On the Measurement of Net External Assets and the Association Between the Current Account and Rates of Return on Capital

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Abstract

Using the correlation between net external assets and net factor income from abroad, the paper shows that the estimates of net external assets which are based on the cumulated current account are more reliable than the balance-sheet estimates of net external assets (Sinn's estimates) or equally reliable to balance-sheet estimates (the international investment position data of the International Monetary Fund). Some of the IMF data are plausibly wrong. The paper then examines the association between the current account and rates of return on physical capital. If physical capital flows to places with high rates of return, the given association should be negative. However, no significantly negative relationship is found if rates of return are approximated by ratios of human to physical capital or by real discount rates. This finding is puzzling and questions the efficiency of international capital flows.

Keywords: Current account; Net external assets; Rates of return

JEL classification: F20, F34

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1. Introduction

Net external assets (NEA) and the current account (CA) constitute fundamental macroeconomic variables. NEA measure the position of an economy on the world credit market, while CA measures the change of this position over time. If expressed relative to GDP, NEA differ substantially across economies. Developed countries are both net lenders (Japan, Switzerland) and net debtors (Australia, Canada). Developing countries are typically net debtors.

NEA have been examined by Lane and Milesi-Ferretti (2001). They construct estimates of external assets and liabilities for 67 industrial and developing countries. Among other things, they study trends in NEA and shifts in debt-equity ratios over time.

The objective of the present paper is twofold. First, the paper proposes a simple test which measures the precision of NEA estimates. This test is based on expressing correlations between the NEA data and the data on net factor income from abroad (NFI) (both expressed relative to GDP). It turns out that the estimates of NEA based on the cumulated CA (see Duczynski, 2000) are more reliable than the balance-sheet estimates (see Sinn, 1990) or equally reliable to the balance-sheet estimates (see the International Financial Statistics of the International Monetary Fund) . Second, the paper focuses on the relationship between CA and rates of return on physical capital. The paper presents a database describing international capital flows in 1970-1989. According to the neoclassical theory of international capital flows, physical capital should flow to places with high rates of return (CA should be negatively related to domestic rates of return). If there are diminishing returns to capital and approximately equal technological parameters across countries, rates of return on capital are negatively related to output per capita. CA is really found to depend positively on output per capita. Nevertheless, if rates of return on physical capital are approximated by ratios of human to physical capital, no significant relationship between CA and rates of return emerges. If rates of return are approximated by real discount rates, the relationship is positive (although insignificant). The lack of negative relationships in these cases is puzzling.

2. The measurement of NEA

Sinn (1990) provides balance-sheet estimates of NEA and NEA/GDP for a large number

of countries in 1970-1987. These estimates are consolidated NEA of the central bank, deposit money banks, private households and firms, and public authorities. In the unpublished Appendix Table to Duczynski (2000), estimates of NEA/GDP and NFI/GDP for 113 countries in 1990 are provided. The estimates of NEA/GDP are based on CA cumulated in the 1970-1990 period. The CA and NFI data are taken from World Bank (1994).

Table 1 presents CA-based estimates of NEA/GDP for 1990 (NEA_1/GDP), Sinn's balance-sheet estimates of NEA/GDP for 1987 (NEA_2/GDP), and NFI/GDP estimates for 1990. For Somalia, NEA_2/GDP applies for 1986. NEA should not change dramatically on a year-to-year basis, so the estimates for 1987 and 1990 should be comparable. However, we do observe dramatic differences between these estimates for a number of countries (Argentina, Bahrain, Bolivia, Botswana, Chile, Congo, Ecuador, Gabon, Gambia, Guyana, Hong Kong, Indonesia, Jamaica, Kuwait, Lesotho, Madagascar, Malawi, Malaysia, Mali, Malta, Mauritania, Morocco, Nicaragua, Nigeria, Papua New Guinea, Philippines, Saudi Arabia, Seychelles, Sierra Leone, Somalia, Sri Lanka, Switzerland, Tanzania, Trinidad and Tobago, Tunisia, Zaire, and Zambia). For these countries, the difference between NEA_1/GDP and NEA_2/GDP exceeds 0.5. The data on NFI can shed light on the issue of which NEA estimates are more precise. If the CA-based estimates are regressed on a constant and the NFI estimates, we obtain:

$$NEA_1/GDP = 0.02 + 11.5\ NFI/GDP, \qquad (1)$$
$$(0.53)\ \ (15.26)$$

where t-statistics are in parentheses. The value of R^2 is 0.68. The relationship is strongly significantly positive. Table 1 presents estimates NEA_3/GDP as fitted values from this regression. These estimates are NFI-based estimates which can be compared with NEA_1/GDP and NEA_2/GDP. For almost all of the countries with large differences between NEA_1/GDP and NEA_2/GDP, NEA_3/GDP is much closer to NEA_1/GDP than to NEA_2/GDP. The estimates of NEA_1 appear to be significantly more accurate than the estimates of NEA_2. This observation is confirmed if NEA_2/GDP is regressed on NFI/GDP:

$$NEA_2/GDP = -0.37 + 4.07\ NFI/GDP, \qquad (2)$$
$$(-6.01)\ (3.97)$$

where R^2 is 0.12. The relationship is clearly much less significant than the relationship given by equation (1). It should not be important that the NFI estimates apply for 1990, while the estimates of NEA_2 apply for 1987.

Despite this observation, Sinn's estimates are definitely of certain value. First, the relationship in equation (2) is still strongly significant as measured by the t-statistic. Second, the estimates of NEA_2 are available as a panel from 1970. For early years, CA-based estimates of NEA cannot be constructed due to the lack of reliable CA data in the 1950s and 1960s for a large number of countries. Third, Sinn's estimates correctly identify most large debtors (Congo, Guyana, Ivory Coast, Jamaica, Mauritania, Nicaragua, and Zambia).

A similar method can be used to infer the quality of the NEA data (international investment position, IIP) presented in the International Financial Statistics of the International Monetary Fund. I focus on the estimates for 2000. (If the data are not available for 2000, I consider estimates for 1999 or 1998.) I compare IIP to the cumulated CA (CCA). CA is cumulated from 1972 or from a later year (depending on data availability), on no account later than from 1980. To find out whether IIP/GDP or CCA/GDP are more accurate, I compute estimates of NFI/GDP. I exclude the observation for Lesotho, in which case the labor-income component of NFI strongly dominates the capital-income component. The data on IIP/GDP, CCA/GDP, and NFI/GDP exist for 55 countries (the data source is the International Financial Statistics). If CCA/GDP is regressed on NFI/GDP, we obtain

$$\underset{(-3.23)\ \ (3.46)}{\text{CCA/GDP} = -0.24 + 7.29\ \text{NFI/GDP},} \qquad (3)$$

$$\underset{(5.29)}{\text{CCA/GDP} = 10.57\ \text{NFI/GDP},} \qquad (4)$$

where R^2 is 0.18 in both the equations. If IIP/GDP is regressed on NFI/GDP, we get

$$\underset{(-2.44)\ \ (3.39)}{\text{IIP/GDP} = -0.16 + 6.44\ \text{NFI/GDP},} \qquad (5)$$

$$\underset{(4.98)}{\text{IIP/GDP} = 8.68\ \text{NFI/GDP},} \qquad (6)$$

where R^2 is 0.18 in both the equations. There is no clear difference in the significance of the dependence of CCA/GDP on NFI/GDP and IIP/GDP on NFI/GDP. The quality of the IIP data is plausibly comparable to the quality of the CA data. For most observations, IIP/GDP is close to CCA/GDP. Nevertheless, the IIP data are not perfect. Table 2 presents 14 cases in which the CCA/GDP estimate differs from the IIP/GDP estimate by more than 0.3. Depending on the estimate of NFI/GDP, CCA is much more precise for Bahrain, Costa Rica, Finland, Maldives, and Tunisia. For these countries, the IMF estimates of IIP are probably wrong. For Malta and Mauritius, CCA is more precise according to the regressions with a constant, while IIP is more precise according to the regressions with no constant. For Benin, the Netherlands, Paraguay, Senegal, Swaziland, Tanzania, and Togo, the IIP data of the International Monetary Fund are better than the CCA data.

3. The current account and rates of return

From the data of World Bank (1994), I have computed the cumulated current account (CCA) in the periods 1970-74, 1975-79, 1980-84, and 1985-89 for a large number of countries (the data for Taiwan have been taken from the Statistical Yearbook of the Republic of China). Table 3 presents CCA relative to initial GDP for each of these periods. The GDP data have been taken from the Summers-Heston data set (see Summers and Heston, 1991, and the web site http://pwt.econ.upenn.edu/). Table 3 provides a picture of international flows of physical capital in 1970-89.

Theoretically, international capital flows should be directed to places with high rates of return on physical capital. If the production function is Cobb-Douglas in capital and labor, it can be written in its intensive form:

$$y=Ak^{\alpha}, \qquad (7)$$

where y is output per capita, A is a technological parameter, k is capital per capita, and $0<\alpha<1$ is the capital share. The gross rate of return on capital, $\alpha Ak^{\alpha-1}$, is negatively related to the level of capital per capita (as well as to the level of output per capita) for a given technological parameter. CCA is negative if there are capital inflows. Thus CCA/GDP should

be positively related to y. I regressed CCA/GDP on a constant and initial y for the pooled sample of observations in 1970-74, 1975-79, 1980-84, and 1985-89:

$$\begin{matrix} CCA/GDP = -19.5 + 0.0025\ y, \\ (-8.65)\ \ (6.51) \end{matrix} \qquad (8)$$

where the number of observations was 490 and R^2 was 0.08. CCA/GDP is expressed in percentage terms. The variable y is expressed in 1985 U.S. dollars and is taken from the Summers-Heston data set. As measured by the t-statistic, the given relationship is strongly significantly positive. To some extent this is due to oil exporting countries. Oil exporting countries are typically high-income countries and they tend to have strong CA surpluses.

Equation (8) states that rich countries export capital to poor countries. [The problem of whether capital flows from rich to poor countries is fundamental and has been theoretically discussed by Lucas (1990).] We may carry out a related analysis comparing developed and developing countries. There are 84 observations for developed countries; the average CCA/GDP is –7.5%, and the standard deviation makes 17.7%. There are 406 observations for developing countries; the mean CCA/GDP is –9.8% and the deviation amounts to 40.6%. The mean in developing countries is not significantly below the mean in developed countries (the corresponding t-statistic is 0.51). If developing countries are considered without oil exporting countries, there are 371 observations, the mean CCA/GDP is –13.9%, and the standard deviation is 23.1%. The given mean is significantly below the mean in developed countries (the t-statistic is 2.38). For oil exporting countries, there are 35 observations, the mean is 33.2%, and the deviation makes 107.0%. The mean in oil exporting countries is significantly above the mean in other developing countries (the t-statistic is 6.99). If statistically compared to zero, the mean in oil exporting countries is marginally significantly positive (the t-statistic is 1.84), the mean in other developing countries is strongly significantly negative (the t-statistic is 11.59), the mean in all developing countries is significantly negative (the t-statistic is 4.86), and the mean in developed countries is also significantly negative (the t-statistic is 3.88).

If the production function takes the form

$$y = Ak^{\alpha}h^{1-\alpha}, \qquad (9)$$

where k is physical capital per capita and h is human capital per capita, the rate of return on physical capital, $\alpha A(h/k)^{1-\alpha}$, depends positively on the ratio of human to physical capital. I regressed CCA/GDP on initial h/k:

$$\text{CCA/GDP} = -8.2 - 3.1\ h/k, \qquad (10)$$
$$(-4.22)\ (-1.61)$$

where the number of observations is 327 and R^2 is 0.01. As expected, the relationship is negative; however, the relationship is insignificant. Human capital per capita equals average years of schooling in the population over 15 years (see Barro and Lee, 1996, and the web site http://www.worldbank.org/research/growth/ddbarle2.htm). Physical capital per capita is derived from the data set of Nehru and Dhareshwar (see Nehru and Dhareshwar, 1993, and the web site http://www.worldbank.org/research/growth/ddnehdha.htm).The ratio of h/k was multiplied by a factor of 1000 before being included in the regression.

Finally, the rate of return on physical capital can be approximated by real interest rates. The International Financial Statistics provides data for various nominal interest-rate measures (the discount rate, the money market rate, the treasury rate, the deposit rate, the lending rate, and the government bond rate). The International Financial Statistics also contains data on consumer prices. I have used this data to construct average real interest rates in the periods 1970-74, 1975-79, 1980-84, and 1985-89. I have excluded observations with average annual inflation higher than 30%. Discount rates are available for a relatively large number of countries. If CCA/GDP is regressed on a constant and the real discount rate, r, we obtain

$$\text{CCA/GDP} = -8.5 + 0.57\ r, \qquad (11)$$
$$(-5.43)\ (1.69)$$

where the number of observations is 252, and R^2 is 0.01. CCA/GDP and r are expressed in percentage terms. This result is puzzling. Theoretically, the relationship between CA and the interest rate should be negative. It may be the case that real interest rates do not precisely reflect rates of return on physical capital. Alternatively, the lack of a negative relationship between CA and interest rates may be a symptom of inefficiencies in international capital flows. Duczynski and Tóthová (2002) observe a similar fact since the growth of real GDP per capita in a cross-section of countries is positively related to the growth of NEA/GDP. Capital

inflows (negative changes in NEA/GDP) are not associated with rapid growth of real GDP per capita.

In the end we will focus on the relationship between real interest rates and output per capita. If the average real discount rate is regressed on a constant and the initial output per capita in each 5-year period, we obtain

$$r = -1.70 + 0.00021\, y, \qquad (12)$$
$$(-4.01) \quad (3.30)$$

where the number of observations is 252, and R^2=0.04. The interest rate is expressed in percentage terms. Rich countries tend to have higher real rates than poor countries. A similar tendency is observed if we compare real interest rates between developed and developing countries. For example, the average real discount rate in 1970-74 was –2.03% in developed countries and –2.27% in developing countries. In 1975-79, the average real discount rate was –2.28% in developed countries and –3.94% in developing countries. In 1980-84, the average was 0.84% in developed countries and –1.54% in developing countries. For 1985-89, the mean was 4.37% in developed countries and 3.21% in developing countries. The results are similar for most of the other measures of interest rates. The observation that poor countries have relatively low interest rates is consistent with the fact that poor countries are above their steady states (see Cho and Graham, 1996). The positive association in equation (8) then may not reflect the fact that capital flows to places with high rates of return (low output does not correspond to high interest rates).

4. Conclusion

The paper first examines the quality of alternative NEA estimates. This quality is measured by the correlation between NEA/GDP and NFI/GDP. The NEA estimates based on the cumulated CA are found to be more precise than Sinn's balance-sheet estimates of NEA. The quality of the NEA estimates of the International Monetary Fund is comparable to the quality of the CA-based estimates. Some of the data of the International Monetary Fund are plausibly wrong. The paper then examines the association between CA and real rates of return on capital. Theoretically, this relationship should be negative. This is really observed if rates

of return on capital depend negatively on output per capita (which is the case if there are diminishing returns to capital). However, if rates of return on physical capital are approximated by ratios of human to physical capital, no significant relationship between CA and rates of return is observed. If rates of return are approximated by real discount rates, there is an insignificantly positive relationship between CA and rates of return. This result is puzzling. One explanation for this observation is the inefficiency of physical capital flows across countries.

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Table 1: Alternative measures of NEA/GDP and a measure of NFI/GDP.

Country	NEA_1/GDP	NEA_2/GDP	NFI/GDP	NEA_3/GDP
Algeria	-0.14	-0.39	-0.028	-0.30
Argentina	-0.09	-0.66	-0.034	-0.37
Australia	-0.36	-0.42	-0.045	-0.49
Austria	-0.08	0.04	-0.007	-0.06
Bahrain	-0.09	1.65	-0.122	-1.38
Bangladesh	-0.01	-0.42	0.002	0.05
Barbados	-0.22	-0.05	-0.016	-0.16
Belgium	0.08	-0.11	0.003	0.06
Benin	-0.20	-0.56	-0.005	-0.03
Bolivia	-0.23	-1.03	-0.016	-0.16
Botswana	0.16	0.99	-0.032	-0.34
Brazil	-0.10	-0.40	-0.014	-0.14
Burkina Faso	-0.09	-0.26	0.001	0.04
Burundi	-0.27	-0.49	-0.002	0.00
Cameroon	-0.36	-0.32	-0.033	-0.36
Canada	-0.14	-0.37	-0.034	-0.38
Central African Republic	-0.35	-0.45	-0.008	-0.07
Chad	-0.07	-0.41	-0.006	-0.04
Chile	-0.27	-1.18	-0.024	-0.25
China	0.04	-0.07	0.003	0.06
Colombia	-0.05	-0.33	-0.016	-0.16
Congo	-0.75	-1.64	-0.083	-0.93
Costa Rica	-0.40	-0.66	-0.018	-0.18
Cyprus	-0.22	-0.15	0.007	0.11
Denmark	-0.32	-0.44	-0.061	-0.68
Dominican Republic	-0.20	-0.55	-0.005	-0.04
Ecuador	-0.21	-0.77	-0.033	-0.36
Egypt	-0.18	-0.53	-0.013	-0.12
El Salvador	-0.05	-0.20	-0.009	-0.08

Ethiopia	-0.11	-0.40	-0.001	0.01
Fiji	-0.17	-0.51	-0.001	0.01
Finland	-0.29	-0.16	-0.044	-0.48
France	-0.01	0.06	-0.002	-0.00
Gabon	-0.01	-0.79	-0.132	-1.49
Gambia	-0.13	-1.36	-0.011	-0.10
Germany	0.30	0.16	0.015	0.20
Ghana	-0.06	-0.41	-0.005	-0.03
Greece	-0.36	-0.43	-0.018	-0.19
Guatemala	-0.14	-0.32	-0.006	-0.04
Guyana	-1.73	-2.61	-0.125	-1.42
Haiti	-0.18	-0.27	-0.001	0.01
Honduras	-0.33	-0.68	-0.026	-0.27
Hong Kong	0.23	1.10	0.011	0.15
Iceland	-0.40	-0.19	-0.059	-0.66
India	-0.00	-0.12	-0.000	0.02
Indonesia	-0.03	-0.58	-0.010	-0.09
Iran	0.19	0.01	0.004	0.08
Ireland	-0.38	-0.38	-0.132	-1.49
Israel	-0.15	-0.57	-0.031	-0.33
Italy	-0.02	-0.04	-0.014	-0.13
Ivory Coast	-0.78	-1.22	-0.066	-0.73
Jamaica	-0.54	-1.38	-0.063	-0.70
Japan	0.26	0.14	0.011	0.15
Jordan	-0.20	-0.58	-0.030	-0.32
Kenya	-0.20	-0.47	-0.013	-0.13
Korea	0.05	-0.28	0.001	0.04
Kuwait	8.07	0.95	0.458	5.29
Lesotho	0.15	-0.44	0.239	2.77
Madagascar	-0.31	-1.38	-0.015	-0.15
Malawi	-0.36	-0.93	-0.009	-0.07
Malaysia	-0.03	-0.62	-0.015	-0.15
Mali	-0.23	-0.96	-0.004	-0.03

Malta	0.24	1.34	0.068	0.81
Mauritania	-0.98	-2.22	-0.023	-0.24
Mauritius	-0.07	-0.06	-0.000	0.02
Mexico	-0.06	-0.49	-0.011	-0.10
Morocco	-0.19	-1.09	-0.014	-0.13
Myanmar	-0.12	-0.47	-0.001	0.01
Nepal	-0.02	-0.23	0.000	0.02
Netherlands	0.33	0.35	-0.003	-0.01
New Zealand	-0.38	-0.50	-0.035	-0.38
Nicaragua	-1.23	-2.11	-0.038	-0.42
Niger	-0.31	-0.69	-0.008	-0.07
Nigeria	0.01	-0.70	-0.023	-0.24
Norway	-0.15	-0.19	-0.037	-0.40
Pakistan	-0.04	-0.35	-0.003	-0.01
Panama	0.12	0.45	-0.050	-0.55
Papua New Guinea	-0.42	-1.25	-0.014	-0.13
Paraguay	-0.25	-0.27	-0.002	0.01
Peru	-0.20	-0.29	-0.016	-0.15
Philippines	-0.12	-0.64	-0.004	-0.03
Portugal	-0.12	-0.25	0.000	0.03
Rwanda	-0.09	-0.19	-0.000	0.02
Saudi Arabia	0.63	1.64	0.068	0.81
Senegal	-0.36	-0.69	-0.021	-0.22
Seychelles	-0.75	-0.02	-0.052	-0.57
Sierra Leone	-0.22	-0.92	-0.014	-0.14
Singapore	-0.11	-0.27	0.032	0.39
Somalia	-0.18	-1.01	-0.007	-0.06
South Africa	0.07	-0.15	-0.016	-0.16
Spain	-0.06	-0.01	-0.007	-0.06
Sri Lanka	-0.08	-0.61	-0.001	0.01
Sudan	-0.44	-0.72	-0.036	-0.39
Suriname	0.24	-0.27	-0.005	-0.04

Sweden	-0.14	-0.23	-0.030	-0.32
Switzerland	0.46	1.04	0.073	0.86
Syria	0.03	-0.06	-0.011	-0.10
Taiwan, China	0.50	0.72	0.024	0.30
Tanzania	-0.33	-1.34	-0.011	-0.11
Thailand	-0.08	-0.30	-0.002	0.00
Togo	-0.36	-0.65	-0.008	-0.07
Trinidad and Tobago	-0.08	-0.69	-0.034	-0.36
Tunisia	-0.19	-0.82	-0.016	-0.16
Turkey	-0.05	-0.45	-0.004	-0.03
Uganda	-0.06	-0.23	-0.004	-0.02
United Kingdom	-0.04	0.25	0.007	0.10
United States	-0.13	-0.08	0.008	0.12
Uruguay	-0.11	0.02	-0.016	-0.16
Venezuela	0.18	-0.23	-0.003	-0.01
Western Samoa	-0.13	-0.31	0.017	0.22
Zaire	-0.43	-2.05	-0.031	-0.33
Zambia	-0.88	-2.10	-0.065	-0.73
Zimbabwe	-0.16	-0.34	-0.017	-0.17

Notes: NEA_1 is a CA-based measure for 1990 taken from the unpublished Appendix Table to Duczynski (2000). NEA_2 is a balance-sheet measure for 1987 taken from Sinn (1990). NFI is taken from the Appendix Table to Duczynski (2000); this variable applies for 1990 and was constructed on the basis of World Bank (1994). NEA_3 is a fitted value of NEA from the regression (1).

Table 2: The estimates of the cumulated current account, the international investment position, and the net factor income from abroad for 2000 for the countries for which CCA/GDP differs from IIP/GDP by more than 0.3. Source: International Financial Statistics.

Country	CCA/GDP	IIP/GDP	NFI/GDP
Bahrain	-0.36	0.58	-0.047
Benin	-1.15	-0.43	-0.005
Costa Rica	-0.56	-0.09	-0.112
Finland	0.03	-1.51	-0.014
Maldives	-0.69	-0.12	-0.054
Malta	-0.28	0.16	0.009
Mauritius	-0.30	0.02	-0.006
Netherlands	0.62	-0.11	-0.010
Paraguay	-0.58	-0.22	0.007
Senegal	-1.51	-0.83	-0.026
Swaziland	-0.40	0.12	0.057
Tanzania	-1.39	-0.68	-0.009
Togo	-1.58	-0.97	-0.027
Tunisia	-0.69	-1.06	-0.048

Note: The data relate to 1999 for Benin, Costa Rica, Malta, and Togo, and to 1998 for Senegal.

Table 3: The cumulated current account relative to the initial output (CCA/GDP, in %).

Country	1970-74	1975-79	1980-84	1985-89
Algeria	-7.0	-55.4	0.3	-6.4
Argentina	0.1	2.2	-11.8	-6.8
Australia	-6.9	-15.1	-24.3	-25.0
Austria	-3.2	-23.2	-10.1	-0.3
Bahamas			-14.1	-18.3
Bahrain		-119.8	38.4	-4.2
Bangladesh	-2.5	-5.4	-4.4	-2.1
Barbados	-50.8	-28.6	-16.3	-1.9
Belgium	15.8	-7.5	-14.4	12.0
Belize			-5.2	2.1
Benin	-4.8	-17.9	-22.4	-5.2
Bhutan				5.3
Bolivia	5.5	-22.0	-10.9	-14.5
Botswana	-80.8	-42.3	-50.0	61.4
Brazil	-15.8	-18.0	-11.8	-0.3
Bulgaria			6.6	-7.0
Burkina Faso	1.3	-22.0	-10.8	-2.4
Burundi	-5.1	-11.7	-42.0	-10.3
Cameroon	-10.0	-19.2	-13.4	-20.9
Canada	0.1	-14.6	-1.0	-13.1
Cape Verde			-29.9	0.7
Central African Republic	-6.9	-13.0	-12.3	-24.4
Chad	-0.7	-11.7	5.8	-9.6
Chile	-9.8	-19.2	-35.6	-10.3
China	-0.3	-1.0	1.4	-2.0
Colombia	-7.9	3.4	-15.8	-1.7
Comoros			-50.4	-20.6
Congo	-49.8	-81.9	-48.7	-29.0
Costa Rica	-35.4	-46.9	-27.5	-12.6

Cote d'Ivoire	-14.7	-46.2	-48.5	-22.2
Cyprus	-24.2	-52.1	-38.6	-4.7
Denmark	-13.3	-30.5	-20.8	-19.2
Dominica				-22.1
Dominican Republic	-24.5	-18.4	-20.8	-6.4
Ecuador	-7.3	-19.5	-15.3	-9.9
Egypt	-5.9	-24.8	-14.0	-8.9
El Salvador	-6.8	-6.8	-5.7	0.9
Ethiopia	1.9	-6.1	-12.5	-7.4
Fiji	-32.8	-19.4	-21.3	0.9
Finland	-16.3	-12.0	-10.0	-19.8
France	-1.4	3.8	-5.5	-1.9
Gabon	36.0	34.6	35.3	-61.0
Gambia	0.6	-36.5	-31.8	13.9
Germany	8.7	4.6	0.5	27.7
Ghana	-4.5	-1.3	-8.7	-4.4
Greece	-25.2	-23.7	-24.2	-15.7
Grenada				-37.9
Guatemala	-3.9	-9.0	-12.4	-8.9
Guinea-Bissau				-25.8
Guyana	-24.5	-35.3	-60.9	-50.4
Haiti	-9.5	-16.1	-13.1	-5.1
Honduras	-18.9	-33.5	-31.0	-12.9
Hong Kong	22.1	22.3	-9.4	24.7
Hungary				-6.5
Iceland	-48.6	-18.1	-32.6	-20.2
India	-1.4	1.4	-2.9	-4.1
Indonesia	-3.2	-4.0	-7.5	-3.9
Iran	31.7	30.8	-0.2	-5.2
Iraq	40.4			
Ireland	-26.5	-41.6	-53.2	-7.9
Israel	-43.8	-32.3	-30.0	9.7

Italy	-3.9	4.6	-5.9	-3.1
Jamaica	-47.4	-26.9	-40.8	-14.2
Japan	3.2	4.3	6.2	25.2
Jordan	-4.8	7.8	-32.8	-6.2
Kenya	-23.1	-23.4	-16.1	-10.5
Korea	-20.8	-17.4	-17.3	19.1
Kuwait			171.5	133.9
Laos				-10.3
Lesotho	34.8		-15.1	-0.4
Liberia	-9.9	14.9	1.6	
Madagascar	-1.1	-15.0	-26.0	-8.9
Malawi	-23.6	-44.1	-27.5	-12.3
Malaysia	-9.3	9.5	-27.8	6.0
Mali	-9.0	-19.4	-18.5	-14.0
Malta	21.4	54.8	12.9	4.4
Mauritania	11.7	-67.0	-92.3	-40.1
Mauritius	9.9	-19.5	-13.0	-0.8
Mexico	-9.1	-11.8	-7.4	-0.7
Mongolia				-143.0
Morocco	2.5	-46.8	-24.8	-2.9
Mozambique			-23.5	-18.3
Myanmar	-5.3	-14.2	-12.2	-3.6
Namibia			3.5	12.2
Nepal	-0.9	-0.4	-2.8	-5.3
Netherlands	13.6	7.8	14.7	17.3
New Zealand	-20.2	-23.5	-26.0	-18.1
Nicaragua	-21.8	-8.2	-66.1	-54.8
Niger	2.2	-34.2	-27.9	-8.8
Nigeria	24.0	-9.2	-14.6	4.3
Norway	-20.0	-73.7	22.3	-15.8
Oman		41.2	61.8	-1.8
Pakistan	-8.1	-12.0	-5.0	-4.0
Panama	-37.6	-37.4	6.4	22.6

Papua New Guinea	12.9	5.1	-45.9	-20.7
Paraguay	-9.2	-22.3	-28.6	-6.3
Peru	-6.2	-12.7	-11.4	-7.8
Philippines	1.1	-14.5	-16.0	-1.6
Poland			-9.9	-2.3
Portugal	-1.3	-17.2	-30.7	2.1
Qatar			104.1	
Romania		-19.2	2.2	24.8
Rwanda	2.8	2.1	-9.9	-10.6
St. Kitts and Nevis				-81.7
St. Lucia				-27.5
St. Vincent				-6.1
Saudi Arabia	557.1	128.8	53.2	-49.6
Senegal	-11.2	-26.6	-36.5	-17.6
Seychelles	-70.2	-52.7	-79.6	-60.4
Sierra Leone	-9.7	-26.4	-17.9	1.6
Singapore	-134.6	-46.8	-44.3	16.5
Solomon Islands			-15.6	-21.5
Somalia	-8.4		-29.2	-13.7
South Africa	-16.8	2.4	-6.7	10.3
Spain	-1.5	-5.2	-7.1	-2.8
Sri Lanka	-5.1	-3.0	-11.6	-6.1
Sudan	-8.7	-30.9	-27.6	-15.9
Suriname	-7.5	42.7	-24.4	19.7
Swaziland		-15.9	-46.3	7.1
Sweden	4.5	-12.6	-13.5	-4.2
Switzerland	-9.1	15.6	19.4	35.2
Syria	7.6	0.6	-6.6	-1.6
Taiwan, China	1.6	9.4	21.8	62.0
Tanzania	-26.6	-27.1	-31.8	-18.8
Thailand	-2.9	-14.5	-13.4	-4.6

Togo	21.4	-94.6	-17.1	-13.3
Tonga				-4.4
Trinidad and Tobago	-7.1	17.1	-14.1	-8.2
Tunisia	-2.4	-32.3	-22.2	-5.9
Turkey	1.0	-15.7	-9.9	-0.5
Uganda	-1.3	-1.2	-2.0	-8.6
United Arab Emirates			133.7	
United Kingdom	-2.6	-1.2	8.1	-10.7
United States	0.4	-0.5	-5.4	-17.0
Uruguay	-2.9	-14.1	-14.1	-1.0
Vanuatu				4.9
Venezuela	33.9	-13.7	15.9	-3.7
Western Samoa			-12.9	18.2
Zaire	-22.9	-33.5	-21.7	-18.1
Zambia	-8.4	-40.5	-52.3	-27.8
Zimbabwe	-8.7	-7.3	-33.2	0.9