SECTION I. REGRESSION EQUATIONS AND RESULTING QUOTA DISTRIBUTIONS FOR MEMBERS

This section presents detailed results of the regression equations analyzed in Chapter V of the report, along with the resulting quota distributions by country. Summary results of these equations are reported in the Statistical Appendix, Part A, Section II.

A. Specification of Regression Equations

1. Re-estimated Bretton Woods Formula for the Whole Membership

   $Q = (0.00296\ Y - 0.03435\ R + 0.00926\ P + 0.52891\ VC) \times (1 + C/Y)$

2. Re-estimated Bretton Woods Formula Using PPP-based GDP Instead of GDP at Market Exchange Rates

   $Q = (0.00242\ YPPP - 0.03473\ R + 0.01179\ P + 0.55457\ VC) \times (1 + C/YPPP)$

3. Linear Bretton Woods Formula With PPP-based GDP Replacing GDP at Market Exchange Rates

   $Q = 0.00166\ YPPP - 0.03399\ R + 0.02307\ P + 0.61002\ VC$

4. Re-estimated Bretton Woods Formula With a Multiplicative Term, Which Includes a Dummy Variable Distinguishing Between Industrial and Developing Countries

   $Q = (0.00331\ Y - 0.04210\ R + 0.02046\ P + 0.20008\ VC) \times (1 + C/Y + DDEV)$

5. Re-estimated Bretton Woods (BW) Formula for Members with Calculated Quotas Based on the Variants of the BW Formula

   $Q = (-0.0084\ Y + 0.00809\ R + 0.03680\ P + 0.52921\ VC) \times (1 + C/Y)$

6. Re-estimated Bretton Woods Formula for Members Representing Developing Countries

   $Q = (0.00558\ Y - 0.0663\ R + 0.04689\ P + 0.314\ VC) \times (1 + C/Y)$

7. Re-estimated Bretton Woods Formula for Members with Actual Quota Shares Equal to or Less Than 1 Percent

   $Q = (0.00720\ Y - 0.01035\ R - 0.00294\ P + 0.38836\ VC) \times (1 + C/Y)$

8. Re-estimated Bretton Woods Formula for Members Who Joined in the Past Twenty Years

   $Q = (0.00933\ Y - 0.00756\ R + 0.00541\ P + 0.33538\ VC) \times (1 + C/Y)$

9. Linear Bretton Woods Formula Without the Multiplicative Factor

   $Q = 0.00215\ Y - 0.03614\ R + 0.01650\ P + 0.68394\ VC$

10. Linear Bretton Woods Formula With Current Receipts

    $Q = 0.00256\ Y + 0.00267\ R + 0.07219\ P + 0.56431\ VC - 0.05943\ C$

11. Linear Bretton Woods Formula with an Openness Index

    $Q = 0.00240\ Y - 0.04510\ R + 0.01712\ P + 0.62811\ VC + 85.57067\ OPEN$

12. Nonlinear Bretton Woods Formula with an Openness Index

    $Q = (0.00030\ Y - 0.00372\ R + 0.00023\ P + 0.22747\ VC) \times (1 + OPEN)$

A. Specification of Regression Equations

13. Nonlinear Bretton Woods Formula Without the Reserves Variable

$$Q = (0.00294\ Y + 0.00344\ P + 0.55148\ VC) \times (1 + C/Y)$$

14. Nonlinear Bretton Woods Formula With Gold Reserves Valued at Market Prices

$$Q = (0.00303\ Y - 0.02237\ RM + 0.00824\ P + 0.53993\ VC) \times (1 + C/Y)$$

15. Nonlinear Bretton Woods Formula With a Five Year Average of GDP Replacing the Existing One-year GDP

$$Q = (0.00359\ YAVG - 0.02849\ R + 0.00882\ P + 0.46241\ VC) \times (1 + C/YAVG)$$

16. Nonlinear Bretton Woods Formula With Population

$$Q = (0.0028\ Y - 0.04422\ R + 0.01156\ P + 0.48769\ VC + 2.63217\ POP) \times (1 + C/Y)$$

17. Nonlinear Bretton Woods Formula with Short Term Debt

$$Q = (0.00310\ Y - 0.04692\ R + 0.01106\ P + 0.49931\ VC + 0.00895\ STDEBT) \times (1 + C/Y)$$

18. Nonlinear Bretton Woods Formula With the Variability of External Receipts Replacing the Variability of Current Receipts

$$Q = (0.00343\ Y - 0.03917\ R + 0.02744\ P + 0.00436\ VCK) \times (1 + C/Y)$$

19. Nonlinear Bretton Woods Formula With the Then-Existing Quota As a Multiplicative Explanatory Variable

$$Q = (0.97643\ QL + 0.00151\ Y - 0.00285\ R - 0.00114\ P + 0.02787\ VC) \times (1 + C/Y)$$

20. Nonlinear Bretton Woods Formula with the Then-Existing Quota As an Additive Explanatory Variable

$$Q = 1.20988\ QL + (0.00043\ Y + 0.00373\ R + 0.00265\ P + 0.03649\ VC) \times (1 + C/Y)$$

21. Regression of Actual Quotas on Variables Indicative of Ability to Contribute Financial Resources to the Fund

$$Q = 0.00337\ Y + 0.0065\ RM + 0.0223\ C + 0.0642\ NNKFL$$

22. Nonlinear Bretton Woods Formula with a Five-Year Average of GDP, where the Conversion Factors are Centered Five-Year Moving Averages of the Annual Exchange Rates, Replacing the Existing One-Year GDP

$$Q = (0.00326\ YM5X - 0.03151\ R + 0.00741\ P + 0.51752\ VC) \times (1 + C/Y)$$

23. Nonlinear Bretton Woods Formula with GNP Converted with the World Bank Atlas Method

$$Q = (0.00322\ YATL - 0.03242\ R + 0.00804\ P + 0.51899\ VC) \times (1 + C/Y)$$

A. Specification of Regression Equations

24. Linear Formula with the Then-Existing Quota, Short-Term Debt, Population, and Trade added, and Reserves and Current Payments dropped.

$$Q = 1.19182\ QL + 0.00028\ Y + 0.04471\ VC + 0.00114\ STDEBT + 0.17798\ POP + 0.00573\ TRADE$$

25. Nonlinear Bretton Woods Formula with the Then-Existing Quota As an Additive Explanatory Variable for Countries with Calculated Quotas Based on the Variants of the Bretton Woods Formula

$$Q = 1.28515\ QL + (0.00033\ Y + 0.00220\ R + 0.00290\ P + 0.01280\ VC) \times (1 + C/Y)$$

26. Nested Model Where a Regression of Vulnerability Variables (Represented by the Variability of Current Receipts and Population) is Estimated First

$$Q = (1 - 0.54491) \times (0.00557\ Y - 0.01145\ RM + 0.01276\ C + 0.07334\ NCF) + (0.544491) \times (1.25141\ VC + 2.33175\ POP)$$

27. Nested Model Where a Regression of Strength Variables is Estimated First

$$Q = (1 - 0.42833) \times (0.00337\ Y + 0.00650\ RM + 0.02226\ C + 0.06419\ NCF) + (0.42833) \times (1.27204\ VC + 5.18170\ POP)$$

28. Linear Estimation of Both Strength and Vulnerability Variables

$$Q = 0.00259\ Y - 0.01378\ RM + 0.00907\ C + 0.03483\ NCF + 0.61967\ VC + 2.40788\ POP$$

29. Re-estimated Bretton Woods Formula With Normal Net Capital Flows as an Additional Variable

$$Q = (0.00327\ Y - 0.01971\ R + 0.00540\ P + 0.46228\ VC + 0.02362\ NCF) \times (1 + C/Y)$$

30. Re-estimated Bretton Woods Formula With Real Effective Exchange Rate Variability Times Current Receipts as an Additional Variable

$$Q = (0.00353\ Y - 0.00259\ R + 0.06383\ P + 0.43189\ VC - 0.05702\ VREC) \times (1 + C/Y)$$

31. Re-estimated Bretton Woods Formula With Debt as an Additional Variable

$$Q = (0.00309\ Y - 0.04458\ R + 0.01394\ P + 0.41660\ VC + 0.01108\ DEBT) \times (1 + C/Y)$$

32. Members with Quota Shares of Equal to or Less Than 1.0 Percent
Re-estimated Bretton Woods Formula With Normal Net Capital Flows as an Additional Variable

$$Q = (0.00595\ Y - 0.01468\ R + 0.00011\ P + 0.36316\ VC + 0.03787\ NCF) \times (1 + C/Y)$$

33. Members with Quota Shares of Equal to or Less Than 1.0 Percent
Re-estimated Bretton Woods Formula With Real Effective Exchange Rate Variability Times Current Receipts as an Additional Variable

$$Q = (0.00655\ Y - 0.00841\ R + 0.03310\ P + 0.40804\ VC - 0.03488\ VREC) \times (1 + C/Y)$$

A. Specification of Regression Equations

34. Members with Quota Shares of Equal to or Less Than 1.0 Percent
Re-estimated Bretton Woods Formula With Financial Market Accessibility Times Current Payments as an Additional Variable

$$Q = (0.00604\ Y - 0.01397\ R - 0.03077\ P + 0.30412\ VC + 0.01561\ FMP) \times (1 + C/Y)$$

35. Members with Quota Shares of Equal to or Less Than 1.0 Percent
Re-estimated Bretton Woods Formula With Debt as an Additional Variable

$$Q = (0.00466\ Y - 0.01321\ R + 0.00190\ P + 0.37379\ VC + 0.00644\ DEBT) \times (1 + C/Y)$$

36. Re-estimated Bretton Woods Formula With Financial Market Accessibility Times Current Payments as an Additional Variable

$$Q = (0.00380\ Y - 0.06305\ R - 0.00033\ P + 0.36828\ VC + 0.01303\ FMP) \times (1 + C/Y)$$

37. Bretton Woods Formula for Schedule A Members Using 1934-43 Data

$$Q = (0.030941\ Y - 0.003025\ R + 0.046770\ M + 0.174646\ V) \times (1 + X/Y)$$