Adjusting the current account to better capture wealth accumulation

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Abstract

The current account is a busy intersection of international macroeconomics. Cross-country trade and income flows are analyzed carefully to pick up signs of global global imbalances. Are current account developments sustainable? Should policies change? By how much must the real exchange rate consequently adjust? All these questions are inherently anchored in a model of inter-temporal consumption, where the current account captures savings over investment; importantly, the accumulation of national wealth. This paper suggests the current account can be a misleading measure of wealth accumulation. Gourinchas and Rey, as well as Lane and Milesi-Ferretti have taken significant steps forward in refining our measure of the stock of wealth, insisting on the valuation channel of exchange rate and asset price fluctuations. This paper turns the spotlight on income flows. It argues, that in Switzerland, for instance, official estimates of the current account seem to over-represent wealth accumulation by a large margin. The reason is that profits of foreign subsidiaries of domestic multinationals are counted as income to domestic residents, ignoring the

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fact that it is foreigners who mostly own the multinational firm. Preliminary results suggest large discrepancies also in other small open economies such as Irelandand the Netherlands. However, the adjustment does not affect net foreign assets, though, as it is captured by the valuation effect.

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The process of adjustment of a country's external balance has been one of the central topics of international economics. The topic has gained further importance with the recent financial crisis. Whatever the cause, whether savings glut or spending spree, the build-up of imbalances across countries and the sudden stop in related inter-bank flows have destabilized the financial system, notably in the euro area. As eyes turn to mend the system and enhance its resilience to future shocks, the magnifying glass turns back over the dynamics of the current account, and in the end wealth accumulation.

The questions on the mind of policy makers and academics are many. Is a large current account sustainable? Is it justified by growth or demographic prospects? Should policies be adapted? Must the real exchange rate adjust? There is no lack of theoretical guidance to answer these questions. But most analysis is rooted in an inter-temporal consumption smoothing model in which the current account represents savings over investment, thus wealth accumulation.

When it comes time to apply these models, a key question emerges on which this paper dwells, does the current account accurately measure domestic wealth accumulation? Put simply, does a positive current account imply that domestic residents became richer by that same amount? In countries like Switzerland, the question is not easy to answer. Switzerland has recorded persistently high current accounts, but its net foreign assets have increased only slowly, as shown in Figure 1. The apparent discrepancy between the current account and changes in net foreign assets is actually common to most countries. We know the difference comes mainly from valuation effects, after the seminal works of Gourinchas and Rey (JPE, 2007), and Lane and

Milesi-Ferretti (2006, 2007), as well as a careful study of the Swiss case by Stoffels and Tille (2007). In that respect, Figure 2 provides new evidence of the importance of the valuation channel for Switzerland.

But then, should changes in net foreign assets or the current account be used in models of optimal inter-temporal consumption smoothing? Most of the existing literature falls on the side of the current account as indicative of domestic agents' consumption decision and choice to accumulate wealth. Subsequent valuation losses are attributed to poor investment decisions, or possibly optimal risk diversification (see works of Sorensen, for instance).

This paper takes an alternative view. It emphasizes that due to accounting practices, the current account may be a misleading indication of domestic wealth accumulation. In the case of Switzerland since 2000 it amounts to nearly 30 percent or 3.5 percent of GDP on average per year (with peaks up to 45 percent of the current account of 6.5 percent of GDP). The same mis-representation is even larger for Ireland, though smaller for bigger countries.

The explanation given in this paper for the mis-representation of wealth accumulation rests on accounting. Foreign assets generate income, called investment income in the current account statistics. The income from portfolio investments are dividend flows from foreign companies, split between foreign and domestic portfolio investors. The entire FDI income, instead, is attributed to the FDI investors. When these investors are domestically registered firms, FDI income adds to the current account, raising the measured wealth accumulation of domestic residents. In many countries, mostly small, advanced countries, FDI investors are mostly owned by foreigners, through portfolio shares. Thus, a part of the FDI income should more appropriately

be allocated to foreigners, and not entirely to domestic residents.

More generally, all reinvested earnings of domestic companies should be allocated to foreigners in a part proportional to foreigners' portfolio ownership of these firms. This would be consistent with the treatment of earnings that are distributed as dividends. More importantly, this would more accurately characterize the net wealth accumulation by domestic residents.

To illustrate the point, the following examples may prove helpful. Suppose first that FDI income earned abroad were 100 and the domestic FDI investor paid no dividends. Furthermore, say sixty percent of the investor's shares were owned by foreigners. Then, domestic wealth accumulation would be exaggerated by = 60 (0.6 x 100). If instead the FDI investor paid 20 in dividends, the exaggeration of wealth accumulation would drop to 48 (0.6 x 80). In the case that the FDI investor paid no dividends, earned 80 on FDI income and 20 from domestic profits, the over-representation of domestic wealth accumulation would again rise to 0.6 x (80+20). And finally if the FDI investor were also owned in part, say 10 percent, by a foreign firm (FDI liability) , the domestic wealth accumulation would be over-represented by 0.6 x 90.

The valuation of net foreign assets, on the other hand, are not subject to the mis-representation of wealth accumulation. As a foreign subsidiary books and retains earnings, its equity valuation increases. Thus, while assets increase by the full retained earnings, portfolio liabilities, once corrected for the valuation effect, increase by the same amount. And since portfolio liabilities are correctly weighed by the foreign ownership share, net assets only increase by the domestic ownership share of retained earnings.

A simple example may further help intuition. Say a Swiss subsidiary (FDI) books and reinvests CHF 10. The current account will show 10. Ceteris paribus, the firm having booked these profits will see its equity price rise by the same amount. But then portfolio equity liabilities will increase by 60 percent (the foreign ownership share) of 10. On net, foreign assets will thus increase by 4. A simple comparison will show a discrepancy between the current account (10) and the change in net foreign assets (4), the difference being 6, given by the valuation effect. But this paper does argue that taken alone, the current account of 10 is a mis-leading representation of domestic wealth accumulation. In a way, a domestically registered firm should be considered domestic for wealth accumulation purposes only to the extent that it is really owned by domestic residents. Inflows to a foreign-owned domestically registered firm should not be part of domestic – income generated - wealth accumulation, if the intention is to estimate, or make judgement on, an inter-temporal consumption model as is typically done in models of current account equilibrium.

1 Mis-representation of domestic wealth accumulation in current account statistics

In practice, we suggest altering the current account so as to more accurately capture domestic wealth accumulation using the following methodology:

1. Definitions: D = dividends, R = retained earnings, P = total profits/earnings, superscript f = foreign share (e.g. D^f is dividends paid to foreigners)

2. Have (observables): D^f, payout ratio $= D/P$, retained ration $= R/P =$

$(1 - D/P)$

3. Want: R^f

4. Calculation: $R^f/R = D^f/D$ i.e. foreign share of retained earnings = foreign share of dividends. Thus, $R^f = D^f \cdot R/D$ where $R/D = (R/P)/(D/P) = (1 - D/P)/(D/P)$.

5. But we also have the reverse bias: $R^{*d} = D^d \cdot R/D$ where R^{*d} are retained earnings of foreign companies which should be attributed to domestic residents and D^d are dividends paid into the domestic country, i.e. portfolio dividend receipts.

6. In the end, the over (or under) representation of domestic wealth accumulation is: $R^f - R^{*d}$

2 Swiss illustration

2.1 Overview of Swiss stylized facts

1. The current account is to a large part made up of investment income (Figure 3), ...

2. ... which itself is dominated by FDI income (Figure 4).

3. Domestic firms are mostly foreign owned, i.e. large foreign equity liabilities (Figure 5), as opposed to Figure 6 showing that portfolio assets are mostly bonds.

Thus, in Switzerland, the ingredients are present for a substantial over-representation of domestic wealth accumulation: large FDI inflows to firms that are mostly foreign owned.

2.2 Over-representation of domestic wealth accumulation

When applied to Switzerland, the adjustment to the current account yields the following results:

- Over 2000-2011, the net adjustment to the Swiss current account is between -1.2 and 6.5 percent of GDP, or 3.5 percent on average,
- the current account shrinks by 28 percent on average, though numbers vary between -13 and 45 percent,
- and the correction cumulates to about CHF 195 billion.

3 An international comparison

Do current account statistics in other countries exhibit the same mis-representation of domestic wealth accumulation? If so, or if not, why? This section investigates these questions. Reinvested earnings of portfolio investment are the source of the misrepresentation of wealth accumulation. As in the case of Switzerland described above, we can approximate these income flows in other countries by multiplying dividends by the appropriate dividend payout factor. This is done in Table 1.

In Table 1, the pay-out ratio is assumed to be 40%, which represents the average annual pay-out ratio for the US stock index S&P 500 between 1997 and 2011, abstracting from the 'outlier' year 2009. The figures for the European and the UK stock markets are similar. For simplicity, we assume the pay-out ratio is the same for receipts and expenses. For large and medium-sized advanced economies considered here, the correction of the cur-

rent account by the estimated net reinvested earnings is small, less than 0.5% of GDP per year in average. This reflects their relatively balanced international investment position in equities, as shown in Figure 8. By contrast, an number of small and very open economies show a larger bias. In the case of Ireland, it amounts a stunning 9% of GDP or three times as large as for Switzerland.

4 **Next steps

Other countries, NFA vs CA in other countries, firm level data for Switzerland.

FIGURE 1: *The current account seems to suggest a much higher rate of wealth accumulation as changes in NFAs.*

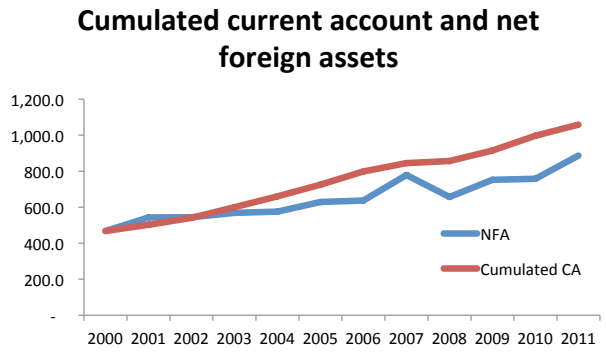

FIGURE 2: *Valuation losses on Swiss net foreign assets mostly reflect the appreciation of the Swiss franc*

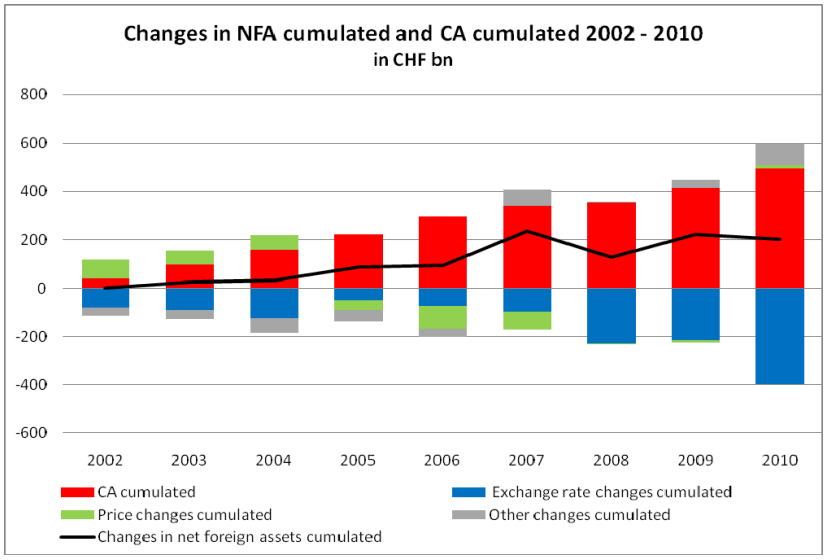

FIGURE 3: *The current account is largely made up of investment income*

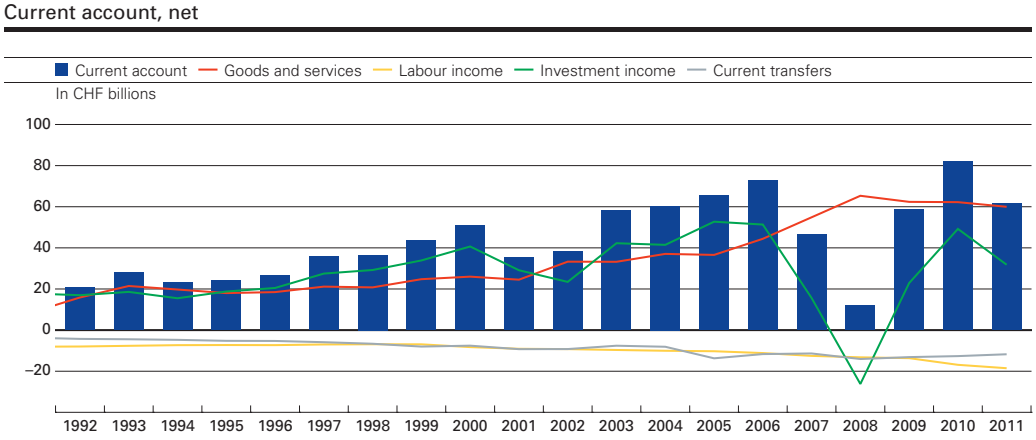

FIGURE 4: *Investment income is dominated by FDI income*

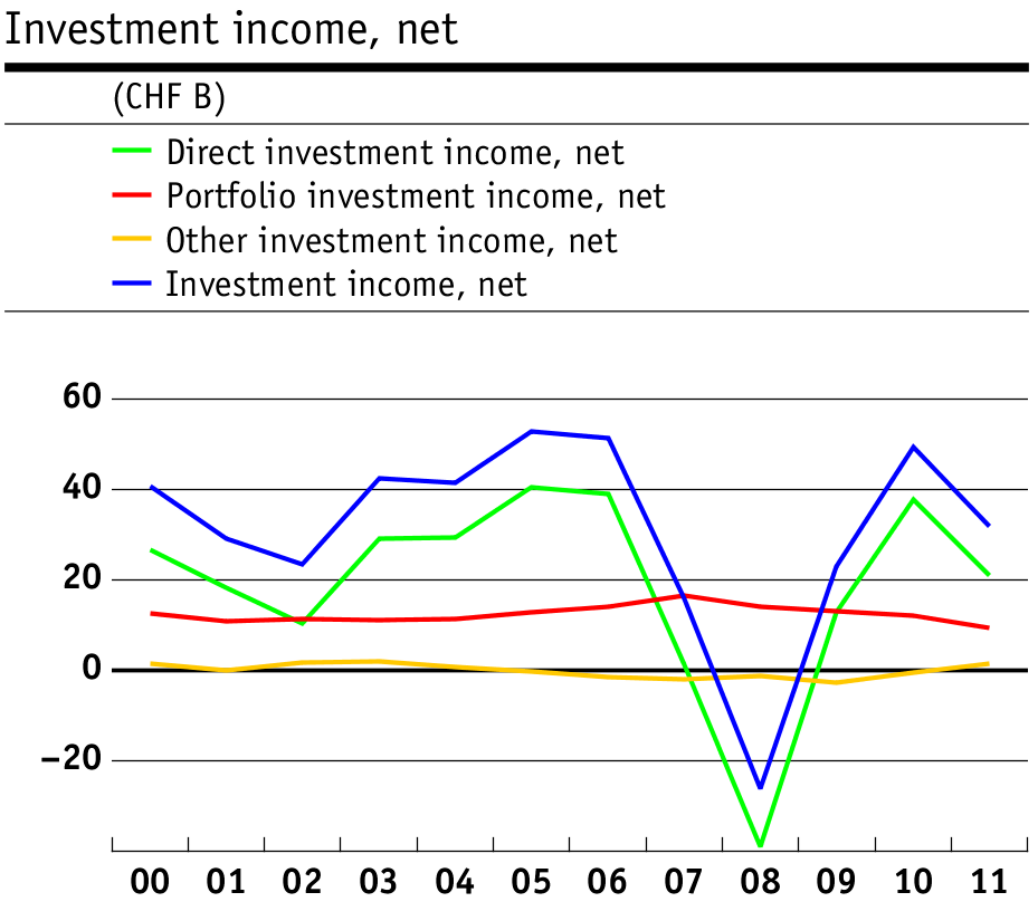

FIGURE 5: *Portfolio liabilities are mostly equity*

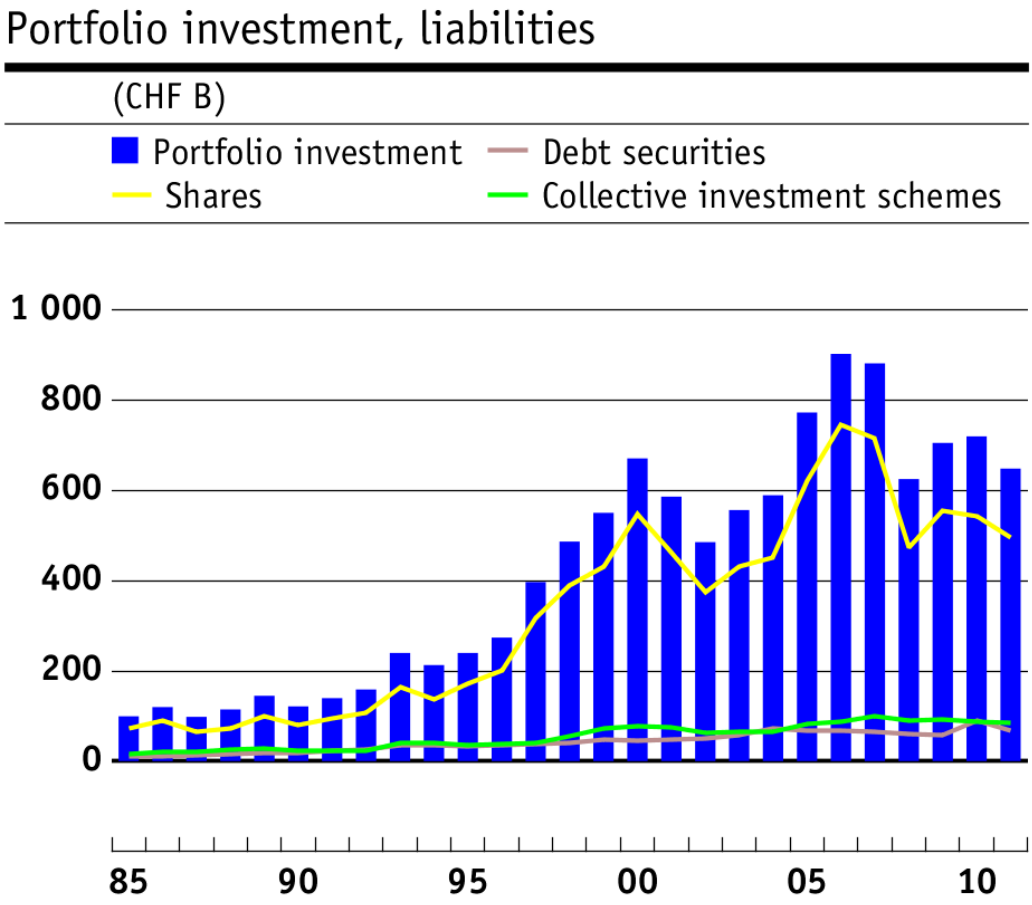

FIGURE 6: *Portfolio assets are mostly bonds*

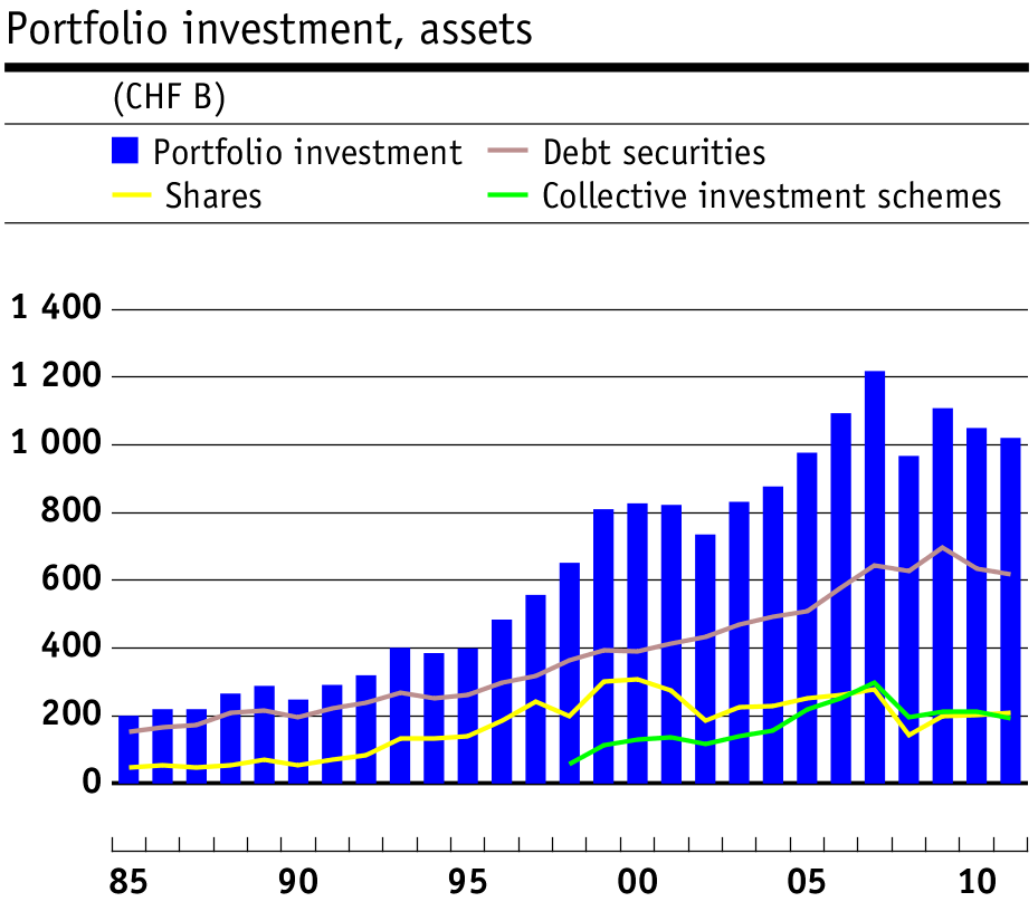

FIGURE 7: *Table 1: The current account can be a misleading indicator of domestic wealth accumulation also internationally.*

In % of GDP, avg 2006-2010	Net dividend income	Pay-out ratio	Current account	Corrected current account	Change (pp)
United States	0.39	0.4	-4.3	-3.8	0.5
Germany	-0.24	0.4	6.3	5.9	-0.4
France	-0.31	0.4	-1.3	-1.8	-0.5
United Kingdom	-0.36	0.4	-2.5	-3	-0.5
Netherlands	-1.04	0.4	6.3	4.7	-1.6
Sweden	0.83	0.4	8.2	9.4	1.2
Ireland	-6.07	0.4	-3.4	-12.5	-9.1
Switzerland			*10.4*	*7.5*	*-2.9*

FIGURE 8: *Net international investment position in equities in percent of GDP, shows much heterogeneity among countries.*