

COMMUNICATION FROM THE INTERNATIONAL MONETARY FUND

The following contribution has been received from the staff of the International Monetary Fund. It has been prepared in response to consultations between the WTO Director-General and the Deputy Managing Director of the IMF on how the IMF can provide support to the WTO Secretariat and Members in areas of its expertise.

TRADE RESTRICTIONS FOR BALANCE-OF-PAYMENTS PURPOSES

Note on Issues Raised by Developing Countries in the Doha Round¹

EXECUTIVE SUMMARY

A number of WTO members have noted in the context of discussions of special and differential treatment that increased capital account mobility has increased the prudent level of reserve holdings, and that trade restrictions can play a role in safeguarding reserves in the event of a capital account crisis. This note considers these and related issues. It concludes that increased capital account mobility has been accompanied by substantially increased volatility of capital flows, which clearly requires holding larger stocks of international reserves than suggested by current account considerations. However, it argues that in normal times when there is no crisis situation, trade restrictions for balance of payments purposes are not an appropriate or effective means for achieving a long-term target for desired growth in reserves. In crisis situations associated with capital outflows and reserve losses, the required policies are those that address the underlying financial imbalances and restore confidence in the economy. The imposition of trade measures in such crisis situations is therefore not an effective policy response. When countries are faced with reserve losses stemming from a current account crisis, the appropriate, first-best response involves the implementation of expenditure-changing and expenditure-switching (exchange rate) policies that bring spending into a sustainable relationship with output in a non-distortionary manner. Trade measures for balance of payments purposes are distortionary and distinctly second best. Only in extreme current account crisis situations where appropriate policies cannot be implemented in the necessary time frame should resort to such measures be contemplated, and then only a uniform tariff across all imports which has a clear timetable for expeditious elimination and which is part of policy package which is designed to address the payments imbalance on a sustainable basis.

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I. INTRODUCTION

1. The legal framework underlying the WTO provides for the use of import restrictions in cases where a member's international reserves are very low or where there is a substantial risk that the level of reserves may be sharply reduced. In particular, Article XII of GATT 1994 permits a member to adopt or maintain import restrictions in order to "(i) forestall the imminent threat of, or to stop, a serious decline in its monetary reserves, or (ii) in the case of a [member] with very low monetary reserves, to achieve a reasonable rate of increase in its reserves." The language in Article XVIII:9 of GATT is very similar. In addition, Article XII of the GATS permits restrictions on trade in services when "...particular pressures on the balance-of-payments of a Member in the process of economic development or economic transition may necessitate the use of restrictions to ensure, *inter alia*, the maintenance of a level of financial reserves adequate for the implementation of its program of economic development or economic transition."

2. In its consideration of these issues regarding the particular circumstances of a member, the WTO Committee on Balance of Payments Restrictions is required to consult with the Fund and seek its assessment of the balance of payments and external financial situation of the country, and the extent to which its reserve position has been adversely affected by recent economic developments. The role of the IMF in these consultations is described in detail in a note by the Secretariat entitled "Reserve Adequacy."²

3. One issue that has arisen in recent years in the deliberations of the Committee on this topic is the extent to which the increased level and volatility of international capital flows have a bearing on the prudent level of reserve holdings, as well as the use of trade restrictions to moderate reserve losses in capital account crises. This note first considers the theoretical considerations and empirical evidence on the relationship between capital flow volatility and reserves. Second, it briefly describes recent capital account crises and the policy lessons for emerging market economies. Against this background, the next section considers the suitability and effectiveness of trade restrictions for achieving objectives relating to a country's international reserve holdings in two different situations: first, in normal times in the absence of a crisis, when a country aims to achieve a long-term target for growth in its reserves, and second, in situations where there is a serious risk that reserves will be drawn down in the face of an acute payments crisis. The final section summarizes the main conclusions of the analysis.

II. INCREASED CAPITAL ACCOUNT MOBILITY AND PRUDENT RESERVE HOLDINGS³

4. As international reserves are used primarily to finance external imbalances through intervention in foreign exchange markets, and thereby reduce the need to adjust quickly to disturbances generating the imbalances, the level of reserves would be expected to bear a fairly close relationship to those factors that affect the magnitude of these imbalances. Most studies of reserve-

² This note, WT/BOP/W20, 2 September 2002, was discussed by the Committee on Balance-of-Payments Restrictions on 2 October 2002. A "Statement on Reserve Adequacy for the WTO Committee on Balance of Payments Restrictions," prepared by the Policy Development and Review Department, was delivered by the Geneva Office on 2 October.

³ Official foreign exchange reserves need to be adequate in order to: maintain confidence in the policies for monetary and exchange rate management, including the capacity to intervene in support of the national currency; limit external vulnerability by maintaining foreign currency liquidity to absorb shocks during times of crisis or when access to borrowing is curtailed, and in doing so provide confidence to markets that a country can meet its external obligations; demonstrate the backing of domestic currency by external assets; assist the government in meeting its foreign exchange needs and external debt obligations; and maintain a reserve for national disasters and emergencies. (*Guidelines for Foreign Exchange Reserve Management*, SM/01/264, 17 August 2001, p. 7.)

holding behaviour indicate that such holdings are positively associated with a scale variable (either aggregate output or imports) and to external payments variability.⁴ There is also evidence, although less strong, that reserve holdings depend on the nature of a country's exchange rate regime, the degree of openness, and the opportunity cost of holding reserves.

5. While the demand for reserves has traditionally been viewed as determined by developments in the current account, recent crises involving emerging market economies have clearly demonstrated that changes in investors' views on a country's economic prospects can generate major disturbances to the capital account. Adverse economic developments in a country and changes in mature financial markets can lead to sudden withdrawal of capital, and outflows can also be induced by contagion from other countries. The increasing openness of the capital account has heightened the vulnerability of emerging market economies to fluctuations arising in this component of the balance of payments.⁵

6. Research work in the Fund and elsewhere suggests that the ratio of reserves to short-term debt is a key indicator of reserve adequacy in countries with substantial but uncertain access to capital markets.⁶ Indeed, this indicator is used in the Early Warning System model developed by Fund staff for emerging market economies.⁷ From a crisis prevention perspective, the ratio of international reserves to short-term debt has been found to be the most relevant indicator of reserve adequacy for emerging market countries. As a predictor and as an explanation of the depth of recent emerging market crises, this ratio empirically outperforms other indicators, including ratios of reserves to imports or to broad money.⁸ Thus there has definitely been a "paradigm shift" away from current to capital account considerations in the assessment of reserve adequacy, with particular focus on a benchmark that targets coverage of all short-term external debt.

7. As expressed by the ratio of non-gold reserves to short-term debt, this indicator rose sharply in the early 1990s for emerging markets and developing countries, but has shown no trend since then (Figure 1). This shows that the future evolution of the short-term debt stocks of these countries is likely to be an important factor in their demand for reserves, in addition to the growth in their imports of goods and services.

8. In general, countries that are subject to greater volatility can be expected to have larger reserve holdings to help buffer themselves from the effects of shocks. One approach to measure the effect of volatility would be to combine elements of the variability of both the current and capital accounts in order to capture a broader sense of the volatility of external transactions. One such

⁴ For a recent survey and contribution to the literature on factors affecting holdings of international reserves, see Robert Flood and Nancy Marion, "Holding International Reserves in an Era of High Capital Mobility," IMF Working Paper WP/02/62, April 2002.

⁵ Flood and Marion (2002) find some evidence that reserve holdings are positively related to financial openness, as measured by the ratio of gross capital flows to GDP. In addition, Joshua Aizenman and Nancy Marion, "The High Demand for International Reserves in the Far East: What's Going On?," paper prepared for the Federal Reserve Bank of San Francisco conference on Financial Issues in the Pacific Basin Region, 26-27 September 2002, provide evidence suggesting that several countries in the Far East increased their reserve holdings as a result of the recent Asian financial crisis.

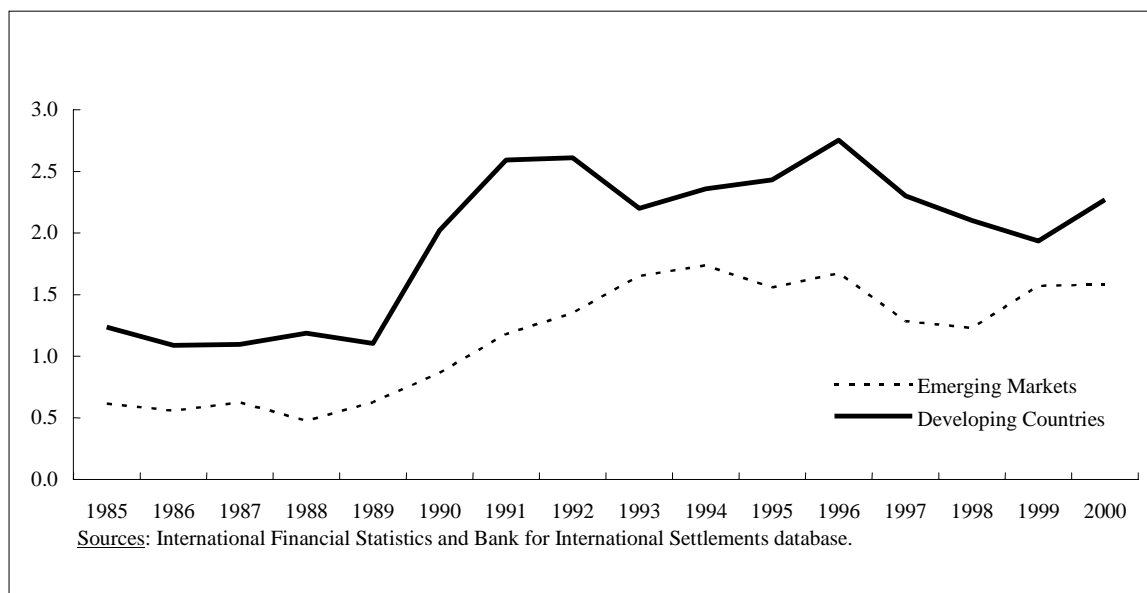
⁶ See, for instance, Dani Rodrik and Roberto Velasco, "Short-term Capital Flows," paper presented at the ABCDE Conference at the World Bank, 1999; Andrew Berg, et al., *Anticipating Balance of Payments Crises – The Role of Early Warning Systems*, Occasional Paper 186, IMF, 1999; Jason Furman and Joseph Stiglitz, "Economic Crises: Evidence and Insights from East Asia," *Brookings Papers on Economic Activity*, Vol. 2, 1998, and J. Onno Wijnholds and Arend Kapteyn, "Reserve Adequacy in Emerging Market Economies," IMF Working Paper WP/01/143.

⁷ See Berg et al., 1999.

⁸ For a discussion of these results, see Mathieu Bussiere and Christian Mulder, "External Vulnerability in Emerging Market Economies: The Trade-Off Between Fundamentals and Liquidity," IMF Working Paper, WP/99/98, 1999.

measure was considered recently in the context of ongoing work in the Fund on alternative quota formulas: the variability of the sum of current receipts and net capital flows (standard deviation of a

Figure 1. The Median Ratio of Non-gold Reserves to Short-Term Debt, 1985-2000



three-year moving average calculated using annual data for 1987–1999).⁹ This measures the fluctuations in external transactions over a period of time, which would appear to contain relevant information regarding a country's balance of payments financing needs and therefore demand for reserves. To be useful for assessing changes in the demand for reserves over time, a long time series for this variable would be needed, similar to that for imports of goods and services. However, lack of suitable data precludes this. Nonetheless, this measure of variability can be computed for the two halves of the sample period 1987–1992 and 1993–1999. This shows that between 1987–1992 and 1993–1999, variability increased by 25, 75, and 225 per cent for developing, advanced, and emerging market countries, respectively. This finding is consistent with the very large increase in reserve holdings of emerging market countries during the 1990s.

9. Other developments could act to reduce the demand for reserves. To the extent that countries respond to external imbalances by allowing the price, rather than the quantity, of foreign exchange to adjust, the need for reserves to intervene in the foreign exchange market would be expected to diminish. This expectation appears to conflict, however, with the massive increase in reserves for most countries since 1970, including floaters and countries that have moved to a more flexible exchange rate regime. Even if a country typically intervenes only rarely to influence its exchange rate, it would still want to hold reserves and probably increase them over time in order to help insulate its economy from large movements in the terms of trade, as well as to provide confidence in its ability to service its debt and thereby help avoid sudden stops or sharp reversals in capital flows. Some empirical studies have found that the move to greater exchange rate flexibility following the collapse of the Bretton Woods system did appear to reduce the demand for reserves for both developed and

⁹ See *Alternative Quota Formulas – Considerations*, SM/01/293 (27/9/01). Capital flows relate to cross-border transactions in all financial assets and liabilities except reserve assets, Fund credit, and exceptional financing.

developing countries.¹⁰ However, while Mussa et al., show that the number of countries with *de jure* flexible exchange rates has increased over the past twenty years, Calvo and Reinhart argue that *de facto* flexibility has increased to a far lesser extent.¹¹ Moreover, Reinhart and Rogoff find that the breakup of Bretton Woods had a much less significant impact on exchange rate regimes than generally believed.¹² This finding suggests there was no clear wholesale move to freely floating rates, implying that any reduction in the demand for reserves from this development would be modest.

10. Any tendency for the demand for reserves to fall on account of possible greater exchange rate flexibility appears to have been offset by large shifts in capital flows. Such disturbances have greatly increased in magnitude, especially for emerging market economies, which has put a premium on having a suitably large stock of international reserves to reduce countries' vulnerability to such disturbances.¹³ Indeed, the Fund has been urging members to give greater prominence to holding adequate stocks of reserves to reduce external vulnerability, in particular arising from capital account volatility.¹⁴

11. Thus as countries open up their capital accounts, they become more vulnerable to shifts in financial flows. Larger stocks of international reserves can help to mitigate the adverse impact of such flows on an economy in at least two ways. First, the higher stock of officially-held foreign assets can give confidence to both foreign and domestic investors that the country has sufficient resources to avoid a large-scale depreciation in its exchange rate, which itself can help mitigate capital outflows. Second, the larger reserve stock can be used to moderate declines in the value of the currency arising from capital outflows, thereby helping to moderate the domestic economy from the inflationary and interest rate effects of an exchange rate depreciation and insulate the domestic economy from capital account shocks.

III. RECENT CAPITAL ACCOUNT CRISES AND POLICY LESSONS

12. In order to appraise the role of trade restrictions for balance of payments purposes where capital flows generate major disturbances to external accounts, it is first necessary to understand the forces generating recent capital account crises and the appropriate policy responses for dealing with

¹⁰ See, for example, Lizondo, J.S. and D.J. Mathieson, 1987, "The Stability of the Demand for International Reserves," *Journal of International Money and Finance*, Vol. 6, pp. 251–282; and Bahmani-Oskooee, M. and M. Malixi, 1987, "Effects of Exchange Rate Flexibility on the Demand for International Reserves," *Economic Letters*, Vol. 23, pp. 89–93.

¹¹ Michael, Mussa et al., *Exchange Rate Regimes in an Increasingly Integrated World Economy*, Occasional Paper 193, IMF, 2000; and Guillermo, Calvo and Carmen Reinhart, "Fear of Floating," *Quarterly Journal of Economics*, Vol. 117, May 2002, pp. 379–408.

¹² Reinhart, Carmen M., and Kenneth Rogoff, "The Modern History of Exchange Rate Arrangements: A Reinterpretation," NBER Working Paper 8963, June 2002. Looking at market-determined exchange rates, they find that it is difficult to detect any change in exchange rate behaviour for many countries, as the demise of the Bretton Woods system appears to have been manifested largely in the shift to floating of the U.S. dollar, the yen, and the German mark.

¹³ This point has been made forcefully by J. Onno Wijnholds and Arend Kapteyn in "Reserve Adequacy in Emerging Market Economies," IMF Working Paper WP/01/143 (September 2001). They argue that the old rule of thumb of maintaining reserves equal to three months of imports is no longer valid, as it ignores the increased importance of capital flows in assessing reserve adequacy.

¹⁴ See *Debt- and Reserve- Related Indicators of External Vulnerability*, SM/00/65 (23/3/00), *Approaches to Vulnerability Assessment for Emerging Markets*, SM/01/301 (10/3/01), *Guidelines for Foreign Exchange Reserve Management*, SM/01/264 (17/8/01), and *Issues in Reserve Adequacy and Management*, SM/01/311 (16/10/01)

them.¹⁵ These issues are discussed below. The following section then deals with the role of trade restrictions in this context.

13. The recent capital account crises in emerging markets confronted the affected countries with new challenges in designing the appropriate policy response. The central feature of all these crises was the rapid reversal of capital inflows, bringing about a large and abrupt current account adjustment with pervasive macroeconomic consequences. The crises were characterized by an over-adjustment of external current accounts relative to what was needed for any reasonable estimate of sustainability. The underlying vulnerabilities generating these outflows reflected primarily stock imbalances: high levels of public debt, maturity or currency mismatches in the structure of private sector liabilities, or highly leveraged positions. The fact that the vulnerabilities were mainly related to stock imbalances, rather than traditional flow disequilibria, made more difficult the formulation of the appropriate macroeconomic policy response. It also created an environment in which it became rational for investors to shift their funds out of the country on a massive scale. The sources of these vulnerabilities differed across the crisis countries: in Latin America, Russia, and Turkey, they were primarily rooted in the public sector; in Asia, in the private sector.

14. In some cases, e.g., Korea and Thailand, the surge in capital inflows helped to finance investments that proved unprofitable when capital was no longer available on its initial, attractive terms. This left both banks and other firms vulnerable to the higher interest rates that emerged as investors lost confidence in the economic prospects of the country. The sharp declines in value of the crisis-hit currencies prompted the monetary authorities to raise official interest rates to reflect market pressures and to defend the value of their currencies. Moreover, in most countries during the upswing phase, domestic residents borrowed heavily abroad in foreign currencies, largely U.S. dollars, as interest rates on such loans were below those available domestically and as borrowers perceived the risk of a significant devaluation of their currency as very low, particularly given policies oriented toward exchange rate stability. When the crisis came, both domestic financial institutions and other firms were hit hard by both the rising cost of foreign borrowing, to the extent it was available at all, and by the rising domestic-currency value of foreign-currency-denominated debt as the domestic currency depreciated, which exacerbated their debt burden. The spread of bankruptcies led to a deterioration in banks' balance sheets, which made them reluctant to extend new loans, thereby starving firms of much needed capital.

15. In the economies of east Asia at the center of the 1997–98 crisis, several factors – exacerbated by contagion among them – contributed to the dramatic deterioration in sentiment on the part of foreign and domestic investors.¹⁶ These factors were: (i) overheating pressures that were manifested partly in large external deficits and in inflated property and equity prices; (ii) the maintenance for too long of pegged or quasi-pegged exchange rates, which came to be viewed as an implicit guarantee against the rise in the domestic value of foreign debt, thereby encouraging external borrowing – often at short maturities – and a consequent excessive exposure to foreign exchange risk in both financial and corporate sectors; (iii) in financial institutions, weak management and poor control of risks, lax enforcement of prudential rules and inadequate supervision, and relationship and government-directed lending practices that led to a sharp decline in the quality of banks' loans; (iv) problems of data availability and transparency, which to some extent concealed economic fundamentals; and (v) problems of governance and political uncertainty, which made foreign investors reluctant to roll over short-term loans and added to downward pressure on exchange rates and stock markets. In Mexico, Russia, Argentina, and Brazil, many of these same factors were also present, but unlike in Asia, fiscal

¹⁵ For an extensive discussion of these issues, see A. Ghosh, et al., *IMF-Supported Programs in Capital Account Crises*, IMF Occasional Paper 210, 2002.

¹⁶ See IMF, *World Economic Outlook*, May 1998, and Timothy Lane, et al., "IMF-Supported Program in Indonesia, Korea, and Thailand: A Preliminary Assessment," IMF Occasional Paper 178, 1999.

deficits also played a prominent role in generating the crisis. In all cases large external debt, largely denominated in foreign currencies, made the countries vulnerable to a loss of investor confidence.

16. Given the large exchange rate movements associated with these crises, which significantly overshoot any reasonable estimate of equilibrium levels, monetary policy faced the challenge of maintaining or regaining nominal stability. Monetary policies were thus tightened at some stages in all of these cases, but in many cases with significant hesitation. Once monetary policy was tightened in a determined way, market conditions stabilized, and the period of high real interest rates was typically short-lived; nominal stability was preserved or restored. But at the same time, in most of these crises, monetary policies were handicapped by the loss of a nominal anchor, as they were driven off a previous exchange rate peg. Brazil responded by introducing formal inflation targeting soon after floating the real, but in other cases the authorities relied on a less formal price stability objective.

17. Fiscal policies played a different role in different countries. In some cases – such as Argentina, Brazil, and Turkey – establishing fiscal sustainability in the face of adverse debt dynamics or a fragile public debt structure was essential to build confidence. In other cases, notably the Asian crisis countries, fiscal sustainability by and large was not a major issue, and efforts at fiscal adjustment were not crucial in boosting confidence. Taken together, the evidence suggests that fiscal adjustment is an essential part of the solution if fiscal unsustainability is a major part of the problem to begin with. Fiscal adjustment that is unnecessary from a medium-term perspective is unlikely to have a favourable confidence effect.

18. Some degree of exchange rate flexibility is desirable in most countries that are open to international capital flows. Flexible exchange rate regimes provide incentives for market participants to take account of the risks associated with open foreign exchange positions and avoid currency and maturity mismatches of the kind that were at the heart of the crises. At the same time unbridled exchange rate movements should not be viewed with equanimity, particularly where liabilities are heavily dollarized. While such "fear of floating" is sometimes used as the basis for a case for an institutional "hard peg," the most recent crisis in Argentina highlights that even hard pegs are vulnerable in the face of sufficiently adverse economic developments and weak policies.

19. Structural reforms were an essential part of the solution in many of these cases. The main purpose of these reforms was to address the vulnerabilities that had contributed to the shift in market sentiment. In the Asian crisis countries, the programs sought both to address the financial system weaknesses that were at the heart of the crisis and to clean up the wreckage of insolvency that had resulted from the exchange rate and interest rate movements associated with the crisis itself. In Mexico, reforms were needed to restore the health of the banking system. In Brazil, the primary objective of structural reform in 1998 was to underpin fiscal sustainability – and, indeed, doubts about the authorities' commitment to undertake these reforms was a major reason for the loss of market confidence.

20. The policy lessons from this experience underscore that emerging market countries need to do more to protect themselves from the vulnerabilities and fragilities that trigger capital account crises. Prevention requires that countries develop and maintain a solid financial sector, pursue sound economic policies, avoid unsustainably large current account deficits and large stocks of short-term debt, and strengthen their national (including private sector) balance sheets. As described above, countries must also maintain larger stocks of international reserves to help insulate themselves from the effects of volatile capital flows. Larger foreign exchange reserves and credit lines from private and official creditors, while entailing costs of their own, are likely to be far less expensive than the painful adjustment required in their absence in the event of a crisis.

21. The extent to which a country should augment its reserve holdings to insulate itself from erratic capital flows clearly depends on the openness of its capital account and the magnitude of

capital flows relative to the size of its economy. Obviously all emerging market economies, almost by definition, need to be cognizant of their vulnerability to capital flows and the resulting increased need for reserves. Indeed, as noted in the previous section, many have added considerably to their reserve holdings during the 1990s. For other developing countries, however, the extent of the openness of their capital accounts is not easy to measure. The IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions* records the presence of capital controls, and starting with the 1997 issue, separates out 13 categories of transactions subject to controls.¹⁷ However, this is only an "on/off" measure of capital controls that does not convey the intensity with which they are enforced. It is therefore not a reliable indicator of capital account openness for individual countries.

22. Alternatively, one can use a quantitative measure of capital flows relative to the size of an economy. Such a measure would reveal the actual openness of the capital account and would reflect the extent and degree of compliance with capital controls. In order to smooth out short-run fluctuations in capital flows, Lane and Milesi-Ferretti have used the stock of cumulative flows of FDI, portfolio, and loan claims and liabilities as a per cent of GDP as a long-run indicator of financial openness.¹⁸ Table 1 shows this measure of financial openness for those countries for which data are available for 1998. For these countries the average ratio is 33 per cent, which is considerably smaller than the average ratio of 106 per cent for the group of G-7 and 14 smaller industrial countries for which data are available. Thus this measure of financial openness reveals what one would expect, namely, that industrial countries are much more open to international financial transactions than developing and emerging market economies.

23. This measure may be of some use for identifying those non-industrial countries which are likely to be more vulnerable to volatile capital flows, and hence in particular need of adding to their reserve stocks to help insulate themselves from such volatility. It is noteworthy that the average of this measure for the twelve emerging market economies that have been subject to crises is 57 per cent, which is above that for the group as a whole.¹⁹ However, some of the countries in this group have a rather low ratio of external claims and liabilities relative to GDP, although they are quite open financially and have experienced large capital outflows. Nonetheless, it would seem reasonable that, broadly speaking, the higher this ratio, the more likely it is that a country will be vulnerable to volatile capital flows and would need to augment its reserves for this reason. In addition, as emphasized in Section II above, countries with relatively high levels of short-term external debt are particularly vulnerable to capital account crises, and need to assess their reserve stocks in light of the level of these liabilities. Moreover, many countries are not included in Table 1 because the data are not available. In these cases it would seem plausible to infer that they would not be that open financially, and therefore less likely to need to augment their reserves to deal with capital account crises.

24. By the same token, those countries which rank low on this measure of capital account openness would typically be less prone to capital account disturbances, and hence would have less

¹⁷ For a description of this and other measures of capital controls, see Hali Edison, *et al.*, "Capital Account Liberalization and Economic Performance: Survey and Synthesis," IMF Working Paper WP/02/120, July 2002.

¹⁸ See Phillip Lane and Gian Maria Milesi-Ferretti, "The External Wealth of Nations: Measures of Foreign Assets and Liabilities for Industrial and Developing Nations," *Journal of International Economics*, Vol. 55, December 2001, pp. 263-394. It should be noted that this is by no means a perfect measure of capital account openness. First, a country may be relatively open in one type of capital, e.g., FDI, but closed in other types, and therefore not as vulnerable to volatile capital flows as the figure in Table 1 might suggest. Second, the magnitude of the stock of claims and liabilities depends in part on how long a country has had an open capital account.

¹⁹ These twelve countries are: Singapore, Chile, Malaysia, Mexico, Argentina, Uruguay, Brazil, Thailand, Turkey, Philippines, Indonesia, and Korea.

need for recourse to trade restrictions for balance of payments purposes.²⁰ For example, Bangladesh, India, and Pakistan would not appear to be vulnerable to capital account crises on the basis of this measure.

Table 1

Gross External Assets and Liabilities for Developing and Emerging Market Countries, 1998^{1/}
(In per cent of GDP)

Country	1998	Country	1998
Singapore	356.3	Honduras	18.5
Bahrain	254.6	Indonesia	18.4
Lesotho	137.5	Armenia	18.3
Nigeria	135.7	Saudi Arabia	18.1
Panama	111.8	Côte d'Ivoire	18.1
Angola	106.4	Kyrgyz Republic	17.8
Trinidad and Tobago	102.8	Korea	17.4
Malaysia	71.2	Ghana	17.4
Azerbaijan	69.6	Brazil	17.1
Papua New Guinea	68.3	Cameroon	16.9
Hungary	65.6	Togo	16.6
Chile	64.2	Jordan	16.5
Bulgaria	61.3	Oman	16.2
Zambia	61.0	Guatemala	16.1
Estonia	59.9	Romania	16.1
Latvia	46.2	Albania	15.0
Jamaica	46.1	Morocco	14.3
South Africa	40.9	El Salvador	14.2
Bolivia	40.0	Slovenia	14.0
Colombia	38.3	Mauritania	13.7
Nicaragua	38.3	Turkey	13.3
Peru	35.5	Central African Rep.	12.2
Lao People's Dem. Rep.	34.7	Croatia	11.9
Thailand	34.1	Sri Lanka	11.8
Kazakhstan	32.0	Gabon	11.4
Czech Republic	30.9	Mauritius	10.3
China	29.7	Ukraine	9.9
Cambodia	29.4	Kuwait	9.9
Chad	29.1	Guinea	9.5
Venezuela	29.0	Georgia	9.5
Costa Rica	28.9	Mongolia	9.5
Namibia	28.6	Pakistan	8.6
Israel	27.2	Haiti	8.0
Ecuador	26.4	Niger	7.8
Tunisia	26.1	Kenya	7.3
Mexico	26.0	Sudan	7.0
Argentina	25.4	Russia	6.6

²⁰ As discussed in the next section, the case for implementing trade restrictions in such circumstances is very weak.

Country	1998	Country	1998
Slovak Republic	25.3	Uzbekistan	6.3
Botswana	25.0	Zimbabwe	5.3
Moldova	24.3	Madagascar	5.2
Dominican Republic	23.4	Macedonia, Former Yugoslav Rep. of	5.0
Poland	22.8	Algeria	4.6
United Arab Emirates	22.5	Syrian Arab Rep.	4.5
Uruguay	21.1	India	3.3
Lithuania	19.3	Burkina Faso	3.2
Egypt	19.1	Bangladesh	1.2
Philippines	19.0	Nepal	1.2
Turkmenistan	18.7	Belarus	1.1
Paraguay	18.5	AVERAGE	33.4

Sources: Financial assets and liabilities in U.S. dollars from Phillip Lane and Gian Maria Milesi-Ferretti, "The External Wealth of Nations: Measures of Foreign Assets and Liabilities for Industrial and Developing Nations," *Journal of International Economics*, Vol. 55, December 2001, pp. 263-394. GDP in U.S. dollars from the World Bank, World Development Indicators.

^{1/} Ranked in descending order of gross assets and liabilities as a per cent of GDP.

IV. SUITABILITY AND EFFECTIVENESS OF TRADE RESTRICTIONS FOR MANAGING INTERNATIONAL RESERVES

25. In a world of high capital mobility, as argued above, countries which are open to capital flows will need to hold higher levels of international reserves to be better able to buffer themselves from balance of payments disturbances arising in the capital account. The question arises as to the appropriateness of the maintenance or imposition of trade restrictions in order to achieve adequate stocks of international reserves. It is important to consider two aspects of this question. The first is whether such restrictions have a role to play in facilitating the long-run growth in reserve holdings in non-crisis situations. The second is their potential usefulness in situations where there is a serious risk that reserves will be drawn down in the face of a large payments crisis.

A. POLICIES TO ACHIEVE LONG-RUN GROWTH IN RESERVES

26. Long-run growth in reserves needs to be brought about by means of an explicit strategy that combines appropriate exchange rate and macroeconomic policies designed to achieve the current and capital account positions consistent with reaching the reserve accumulation target. More generally, the growing recognition of the important role of reserves in crisis prevention and in buffering economies from payment shocks has given reserve management a more prominent role in national economic policies. The determination of an adequate level of reserves, the means by which reserves are funded, and the practices governing when and for what purposes reserves are used require the development of an integrated set of policies for reserve management.²¹ Such an approach helps achieve one of the principle aims of reserve adequacy, namely, to promote domestic and foreign confidence in a country's economic policies. Such confidence would not be generated, but more likely undermined, if trade restrictions were used for the express purpose of increasing international reserves in the absence of a payments crisis.

²¹ See *Issues in Reserves Adequacy and Management*, SM/01/311, 16 October 2001.

27. Moreover, trade restrictions for balance of payments purposes are designed to be put in place only for a limited period of time to deal with a short-run payments problem. Hence in normal times when there is no payments crisis, resort to trade restrictions would not be appropriate. In addition, they are not effective tools for achieving a medium- or long-term target for reserve growth, as the effectiveness of trade measures for balance of payments purposes is questionable in the medium to long run. The short-run impact of tariffs and quotas on the current account may be positive, as importers shift from foreign to domestic suppliers. However, over time this effect will dissipate for at least three reasons. First, tariffs and quotas give rise to an anti-export bias as the bidding of resources into import-competing activities makes inputs to export production more expensive, thereby diminishing the attractiveness of exporting. Second, the shift in demand from foreign to domestically-produced substitutes raises the prices of the latter, causing domestic prices to rise which will at least partially offset the initial impact of the trade measures on the current account. Finally, in countries where there is significant capital mobility, the imposition of trade restrictions may be counterproductive; as noted above, they may signal that the country faces a severe payments problem and generate a capital outflow.

28. Rather than seek to augment reserves on a long-term basis using trade restrictions, it is far more preferable to adopt appropriate macroeconomic policies to achieve an improvement in the current account. Such policies are particularly relevant for those developing countries which have little or no access to international capital markets, and are best seen in the context of the relevant macroeconomic framework. A country's external balance, as measured by the external current account, can be expressed as the difference between income and expenditure:

$$CA = Y - (C + I + G)$$

where CA is the current account balance, Y is national income, and (C + I + G) is domestic demand (absorption), equal to the sum of consumption (C), investment (I) and government spending (G). This shows that an improvement in the current account requires a reduction in domestic spending relative to output. This could be brought about, for example, by a tighter monetary policy to curb consumption and investment spending. Alternatively, a country's external current account balance can be represented as:

$$CA = (S - I) + (T - G)$$

where S is private saving, I is private investment, T is total tax revenue, and G is government spending. Expressed this way, the current account is equal to net private saving plus the government fiscal position. From this perspective, a current account improvement requires an increase in saving relative to investment, which could be achieved, for example, by an improved fiscal position. This framework shows that the current account reflects macroeconomic developments, and its adjustment require corresponding policies.

29. In addition to policies involving expenditure reduction, it is important in most cases that they be accompanied by policies that facilitate the switch of expenditure from foreign to domestic goods. This is most efficiently accomplished by an exchange rate arrangement that permits a depreciation of the currency which simultaneously discourages imports and encourages exports of goods and services. By contrast, import restrictions affect only one side of the trade account, and typically only on a temporary basis.

30. For countries which have access to international financial markets, the long-run augmentation of reserves in normal times can also be achieved through two channels in the capital account. First, macroeconomic, financial, and regulatory policies that are conducive to an expanding and efficient domestic economy will also tend to attract private capital from abroad. Such inflows will typically be associated with upward pressure on the exchange rate and provide an opportunity for the monetary

authorities to intervene in the foreign exchange market to acquire reserves. This channel provided a major source of reserve growth for emerging market economies, especially in Asia, in the 1990s.²² Second, these economies can access international capital markets directly for the explicit purpose of augmenting their reserves. Many countries have found that such borrowed reserves can be obtained on favorable terms in normal times when they or other emerging markets are not subject to a payments crisis.

B. POLICIES TO DEAL WITH AN ACTUAL OR PROSPECTIVE LOSS IN RESERVES IN CRISES

31. Regarding the use of trade restrictions in crisis situations where there is an actual or prospective severe drawdown of reserves, it is important to distinguish between current and capital account crises. In the latter case, it is necessary to consider the connection between trade restrictions and the factor singled out as adversely affecting reserves, namely, capital outflows. While there are important relationships between the current and the capital account (trade credits being only one),²³ the links between them in this particular case are tenuous at best. Here the general point that instruments need to be related to appropriate targets is relevant: where there is a threat to a country's reserve stock emanating from the capital account, the policy response should be targeted at the underlying cause of the capital outflow. As discussed in Section III above, in some cases such outflows reflect unsustainable fiscal and monetary policies, while in others unsustainable debt positions in domestic banking and corporate sectors are a major factor. Hence, trade restrictions intended as a response to reserve declines generated by a capital account crisis would be very inefficient instruments to achieve the desired results, as the balance of payments disturbance does not arise in the current account.²⁴

32. It is noteworthy that there was very little recourse to tariff increases in the countries affected by capital account crises: Mexico increased tariffs in 1995 on non-NAFTA imports by about 3 per cent, Brazil slowed planned reductions in the MERCOSUR common external tariff after a 3 per cent increase in 1997, and there were a few selective tariff increases in Thailand and Malaysia. Indeed, countries with Fund-supported programs moved ahead with their trade liberalization commitments. However, there was some use of non-tariff barriers: Brazil introduced an import fee in 1998, Argentina put in place a compulsory import deposit requirement in 1999, Chile tightened its anti-dumping rules and introduced a safeguard law to counter "unfairly priced" imports, and Mexico introduced minimum import reference prices.

33. In the case of payments crisis arising in the current account, although trade restrictions are permitted under WTO rules, they are not the most efficient way to address deficits arising from current account transactions. Rather, as implied by the macroeconomic framework described above, payments imbalances are best corrected by macroeconomic measures that are directly related to the root cause of the imbalance, namely, the excess of domestic spending over income, or equivalently, an excess of investment over saving – through appropriate monetary, fiscal, and exchange rate policies, rather than through trade barriers. Current account deficits can arise from many sources, such as fiscal

²² However, as described in Section III above, such capital inflows can be excessive, leading to an overheated domestic economy and investments that ultimately prove to be unprofitable, and can result in capital account crises.

²³ For a recent discussion of the links between trade and financial integration, see Chapter III, "Trade and Financial Integration," in the IMF *World Economic Outlook*, September 2002.

²⁴ A similar view is expressed in a Note by the WTO Secretariat ("The Treatment of 'Monetary Reserves' in WTO Balance-of-Payments Committee Consultations," WT/TF/COH/S/2, 18 June 1999, para. 54): "With more and more WTO Members participating actively on international capital markets, capital account developments have taken on increased importance for many Members in prudent management of their overall balance-of-payments situation, as the recent 'emerging markets' financial crisis has shown. One implication of this is that trade restrictions are a less suitable tool for managing balance-of-payments problems, where these relate to capital account as opposed to current account developments."

imbalances, a cyclical boom in consumption and/or investment generated by an expansionary monetary policy, a deterioration in the terms of trade that leads to a loss in export revenue, and an overvalued exchange rate. In each case the appropriate policy response is to target as closely as possible the underlying cause of the payments imbalance, which may require a tighter fiscal stance, a tighter monetary policy to rein in excessive private spending, and a depreciation of the exchange rate. A current account imbalance should be addressed with macroeconomic tools, namely, a combination of measures to reduce domestic spending – expenditure reduction – and expenditure switching generated by a real exchange rate depreciation which raises the price of tradables relative to nontradables, thereby encouraging exports and discouraging imports.

34. The usual justification for raising import tariffs is that notwithstanding their longer-term efficiency costs and long-run ineffectiveness, they may have some short-term macroeconomic benefits. In particular, they are typically justified as a means to address fiscal or balance of payments difficulties in an expeditious manner. By raising the price of imports, they may be able to switch demand to domestic goods and improve the current account, at least in the short term. Moreover, by raising revenue, tariffs may reduce fiscal deficits and improve the savings-investment balance in the short run, thereby also improving the external position.

35. However, tariffs as well as quotas are distortionary, inefficient, and ineffective in the long run, and hence very much second-best solutions. The costs of protection in the form of tariffs and quotas arise both from the distortions generated in the pattern of production and in the use of inputs in production, and from the distortions caused in the pattern of consumption brought about by price signals that do not correctly reflect the trading opportunities open to a country. More generally, the effect of protection is to lead to excess production of import-competing relative to export production, as well as to distortions within the import-competing sector arising from uneven rates of protection. In addition, as both tariffs and quotas confer rents on the factors of production engaged in the protected activities, they generate non-productive rent seeking activities involving lobbying legislative and administrative officials. These losses in income do not arise in the application of the first-best macroeconomic measures described above to deal with payments imbalances.

36. In light of these costs, trade measures are only justifiable in a narrow set of circumstances where first-best policies are not immediately feasible, namely, where an inappropriate and inflexible exchange regime is in place and other feasible fiscal or monetary policy measures are not options available to the authorities. In such situations where there is an acute disequilibrium in the current account, trade restrictions may be considered as a short-run measure while more appropriate macroeconomic and exchange rate policies are being put in place. They need to be viewed as part of a policy package designed to achieve payments equilibrium, with an explicit timetable for their removal. As shown below, however, there is a clear risk that once in place they will become close to permanent devices to protect domestic producers.

37. To the extent that trade restrictions could be used as short-term measures to address balance of payments problems, it would be preferable to use a tariff rather than a quantitative restriction, such as an import quota. This is because a tariff would generate revenue, while a quantitative restriction would generate rent-seeking behaviour on the part of domestic agents, with attendant welfare costs, or the rent would accrue to foreign exporters. Also, a tariff is more transparent than a quota. Under a tariff, the gap between the world and domestic price is known, and the magnitude of the gap remains unchanged as long as the tariff remains in place. Under a quota, the gap between domestic and world prices would change over time, depending on changes in the demand and supply for the protected good. Hence the protective effect of a tariff is more transparent than that of a quota.

38. Tariffs are also second-best fiscal instruments. In terms of efficiency of the tax system they rank low as revenue measures. A given amount of revenue can be raised with less economic distortions by more broad-based, general taxes on consumption or output, such as the

value-added tax. Moreover, a broad-based tax is more likely to reduce overall consumption, whereas a tariff will shift spending to domestic goods and will in effect tax exports, with little or no long-run impact on the savings-investment balance, and hence the current account. The tax literature, however, suggests that collection costs for trade taxes may be lower than for consumption taxes in countries with very weak tax administration. Thus, there may be a case for a limited number of developing countries to resort to trade taxes on grounds of lack of alternative tax measures. However, over time there is a need for these countries to develop more efficient and broadly-based systems.²⁵

39. While trade restrictions for balance of payments purposes are designed to be temporary measures dealing with short-run external disequilibrium problems, in many cases once in place, they become a permanent feature of the economic landscape. This is illustrated in Table 2 below. It shows the length of time a number of countries – developed and developing – have justified their use of quantitative restrictions in the GATT/WTO on balance of payments grounds. Countries have justified ineffective, and counterproductive, trade policies for 20, 30, 40, and even 50 years. And this has been true not just of developing countries but also developed as well. Thus there is a clear risk that once they are imposed, trade restrictions will remain long after the original case was made for their introduction.

V. CONCLUSIONS

40. The main conclusions of this note can be summarized as follows:

- Greater capital account mobility has been accompanied by substantially increased volatility of capital flows, which clearly requires holding larger stocks of international reserves than suggested by current account considerations on the part of countries with significant capital account transactions.
- In normal times when there is no crisis situation, trade restrictions for balance of payments purposes are not appropriate or effective means for achieving a long-term target for desired growth in reserves. Rather, appropriate macroeconomic and financial policies are needed to achieve the current and capital account positions that will deliver the desired growth in reserve holdings over time.
- In crisis situations associated with capital outflows and reserve losses, the required policies are those that address the underlying financial imbalances and restore confidence in the economy. The imposition of trade measures in such crisis situations is not an effective policy response to deal with reserve losses, as these measures do not address the financial disequilibrium, and are not likely to enhance confidence in the economy.
- When countries are faced with reserve losses stemming from a current account crisis, the appropriate, first-best response involves the implementation of expenditure-reducing and expenditure-switching (exchange rate) policies that bring spending into a sustainable relationship with output in a non-distortionary manner. Trade measures for balance of payments purposes are distortionary and distinctly second best. Only in extreme current account crisis situations where appropriate policies cannot be implemented in the necessary time frame should resort to such measures be contemplated, and then only a uniform tariff across all imports which has a clear timetable for expeditious elimination and which is part of policy package which is designed to address the payments imbalance on a sustainable basis.

²⁵ See the note on Liberalizing Trade and Safeguarding Public Revenues for a discussion of the need to strengthen revenue systems.

Table 2

Use of Trade Restrictions for Balance-of-Payments Reasons in the GATT/WTO ^{1/}

	<i>Years of Invocation</i> ^{2/}	<i>Duration</i> ^{2/}
Argentina	early 1970s–91	Approx. 20
Bangladesh	early 1970s–	30+
Brazil	1949–95	46
Chile	1949–late 70s	Approx. 30
Colombia	1985–92	7
Egypt	mid-1960s–95	Approx. 30
Finland	mid-1950s–78	23
Ghana	late 1950s–late 80s	Approx. 30
Greece	1955–81	36
India	1949–2000	51
Indonesia	late 1950s–early 80s	Approx. 30
Israel	1961–95	34
Korea	1968–late 80s	Approx. 30
New Zealand	1949–late 60s	Approx. 20
Nigeria	1984–98	14
Pakistan	1949–2001	52
Peru	late 1960s–91	Approx. 30
Philippines	1980–95	15
Sri Lanka	1949–98	49
Tunisia	mid-1960s–97	Approx. 30
Turkey	mid-1950s–97	Approx. 40

Source: GATT/WTO documents and Eglin, *World Economy* (1987).

1/ This table does not necessarily indicate how long countries have actually been using quantitative restrictions; rather, it refers to how long countries have sought legal cover for them in the GATT/WTO under Articles XII or XVIII: B and hence escaped multilateral pressure to eliminate the measures. The table does not include all countries that have invoked the balance-of-payments exceptions to justify trade restrictions.

2/ The years of invocation and duration are not exact.