and policymakers have resisted the temptation to incorporate targets for the exchange rate or external balance. European policymakers typically have gone further in incorporating concerns about the exchange rate into the formulation of policy, but such efforts were strongly associated with the effort to achieve convergence prior to the introduction of the Euro in 1999. Since 1999, the major central banks have generally avoided sustained interventions in exchange markets and tolerated wide swings in relative values.

This broad sketch of stabilization policy would fit the circumstances of most large industrial countries, although there would be significant differences in some of the details.

However, the role of stabilization policy seems far less defined in the rest of the world. In particular, there seems to be a growing perception that stabilization policy is ineffective for open economies. The following section uses fiscal and monetary data from a group of industrialized and emerging-market countries to examine the quantitative importance of these differences.

**Stylized Facts**

A simple summary of some indicators of economic performance and measures of stabilization policy are reported in table 1 using annual data for the 25 years from 1975 through 1999 for 35 countries. The countries are divided into four groups of: the G-7 countries, eleven smaller high-income OECD economies, eight emerging-market economies of Latin America, and nine economies from Asia.[5]

First, the emerging-market countries show a significantly greater variability of output growth than the industrial countries, as measured by the standard deviation of the annual percentage change in real GDP. The variability is slightly less in Asia and has occurred against a backdrop of extremely high average growth. It is commonly argued that the variability of output growth in emerging markets is high because of a greater role of external shocks. A partial adjustment for trade shocks was made by regressing output growth within each regional group on current and lagged changes in the real value of exports and the terms-of-trade. The standard deviation of the adjusted measures of output variation is reported in column (3) of the table. While external factors do have a statistically significant impact on output variation and the impact is greater in the emerging markets, the adjustment does very little to narrow the gap. Whatever the source of the greater output variability, it appears to operate through channels other than trade. Furthermore, the greater output variability is not evident for the small OECD economies that share a large trade exposure.

Second, as shown in column (4), the emerging markets also have considerably greater variation in annual rates of inflation. In order to prevent excessive distortions from episodes of

[5] The smaller OECD countries are: Australia, Austria, Belgium, Spain, Finland, Greece, Ireland, Netherlands, Norway, Portugal, and Sweden. The emerging markets of Latin America are: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, and Venezuela. Asia consists of: China, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

extreme inflation, the data set exclude 24 observations in which the rate of inflation exceeded 200 percent, all of which are in Latin America. Still, the standard deviation of the inflation rate in the Latin American economies was 34 percent, or six times that of the OECD. In this case, the experience of the Asian economies is closer to that of the industrial countries.

The second panel of table 1 provides a perspective on the variability of fiscal policy. The fiscal measures refer to general government for the OECD countries, but they are restricted to the central government accounts for the emerging-market countries because of difficulty in obtaining information on the budget situation of local governments. However, most of the cyclical variability should be concentrated in the central government finances, because lower levels of government lack access to financial markets. In addition, the fiscal balance (budget surplus) refers to total revenues less expenditures, whereas the revenue series shown in the table is for current revenues.[6] While there is only a small different in the average value of the fiscal balance over the full quarter century, fiscal outcomes have been far more volatile in the emerging markets. Again, Asia lies between the industrial countries and Latin America. Furthermore, the volatility of outcomes is evident on both the income and expenditure sides of the budget.

Summary statistics for interest rates are reported in the bottom panel of the table. The measure of the real interest rate is the short-term money market rate adjusted by the rate of change in the GDP price deflator. The result is a mean real interest rate that is very surprisingly similar across countries and regions. However, more relevant is the greater variation in Latin America. In this case, the experience of the Asian economies seems particularly close to that of the industrial economies. The last column provides a measure of change in a trade-weighted multilateral real exchange rate.

Taken as a whole, table 1 clearly supports the view that emerging-market economies are more volatile than the industrial economies, both in terms of outcomes and standard measures of fiscal and monetary policy actions. The next step is to examine the extent to which the policy indicators have behaved in a pro- or counter-cyclical fashion. This is done by estimating simple regressions that relate the fiscal or monetary change to current and lagged changes in GDP and

[6] In particular, the measure of the budget balance includes privatization receipts and net lending minus repayments. From the perspective of stabilization, current revenues and total expenditures seem more relevant.

inflation. An effort was also made to address external balance concerns by including measures of the real exchange rate or the current account balance, expressed as a percent of GDP. All of the regressioons are computed using a fixed-effect estimator that allows for fixed country differences. In addition, because of obvious problems with estimation biases due to the endogenous nature of the right-hand side variables, the regressions are based on instrumental variable estimation or use lagged values.[7]

*Fiscal Policy*. The results for fiscal policy are shown in table 2. Here the comparison is between the change in the fiscal balance and changes in real GDP and inflation. There are 426 annual observations for the industrial countries and 365 for the emerging markets. The presumption of counter-cyclical fiscal policy is clearly borne out by the data for the industrial countries. The elasticity of changes in the fiscal balance with respect to changes in real GDP approaches unity.[8] Revenues are particularly highly correlated with output changes, and the stabilizing influence is derived from the lack of any significant positive correlation between output changes and government expenditures.

However, for Latin America the results confirm a fact first reported by Gavin and Perotti (1997), namely that fiscal policy is pro-cyclical. The result is due to a marked difference on the behavior of government expenditures which are pro-cyclical in Latin America and acyclical in the industrial countries.[9] On the other hand, the cyclical behavior of fiscal policy in the Asian economies closely parallels that observed in the industrial economies. In the conduct of fiscal policy, Latin America appears to be an outlier, and fiscal policy in the Asian economies appears

[7] The panel estimation is done within TSP. For the instrumental variable estimation, the instruments included lagged values of the changes in real GDP, prices, the real value of government revenues and expenditures, an index of world oil prices, and the lagged level of the real interest rate and the current account balance. For the smaller countries, the instruments list included the average rate of growth in the G-7 countries.

[8] The inflation rate is included to ensure that the results are not distorted by differences in the extent to which government revenues and expenditure programs are indexed to inflation. There was no observable correlation with the indicators of external balance

[9] They used a larger sample of 13 Latin American countries over the period of 1968-95.

to be as actively counter-cyclical as in the industrial countries.[10] No significant role could be found for variations in either the real exchange rate or the current account balance.

In their study, Gavin and Perotti advanced two possible explanations for the pro-cyclical behavior of policy in Latin America. The first was a political story in which weak governments are unable to resist pressures of strong competing interest groups for more spending. The second was more economic in suggesting that Latin American governments face severe borrowing constraints in bad times that force them to reduce spending during recessions. In differentiating between Asia and Latin America, both of the above explanations seem more relevant in Latin America: populism is a stronger political force, and the Asian countries have not had to rely on foreign borrowing because of high internal saving rates.

*Monetary Policy*. A perspective on the cyclical behavior of monetary policy is outlined in table 3. The framework is suggested by development of the Taylor rule (Taylor, 1993) where the short-term interest rate is used as a policy indicator and changes in the rate are related to changes in real output and inflation.[11] In addition, the current account balance is included because of assertions that external balance is an important consideration in small open economies. Again, the measures of output change and the current account are lagged because of concerns about endogeneity. However, since inflation has such an obvious and immediate effect on interest rates, it is included on a concurrent basis. Because of imprecision in the instrumental variable estimate, the reported equations are based on the actual change in the price level.[12] In addition, it was difficult to compute meaningful measures of the real interest rate in a sample with extreme annual variations in inflation. Thus, monetary policy is measured by the level of the nominal interest rate in an equation that includes the lagged level and the lagged rate of inflation on the right-hand side.

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[10] In the table, Asia appears to have a less significant correlation between fiscal policy and changes in GDP. However, that is largely a result of the instrumental variables estimation since the OLS regressions have comparable $R^2$s.

[11] In this data set, inflation and real GDP growth are negatively correlated. The correlation is strongest for Asia and not statistically significant in the G-7.

[12] The instrumental variable estimates did not adequately capture of episodes of large price acceleration, yet such jumps are critical to defining a reasonable value for the real interest rate. It seems reasonable to argue that concurrent feedback effects from monetary policy changes to inflation would be relatively small.

For the G-7 countries, the short-term interest rate is positively correlated with changes in both real output and inflation, with coefficients near one fourth and there is no statistically significant role for the external balance. The implied adjustment in interest rates in response to variations in output and inflation are about half those suggested by the Taylor rule. The results for the role of fluctuations in output and inflation are similar for the smaller industrial economies, but there is a significant negative impact from the lagged current account balance, suggesting that external balance is more of a consideration in the formulation of monetary policy.

The emerging-market economies nearly match the industrial countries in the implied responsiveness of their counter-cyclical monetary policy to changes in output and prices. In addition, there is evidence of a modest impact from the lagged current account for Asia, but not for Latin America. The counter-cyclical behavior of monetary policy in the Asian economies, in particular, seems very similar to that of the smaller OECD countries.

Some observers argue that they can detect in the experience of the 1990s a retreat from the active use of stabilization policy, particularly on the fiscal side (Krugman, 2000 and Stiglitz, 2002). In order to examine this suggestion, the data were divided into two sub-periods of 1975-87, and 1988-99. As shown in table 4, there is evidence of a shift toward greater fiscal restraint, as measured by the mean value of the fiscal balance, for the industrial countries and Latin America, but the change is opposite for Asia. In addition, real rates of interest are much higher in all of the regions in the most recent sub-period. In particular, real rates of interest were negative in Latin America in the early period, and averaged near 8 percent in the 1990s. However, contrary to expectations, the marginal responses of policy seem similar across both periods. In comparing the two sub-periods, there is no consistent pattern of change in the coefficients or correlations of either fiscal or monetary with changes in changes in real output, inflation and the current account.

In summary, counter-cyclical monetary policy in emerging-market countries seems surprisingly similar to that of the industrial economies. And on the fiscal side, the same is true in Asia. The exception is fiscal policy in Latin America. However, the overall differences seem small, and there is surprisingly strong evidence of reliance on an active stabilization policy in the emerging-market countries.

On the other hand, although emerging-market countries may not differ greatly in the conduct of their counter-cyclical policies, the outcomes are far more variable. We have been unable to account for that variability in terms of shocks from the external sector (trade). In addition, it is easy to invert the above relationships in order to see if the instability of policy has contributed to the greater variation of output. While changes in monetary policy, as measured by changes in the money market rate, are negatively correlated with future output growth, the correlation is strongest for the industrial countries and absent for Latin America. The correlations between changes in the fiscal balance and future output growth were uniformly positive and statistically insignificant. It does not appear that the policy changes are a major source of the greater variability of output in emerging markets.

**What Makes Emerging Markets Different?**

The literature on emerging markets suggests that their output instability is largely a product of frequent financial crises. In the financial arena, the emerging markets face a far more challenging environment than that of the industrial economies at a comparable stage of development. They differ in the speed with which they are trying to build up a sophisticated domestic financial system and simultaneously open up their financial markets to international capital flows. This is far different from the staged process of institution-building followed by the OECD countries. Most of the OECD cooperated in restricting private capital flows until the mid-1970s and early 1980s. Thus, capital convertibility occurred against the backdrop of a more sophisticated and better supervised domestic financial system.

The importance of capital flows into the emerging-market countries and their volatility are evident in figures 1 and 2. Capital inflows, consisting of direct investment, portfolio capital, and other investments (mainly bank lending) exceeded six percent of GDP in each of these regions in some of the middle years of the 1990s – magnitudes that were comparable to those of the OECD -- but they have varied over a very wide range.[13] The magnitudes are much reduced by the exclusion of direct investment inflows in figure 2, but the variability remains high.

[13] The data on capital inflows may not be comparable for some OECD countries in recent years because the magnitudes have increased greatly for Austria, Ireland and Belgium .

It is largely the openness to international capital markets that makes the problem of economic stabilization different than that faced by industrial countries in the 1960s, 1970s, and even the 1980s. Access to international capital markets creates opportunities; but, if the process is mismanaged, it also raises the risk of crisis and collapse. Yet, each round of crises seems different from the last, and economists are good at predicting only those of the past. Just within the last quarter-century, the world has evolved through at least three types of financial crises of increasing complexity.

Initially, currency crises were viewed as relatively simple processes that evolved out of situations of countries living beyond their means, with speculators and lenders trying to estimate when their reserves would be exhausted.[14] The IMF became very proficient at resolving these crises since the answer involved reducing domestic demand to the level of supply, devaluation to restore competitiveness, and a bridge loan to cover the period required for the policy changes to become effective.

In the 1990s, new types of currency crises emerged that could not be simply traced to excessively expansionary domestic policies. The exchange rate policy was often sustainable when judged by fundamentals, but questions arose about the strength of government commitment due to conflicts with other policy objectives. Crises appeared to be triggered by self-fulfilling waves of pessimism rather than fundamentals. The 1992-93 currency crisis in Europe was an example of a more complex process that involved speculative beliefs about the strength of government commitments.[15]

With the Asian financial crises of the late 1990s, the process appears to have mutated again with new explanations emerging that placed emphasis on balance sheet problems, such as the failure to hedge the currency risks that arose from borrowing in a foreign currency to finance investments in the domestic economy.[16] In addition, the private sector financed its extraordinary growth through excessive reliance on short-term debt finance, leading to a situation where the

[14] Theoretical models that capture the essence of these crises are those of Krugman (1979) and Flood and Garber (1984).

[15] Some aspects of these crises are captured in Obstfeld (1996).

[16] For those who believed their government's pledge to a fixed exchange rate, the opening of capital markets looked like the creation of a money machine: they could borrow in international markets at very low rates of interest and relend domestically at high rates.

monetary authorities could not act to defend the currency through interest rate increase without the risk of domestic collapse. One important less was, contrary to prior expectations, currency devaluation may not be expansionary if it triggers widespread balance-sheet losses.

Similar financial mismatches arose in Argentina, where some individuals and corporations borrowed in dollars to take advantage of lower interest rates, but invested in higher-yielding peso deposits. Others fled to dollar-denominated assets in fear of devaluation. With the devaluation of the peso, the potential losses from currency mismatches were very large. The government responded by trying to restrict the conversion of deposits from pesos to dollars; and then by mandating that dollar-denominated loans, but not deposits, could be repaid in pesos. It rescued citizens from the consequences of their own speculation, but at the cost of bankrupting the banking system.

In an open global market, governments are constantly being judged with respect to the sustainability of their economic policies. A large public debt, domestically financed, raises concerns about the sustainability of interest rate policies that may be required to defend a currency peg. If the debt is denominated in a foreign currency, investors focus on the fiscal costs of devaluation and the risks of default. Thus, governments are pressed to commit their fiscal policy to confidence-building, rather than stabilization.

The debate over credibility versus stabilization is even more prominent in the literature on the choice of an exchange rate regime. The advocacy of various forms of 'hard pegs," ranging from exchange rate targeting, to currency boards, and ultimately dollarization and monetary union, has been driven by the search for commitment. All of these potential reforms are aimed are removing discretion from the conduct of monetary policy. However, the intermediate versions seem increasingly problematic because the implicit insurance against exchange rate risk encourages domestic banks and corporations to accumulate unhedged debts in foreign currencies. If an exchange rate adjustment becomes necessary, the financial consequences can be devastating, far out-weighting the potential stimulus to trade.

It also seems evident that traditional stabilization policy is not particularly effective as a response to a currency crisis. Governments are caught between the goals of stabilizing the external financial balance or the domestic economy; whatever they do for one is bound to worsen the other. Fragile domestic financial markets combined with the potential for sudden large

capital movements of the magnitude shown in figures 1 and 2 suggest a extremely narrow band for policy.

It follows that countries are being pushed to chose between two extremes: a hard peg, as in dollarization, or a relatively freely floating currency whose management provides constant reinforcement for private agents of the risks of balance sheet mismatches. After the experience of Argentina, it may be that only dollarization or membership in a monetary union is a credible option – as adoption of a currency board did not bring an end to speculation. Argentina is also a reminder that a hard peg can be very harsh in the penalties that it imposes on non-sustainable policies, and that the options for corrective action are very limited (Perry, and Servén, 2002).

From a stabilization perspective, fiscal policy might appear to be an available option even if monetary policy is not. However, given the risks of debt accumulation in such a situation, governments are likely to be leery of its use. The escape hatch of inflation will not be available.[17] Realistically, dollarization implies the end of stabilization policy. Without some assurance that the potential for future shocks are in common to those faced in the base country, emerging-market countries are only likely to turn to dollarization in the most dire of circumstances when all credibility has been lost.

The alternative of a more variable exchange rate is also not free of problems. The abandonment of an exchange rate peg creates the need for an alternative monetary strategy that is transparent and credible in the view of financial market participants. Yet, simple domestic policy rules, such as monetary or inflation targeting, that imply indifference toward the nominal exchange rate probably go too far. Widely fluctuating rates discourage international trade and financial linkages. Thus, a variable rate system probably means only the absence of explicit targets that make countries vulnerable to speculation.

Some of the credibility concerns might be addressed by the adoption of some aspects of inflation targeting.[18] The policy allows countries to focus on the domestic economy, improves the transparency of policy by being more explicit about the goals of monetary policy, and provides for greater accountability. But just as the industrial countries object to the rigidity of a

[17] Many observers would regard this as an advantage of dollarization because they believe the risks of unsustainable long-term fiscal policy outweigh the benefits of stabilization.

[18] A useful discussion with citations is provided in Mishkin (2000).

rule that ignores short-run changes in output and locks them into a fixed response, emerging countries are likely to find that they cannot stick to the rule in the face of a crisis. Policymakers need to be able to respond to extremes in output and the exchange rate, even if they have committed to price stability as the primary objective. As with the Taylor rule, inflation targeting is useful as guidance for policy, but not as a rule.

We can see in figure 3 that emerging-market countries have tried to respond to the speculative risks by holding high levels of reserves. The ratio of reserves to exports is 2-3 times that of the holdings of the industrial countries.[19] However, this is an expensive policy. Foreign investors have expectations of very high returns; yet, rather than using the funds for physical capital, the recipient countries invest in reserve assets – primarily U.S. government bonds – with low rates of return. Given the large potential magnitude of speculative capital, a high reserve policy can also create a false sense of confidence.

It is difficult to see the benefits of unrestricted capital convertibility if countries are forced to address the risk of a sudden reversal of the inflows by holding large amounts of low-return reserve assets. Thus, some countries may find it advantageous to restrict the magnitude of capital inflows more directly. It is argued that the introduction of restrictions on capital outflows may simple magnify a potential crisis by leading to exit in anticipation of controls; but the same arguments do not apply to prior limitations on inflows. On the basis of findings by Montiel and Rienhart (1999), it appears that capital controls can be effective in discouraging volatile inflows of portfolio capital without adversely affecting more stable flows such as FDI. Governments could easily rule out the issuance of public debt in a foreign currency, and restrictions on the foreign currency liabilities of domestic financial institutions ought to be a part of prudential regulation.

**Concluding Thoughts**

Emerging-market economies do experience considerable greater variability of output and inflation than industrial countries. Much of that variability can be traced to the periodic disruptions in their access to international capital markets. An argument has been made that

these countries would be better served by renouncing the use of fiscal and monetary policies for short-run counter-cyclical stabilization and adopting the dollar as their official currency. This argument would be strengthened if we could conclude that they have not been making effective use of stabilization policy in the past. However, with the exception of fiscal policy in Latin America,, the conduct of counter-cyclical policies in the emerging markets seems comparable to that of the industrial countries. While no policy is optimal for all countries, this paper has argued that that a combination of increased flexibility in exchange rate policy and some restrictions on foreign currency denominated debt is a more likely direction for future reform. In addition, emerging-market economies can respond to the concerns about credibility by being more explicit and transparent about the objectives of both fiscal and monetary policy, particularly with regard to inflation

[19] This represents a substantial change for Korea, which entered the 1997 crisis with the near absence of available reserves.

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**Table 1. Summary Measures of Macroeconomic Variability, 1975 - 1999**

| Region | Mean Real GDP Growth | Standard Deviation of: Real GDP Growth | Trade-Adjusted GDP Growth | Annual Inflation Rate |
|---|---|---|---|---|
| **OECD** | 2.7 | 2.1 | 1.7 | 5.4 |
| G7 Nations (7) | 2.6 | 1.9 | 1.7 | 4.4 |
| Other OECD Nations (11) | 2.8 | 2.2 | 1.8 | 5.8 |
| **Emerging Markets** | 5.3 | 4.6 | 4.1 | 27.4 |
| Latin America (8) | 3.5 | 4.6 | 4.6 | 34.2 |
| Asia (9) | 6.7 | 4.2 | 3.6 | 8.2 |

| Region | Mean Fiscal Balance | Standard Deviation of: Fiscal Balance | Current Revenues | Total Expenditure |
|---|---|---|---|---|
| **OECD** | 0.1 | 4.2 | 3.4 | 3.6 |
| G7 Nations | 0.2 | 3.5 | 2.9 | 2.7 |
| Other OECD Nations | 0.1 | 4.6 | 3.7 | 4.1 |
| **Emerging Markets** | -0.6 | 12.0 | 13.4 | 14.1 |
| Latin America | -0.4 | 14.4 | 17.3 | 18.0 |
| Asia | -0.7 | 10.0 | 8.3 | 9.6 |

| Region | Mean Real Interest Rate | Standard Deviation of: Real Interest Rate | Nominal Interest Rate | Exchange Rate |
|---|---|---|---|---|
| **OECD** | 3.0 | 3.5 | 4.5 | 5.1 |
| G7 Nations | 3.0 | 2.8 | 4.1 | 5.4 |
| Other OECD Nations | 3.0 | 3.9 | 4.6 | 4.8 |
| **Emerging Markets** | 2.5 | 9.8 | 19.9 | 9.3 |
| Latin America | 2.0 | 14.2 | 24.6 | 10.4 |
| Asia | 2.8 | 4.4 | 6.3 | 8.4 |

Source: OECD 2001 Statistical Compendium, World Bank World Development Indicators, International Financial Statistics, and JPMorgan.

Note: The fiscal data are for central government activities. Changes in GDP, government revenues and expenditures are measured as percentage changes in deflated values. The change in the fiscal balance is reported as a percent of revenues. Inflation is measured by the change in the GDP price deflator. The data set excludes 24 observations with inflation in excess of 200 percent per year.

**Table 2. Cyclical Properties of Fiscal Policy**

*Fiscal Balance*

| Region | Real GDP Change | Inflation Rate | Adjusted $R^2$ | NOBS |
|---|---|---|---|---|
| **OECD** | 0.82* | -0.14* | 0.06 | 426 |
| G7 Nations | 0.97* | -0.21* | 0.08 | 175 |
| Other OECD Nations | 0.74* | -0.11 | 0.03 | 258 |
| **Emerging Markets** | 0.65 | 0.13* | 0.00 | 362 |
| Latin America | -0.45 | 0.11 | -0.02 | 150 |
| Asia | 1.16* | 0.49* | 0.02 | 212 |

*Current Revenues*

| Region | Real GDP Change | Inflation Rate | Adjusted $R^2$ | NOBS |
|---|---|---|---|---|
| **OECD** | 0.77* | 0.18* | 0.15 | 426 |
| G7 Nations | 0.95* | 0.19* | 0.19 | 175 |
| Other OECD Nations | 0.75* | 0.17* | 0.12 | 258 |
| **Emerging Markets** | 1.68* | 0.02 | 0.26 | 365 |
| Latin America | 1.72* | 0.00 | 0.26 | 153 |
| Asia | 1.66* | 0.40* | 0.11 | 212 |

*Total Expenditure*

| Region | Real GDP Change | Inflation Rate | Adjusted $R^2$ | NOBS |
|---|---|---|---|---|
| **OECD** | -0.09 | 0.28* | 0.11 | 426 |
| G7 Nations | -0.02 | 0.34* | 0.26 | 175 |
| Other OECD Nations | -0.05 | 0.25* | 0.06 | 258 |
| **Emerging Markets** | 1.20* | -0.06 | 0.20 | 365 |
| Latin America | 1.63* | -0.09 | 0.26 | 153 |
| Asia | 0.57 | 0.11 | 0.00 | 212 |

Source: Author's calculations. Instrumental variables estimates.
Significance above the 5 percent level is indicated by an *.

**Table 3. Cyclical Properties of Monetary Policy**

| *Nominal Interest Rate* Region | Lagged Real GDP Change | Current Inflation | Lagged Inflation | Lagged Current Account Balance | Lagged Nominal Interest Rate | $R^2$ | NOBS |
|---|---|---|---|---|---|---|---|
| **OECD** | 0.24* | 0.18* | 0.07 | -0.14* | 0.70* | 0.79 | 428 |
| G7 Nations | 0.14* | 0.58* | -0.32* | -0.07 | 0.70* | 0.84 | 175 |
| Other OECD Nations | 0.25* | 0.05 | 0.19* | -0.16* | 0.69* | 0.77 | 260 |
| **Emerging Markets** | 0.19 | 0.31* | -0.18* | -0.08 | 0.74* | 0.82 | 370 |
| Latin America | 0.09 | 0.29* | -0.17* | -0.07 | 0.75* | 0.74 | 157 |
| Asia | 0.16* | 0.43* | -0.13* | -0.08* | 0.55* | 0.80 | 213 |

Source: Author's calculations. Ordinary least squares estimates.
Significance above the 5 percent level is indicated by an *.

**Table 4. Summary Measures of Macroeconomic Variability, By Subperiod**

| Region | Mean Real GDP Growth | | Mean Inflation | |
|---|---|---|---|---|
| | 1975-87 | 1988-99 | 1975-87 | 1988-99 |
| **OECD** | 2.6 | 2.7 | 9.0 | 3.6 |
| G7 Nations | 2.7 | 2.3 | 7.9 | 2.7 |
| Other OECD Nations | 2.5 | 3.0 | 9.8 | 4.2 |
| **Emerging Markets** | 5.2 | 5.5 | 22.4 | 16.0 |
| Latin America | 3.3 | 3.8 | 41.9 | 28.7 |
| Asia | 6.6 | 6.6 | 8.1 | 6.8 |

| | Mean Fiscal Balance | | Mean Real Interest Rate | |
|---|---|---|---|---|
| | 1975-87 | 1988-99 | 1975-87 | 1988-99 |
| **OECD** | -0.7 | 0.5 | 1.7 | 4.1 |
| G7 Nations | -0.8 | 0.3 | 1.7 | 3.8 |
| Other OECD Nations | -0.7 | 0.6 | 1.6 | 4.3 |
| **Emerging Markets** | -1.4 | 0.1 | 0.0 | 4.5 |
| Latin America | -1.8 | 0.9 | -2.9 | 5.7 |
| Asia | -1.1 | -0.4 | 2.1 | 3.6 |

Source: See Table 1.

**Figure 1. Capital Inflows to Emerging Markets**

Share of GDP

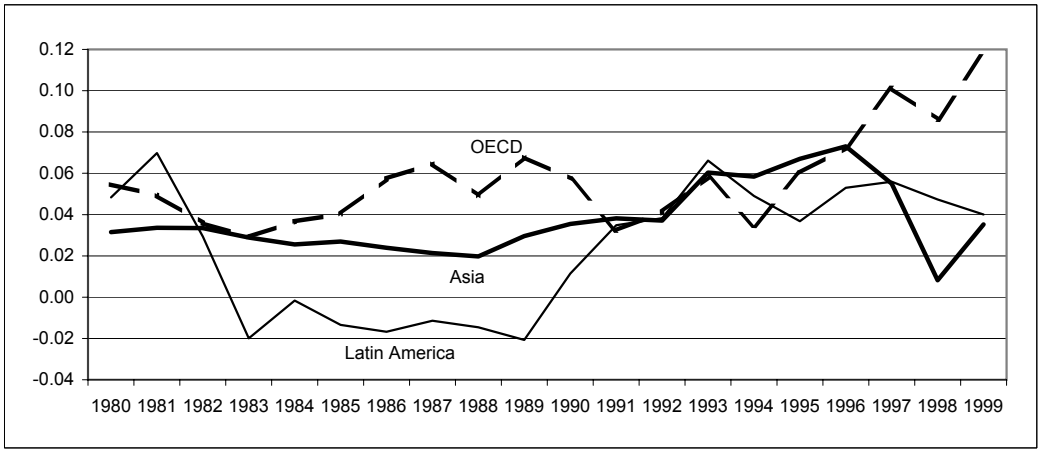



**Figure 2. Portfolio and Other Investment Flows to Emerging Markets**

Share of GDP (Excludes direct investment)

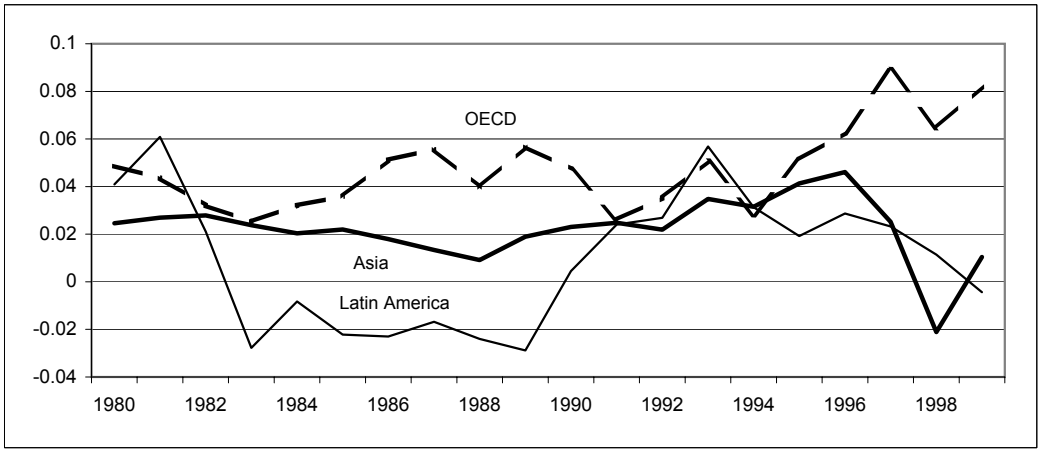
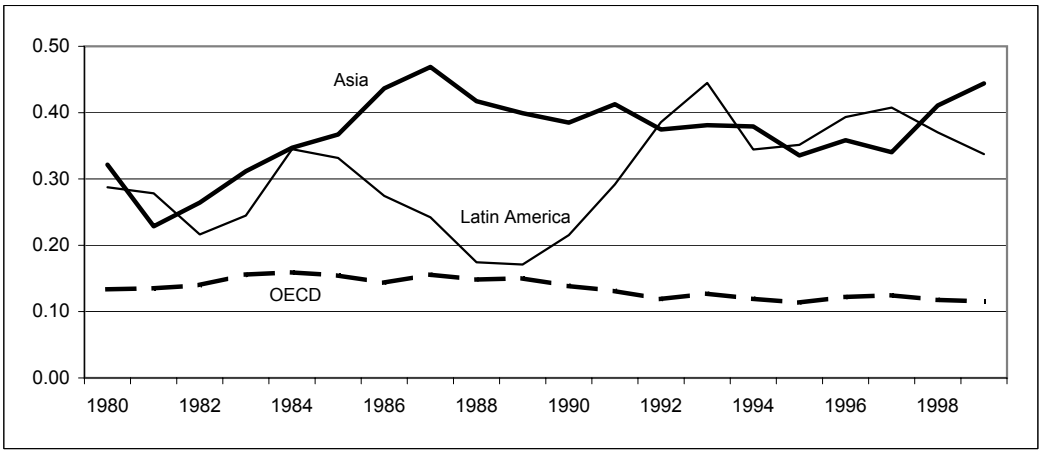



**Figure 3. Total Reserves of Emerging Markets**

Share of Exports




Source: Balance of Payments statistics of the IMF. Financial Flows are the sum of direct investment, portfolio capital, and other investment flows.