Note 6. Capital Account Variables in the Quota Formulas

Introduction

53. The IMF's Executive Board has, since the early 1970s, discussed the issue of using capital account variables as a component of the Fund's quota formulas. The Board's consideration of this issue took into account not only a priori considerations that have a bearing on the merits of the variables included in the quota formulas, but also the problems posed by the lack of comprehensive and comparable data on transactions in the capital and financial accounts for many members.[34] Issues of methodology relating to the close correlation of capital account variables with the existing GDP and current account variables also arose and were difficult to resolve. As a consequence, capital account variables have not been incorporated into the quota formulas, though the issue of such incorporation has remained a topic of significant debate in the general reviews of quotas. This note provides background information on the staff's analysis and calculations, as well as on the views of the Executive Board, on the issue of incorporating capital account variables as a component of the quota formulas. Annex Note 7 describes the available data on countries' capital account transactions, as well as the data on current account transactions used in the existing quota formulas.

Staff analysis

54. The staff has argued that, in principle, capital flows have a role to play in the quota formulas. In the Sixth Review, the staff noted, for example, that shifts in long-term capital flows might produce a need for Fund drawings just as much as fluctuations in merchandise trade.[35] As a proxy for long-term capital flows, for which comprehensive data were lacking, the absolute value of current account balances was suggested by the staff in the Sixth, Eighth, and Tenth Reviews. Current account balances were viewed as giving a broad indication of a member's cyclical and structural position in world payments and, hence, of its ability to contribute to the Fund's resources or its need for Fund financing. More generally, however, the volume of capital account transactions would provide an important indication of developments in a member's *overall* external payments position, and of the relative importance of members' currencies in the international monetary system, which are not fully captured in the existing components of the quota formulas.[36] These missing elements have

[34] In this note, the terms "capital account" and "capital account transactions" refer to those defined in the Fund's Balance of Payments manual as "capital and financial account" transactions.

[35] SM/73/275, 12/10/73, "Statistical Formulas Explaining Present Fund Quotas."

[36] See EB/CQuota/87/3 (12/7/87), "Ninth General Review of Quotas—Further Consideration of Variables in the Quota Formulas," pp.16–19.

grown in significance, especially since the mid-1980s, as capital account liberalization undertaken by many countries was accompanied by a surge of capital flows, and as the volatility of capital transactions has added to their external vulnerability. The staff has also considered that a member's relative ability to access the capital markets is inversely related to its need for Fund financing.[37]

55. Nevertheless, the staff also cautioned at the time of the Ninth Review that the capital account could be regarded to a large extent as a mirror image of the current account in that, for many countries, the long-term capital account tends to have a corresponding counterpart in the data on current transactions. Furthermore, it was recognized that short-term capital movements tend to be reflected in the changes in the level of members' reserves, which is already a variable in the quota formulas. The issue of including capital account variables in the quota formulas therefore raised questions as to whether they contributed significant new information to the method of calculating quotas.

56. Partly because of the linkages between the current and capital account transactions in the balance of payments of member countries, the past discussions of the issue of the inclusion of capital account variables in the quota formulas tended to be cast in pragmatic terms. For example, if capital account transactions were mirrored in or highly correlated with current account transactions, including the former variable in the quota formulas could be seen as redundant. However, if the distribution of capital account transactions or access to private capital markets by members were correlated with that of their existing quotas, including capital account variables in the quota formulas might produce results that were closer to the actual distribution of quotas. Consequently, a revised formula might find support amongst some Executive Directors who felt that the deviations between actual and calculated quotas were attributable, in a significant way, to imperfections in the quota formulas. In the end, however, the lessened availability and lower quality of data on capital account transactions, compared with those of data on current account transactions, were particularly relevant practical considerations underlying the Executive Board's conclusion to use only the current account variables and exclude the capital account variables in the quota formulas.

Staff calculations and the views of Executive Directors

57. For illustrative purposes, the staff undertook a large number of calculations relating to the incorporation of capital account variables into the quota formulas in the context of several past general quota reviews. The earliest calculations were attempted in 1973, using regression methods as a means of approximating the then existing quotas to derive a number of statistical formulas containing variables other than those already included in the quota formulas. Data on capital payments and variability of capital receipts were available at that time for 79 members (out of 109) for the period ended 1967. The staff found that the

[37] EB/CQuota/94/2 (2/28/94), "The Working of the Quota Formulas," pp. 43–44.

correlation of capital account variables with then-existing quotas compared reasonably well with that of the more traditional variables such as current account transactions and national income. Thus, including capital account variables in the estimated equation for the sub-sample of countries for which data were available reduced the average error of the estimated equation by about 7½ percentage points. In other words, capital account variables increased significantly the explanatory power of equations that were estimated in an effort to replicate the then-existing quotas.

58. When the Executive Board discussed the staff calculations in April 1974, Directors generally hesitated to make any changes to the method of calculating quotas, which had last been modified in 1963 at the time of the Fourth Review. The Executive Board agreed to continue to use the then existing quota formulas for the purpose of the Sixth Review, although a few Directors appeared to be more open to consideration of new variables. One Director suggested, in particular, that the "availability of other sources of credit" should be taken into account, given that the developed countries had much better chances of borrowing than did the less developing countries, and that the latter countries were expected in the future to use the Fund's resources more heavily.

59. Quota formulas were intensively discussed in 1982/83 at the time of the Eighth General Review of Quotas. Executive Directors did not, at that time, pursue the issue of introducing capital account variables into the quota formulas largely because their discussion moved in the direction of modifying the coefficients of the existing variables in the quota formulas, especially that of the variability of current receipts, rather than toward changes that would involve adding new variables into the formulas.[38]

60. In view of the increasing importance of capital transactions in the international monetary system, suggestions were made by a number of Executive Directors in 1987 at the time of the Ninth Review to include a measure of capital flows in the quota formulas. The capital account had become the subject of increasing attention as the Fund dealt with the imbalances of the major industrial countries and the problems of debtor countries, and it was noted that capital transactions had received little attention in the quota formulas.

61. New attempts were made by the staff, in connection with both the Ninth and Tenth Reviews, to incorporate capital account variables in statistical quota formulas. These attempts yielded unacceptable results in that the estimated coefficients for the current account and capital account variables were negative, which posed difficulties of interpretation, except as a result of multicollinearity among the explanatory variables. The staff interpreted these results as a reflection of the substitutability of the GDP, current account, and capital account variables as potential variables in quota formulas. In addition, the staff noted that despite improvements in data availability and quality, capital transactions are in principle recorded

[38] EB/CQuota/87/4 (12/21/87), "Ninth General Review of Quotas—Issues Arising in Connection with the Eighth General Review of Quotas," pp.1–4.

as flows of or as changes in identified external assets and liabilities, with varying degrees of netting and coverage across countries and individual capital account items. As a consequence, the use of capital account data in the quota calculations could lead to uneven results among members. The staff concluded that, on these technical and practical grounds, there did not seem to be a strong case for including a capital account variable in the quota formulas. The Executive Board generally accepted this conclusion when it discussed the matter in January 1988 and March 1994. It was felt that the relative financial importance of countries was difficult to capture in the quota formulas, and that this affected only a few major industrial countries and some relatively small developing countries that operated offshore financial markets. A number of Directors were also concerned that the use of capital account or financial variables would tend to reduce the calculated quota shares of the developing countries, and consequently these Directors did not support the inclusion of a capital account variable in the quota formulas. Some Directors, however, felt it would be worthwhile to continue to pursue the possibility of including capital flows in the quota formulas, with one Director noting that international financial flows had grown exponentially since the 1970s.

62. As regards a variable representing members' access to capital markets, the staff found in 1994 a strong negative correlation between members' actual quotas and their relative access to capital markets. The latter variable was defined qualitatively by classifying countries according to four groupings—industrial countries with unlimited access to capital markets, other industrial countries, developing countries with general access, and developing countries with limited access. However, access to capital markets was seen as akin to such "needs-based" variables as poverty indexes or external debt indicators, and Directors generally did not favor the inclusion in the quota formulas of needs-based variables. It was argued that the particular needs for Fund resources of members with low per capita incomes were being addressed by the availability of resources under the Fund's low-interest-cost facilities (Trust Fund loans, the Structural Adjustment Facility, and the Enhanced Structural Adjustment Facility). Nevertheless, Directors representing the developing countries strongly supported the use of a variable in the quota formulas that would recognize a member's difficulty in achieving access to international capital markets as a factor that could increase the member's need to use the Fund's resources.