

Regression Number: 37  
 Regression Name: Bretton Woods Formula for Schedule A Members Using 1934-43 Data

Quota Review: Bretton Woods

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

(20.11)            (-0.51)            (4.11)            (4.34)

where Q is the actual quota; Y is national income in 1940; R is average gold and dollar balances on July 1, 1943; M is the annual average of imports over the five year period 1934 - 1938; X is the annual average of exports over the five-year period 1934 - 1938; V is the maximum variation in exports during 1934 - 1938; t-ratios are given in parentheses.

|                       |                          |                       |           |
|-----------------------|--------------------------|-----------------------|-----------|
| Sample size           | 29                       | R-squared             | 0.999     |
| Description of sample | Schedule A Members *     | Adjusted R-Squared    | 0.998     |
|                       |                          | S.E. of Regression    | 22.37     |
| Estimation method     | Non-linear Least Squares | SSR (from estimation) | 12,514.06 |

**Relative Contributions of Variables in the Estimated Formula**  
(In percent)

|            |             |
|------------|-------------|
| Y          | 72.3%       |
| R          | -1.1%       |
| P          | 8.8%        |
| VC         | 11.9%       |
| <u>C/Y</u> | <u>8.1%</u> |
| Total:     | 100.0%      |

\* The following Schedule A members were not included in the estimation, due to the lack of data: Denmark, Dominican Republic, Ethiopia, France, Haiti, Iceland, Iran, Iraq, Liberia, New Zealand, Nicaragua, Panama, Philippine Commonwealth, Poland, Union of Soviet Socialist Republic, and Yugoslavia.

Table I.37. Results of Regression Equation No. 37

|                                | Actual  | Estimated                                | Adjusted  | Actual                 | Adjusted                        | Residuals <sup>1</sup> |         | Memo Item:              |                        |
|--------------------------------|---------|--|---|------------------------|---------------------------------|------------------------|---------|-------------------------|------------------------|
|                                | Quota   | Quota                                    | Estimated   | Quota                  | Estimated                       | Columns                |         | Calculated Quotas       |                        |
|                                | Amount  | Amount 1/<br>(In millions of US Dollars) | Quota<br>Amount 2/<br>(In millions of US Dollars) | Shares<br>(In percent) | Quota<br>Shares<br>(In percent) | (1)-(3)                | (4)-(5) | Amount<br>(in mill USD) | Shares<br>(In percent) |
|                                | (1)     | (2)                                      | (3)   | (4)                    | (5)                             | (6)                    | (7)     | (8)                     | (9)                    |
| Australia                      | 200.0   | 176.2                                    | 177.4   | 2.921                  | 2.591                           | 22.59                  | 0.33    | 149.0                   | 2.202                  |
| Belgium                        | 225.0   | 193.0                                    | 194.3   | 3.286                  | 2.838                           | 30.71                  | 0.45    | 250.0                   | 3.695                  |
| Bolivia                        | 10.0    | 10.0                                     | 10.0  | 0.146                  | 0.146                           | -0.03                  | 0.00    | 9.1                     | 0.135                  |
| Brazil                         | 150.0   | 117.7                                    | 118.5   | 2.191                  | 1.731                           | 31.49                  | 0.46    | 107.0                   | 1.582                  |
| Canada                         | 300.0   | 311.3                                    | 313.4   | 4.381                  | 4.577                           | -13.39                 | -0.20   | 278.0                   | 4.109                  |
| Chile                          | 50.0    | 43.7                                     | 44.0  | 0.730                  | 0.642                           | 6.04                   | 0.09    | 37.0                    | 0.547                  |
| China                          | 550.0   | 515.7                                    | 519.3   | 8.033                  | 7.584                           | 30.74                  | 0.45    | 350.0                   | 5.173                  |
| Colombia                       | 50.0    | 33.0                                     | 33.2  | 0.730                  | 0.485                           | 16.80                  | 0.25    | 30.0                    | 0.443                  |
| Costa Rica                     | 5.0     | 3.2                                      | 3.2   | 0.073                  | 0.047                           | 1.79                   | 0.03    | 3.5                     | 0.052                  |
| Cuba                           | 50.0    | 42.6                                     | 42.9  | 0.730                  | 0.627                           | 7.10                   | 0.10    | 37.0                    | 0.547                  |
| Czechoslovakia                 | 125.0   | 140.8                                    | 141.7   | 1.826                  | 2.070                           | -16.72                 | -0.24   | 117.0                   | 1.729                  |
| Ecuador                        | 5.0     | 5.8                                      | 5.8   | 0.073                  | 0.085                           | -0.81                  | -0.01   | 5.3                     | 0.078                  |
| Egypt                          | 45.0    | 66.9                                     | 67.3  | 0.657                  | 0.984                           | -22.34                 | -0.33   | 59.0                    | 0.872                  |
| El Salvador                    | 2.5     | 4.5                                      | 4.5   | 0.037                  | 0.066                           | -2.02                  | -0.03   | 4.6                     | 0.068                  |
| Greece                         | 40.0    | 46.2                                     | 46.5  | 0.584                  | 0.680                           | -6.53                  | -0.10   | 41.0                    | 0.606                  |
| Guatemala                      | 5.0     | 6.9                                      | 7.0   | 0.073                  | 0.102                           | -1.97                  | -0.03   | 6.8                     | 0.101                  |
| Honduras                       | 2.5     | 3.4                                      | 3.5   | 0.037                  | 0.050                           | -0.95                  | -0.01   | 3.3                     | 0.049                  |
| India                          | 400.0   | 423.0                                    | 425.9   | 5.842                  | 6.221                           | -25.94                 | -0.38   | 367.0                   | 5.424                  |
| Luxembourg                     | 10.0    | 6.6                                      | 6.7   | 0.146                  | 0.098                           | 3.32                   | 0.05    | 6.7                     | 0.099                  |
| Mexico                         | 90.0    | 70.5                                     | 70.9  | 1.314                  | 1.036                           | 19.05                  | 0.28    | 63.0                    | 0.931                  |
| Netherlands                    | 275.0   | 219.9                                    | 221.4   | 4.016                  | 3.234                           | 53.56                  | 0.78    | 325.0                   | 4.804                  |
| Norway                         | 50.0    | 54.9                                     | 55.3  | 0.730                  | 0.808                           | -5.29                  | -0.08   | 66.0                    | 0.976                  |
| Paraguay                       | 2.0     | 2.4                                      | 2.4   | 0.029                  | 0.035                           | -0.38                  | -0.01   | 2.5                     | 0.037                  |
| Peru                           | 25.0    | 23.8                                     | 24.0  | 0.365                  | 0.351                           | 1.00                   | 0.01    | 21.1                    | 0.312                  |
| Union of South Africa          | 100.0   | 135.9                                    | 136.8   | 1.460                  | 1.998                           | -36.80                 | -0.54   | 175.0                   | 2.587                  |
| United Kingdom                 | 1,300.0 | 1,310.1                                  | 1,319.1   | 18.986                 | 19.265                          | -19.09                 | -0.28   | 1,275.0                 | 18.845                 |
| United States                  | 2,750.0 | 2,752.9                                  | 2,771.8   | 40.164                 | 40.482                          | -21.78                 | -0.32   | 2,929.0                 | 43.292                 |
| Uruguay                        | 15.0    | 19.7                                     | 19.8  | 0.219                  | 0.290                           | -4.84                  | -0.07   | 22.5                    | 0.333                  |
| Venezuela                      | 15.0    | 59.9                                     | 60.3  | 0.219                  | 0.880                           | -45.28                 | -0.66   | 25.3                    | 0.374                  |
| Total                          | 6,847.0 | 6,800.5                                  | 6,847.0   | 100.0                  | 100.0                           | 0.0                    | 0.0     | 6,765.7                 | 100.0                  |
| Memo: Sum of squared residuals |         |  |   |                        |                                 | 12,984                 | 2.77    |                         |                        |

1/ Based on the "estimate" generated by the regression equation.

2/ Based on the estimated quotas shown in Col. (2) but adjusted so that their total equals the total of actual quotas.