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Sustainable and Excessive
Current Account Deficits

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ABSTRACT

The abundance of private capital flows confronts many emerging-market authorities with a transfer problem. They must decide whether to accept or resist the net capital inflow, or how much to accept and how much to resist. This paper aims at assisting that decision by focusing on the rationale, the sustainability and the source of protracted private-sector driven current account deficits.

First, the paper consults the consumption-smoothing (intertemporal) approach to the current account for a prediction about how the "equilibrium" current account should respond to a reform-induced productivity rise and to a cyclical drop in the world interest rate -- two impulses that have figured prominently in the discussion on the determinants of recent capital flows to the emerging markets. The approach predicts a widening of current account deficits if the country enjoys a persistent indiosyncratic productivity boom. By contrast, the current account deficit should decline in the face of temporarily low world interest rates.

Second, the paper presents various long-term sustainability measures of debt-augmenting capital flows, since authorities need to know the required magnitude and time profile of adjustment back to payments balance as deficits will not be financed by foreigners forever. Any judgement about long-term sustainability needs to consider debt-GDP ratios (current versus tolerated by investors), official foreign exchange reserves (current versus targeted), the potential growth rate of GDP and imports, catch-up appreciation of the real exchange rate, and the structure of capital inflows.

Third, protracted current account deficits should be resisted when they are seen to finance excessive consumption or unproductive investment. A clear warning signal is usually the coincidence of unsustainable currency appreciation, excessive risk-taking in the banking system and a sharp drop in private savings. A case can be made to accept all foreign direct investment, unless it is distorted by trade restrictions and as long as it can be absorbed by the existing stock of human capital.

SUSTAINABLE AND EXCESSIVE CURRENT ACCOUNT DEFICITS

In January 1994, the Governor of the Banco de Mexico told *The Economist* that the current account deficit was not a problem because it was associated with the inflow of foreign funds, rather than expansionary fiscal or monetary policy. A year later, foreign and domestic investors forced Mexico to reduce the deficit on her current account from almost 8 per cent of GDP in 1994 to about zero. Currently, countries such as the Czech Republic, Malaysia, Peru, and Thailand are running deficits as high or even higher than Mexico did before the currency crisis emerged.

The current account deficits analyzed in this paper share three important features. First, they are 'private-sector driven' in the (non-Ricardian) sense that they do not reflect government budget deficits. The paper examines the experiences of four Asian and four Latin American countries that have not had public-sector deficits during the 1990s, but have received sizeable capital imports. With the public budget in balance and private capital mobile in these countries, the current account is determined by private-sector savings-investment decisions. Second, the current account deficits are 'overfinanced'(except just prior to currency crises), implying a positive overall balance of payments and rising levels of foreign exchange reserves. Third, a part of the deficit is financed by cyclical capital flows, as has been generally the case for a large share of emerging-market flows during the 1990s (see, e.g., Calvo, Leiderman and Reinhart, 1996). Their cyclical determination makes these flows subject to reversal.

The abundance of private capital inflows confronts many emerging-market authorities with a transfer problem. They must decide whether to accept or resist the net capital inflow, or how much to accept or how much to resist. This paper analyzes this decision by focusing on the rationale, the sustainability and the source of protracted current account deficits. The paper does not provide recommendations for how to resist capital inflows through such policies as macroeconomic restraint, sterilized intervention, or capital controls (see, e.g., Montes, 1996; Reisen, 1996). Nor does it provide policy advice for preventing financial crises (see, e.g., Goldstein, 1996).

The paper is structured as follows. First, it consults the intertemporal approach to the current account for a prediction about how the 'equilibrium' current account should respond to a reform-induced productivity rise and to a drop in the world interest rate — two impulses that have figured prominently in the discussion on the determinants of recent capital flows to emerging markets.

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Second, the paper presents various long-term sustainability measures of debt-augmenting capital flows. Since large current account deficits will not be financed by foreigners forever, authorities need to know the required magnitude and time profile of the subsequent adjustment back to payments balance. Since an unsustainable deficit is not necessarily an "excessive" deficit, the size of the current account deficit does not give rise to normative judgements; what matters, rather, is the *source* of the deficit. The third section of the paper makes a case for resisting part of foreign savings when unsustainable currency appreciation, excessive risk-taking in the banking system, and a sharp drop in private savings coincide. Thus the appropriate policy response is to strike a balance between the benefits of consumption-smoothing and of financing viable investment versus the economic costs of excessive private borrowing. A case can be made that foreign direct investment is less likely than other capital flows to stimulate excessive private consumption and a real appreciation problem.

1. The intertemporal approach to the current account

In principle, the intertemporal approach to the current account can help answer the question of how much capital flows to accept by running current account deficits. International capital mobility opens the opportunity to trade off present levels of absorption against future absorption. If saving falls short of desired investment, foreigners have to finance the resulting current account deficit, leading to a rise in the country's net foreign liabilities. The intertemporal approach views the current account as the outcome of forward-looking dynamic saving and investment decisions (Obstfeld and Rogoff, 1994), which are driven by expectations of future productivity growth, interest rates and other factors. This approach, in principle, is able to provide a benchmark for defining "excessive" current account deficits in the context of models that yield predictions about the equilibrium path of external imbalances (Milesi-Ferretti and Razin, 1996).

Without writing down the whole maximization problem for the representative consumer (among the many assumptions necessary to produce behavioural predictions are intertemporal separability of preferences and perfect foresight; see Obstfeld and Rogoff, 1994; Glick and Rogoff, 1995; and Razin, 1995), Table 1 collects some important predictions of the intertemporal approach about how the 'equilibrium' (first-period) current account should respond to a drop in the world interest rate and a reform-induced productivity rise.

Shock	Temporary			Persistent		
	Saving	Investment	Current account	Saving	Investment	Current account
1. Drop in the world interest rate below permanent average rate						
- Net debtor countries	+	0	+	not applicable		
- Net creditor countries	-	0	-			
2. Rise in productivity						
- Country-specific	+	0	+	-	+	-
- Global	+	0	+	+	+	0

Source: See discussions in Glick and Rogoff (1995), Obstfeld and Rogoff (1994) and Razin (1995).

The results in the table imply:

— Capital-importing countries, as net foreign debtors, should raise the saving rate in response to cyclical portfolio flows, which are interest-driven. The current account deficit should decline (or move into surplus) as people smooth consumption in the face of temporarily low interest payments. For net creditor countries, temporarily low interest rates should result in opposite current account effects. If a net debtor country widens its current account deficit in response to temporary interest rate reductions, the response may well destabilize rather than smooth the intertemporal consumption path.

— Likewise, the intertemporal approach does not necessarily predict an increasing current account deficit when capital flows are attracted by country-specific productivity surges. The 'equilibrium' response of the current account depends crucially on the expectation of whether the productivity surge is temporary or permanent. In both cases, the productivity surge raises output immediately, but only a persistent rise in productivity raises permanent income. The reason is that only a permanent productivity surge induces investment and a higher future capital stock. The rise in permanent income also causes consumption to rise more than output, resulting in a strong current account deficit as a result of lower saving and higher investment. In contrast, a transitory increase in productivity should result in an opposite current account effect (a lower deficit), since there is no effect on investment and agents

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save part of any transitory increase of income (in the permanent income model of consumption).

— Productivity surges should not necessarily be interpreted as country-specific in origin, but can be part of a broader global shock. A persistent productivity-enhancing shock common to all countries raises the world rate of interest. This should dampen consumption in net debtor countries sufficiently to offset the consumption effects arising from higher permanent income brought about by higher investment. Since all countries cannot improve their current accounts, world interest rates rise until global savings and investment are balanced. A global transitory productivity shock produces excess world saving and thereby exerts downward pressure on interest rates. A temporary drop in world interest rates results in lower current-account deficits for net debtor countries, as analyzed above.

It is noteworthy that — among the capital-flow determinants discussed here — the intertemporal approach predicts a widening of current account deficits (for net debtor countries) only if the country enjoys a permanent idiosyncratic productivity boom. How well then does the intertemporal approach explain actual current account balances in our eight sample countries.

TABLE 2 INVESTMENT, GROWTH AND PRODUCTIVITY [a)]

	First year of inflow	Investment Ratio		Real GDP Growth Rate		Efficiency[b)]	
		before inflow	thereafter	before inflow	thereafter	before inflow	thereafter
Argentina	1991	16.9	18.3	-1.4	7.5	-9.0	41.0
Chile	1990	20.9	23.3	8.0	7.0	37.8	30.6
Mexico	1989	18.8	19.7	1.7	3.0	8.8	15.6
Peru	1992	17.8	20.4	-2.7	4.8	-14.8	28.4
Indonesia	1990	32.7	34.1	6.0	7.0	18.3	20.6
Malaysia	1989	23.6	35.1	7.2	8.7	30.2	23.5
Philippines	1992	19.6	23.2	3.8	4.2	20.1	16.2
Thailand	1988	27.6	39.8	9.6	9.0	34.7	23.6

a) Data are annual averages for the first period from 1987 to the year that preceded the first year of inflow and for the second period from the year after the inflow started to 1995 (investment, efficiency) or to 1996 (growth). For Argentina and Mexico, the second period stops in 1994.
b) Efficiency is defined as the inverse of the investment rate to the real GDP growth rate.
Source: JP Morgan, *World Financial Markets*; IMF, *International Financial Markets*; own calculations.

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TABLE 3 CHANGE IN FOREIGN RESERVES AND CURRENT ACCOUNT BALANCES,
IN PER CENT OF GDP

	Change[a)				Memo:		
	Foreign reserves	Current account	Saving	Private consumption	First year of inflow	Year when current account deficit peaked	Peak current account deficit
Argentina	1.4	-1.9	-0.5	4.5	1991	1994	3.5
Chile	5.7	1.2	3.7	1.2	1990	1996	3.3
Mexico	-0.7	-6.9	-6.0	3.1	1989	1994	7.8
Peru	5.9	0.1	2.8	0.7	1992	1995	7.2
Indonesia	-0.2	-0.5	0.9	-0.3	1990	1996	3.7
Malaysia	8.8	-11.8	-0.7	3.4	1989	1995	8.1
Philippines	3.4	-1.6	1.9	3.8	1992	1994	4.5
Thailand	8.2	-5.8	6.4	-4.9	1988	1995	8.2

a) Changes are calculated as the annual average changes between the first period from 1987 to the year that preceded the first year of inflow and the second period from the year after the inflow started to 1995 (for Argentina and Mexico, 1994). Saving rates were derived as residual.
Source:IMF, *International Financial Statistics*; JP Morgan, *World Financial Markets*; World Bank, *Global Development Finance*; own calculations.

Tables 2 and 3 explore the issue in more country detail, by comparing the years 1987 up to the year when foreign capital started to flow in with the capital-inflow period. Table 2 shows that the capital inflow period coincided with a strong surge in efficiency (the inverse of the incremental capital-output ratio) really only in Argentina and Peru. Efficiency rose also slightly during the inflow period in Mexico, Indonesia, and more recently, in the Philippines. By contrast, strongly higher investment rates in Malaysia and Thailand resulted in declining levels of capital productivity; in milder form, the same phenomenon was visible in Chile, reflecting the law of diminishing marginal returns of investment (and probably indicating an excessive switch in investment).

The sharpest deterioration in current account balances were seen in Malaysia, Mexico and Thailand, and not in those countries (Argentina, Peru) where country-specific productivity surges were particularly important (Table 3). In Argentina, Mexico, Malaysia and the Philippines private consumption (as a share of GDP) rose by more than 3 per cent of GDP on average during the inflow period, often reflecting a strong rise in public savings. As noted above, a rise in private consumption can be validated by higher investment rates (indicating expectations of higher permanent income levels) or by current

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income levels being below potential. In Argentina and Mexico, however, the size of the switch in private consumption relative to the switch in investment looks excessive.

2. Long-term sustainability

It is a common fallacy to confuse unsustainability with undesirability. Foreign savings need not necessarily be resisted because they finance a current account deficit that is unsustainably large. In particular, during reform episodes a deficit may occur as a result of a desired stock adjustment from financial assets into real assets in the case of an investment boom, because the expected profitability of real assets has improved. The corresponding deficit in the current account is inevitably temporary, yet desirable as well. This is a valuable lesson from the intertemporal approach.

But a large deficit will not be financed by foreigners forever. There will at one point inevitably have to be adjustment back to payments balance. It is thus not only important to know the *sources* of the current account deficit (see Section 3), but also the *size* and the *time profile* of the balancing adjustment. That makes long-term sustainability of the current account deficit a benchmark of which authorities should be aware.

This section presents a conventional debt dynamics equation to arrive at a notion of intertemporal solvency, emphasizing the role of potential GDP growth, the real exchange rate, and the desired level of foreign exchange reserves.[1] The section builds on recent work by Milesi-Ferretti and Razin (1996) and Edwards, Steiner and Losada (1996).

Let us first consider an economy in steady state, with liabilities as a fraction of the country's GDP that foreigners are willing to hold in equilibrium, denoted by d. d can be interpreted as an 'equilibrium portfolio share'. Note that foreign direct investment is *not* governed by portfolio considerations; multinational companies seek to internalize agglomeration benefits by concentrating (rather than diversifying) their FDI flows; and, while markets do watch a country's foreign debt-GDP ratio, they are not concerned about the level of FDI-related liabilities. Consequently, FDI flows are excluded from the subsequent discussion on long-term sustainability. In equilibrium, i.e. with d held constant,

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[1] Interest payments on outstanding debt and the resource transfer (the non-interest current account) are ignored to keep the focus on the sustainable current account deficit. The loss of information is minor to the extent that average interest costs do not vary much across the sample countries.

the country accumulates net liabilities, equal to the current account deficit CAD *plus* the net accumulation of international reserves FX, both as fractions of GDP, in proportion to its long-run GDP growth, γ.

(1) $CAD + \Delta FX = \gamma d$.

Long-run GDP growth also exerts two indirect effects on the steady state current account that is consistent with a stable debt-to-GDP ratio. First, as the economy expands, the desired level of international reserves also grows. Edwards, Steiner and Losada (1996) assume that in equilibrium the authorities define their desired reserve holdings in terms of number of months of imports. However, the literature on the demand for international reserves has empirically identified two different determinants (Heller and Khan, 1978). The first is the level of imports. The second is the variability in the balance of payments which, by creating uncertainty, increases the demand for reserves. Uncertainty in the balance of payments is ignored. In principle it can be incorporated into the analysis, by making predictions about the coefficient of variation from the time trend in the foreign reserve ratio. Denoting real annual import growth by η, the change in the desired reserve ratio can be written as

(2) $\Delta FX = [(1 + \eta)/(1 + \gamma)]FX - FX$.

Incorporating (2) into (1) yields

(3) $\gamma d = CAD + [(\eta - \gamma)/(1 + \gamma)]FX$.

A second channel through which GDP growth indirectly impacts on debt dynamics is the Balassa-Samuelson effect.[2] In the long run, *relative* growth leads to real exchange rate appreciation, largely driven by the evolution of productivity differentials between traded and non-traded goods in the domestic economy and in the rest of the world. Real exchange rate appreciation per unit of GDP growth, denoted by ε, reduces both debt and foreign exchange reserves as a fraction of GDP, so that equation (3) becomes

(4) $(\gamma + \varepsilon)d = CAD + [(\eta + \varepsilon - \gamma)/(1 + \gamma)]FX$.

Equation (4) describes the steady-state current account deficit that can be sustained over the long run if the debt ratio remains constant and desired reserves rise in proportion to import growth:

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[2] Measures of equilibrium real exchange rates are especially difficult to calculate for the transition countries, since their production structures and productivity levels are undergoing substantial changes; see Halpern and Wyplosz (1996).

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(4′) $CAD = (\gamma + \varepsilon)d - [(\eta + \varepsilon - \gamma)/(1 + \gamma)]FX.$

Table 3 provides numerical estimates of equation (4′) for four Latin American and four Asian countries. The variables d (total external debt/GDP) and FX (international reserves/GDP) refer to 1996 estimates as given in JP Morgan, *World Financial Markets* (28 March 1997). The parameters γ, ε and η are estimated as described below.

Since GDP can be seen as the result of a transformation of key factors of production, a theoretically appropriate way to estimate potential GDP γ is to estimate the available volume of factor inputs in the business sector into a numerically specified production function. However, even small estimation errors for the individual parameters of the production function (e.g. output elasticities, rate of technical progress, or degree of slack) can lead to rather implausible estimates for potential output. Instead, a simpler approach, the peak-to-peak method is employed, which uses actual GDP data only for the derivation of potential GDP estimates.

This method is implemented by first identifying the peak of actual GDP in each cycle and connecting these data points by interpolation. The procedure is applied for two different observation periods, for 1960-95 (for Malaysia 1970-95) and for the period since "openness" reform as classified by Sachs and Warner (1995) until 1995. For Argentina and Peru, Sachs and Warner classify the year of opening as 1991, for the Philippines 1988, for Mexico 1986 and for Chile 1976; for the other countries the observation periods coincide. Annual GDP data are used, except for Peru and the Philippines where good quarterly data are available and where the reform period is relatively short. The resulting GDP series can be seen as an approximation of the highest attainable level of output at any given point in time.

In a second step, the average ratio of actual GDP to the highest attainable GDP for each cycle is calculated — a measure of the 'normal' degree of slack in the eight economies. This ratio is then used to scale the series of highest attainable GDP to derive estimates for potential GDP. The *annual* growth rate of potential GDP is then obtained by regressing the potential GDP series on a time trend. The results give largely plausible estimates, except possibly for Mexico and the Philippines, where potential growth for the period since openness reform is lower than for full period. The results reported in Table 3 use the growth rates of potential GDP obtained for the period since reform, except for Mexico and the Philippines where estimated and forecast GDP growth rates, based on JP Morgan, have been taken.

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Estimates of the real exchange rate appreciation effect of GDP growth *relative* to the US are obtained from Larraín's (1996) instrumental variables analysis of the determinants of real exchange rates (viz. the dollar) for a sample of 28 Asian and Latin American countries over the period 1960-90. These estimates control for the effects of other determinants, namely government spending, degree of openness, and the terms of trade. The parameter ε is calculated by scaling these figures by the annual growth rate of potential GDP. Note that since the relationship between real exchange rates and relative GDP levels is non-linear, a given estimate of the growth rate of potential GDP implies greater real equilibrium exchange rate appreciation at higher relative income levels; witness the difference between Malaysia and Indonesia, for example.

Finally, estimates of the future annual real import growth rate, η, are simply extrapolated out of the reform-period sample for each country. Argentina's annual import growth may seem implausibly high, but it must be recognized that Argentina is still a very closed economy in terms of the import ratio m and that the potential for natural trade through, for example, the Mercosur free-trade agreement is far from exhausted.

TABLE 4 DEBT-RELATED CURRENT ACCOUNT DEFICITS IN STEADY STATE, IN PER CENT

Country	CAD	=	(γ+ε)d*	-	[(η+ε–γ)/(1+γ)]FX*	memo: d	FX
Argentina	1.6		(0.043+0.007)50	-	[(0.318+0.007-0.043)/1.043]3.5	34	6.1
Chile	2.0		(0.042+0.006)50	-	[(0.069+0.006-0.042)/1.042]11.4	30	20.2
Mexico	1.9		(0.052+0.008)50	-	[(0.126+0.008-0.052)/1.052]14.0	51	5.4
Peru	3.8		(0.078+0.009)50	-	[(0.152+0.009-0.078)/1.078]6.5	51	13.6
Indonesia	3.0		(0.061+0.004)50	-	[(0.073+0.004-0.061)/1.061]9.9	45	8.7
Malaysia	1.7		(0.065+0.014)50	-	[(0.111+0.014-0.065)/1.065]39.6	38	28.3
Philippines	2.1		(0.057+0.004)50	-	[(0.112+0.004-0.057)/1.057]16.6	56	13.5
Thailand	2.8		(0.072+0.010)50	-	[(0.133+0.010-0.072)/1.072]19.7	50	20.0

Note: See text for explanations

Table 4 displays the results of calibrating equation (4′) for the long-run steady-state current account ratio implying constant debt and reserve levels relative to GDP. Since a high debt ratio can be sustained by a larger deficit in the current account than a smaller debt ratio, it is assumed for all sample countries that foreign investors are comfortable with tolerating a debt ratio of 50 per cent, i.e. d* = 50. This is roughly equal to the level in Peru or Thailand, countries about which the financial press has started to worry recently. By contrast, countries

such as Chile and Malaysia with low debt and high foreign-reserve levels could run higher current account deficits for a transition period than indicated by the steady-state levels in Table 3. The target level of foreign exchange reserves for all countries is assumed to be equal to half the import ratio (six months of imports).

Table 5 compares the steady-state measure of the current account balance with the actual balance and with cyclically adjusted and FDI-adjusted balance measures, all for the year 1994 (the last year for which FDI data were available). Observe that the FDI and cyclically adjusted current account deficit was higher than the steady-state deficit in Argentina, Mexico and the Philippines. In contrast, high-deficit countries such as Malaysia and Thailand appear to be sustainable.

TABLE 5 VARIOUS CURRENT ACCOUNT BALANCE MEASURES, 1994
IN PER CENT OF GDP

	Actual	Cyclically adjusted[a]	Cyclically and FDI adjusted[b]	Steady-state
Argentina	-3.5	-3.0	-2.6	-1.6
Chile	-1.5	-1.5	+2.1	-2.0
Mexico	-7.8	-7.1	-4.9	-1.9
Peru	-4.5	-3.5	+1.2	-3.8
India	-1.6	-0.4	+0.9	-3.0
Malaysia	-5.9	±0.0	+6.5	-1.7
Philippines	-4.4	-4.3	-2.8	-2.1
Thailand	-5.9	-1.1	+2.0	-2.8

Notes: a) The cyclically corrected deficit adjusts imports for the difference in actual and potential GDP.
b) Adjusts cyclically corrected deficit by adding FDI/GDP inflows.

3. Problems with excessive current account deficits

This section discusses some problems with 'excessive' current account deficits. The benefits of foreign savings — consumption-smoothing and growth of income — will not materialize when current account deficits represent excessive current consumption or when foreign funds are misallocated. A balance of payments crisis will thus be unavoidable. It is useful, however, to review some of the arguments for why excessive consumption and unsound investment surges are unlikely to occur in the absence of public-sector deficits and distortions.

3.1. The Lawson doctrine

Commenting on concerns about the UK's balance of payments in a speech to the International Monetary Fund, the UK Chancellor Nigel Lawson concluded in September 1988 (a year before a deep crisis with falling output and surging unemployment set in): "we are prisoners of the past, when UK current account deficits were almost invariably associated with large budget deficits, poor economic performance, low reserves and exiguous net overseas assets. The present position could not be more different". What came to be internationally known as the Lawson doctrine is a proposition that has been most eloquently expressed by Max Corden (1977; and, with some qualifications, 1994):

> The current account is the net result of savings and investment, private and public. Decentralized optimal decisions on private saving and investment will lead to a net balance — the current account — which will also be optimal. There is no reason to presume that governments or outside observers know better how much private agents should invest and save than these agents themselves, unless there are government-imposed distortions. It follows that an increase in a current account deficit that results from a shift in private sector behaviour should not be a matter of concern at all. On the other hand, the public budget balance is a matter of public policy concern and the focus should be on this (Corden, 1994).

The fact, however, that large current account deficits primarily reflected a private-sector saving-investment imbalance did not prevent private capital markets from attacking currencies in Chile (early 1980s), in the UK and the Nordic countries (late 1980s) and in Mexico and Argentina (mid 1990s). So what was wrong with the Lawson doctrine?

— First, in a forward-looking rational-expectations framework, current account balances are always the result of private-sector decisions, with or without public-sector deficits. With Ricardian equivalence, a public budget deficit immediately stimulates private savings to pay for future taxes. People who subscribe to the Lawson doctrine are thus saying that they do not believe in Ricardian equivalence (i.e. they believe in optimal private-sector decisions, but not in rational expectations). In fact, the Ricardian offset coefficient has been estimated to average 0.5 for developing countries (Edwards, 1995); other things equal, a deterioration in the current account worth 5 per cent of GDP thus requires the public-sector deficit to worsen by 10 per cent of GDP.

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— Second, current private-sector liabilities are often contingent public-sector liabilities. Foreign creditors may force governments to turn private-sector debt into public-sector obligations, as happened in Chile after 1982. Furthermore, private-sector losses tend to be absorbed eventually by the public sector, either in terms of tax revenue foregone or through costly resolutions of banking crises, in particular when financial institutions are deemed 'too large to fail'. Balance-of-payments and financial crises are often caused by common factors, such as domestic financial liberalization, implicit deposit insurance, or exchange rate-based stabilization plans (Kaminsky and Reinhart, 1996).

— Third, observed and expected returns to saving and investment can be distorted by various market failures: (a) Private borrowers may not internalize the rising marginal social cost of their private borrowing that arise from the upward-sloping supply of foreign capital (Harberger, 1985). (b) Excessively optimistic expectations about permanent income levels after major changes in the policy regime can lead to over-borrowing, because financial market institutions fail as efficient information conduits between depositors and borrowers (McKinnon and Pill, 1995). Financial market bubbles may add to this boom mentality by discouraging private savings through wealth effects.

— Fourth, a worsening current account deficit may lead to an unsustainable appreciation in the real exchange rate. Such an appreciation can conflict with development strategies based on the expansion of exports and efficient import substitution, which rely on a reliable and competitive exchange rate. Overvalued exchange rates cause sub-optimal investments which are costly to reverse, undermine active trade promotion, export diversification and productivity growth, and breed capital flight. Large swings in real exchange rates, often a result of temporary capital flows, have been found to significantly depress machinery and equipment investment and thus long-run growth performance (Agosin, 1994).

— Fifth (as now also stressed by Corden, 1994), markets are concerned with country risk and look at a country's total debt ratio. Therefore, the current account as a whole, and not just the sources of its change, become relevant. Once debt ratios and current account deficits exceed certain levels (see section 2), decentralized decision-making can lead to excessive borrowing from a national point of view (again, due to the Harberger externality), particularly when increased borrowing is for consumption rather than for investment.

Table 6 displays three hard-landing episodes in Latin America where the required switch in the current account went along with sharp drops in real GDP,

even sharper cuts in private per capita consumption, and often strong depreciation in the real exchange rate. During the bust, the benefits of consumption-smoothing and growth enhancement through foreign savings did indeed ring hollow.

TABLE 6 MACROECONOMIC ADJUSTMENT IN SELECTED COUNTRIES

Country	Year (period avg.)	Current account/GDP (%)	Real GDP Growth (%)	Real private consumption growth (%)	Real exchange rate appreciation (%)
Chile	1980	-7.1	7.8	1.5	22.0
	1981	-14.5	5.6	2.4	8.4
	1982	-9.5	-14.1	-12.4	-20.6
	1983	-5.6	-0.7	-5.1	-20.4
Mexico	1993	-6.5	0.6	-2.1	5.8
	1994	-7.8	3.5	3.7	-3.7
	1995	-0.3	-6.9	-9.2	-28.1
Argentina	1993	-2.9	6.0	1.2	7.4
	1994	-3.5	7.4	3.7	1.7
	1995	-0.8	-4.4	-9.2	0.4

Sources: IMF, *International Financial Statistics*; JP Morgan, *World Financial Markets*; own calculations.

3.2. *Private spending booms*

As defined above, large current account deficits may represent "excessive" private consumption, as was suggested for Argentina and Mexico. The empirical link between consumption booms, surges in bank lending, and subsequent banking crises is well documented (Gavin and Hausmann, 1996). Therefore, payments deficits owing to private spending booms suggest great risks to the public sector — risks of tax revenue losses and costly bank crisis resolutions, as documented by Table 7.

TABLE 7 EPISODES OF SYSTEMIC BANKING CRISES WITH HEAVY CAPITAL INFLOWS

Country	Scope of crisis	Cost of rescuing banks (% of GDP)
Argentina 1980-82	16% of assets of commercial banks; 35% of total assets of finance companies	55.3
Chile 1981-83	45% of total assets	41.2
Israel 1977-83	Entire banking sector	30.0
Finland 1991-93	Savings banks affected	8.2
Mexico 1995-?	Commercial banks past due to gross loan ratio reaches 9.3% in February 1995	12-15

Sources: Bank for International Settlements, *63rd Annual Report*, 1993; G. Caprio and D. Klingebiel (1996).

While it seems obvious that such costs imposed on the public sector suggest that governments engage in some stabilizing measures to moderate private spending booms (by restrictive fiscal policies or credit restrictions for private borrowers), it is less straightforward that resistance to large current account deficits should be included in such measures. Distortions should be corrected at the source; the twin payment and banking crises seem to originate in either domestic financial deregulation, implicit deposit insurance, or protracted exchange rate-based stabilization plans:

—   Since the 1980s, the link between banking crises and balance-of-payments crises has strengthened. Kaminsky and Reinhart (1996) trace 71 balance-of-payments crises and 25 banking crises during the period 1970-95. While they report only 3 banking crises on 25 balance-of-payments crises during 1970-79, they find 22 banking crises on 46 payments crises over 1980-95. They find that financial liberalization (which occurred mostly since the 1980s) plays a significant role in explaining the probability of a banking crisis preceded by a private lending boom. A banking crisis, in turn, helps to predict a currency crisis. There is also clear evidence for the OECD countries that rapid and extensive financial deregulation has tended to lower household savings by lessening liquidity constraints (Blundell-Wignall and Browne, 1991). While most of that drop in private savings could be interpreted as a

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temporary stock adjustment to a higher consumption path, there is evidence that household saving rates have remained low (Andersen and White, 1996).

— Information asymmetries, reinforced by the lack of institutions that monitor and supervise credit risk, produce moral hazard and adverse selection. Firms with a high risk-return profile have an incentive to borrow heavily, as their exposure is limited by bankruptcy laws. Consumers incur excessive debt when they feel that their debt is not comprehensively monitored. In principle, banks and other intermediaries may attempt to reduce credit risk through credit rationing. This limits the extent to which liberalization can ease liquidity constraints. But when the government insures deposits against adverse outcomes, it alters how the banking system views the risks associated with making loans — it introduces moral hazard. This results in higher bank lending, which in turn can underpin excessively optimistic expectations about the success of reform (McKinnon and Pill, 1995).[3]

— Exchange rate-based stabilization plans have often been accompanied by a boom in bank lending, which in turn fuels a boom in consumption spending. Unlike with money-based stabilization, disinflation produces a rise in real-money balances, as a result of central bank intervention to peg the currency and of money demand rising as domestic wealth holders convert their assets back into domestic currency. As long as foreign exchange intervention is unsterilized the capital inflows are fully intermediated through the banking system. This allows a boom in credit to agents who have been rationed previously as a result of inflation and financial repression (Reisen, 1993). Subsequently, overvaluation due to inflation inertia causes a recession and a deterioration of bank assets as a result of non-performing loans and lower asset prices.

Even though the source of these private spending booms is domestic, one must ask whether foreign savings worsen the boom (Corden, 1994). In the absence of foreign capital inflows, the spending boom would manifest itself not in a current account deficit, but in higher interest rates. The critical question then is what kind of investment would be crowded out by the rise in domestic interest rates. With ineffective bank supervision (as a result of too rapid financial

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[3] In other words, bank lending supports excess credibility of liberalization and stabilization programmes. For liberalization programs perceived as temporary (an hypothesis which does not seem apt to describe existing policy regimes in most capital-importing countries), it was a *lack* of credibility which was used to explain temporary spending booms as residents exploited a 'window of opportunity' (Calvo, 1987).

deregulation, for example), the average productivity of borrowing may decline as risk-averse investors withdraw from the pool of potential borrowers. The failure to finance productive investment would be the cost of the decision not to accept capital inflows, with the excess of the risk-adjusted domestic interest rate over the world interest rate as a measure of the distortion created by that decision. The result for the decision whether to accept or resist inflows would be ambiguous.

In the McKinnon-Pill model the closed-economy financial market failure is reflected in higher financial yields, but its effect on quantities — borrowing and consumption — is ambiguous, depending on offsetting income and substitution effects. Excessively optimistic expectations about future permanent income levels, resulting in both over-consumption and over-investment, are financed by excessive borrowing from the rest of the world. This distortion is reinforced by foreign savings. The McKinnon-Pill solution to the distortion is similar to a Pigou-Harberger tax (specifically, a reserve requirement on foreign deposits) that achieves the optimal balance of consumption-smoothing and excessive borrowing.

The first-best solution to the boom distortion triggered by exchange rate-based stabilization is to announce, at the start of the stabilization plan, that the peg will be temporary, and will be followed by more nominal exchange rate flexibility. While this is easier said than done, it does not do away with the immediate remonetization and real exchange rate appreciation that characterize the first phase of disinflation. Temporary support from selective controls on short-term capital controls may well be needed (Hausmann and Reisen, 1996).

3.3. The real appreciation problem

If the scope for sterilized intervention is limited or exhausted[4] and if foreign savings are partly spent on nontradables, a protracted current account deficit will be associated with a real appreciation of the exchange rate. But there is no mechanical link between the size of the deficit and the magnitude of the appreciation. To the extent that the shift in the current account balance represents higher investment, the increased resource transfer is likely to be spent on additional imports of capital goods and intermediate goods. In such a case, the real transfer will be 'effected' largely through the transfer of purchasing power, with little effect on relative prices. But when the current account deficit largely represents a consumption boom, the transfer of purchasing power will not solve the real transfer problem by itself, since a large part of the additional purchasing power is likely to fall on nontradables. In such

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[4] On sterilized intervention in Asia and Latin America, see Reisen (1994b).

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cases, a shift in relative prices — a real appreciation of the exchange rate in the recipient country — will be necessary. This lesson from the inter-war transfer debate is supported by Table 8.

TABLE 8 SAVING AND REAL EXCHANGE RATE APPRECIATION

Country	Change in domestic saving rate since inflows started (from Table 3)	Degree of undervaluation[a] Current vs. PPP-adj. income per cap.			Catch-up appreciation[b]	Net appreciation[c]
		1990	1994	Change		
Argentina	-0.5	50	93	+43	8	35
Chile	3.7	31	40	+9	3	6
Mexico	-6.0	32	60	+28	0	28
Peru	2.8	42	59	+17	8	8
Indonesia	0.9	24	24	±0	1	-1
Malaysia	-0.7	38	41	+3	7	-4
Philippines	1.9	31	35	+4	0	4
Thailand	6.4	30	35	+5	5	0

Notes: a) Nominal income per capita at current exchange rates as a percentage of PPP-adjusted income per capita.
   b) Real exchange rate appreciation due to GDP growth relative to the US, as derived from Larraín (1996).
   c) Residual (Change minus catch-up appreciation).
Sources: World Bank, *World Development Report,*1992 and 1996; Larraín (1996).

The table suggests that the real appreciation problem appeared when capital inflows were mostly consumed rather than invested and saving fell, as for Argentina and Mexico. Estimates of the 'unwarranted' appreciation ("net appreciation") are derived from data in the UN Income Comparison Project, as reported in the World Bank's *World Development Reports*. According to the Balassa-Samuelson effect, poor countries tend to be 'cheap' in PPP terms, since services tend to be cheaper in these countries. In fact, there is a strong non-linear correlation between the PPP-adjusted per capita incomes relative to the US and the deviation of the currency below PPP (Reisen, 1993). By 1990, neither Argentina nor Mexico were 'cheap' countries in PPP terms as determined by their relative per capita incomes. However, their currencies have strongly appreciated, as did the Mexican peso until 1994. Only a small part of that appreciation (in Mexico's case, none) is due to the "catch-up" effect associated with the property that relative growth (compared to the US rate) leads to trend appreciation of the real exchange rate. The 'residual' appreciation is likely to conflict with development strategies based on the expansion of

exports and efficient import substitution, which centred on a reliable and competitive exchange rate.

3.4. Is foreign direct investment special?

From 1970 to 1982, Singapore ran a current account deficit equal to 12.1 per cent of GDP on average; in the early 1970s, the deficit peaked at around 20 per cent of GDP several times. Almost half of the corresponding net capital inflows consisted of foreign direct investment (FDI). Real GDP growth averaged more than 8.6 per cent per year over the period, and the domestic saving rate doubled from 21 per cent in 1970 to more than 40 per cent in 1982, but a balance-of-payments crisis never developed. This anecdotal evidence in support of the view that FDI lessens the possibility of later balance of payments problems is supported by Frankel and Rose (1996). They find in a panel of annual data for over 100 developing countries from 1971 through 1991 that a high ratio of FDI to debt is associated with a low likelihood of a currency crash. This raises the question whether FDI is special with respect to its macroeconomic implications. There is a strong presumption that indeed it is:

— First, foreign direct investment is largely determined by non-cyclical considerations. Being governed rather by long-term profitability expectations, it is less subject to sudden shifts in investor sentiment. While on an annual basis, large fluctuations of foreign-direct-investment *flows* are regularly observed, foreign-direct-investment *stocks* are largely illiquid and irreversible.[5] Foreign direct investment is less dependent on financial market sentiment. This observation is reinforced by Mexico's experience in 1995, when its capital account showed only a slightly reduced net inflow of foreign direct investment after the crisis in 1994.

— Second, the Harberger externality does not apply to foreign direct investment. Even if the supply schedule of FDI is upward-sloping, FDI is likely to produce positive external spillovers, comparable to agglomeration benefits. This conjecture implies that higher inflows of FDI carry positive externalities, by improving the host country's production function (Borensztein *et al.,* 1995). Moreover, returns to FDI are state-contingent and sovereign risk seems to apply less than to other

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[5] Using quarterly balance-of-payments flow data for changes in *net* claims of FDI, portfolio equity, "long-term" and "short-term" flows, Claessens *et al.* (1995) find that capital-account labels do not provide any information about the volatility of flows. In particular, they argue that FDI and long-term flows are not more persistent than others. However, the primary policy concern here is with *reversals* of foreign investment, a concern not addressed by Claessens and co-authors who base their analysis on quarterly time-series properties of net, rather than gross, inflows.

forms of foreign capital inflows. As a result, foreign investors do not observe an upper limit of engagement, in contrast to debt flows.

—   Third, to the extent that FDI is not induced by privatization (which represents, other things being equal, just a change in ownership), FDI inflows exert less upward pressure on the real exchange rate, minimizing the risk of 'Dutch disease'. Since FDI is likely to crowd in domestic investment, to the extent that it is 'green field' investment, it will stimulate a corresponding movement in the demand for foreign exchange by stimulating imports. Moreover, by stimulating investment rather than consumption, FDI creates an *ex ante* home goods excess supply in the recipient country. Equilibrium in the home goods market requires a depreciation of the real exchange rate to stimulate the demand for home goods (Artus, 1996). Table 9 gives another hint of why FDI flows did not cause real exchange rate appreciation in Asia, while it did in Latin America: very little of FDI inflows in Asia were induced by privatization.

—   Finally, in the absence of financial sector and foreign exchange distortions, foreign direct investment can improve the current account balance. Fry (1996) has shown that, despite the fact that FDI increases domestic investment, the positive direct and indirect (through accelerated growth) effects of FDI on national saving actually leads to an improvement in the current account in the long run. While the FDI impulse leads to a worsening of the current account in the first three years (for an average of six Asian countries), it induces growth and saving effects as to improve the current account thereafter.

TABLE 9 FOREIGN DIRECT INVESTMENT AND PRIVATIZATION, 1990-94

	Latin America	East Asia (excl. China)
Net Private Capital Inflows, $ bn	173.8	110.0
- of which: raised through privatization	22.2	3.8
Net Foreign Direct Investment Inflows, $ bn	71.3	47.2
- of which: raised through privatization	13.0	2.0

Sources: World Bank, *World Debt Tables 1996*; own calculations.

4.   Conclusions

This paper has suggested measures against which to judge whether actual current account deficits are sustainable in the long run. Actual deficit numbers alone cannot provide information about long-term sustainability. Any

judgement needs to consider debt-GDP levels (current versus that tolerated by investors), official foreign exchange reserves (current versus targeted), the potential GDP growth rate, import growth, the Balassa-Samuelson effect, and the structure of capital inflows. Sustainability considerations do not make sense for FDI flows, as long as there is no widely held notion about the sustainability of net foreign liabilities for the stock of FDI invested in a country.

The size of the current account deficit does not give rise to normative judgements; a deficit worth 3 per cent of GDP may be 'excessive' in one country, while a deficit worth 12 per cent of GDP may be justified for another country. What distinguishes such deficits is not so much whether they are driven by public-sector or private-sector decisions, since there is some evidence for a Ricardian offset and since private debt is a contingent public-sector liability. Rather what matters for governments is the source of the current account deficit. Foreign savings should be resisted to some extent when they are seen to finance excessive consumption or unproductive investment.

How much foreign savings should be resisted in such a case? The answer depends primarily on the nature of the source that ultimately gives rise to the spending boom and on the composition of the capital inflow. Private spending booms mostly originate in prior domestic deregulation, because of the interaction of implicit or explicit deposit insurance with an existing boom mentality, and/or a disinflation brought about by an exchange rate-based stabilization program. Resisting foreign savings thus is not necessarily a first-best policy response. If more nominal exchange rate flexibility, effective prudential regulation and bank supervision, and gradual domestic financial reform succeed in keeping private savings rates stable and productive investment financed, all the better. If instead, an unsustainable currency appreciation, excessive risk-taking in the banking system and a sharp drop in private savings coincide, there is a case for resisting foreign capital inflows. The appropriate policy response then must balance the benefits of consumption-smoothing and financing viable investment and the risks of excessive borrowing.

A case can be made for an open economy to accept all foreign direct investment, unless it creates new distortions as a result of new trade restrictions and as long as it can be absorbed by the existing stock of human capital. Foreign direct investment is less constrained by considerations of sovereign risk and portfolio limits from the perspective of the investor than types of capital flows; and by crowding in domestic investment and having a minor initial effect on consumption (possibly unless privatization-induced), foreign direct investment is unlikely to generate a real appreciation problem.

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