

IMF WORKING PAPER

©1990 International Monetary Fund

This is a working paper and the author would welcome any comments on the present text. Citations should refer to an unpublished manuscript, mentioning the author and the date of issuance by the International Monetary Fund. The views expressed are those of the author and do not necessarily represent those of the Fund.

WP/90/30

INTERNATIONAL MONETARY FUND

European Department

The Significance of the Current Account:  
Implications of European Financial Integration

Prepared by Lazaros Molho\*

Authorized for Distribution by Erich Spitäller

April 1990

Abstract

This paper reassesses the significance of persistent current imbalances as they become easier to finance in the process of European integration. After highlighting some limitations of simple saving-investment guidelines for policies toward the current account, the paper shows that an economy's current account position may be an indicator of its attitude toward risk. Externalities in the incidence of risk could warrant government concern over current imbalances, even if they are caused by privately motivated investment and saving decisions. Such externalities may arise from credit markets' conventional perceptions about country risk and from existing deposit insurance arrangements.

JEL Classification Numbers:

430; 441

---

\* I am grateful to Shahpassand Sheybani for research assistance. I would also like to thank, without implicating, Tamim Bayoumi, Manuel Guitián, Donogh McDonald, Mauro Mecagni, Bruce Smith and Erich Spitäller, for many helpful comments.

	<u>Contents</u>	<u>Page</u>
Summary		iii
I.	Introduction	1
II.	The Notion of External Constraint	2
	1. The current account as a constraint on growth	2
	a. The limitations of exchange rate flexibility	2
	b. The modern elasticities approach	3
	2. The saving-investment approach: A critical appraisal	4
	a. The role of uncertainty	6
	b. The distinction between investment and consumption	8
	c. The distinction between the private and public sectors	10
	d. The importance of financial constraints	11
III.	The Current Account Under European Financial Integration	12
	1. The new regime: Capital flow liberalization under exchange rate stability	12
	2. Current account targeting as behavior toward risk	14
	a. A two-period model of the current account	15
	b. The incidence of risk under the gold standard: Borrower beware	18
	c. The current account in the 1990s: The case against benign neglect	25
IV.	Conclusions	28
 <u>Tables</u>		
	1. Italy, Portugal, and Spain: Current Account and Official Reserves Balances, 1986-89	13
	2. Comparative Economic Performance Under the Gold Standard, 1880-1913	20
	3. Australia: Summary Economic Indicators, 1880-1913	23
 <u>Figures</u>		
	1. Riskless Foreign Asset with Risky Domestic Capital	18a
	2. Riskless Foreign Asset with Risky Domestic and Foreign Capital	18a
 <u>Charts</u>		
	1. Comparative Output and Investment Performance Under the Gold Standard, 1880-1913	20a
	2. Comparative Consumption and Current Account Performance Under the Gold Standard, 1880-1913	20b

### Summary

The recent current imbalances both among the major industrial countries and among EC member countries have caused much controversy. The conventional wisdom that persistent deficits generally call for corrective policies is now under serious challenge. Larger national saving-investment gaps may be the natural outcome of international financial integration, which allows world saving to seek the most remunerative investment opportunities. Privately motivated imbalances that reflect growing investment may be both growth-promoting and self-limiting, thus obviating the need for early adjustment. As EC countries become better integrated and international capital moves more smoothly, there may be a case for a policy of benign neglect toward national saving-investment gaps.

This paper seeks to rehabilitate the conventional wisdom about the perils of debt-financed external deficits. The paper exposes several limitations of simple saving-investment guidelines for policies regarding the current account and argues that, under uncertainty, debt-financed increases in investment spending are not always benign. This point is formalized in the context of a two-period saving-investment model, which allows risky domestic investment to be financed with a combination of domestic saving and net foreign borrowing. Highly leveraged economies may reap higher expected returns from their investments only at the expense of greater risk in their future consumption possibilities. Subject to certain qualifications, the current account position may thus be viewed as an indicator of an economy's exposure to risk. Evidence from the period of the gold standard supports this view. Over the 1880-1913 period, economies with large and persistent current account deficits seem to have been more vulnerable to financial and economic instability than surplus economies.

The presence of risk calls for government concern about current imbalances as long as there is some externality in the incidence of risk. Two such externalities are likely to be present in the EC during the 1990s. The first stems from perceptions of country risk, which may condition the flow of private funds to the less advanced EC countries for some time. Unless the EC is prepared to increase recourse to its own stand-by facilities, deficit countries may need to safeguard their credit-worthiness by containing the growth of their external debt. The second type of externality, which affects domestic and international credit flows alike, is a consequence of implicit or explicit deposit insurance arrangements. Because the large financial institutions that effect cross-border flows are often insured de facto, private credit risks may create contingent liabilities for taxpayers throughout the EC. The containment of current imbalances could be justified as a second-best way to minimize the incidence of such risks to taxpayers.



## I. Introduction

The last few years have witnessed a marked widening in current payments imbalances both among the major industrial countries and among EC member countries. As of 1989, Canada, the United Kingdom and the United States were running current account deficits on the order of 2 1/2 to 3 1/2 percent of GDP, while France and Italy were registering deficits of 0.5 to 1 percent of GDP. Germany and Japan, by contrast, had surpluses equivalent to 4 1/2 percent and 2 1/2 percent of GDP, respectively, in 1989. 1/ The smaller countries of Southern Europe have also been affected by these trends. The current account deficits of Greece, Portugal and Spain have widened rapidly in 1988-89, to an estimated 4 1/2 percent of GDP, 2 percent of GDP and 3 percent of GDP, respectively. Unlike in previous periods, these imbalances seem to be of a persistent nature and are not expected to be eliminated any time soon.

The interpretation of these developments has been a subject of considerable controversy. The more conventional view has been that the size and persistence of current account imbalances pose serious threats to international financial stability and to the multilateral trade system. 2/ If left unchecked, widening trade deficits would eventually become unsustainable, leading to a hard-landing adjustment that would jeopardize world economic growth. A contrasting view holds that, in a world of free capital mobility, current account imbalances are the natural outcome of the efficient flow of funds to the most remunerative outlets. Countries with relatively more profitable investment opportunities should be expected to run current account deficits as they exploit these opportunities by supplementing their own saving with foreign capital. As long as the foreign capital is productively employed, it will automatically generate the returns needed for its servicing. This view, which basically calls for a policy of benign neglect with respect to current account imbalances, is often qualified by a distinction between the saving-investment gaps of public and private sectors. A current account deficit is considered benign only if it reflects the private sector's saving-investment imbalance, which is both self-limiting and self-correcting. 3/

The purpose of this paper is to investigate the significance of current account imbalances in the context of the rapidly integrating European financial market. Recent trends in capital flows seem to

---

1/ IMF, World Economic Outlook, October 1989, p. 29.

2/ Ibid, p. 38.

3/ This latter view has been recently expounded by Chancellor Lawson in his speech to the 1989 IMF-World Bank Annual Meetings. See also IMF, op. cit., p. 39.

suggest that financial integration under exchange rate stability may have considerably eased the external constraints previously affecting deficit countries. Assuming that one can establish that private investment is the counterpart to a widening current account deficit, the saving-investment approach to external imbalances would imply that such a deficit should be no cause for concern. The paper highlights some practical limitations of the saving-investment framework and shows why the current account may still matter under financial integration.

## II. The Notion of External Constraint

### 1. The current account as a constraint on growth

From the perspective of the European experience, one cannot help but be apprehensive about theories that dismiss the current account as insignificant. The so-called external constraint was a central preoccupation of the authorities in many European countries through much of the 1970s and 1980s. France, Italy, and the United Kingdom all have been hard pressed to correct current account deficits at one time or another, as have Austria, Denmark and Norway. <sup>1/</sup> In Italy, in particular, widening current account deficits in the wake of the first and second oil shocks led to large-scale losses of official reserves, which required the enactment of strict adjustment measures. In each instance, the measures were effective in restoring external balance, albeit at the expense of temporary slowdowns in economic growth.

#### a. The limitations of exchange rate flexibility

The experience of the mid-1970s dispelled any illusions about the ability of freely floating exchange rates to outmode the external constraint. The early proponents of floating had theorized that flexible exchange rates would insulate the domestic economy from external shocks by automatically restoring external balance. <sup>2/</sup> The onset of the first oil shock and the concurrent pickup in the world rate of inflation served to highlight the practical limitations of this theory. If trade volumes take time to respond to changes in relative prices, then the predominant short-run effect of exchange rate changes on the trade balance will be through the terms of trade. This implies a perverse short-run response of the trade balance to exchange rate movements, which is commonly known as the J-curve effect. <sup>3/</sup> But even in the long

---

<sup>1/</sup> For a more detailed description of official views on the current account, see Salop and Spitaller (1980).

<sup>2/</sup> See, for example, Bryant (1980, pp. 432-41) and references therein.

<sup>3/</sup> Spitaller (1980) used data from ten industrial countries over the 1973-78 period to estimate the terms-of-trade effects of devaluation on the trade balance. The results implied that, if trade volumes react sluggishly to the exchange rate, the perverse response of the trade balance to exchange rate changes may last for one year.

run, exchange rate depreciation alone may fail to improve the trade balance if the economy is already in full employment or if rigidities in the product or factor markets otherwise frustrate the adjustment of the real exchange rate. In such instances, a floating exchange rate in the context of an accommodating monetary policy may be conducive to a vicious circle of devaluation and inflation, without bringing about the desired correction in the external imbalance.

b. The modern elasticities approach

The limited effectiveness of exchange rate changes redirected attention to the management of domestic demand, which had a more powerful and immediate effect on the current account. <sup>1/</sup> The analytical underpinning for the emphasis on domestic demand is provided by the *modern elasticities framework*. This framework is a partial-equilibrium model of the trade balance that postulates well behaved and stable import demand and export demand functions. The traditional elasticities approach was developed more than forty years ago to derive the conditions under which changes in the exchange rate (i.e. relative prices) would have the expected effect on the trade balance. Under the assumption of infinitely elastic import and export supply schedules, the price elasticities of demand for imports and exports were shown to be the key determinants of trade balance stability. <sup>2/</sup> The modern version of the elasticities approach also allows for relative price effects, but at the same time it recognizes the limitations of exchange rate flexibility. More emphasis is placed instead on the elasticities of import and export demand functions with respect to domestic demand at home and abroad, which are exogenously given, and on demand growth differentials. <sup>3/</sup> In the absence of a favorable configuration of elasticities, external balance considerations restrain each country's economic growth to about the same levels prevailing in its principal trading partners.

The implications of the elasticities approach have recently come under increasing scrutiny. Of particular importance in the EC context has been the concern that, by fixing their exchange rates vis-a-vis the harder EMS currencies, the less advanced European economies might be unable to catch up with the other EC countries without incurring ever-widening trade deficits. Krugman (1989) has discounted such concerns by highlighting some of the shortcomings of the elasticities framework. The supply side of the trade picture, which is typically disregarded in partial-equilibrium models of the trade balance, may account for systematic links between a country's relative growth performance and the apparent income elasticities of its import and export demand functions. High-growth countries like Japan may increase their shares of

---

<sup>1/</sup> See, for example, Bank of Italy, Relazione Annuale, 1974, pp. 162-63 and Relazione Annuale, 1976, p. 148.

<sup>2/</sup> See Haberler (1949), for a precise statement of the stability conditions under varying assumptions about supply elasticities.

<sup>3/</sup> See Bini Smaghi and Vona (1986) for an empirical application of the modern elasticities approach to intra-EMS trade.

world markets by expanding the range of goods that they produce rather than by depreciating their real exchange rates. Trade balance can then be maintained by the emergence of a favorable pattern of income elasticities, which can allow the unconstrained realization of each country's growth potential.

A more radical criticism of traditional notions of the external constraint has been expounded in the context of the new saving-investment approach to the current account. Going back to basics, this approach questions whether current imbalances should be of any concern in the first place. The arguments underlying the new saving-investment analysis are critically reviewed in the following section.

## 2. The saving-investment approach: A critical appraisal

The modern saving-investment approach to the balance of payments begins with the national accounts identity emphasized long ago by the traditional absorption approach. 1/ The current account is identically equal to the gap between gross national income and gross domestic expenditure or, equivalently, the gap between gross national saving and gross domestic investment. We have:

$$CA \equiv Y - (C + I) \equiv S - I \quad (1)$$

where CA is the current account surplus, Y is gross national income, C is total consumer spending and I is gross domestic investment. Disaggregating between the private and government sectors yields:

$$CA \equiv (S_p - I_p) + (S_g - I_g) \quad (2)$$

where  $S_p$  and  $I_p$  are private sector saving and investment, respectively,  $S_g$  is the current surplus of the fiscal accounts and  $I_g$  is the government's net capital expenditure.

The principal novelty of the saving-investment approach is its emphasis on the intertemporal dimension of the current account. 2/ A current account deficit that reflects an excess of investment over saving in the current period implies a buildup of foreign debt. The intertemporal budget constraint requires that this debt be repaid sometime in the future, by running an excess of saving over investment, i.e., a current account surplus. The determination of the current account can thus be likened to an individual saver-investor's choice of his intertemporal consumption profile.

---

1/ Although they emphasize different aspects of trade imbalances, the elasticities and absorption approaches are by no means mutually inconsistent. For early attempts to synthesize the two approaches, see Johnson (1958) and Tsiang (1961).

2/ See, for example, Sachs (1981 and 1982) and Cooper and Sachs (1986).

Two important corollaries follow. The first is that balancing the current account is not in general a valid policy target. <sup>1/</sup> An economy may find it optimal to run current account deficits or surpluses some of the time, so as to smooth the effects of temporary shocks on its consumption profile. Striving for continuous current account balance is like restricting consumers to spend exactly what they earn in every period, which is contrary to the general prescription of the life-cycle theory of consumption. A second corollary is that, even in the absence of any shocks, current account imbalances and the attendant international capital flows may merely reflect the efficient utilization of world resources. A country with a higher rate of return on capital may find it optimal to invest not only its own saving but also borrowed funds from the rest of the world. As long as the return on physical capital exceeds the world rate of interest, the excess investment will generate the resources required to service the foreign debt and it will also add to future consumption possibilities.

The new saving-investment approach has been the basis of proposals for some rules of thumb on how to deal with current account imbalances. With regard to national output shocks, in particular, Sachs (1981) has argued that the appropriate policy response depends on whether they are temporary or permanent. The effects of temporary slumps in output can be optimally smoothed by incurring current account deficits (i.e., by external borrowing) whereas temporary booms call for current account surpluses (i.e., external lending). Permanent shocks, by contrast, should not be accommodated by current account imbalances. Another rule of thumb is to distinguish between current account deficits that reflect increased investment and those that are due to increased consumption (decreased saving). A deficit is benign as long as the foreign resources are used to expand productive investment, but it may need to be corrected if foreign borrowing finances a consumption boom. Finally, a distinction is often drawn between the saving-investment imbalance of the private sector and that of the public sector. Private sector imbalances are self-correcting in the sense that any excess borrowing will sooner or later be checked by a limited debt-servicing capability and by an increase in saving. The public sector, by contrast, does not have as tight a borrowing constraint, being able to service its debts with new borrowing for extended periods of time. Current account deficits should be of no concern as long as they reflect the private sector's saving-investment decisions, but they should be corrected if they reflect public sector deficits.

The simplicity of these rules of thumb has made them especially appealing among policy analysts, but the underlying framework has some fundamental weaknesses, which are discussed below.

---

<sup>1/</sup> Sachs (1982, p. 148).

a. The role of uncertainty

The principal flaw of most analyses of the current account in terms of saving-investment balances is their disregard of uncertainty. 1/ Sachs (1982), for example, derives his results in models with perfect foresight, in which current consumption and borrowing depends on "expectations of the entire future path of key variables and not only current variables" (p. 147). But this rules out any role for agents' behavior toward risk, which has been elsewhere recognized to be of key importance in saving-investment decisions. 2/ Consider, for example, the distinction between a temporary and permanent reduction in output. According to Sachs (1981), agents with perfect foresight would find it optimal to moderate the effects of the temporary shock on current consumption by borrowing abroad (i.e., by running a current account deficit). Once we allow for uncertainty, however, we must recognize that agents observing the current shock cannot be sure whether it will be reversed, it will persist or it will even worsen in the future. The smoothing of current consumption may be at the expense of increased riskiness of future consumption, possibly prompting risk averse agents not to resort to external borrowing. 3/ Risk considerations become even more relevant when one talks about debt-financed increases in investment. The returns on physical capital are inherently risky and increased leverage will raise expected returns on investors' portfolios only at the expense of increased riskiness. In an uncertain world, it is simplistic to assume that flows of international capital to the uses with highest expected returns are always benign. 4/

The disregard of uncertainty may lead to an overly sanguine view of recent current account imbalances. Such a view is sometimes supported by references to the favorable performance of the world economy during

---

1/ A notable exception is the work of Cooper and Sachs (1986), who analyze borrowing strategies for developing countries facing the risk of liquidity crises. The analysis shows that optimum borrowing is negatively related to the probability of a future cutoff in lending.

2/ See Sandmo (1974) for a survey of two-period models of consumption decisions under uncertainty.

3/ Risk aversion is a plausible explanation for the prompt restoration of current account balance in Germany and Japan following the second oil shock. In retrospect, the terms of trade effects of that shock can be deemed to have been temporary and, as such, would have called for a more tolerant view of current account deficits in a world with perfect foresight. At the time, however, policymakers could not possibly anticipate the subsequent collapse of oil prices. As a result, they rationally opted for minimizing the risk of future consumption possibilities at the expense of lower current consumption.

4/ These statements are elaborated on in the context of a more formal framework in Section III below.

the heyday of the gold standard, when there were large and persistent current account imbalances among the major economies. 1/ But even if one abstracts from the uniquely favorable conditions for international capital movements during the earlier period, 2/ it is still difficult to draw lessons from a high-risk endeavor that actually turned out to pay off. The success story of international finance before 1914 must be tempered by the turbulence and large-scale defaults of the 1920s and 1930s. With hindsight it may be tempting to conclude that these defaults could have been avoided, if only contemporary investors had been more astute. 3/ Such deterministic arguments, however, should not be allowed to obscure the riskiness inherent in any investment decision. The fact that some countries have successfully carried out a high-growth, high-risk strategy relying on foreign borrowing does not

---

1/ See, for example, the already referred to speech by Chancellor Lawson. Bayoumi (1989) has found that six out of the eight economies for which data are available recorded an average current account surplus or deficit of over 2 1/2 percent of output over the 1880-1913 period.

2/ The uniqueness of international investment during the 19th century has been well documented by Nurkse (1954, p. 359):

Over the fifty years that preceded the outbreak of the First World War, it seems that Great Britain invested overseas an amount equal to about 4 percent of her national income. In the later part the period (1905-13) the ratio was as high as 7 percent .... These figures are almost absurdly large and tend to confirm the view that there was something unique about Britain's foreign investment.

It was unique in that the greater part of it--roughly two thirds--went to the so-called "regions of recent settlement": the spacious, fertile, and virtually empty plains of Canada, the United States, Argentina, Australia, and other "new" countries in the world's temperate latitudes. It was unique in that it went to these places with a great migration of about sixty million people, including many trained and enterprising persons from the British Isles as well as continental Europe. The conditions that made this flow of private capital possible do not exist to any great extent today, and probably cannot be recreated.

3/ Schuker (1988), for example, describes Germany's payments crisis in the interwar period as follows:

The Reich ... had overborrowed in the 1920s and squandered much of the proceeds on public or private consumption, and it had persistently failed in the early years to adjust tax, budgetary, labor, and trade policies to take account of reparations requirements added to growing commercial debt ....

Realists could not have expected that other countries would enable Germany to run large current-account deficits forever, particularly if economic growth remained sluggish. The cumulative impact of previous borrowing would raise the perceived risk for new lenders and increase the country's vulnerability to external shocks. At some point, foreign investors would take fright.

mean that such success can be readily replicated by other countries neither does it imply that other countries will want to opt for the same strategy. 1/

b. The distinction between investment and consumption

The relevance of this distinction has been somewhat overplayed. First, from an analytical point of view, with investment identically equal to national saving plus the current account deficit, it is difficult to make a meaningful determination as to what is the counterpart of a current account deficit. Suppose, for example, that initially the current account is in equilibrium, with both saving and investment equal to 15 percent of GDP. Now suppose that, in response to a terms-of-trade shock, the savings rate rises to 16 percent and the investment rate rises to 18 percent, raising the current account deficit to 2 percent of GDP. At first sight, one can say that the current account deficit reflects the rise in investment, but a closer look raises some doubts. It is conceivable, for instance, that without access to foreign capital, the greater demand for loans by investors would have been fully accommodated by domestic banks, crowding out consumer credit in the process. Liquidity constrained consumers would then be forced to raise their savings propensities above the level that would have been allowed by a more accommodating supply of credit. Although investment is higher than it was before the current account deteriorated, saving is also higher and it would have been even higher if foreign financing had not been as readily available. This example illustrates the more general point that an accounting identity alone is not sufficient to determine the direction of causation among its various components.

Moreover, in the presence of uncertain returns, it no longer follows that investment will automatically generate the funds that are needed to service the corresponding foreign liabilities. Poor investments are no more productive than consumption and no investment is guaranteed to pay off. The investment versus consumption criterion would have probably failed to detect the LDC debt problem that emerged in the early 1980s. Countries with recent debt-servicing difficulties increased their investment ratio from an average of 23.6 percent of GDP in 1970-73 to 26.6 percent of GDP during the 1974-82 period. Yet these countries also doubled the ratio of their foreign debt to exports of goods and services from 110 percent in 1973 to 221 1/2 percent in 1982, indicating that the higher investment failed to raise exports

---

1/ Simple analogies with 19th-century experience fail to appreciate the nature of risk. The fact that *some economies seem immune* to the risks of foreign borrowing some of the time does not guarantee that they will remain immune forever and it does not warrant the disregard of these risks by other economies. For evidence on the risks associated with current account deficits under the gold standard, see Section III below.

commensurately with the increase in foreign borrowing. 1/ Despite the increase in debt ratios, one of the early proponents of the saving-investment approach was writing in 1981:

If my analysis is correct, much of the growth in LDC debt reflects increased investment and should not pose a problem of repayment. The major borrowers have accumulated debt in the context of rising or stable, but not falling, saving rates. This is particularly true for Brazil and Mexico, which together account for about 40 percent of the net bank liabilities of the LDCs and about 25 percent of total debt of the LDCs. The growth in debt might be a cause for concern if borrowing reflected an attempt to maintain consumption at unsustainable levels after the oil price increases. In that case, the debt would presage a fall in consumption that might prove to be politically or economically untenable and result in default. In fact, the current account reflects rising investment rates in excess of rising or stable saving rates. As long as the investment projects undertaken have a positive present value at the borrowing rate of interest, the investing country should experience a rising consumption path over time. 2/

Finally, pitfalls in national accounts conventions call for caution in interpreting movements in standard savings and expenditure categories. In the case of many European countries, for example, the acceleration of inflation in the 1970s and the subsequent disinflation are known to have distorted the conventional measures of saving rates both of the private and of the public sector. Recent studies have constructed series of inflation-adjusted savings rates, which are more meaningful from an economic point of view. 3/ Such an approach, however, undermines the simplicity and transparency that are perhaps the strongest assets of the saving-investment rules. The standard definitions of investment and consumption are also problematic. Investment in human capital, for example, may well be among the most important determinants of future output possibilities. Yet expenditures on health and education, which might reasonably be assumed to have some investment component, are typically lumped together with public or private

---

1/ IMF, World Economic Outlook, p. 46. Countries without debt servicing difficulties, by contrast, had consistently lower average investment ratios--20 1/2 percent in 1970-73 and 25 percent in 1974-82--and managed to lower their external debt ratio from 107 percent in 1973 to 101 percent in 1982.

2/ Sachs (1981, pp. 243-4). It is perhaps fair to note here that the LDC debt crisis failed to be predicted by a large number of financial market observers, including many highly placed officials (see, for example, Lever and Huhne (1985, pp. 55-8)). The object of this discussion is not to fault these observers, but rather to underscore the limitations of simple rules of thumb for borrowing behavior under uncertainty.

3/ See, for example, Pagliano and Barca (1989).

consumption. These and other measurement problems make it difficult to apply analytically meaningful saving-investment criteria in real-world situations. 1/

c. The distinction between the private and public sectors

The saving-investment approach to the current account does not in itself provide any obvious rationale for distinguishing between private and public sector imbalances. As Cooper and Sachs (1986) have shown, as long as the government satisfies its intertemporal budget constraint, the solution to a country's intertemporal optimization problem is the same irrespective of whether it is the private or the public sector that undertakes to borrow abroad. A more relevant distinction could be drawn between the Government's saving and capital expenditure consistent with the previously cited arguments, but this would invalidate the general claim that government imbalances are more worrisome than private imbalances. In fact, recent empirical work has reaffirmed the importance of public sector investment in infrastructure in improving the overall levels of productivity and economic growth in the economy at large. 2/ Public or public-utility investments moreover played a dominant role during the pre-World War I golden age of international capital mobility, which is often viewed as a model of international financial stability. 3/

There are other more compelling arguments for reducing fiscal imbalances, which nevertheless apply irrespective of whether there are accompanying current account deficits. In the absence of nondistortionary ways of taxation, the accumulation of public debt leads to a higher burden of taxation in the future, thereby worsening tax-induced inefficiencies (Lucas (1986)). Limits on the burden that taxpayers are willing to bear can eventually jeopardize the government's ability to satisfy its intertemporal budget constraint (Spaventa (1987)). If financial markets are not able properly to assess these risks, government deficits can lead to an unsustainable accumulation of public debt, ultimately causing costly financial instability. Italy is perhaps the pre-eminent example of a country that has managed to keep its external accounts near balance, while at the same time accumulating an ominous

---

1/ For an extensive discussion of divergences of measurement and theory in economics, see Eisner (1989).

2/ See, for example, Aschauer (1989) and Barro (1989).

3/ As of 1913, Britain's foreign investment portfolio consisted mainly of loans to government (30 percent), railway securities (40 percent) and other public utilities (about 5 percent). The rest included banking, insurance and manufacturing companies as well direct investments in the extraction of raw materials (Nurkse (1954, p. 361)). For favorable references to the pre-1913 financial system, see Lawson (op.cit) and The Economist, October 7, 1989 (p. 83).

burden of domestic public debt. <sup>1/</sup> In such a context, emphasizing the nexus between the government deficit and the external current account is not only unwarranted but it may also be construed to weaken the case for fiscal correction, which is therefore best argued on its own merits.

d. The importance of financial constraints

Like most theoretical analyses of sustainability, the saving-investment approach takes it for granted that a deficit that is deemed to be sustainable is also financeable. The implicit assumption is that the private sector will rationally provide the needed financing once it has ascertained sustainability. But the notion of sustainability is elusive and there is no consensus on how to distinguish ex ante between liquidity and solvency problems. <sup>2/</sup> This may give rise to bouts of over-lending by private investors, followed by sudden withdrawal of financing, which may cause liquidity crises. <sup>3/</sup>

In the real world, external adjustment is more often dictated by liquidity constraints than by any intertemporal optimization calculus. Even if they seem sustainable by economic criteria, persistent current account deficits may spur speculative capital outflows, leading to large overall payments deficits that can quickly degenerate into full-blown runs on official reserves. Depletion of reserves in turn forces deficit countries promptly to restore current account balance, irrespective of whether they can fulfill their intertemporal budget constraints. Exclusive focus on the current account makes the saving-investment approach ill equipped to address such interactions with the capital account and the official reserves balance, which are at the center of real-world balance of payments problems. <sup>4/</sup>

---

<sup>1/</sup> Over the 1960-88 period, Italy registered an average current account surplus equivalent to 0.4 percent of GDP. Yet the ratio of its public debt to GDP rose from around 30 percent in the early 1960s to 96 percent in 1988.

<sup>2/</sup> Cooper and Sachs (1986, pp. 265-7) for example, show that commonly used indicators such as debt-to-GDP ratios have little objective basis; under plausible conditions, a debt-to-GDP ratio of 4 could be sustainable. But this is a much higher ratio than anything that has been observed even among countries with debt-service difficulties. In a similar vein, de Piniés (1989) looks at debt-to-export ratios with the benefit of hindsight and argues that the financing constraints recently imposed on debtor developing countries have been unwarranted. Based on the fundamentals of debt dynamics, these countries could have borrowed more than they did in the last few years, while still remaining solvent.

<sup>3/</sup> In the recent past, liquidity crises have often been associated with speculation about an imminent devaluation, but such crises also occurred under the gold standard, when there were presumably no doubts about exchange rate stability (see Section III.2.b. below).

<sup>4/</sup> See Molho (1990), for an analysis of Italy's balance of payments that brings out the important roles of capital and reserve flows.

### III. The Current Account Under European Financial Integration

The process of European financial integration that is already well under way carries important implications about the nature of the external constraint in the years to come. To the extent that the pattern of intra-European capital flows becomes more stable than in the past, the financial constraints on EC member countries may be permanently eased. The prospect of greater ease of financing deficits in turn calls for a reassessment of the case for current account balance. If the markets no longer require the prompt correction of deficits, what should be the role of policy? In the absence of liquidity crises, can one make a stronger case for benign neglect over current imbalances and, if not, what would be the rationale for government intervention? This section spells out some of the likely implications of financial integration and shows why the current account might still matter in a unified European market.

#### 1. The new regime: Capital flow liberalization under exchange rate stability

Over the last two years, there has been a marked change in the climate for international capital flows in Europe. Ever since the realignment of EMS central rates of January 1987, the authorities of member countries with traditionally weaker currencies have shown an unprecedented commitment to exchange rate stability. This commitment, together with the stronger tools for countering speculative capital flows that were made available by the Basle-Nyborg agreements, have allowed central banks to withstand any pressure for realignment for almost three years. <sup>1/</sup> Even outside the EMS, in countries such as Portugal, the authorities have succeeded in proceeding toward capital flow liberalization, while at the same time adhering to a firm exchange rate policy.

In such a climate, the progressive dismantling of remaining capital controls has implied increasing reliance on market mechanisms for the implementation of monetary and exchange rate policies. This has had a salutary effect on financial stability. The direction of net capital flows, which used to be readily reversible on account of exchange rate speculation, has become much more stable. This has allowed countries with widening current deficits--such as Italy, Portugal, and Spain--to stay on a path of rapid economic growth unconstrained by worries about external balance. The expectation of exchange rate stability has in fact had such a powerful impact on capital flows that, in contrast to previous experience, these countries have accumulated record amounts of foreign reserves, at the same time that their current accounts were rapidly deteriorating (see Table 1 below). If these trends continue,

---

<sup>1/</sup> On January 8, 1990, there was a realignment of central rates, which however affected only the Italian lira and was part of a broader change that placed the lira in the narrow band of fluctuation.

European countries may be able to finance wider current account deficits over longer periods of time than has been customary in the past. The current account may then cease to be viewed as a constraint on growth.

Table 1. Italy, Portugal, and Spain:  
Current Account and Official Reserves Balances, 1986-89

(In billions of U.S. dollars)

	1986	1987	1988	1989 <u>1/</u>
<b>Italy</b>				
Current account balance	2.6	-1.5	-5.2	-10.9
Official reserves balance	2.3	5.2	8.4	11.2
<b>Portugal</b>				
Current account balance	1.2	0.4	-1.0	-0.9
Official reserves balance	--	1.8	0.9	4.0 <u>2/</u>
<b>Spain</b>				
Current account balance	4.1	0.3	-3.6	-11.5
Official reserves balance	2.7	14.2	9.7	4.5

Sources: Bank of Italy, Relazione Annuale, 1988 and Bollettino Economico, February 1990; Bank of Portugal, Monthly Bulletin, December 1989; Bank of Spain, Statistical Bulletin, January 1990.

1/ Preliminary estimates for the full year, unless otherwise noted.

2/ January-September 1989.

The easing of financial constraints may allow EEC countries greater flexibility in pursuing their growth objectives, but it also gives rise to challenging policy dilemmas. The high-growth Southern European countries have higher-than-average rates of inflation, calling for tight monetary policies. But such policies can only spur more capital inflows and larger overall surpluses. To maintain a tight policy stance, the monetary effects of reserve gains must be sterilized or, if that proves difficult, the exchange rate must be allowed to appreciate. Hence there may be a conflict between the goals of inflation control and exchange

rate stability. <sup>1/</sup> In the face of an already unfavorable inflation differential, moreover, appreciation may undermine competitiveness, leading to a further deterioration of the current account which may be an independent policy goal. A rationale for pursuing such a goal is described in the following section.

## 2. Current account targeting as behavior toward risk

As was noted in Section II above, risk consideration may justify concern about current account deficits even if their counterpart is productive investment. The role of risk in portfolio behavior was first formalized in the seminal contributions of Tobin (1958) and Markowitz (1959). Since then, a large body of literature has extended this strand of analysis to a variety of economic issues. Sandmo (1969) integrated the classical Fisherian model of saving with the theory of portfolio choice under uncertainty, in the context of a two-period optimization framework. The discussion below sketches out how this framework can help highlight the significance of the current account in the presence of risky investments and presents corroborating evidence on the incidence of risk under the gold standard. The implications about the role of government policy in the period ahead are discussed informally in the concluding subsection.

---

<sup>1/</sup> These considerations suggest that monetary union, with irrevocably fixed exchange rates and no room for sterilization, may hamper inflation control in countries with large overall surpluses. The potential conflicts between exchange rate stability and inflation control in a regime of free capital mobility have been well understood for at least half a century. Brown (1940, pp. 474, 479), for example, described German monetary policy during the 1920s as follows:

Under the Dawes Plan the Reichsbank had been made independent of the one influence that ... had been considered the single great threat of inflation--the covering of budget deficits by direct or concealed borrowing from the central bank by government. It had in consequence been deprived of adequate weapons against an inflationary influence of an entirely different sort--the creation of a vast superstructure of bank credit based on an inflow of foreign funds ....

[T]he inflow of foreign funds, which produced this expansion of credit within Germany ... [made the Reichsbank] aware that the true enemy to its independence was no longer the German government but the dependence of Germany upon foreign capital .... In August 1926, it tried to regain part of its independence by ending the formal pegging of the mark so as to introduce an element of exchange risk ... in credit operations [with] foreign lenders ... but this was not enough to restore its control over the domestic market.

a. A two-period model of the current account

Consider an economy that consists of identical consumer-investors, each of whom maximizes the same utility function over a two-period horizon. The representative consumer's utility function  $u$  satisfies all the axioms for rational choice under uncertainty and has all the required differentiability properties. <sup>1/</sup> Each consumer receives all his income  $Y_1$  in the first period; he spends  $C_1$  to buy consumption goods during that period and saves the balance  $S_1$  for future consumption. Saving ( $S_1$ ) can be invested in any combination of a safe asset  $B_1$  and a risky asset  $K_1$ . The safe asset has a rate of return  $r_B$  that is known with certainty and the risky asset has a rate of return  $r_K$  that is a random variable. Future consumption  $C_2$  is thus also a random variable and the representative consumer's optimization problem can be written as follows:

$$\max E [u(C_1, C_2)] \quad (3)$$

$$\text{subject to: } Y_1 - C_1 - S_1 = 0 \quad (4)$$

$$S_1 - B_1 - K_1 = 0 \quad (5)$$

$$C_2 - B_1 (1+r_B) - K_1 (1+r_K) = 0 \quad (6)$$

To apply this framework to the analysis of the current account, we assume that each country's representative agent can invest his saving (wealth) domestically, in risky physical capital, or abroad, in riskless debt (e.g., Eurocurrency) instruments. Government debt that is held domestically is excluded from the definition of national wealth and it is assumed that exchange risk can be perfectly hedged. It is also assumed that all foreign debt is repaid in full and the probability of default is zero. By definition, a country's current account deficit (surplus) reflects an excess (shortfall) of domestic investment in risky physical capital over domestic saving; the deficit (surplus) is exclusively financed by (invested in) foreign debt (assets):

$$CA \equiv B_1 \equiv S_1 - K_1 \quad (7)$$

This definition of the current account is identical to that of the conventional saving-investment framework. The only new element of (7)

---

<sup>1/</sup> See Sandmo (1969, p. 589).

is the assumption that the returns on investment in physical capital are uncertain, whereas the returns on net foreign borrowing (assets) are known with certainty. 1/

The introduction of risk into the saving-investment framework places the current account in a new perspective. The financing of productive investment with a higher expected return than foreign debt is no longer the sole justification for current deficits and international capital flows need not reflect inter-country differentials in the productivity of physical capital. Inter-country differences in the perceived riskiness of physical capital and in attitudes toward risk may be equally important considerations. Economies in which capital is perceived to be riskier or investors are more risk averse will tend to invest a significant share of their saving in net foreign assets, by running current account surpluses. Others may prefer to invest not only all of their saving but also borrowed funds in risky physical capital, by incurring current account deficits. Somewhere in between are economies that set their risky investments more or less equal to their saving, thus keeping their current accounts near balance.

The current account thus acquires a new dimension, as an indicator of the risk that each economy is willing to bear regarding future consumption possibilities. But once we allow for more varied investment possibilities, the current account is no longer the most accurate measure of risk. Even if default on foreign debt is ruled out, direct foreign investment is probably considered at least as risky as domestic investment. Risk is then a function of a country's overall investment in physical capital in relation to its net borrowing or lending. This brings the capital account into the picture. A country with a current deficit can reduce the riskiness and expected return of its investment portfolio by financing a share of its deficit through direct foreign investment. By the same token, a surplus country can raise the risk and expected value of its future consumption by placing a portion of its

---

1/ Although the existence of riskless domestic assets (e.g., bank deposits) may be important from the point of view of an economy's individual investors, it only affects the distribution of risk among these investors, without altering the aggregate level of risk for the economy as a whole. To see this, note that in a closed economy, by definition  $S_1 = K_1$ , so that all saving is directly or indirectly channeled into risky investment. Individual investors may avoid risk by holding safe debt claims against other investors, who will therefore bear an extra burden of risk. Collectively, however, the investors of the closed economy will have to bear the full burden of risk associated with the economy's stock of risky physical capital. By the same token, the saver-investors of an open economy can collectively reduce the riskiness of aggregate consumption only by investing in safe net foreign assets. The effects of investing in safe domestic debt instruments cancel out at the aggregate level, unless they are directly or indirectly channeled into safe net foreign assets rather than domestic loans.

foreign assets in physical capital. These considerations provide an additional rationale for the commonly applied distinction between investment-saving gaps that are financed by foreign debt versus those that are largely covered by direct foreign investment. The latter allow the shifting of some risk to foreigners; in return foreigners appropriate a larger share of the returns on the excess of investment over saving. The current account position serves only as an approximation of a country's overall risk exposure, calling for a supplementary analysis of the capital account.

It is perhaps easiest to illustrate these points with a simplified diagrammatic exposition. Assuming that the utility function is additively separable in  $C_1$  and  $C_2$ , one can separate the optimization problem into two independent stages: the decision on how much to save in the first period and the decision on how to allocate the saving between assets. 1/ Assuming further that expected utility depends only on two parameters of the probability distribution of  $C_2$ , its mean and its standard deviation, the determination of the current account can be represented in terms of the simple mean-variance analysis familiar from portfolio theory. 2/ Given the amount of saving  $S_1$  set aside for investment, expected utility is a function of the expected value  $E_R$  and the standard deviation  $\sigma_R$  of the rate of return  $R$  on  $S_1$ , as in Sharpe (1964):

$$E[u(C_1, C_2)] = v(C_1) + E[w(C_2)] = v(C_1) + g(E_R, \sigma_R) \quad (8)$$

where

$$R = br_B + (1-b)r_K \quad (9)$$

and  $b$  is the fraction of  $S_1$  that is invested in the riskless asset. It is assumed that the representative agent is risk averse, with  $g_1 > 0$  and  $g_2 < 0$ .

When domestic physical capital is the only risky asset, the opportunity locus of risk-return possibilities is a straight line in the  $E_R, \sigma_R$  plane defined by:

$$E_R = r_B + \left( \frac{\bar{r}_K - r_B}{\sigma_K} \right) \sigma_R \quad (10)$$

where  $\bar{r}_K$  is the mean and  $\sigma_K$  is the standard deviation of  $r_K$ . The optimal current account is then defined as the point of tangency between the representative agent's indifference curves in the  $E_R, \sigma_R$  plane and

1/ See Sandmo (1974, pp. 32-3) for a more precise statement on the conditions under which this separation is possible.

2/ The representation of the optimization problem in terms of mean and variance alone can be justified if the utility function is quadratic in  $C_2$  or if the variable  $r_K$  is normally distributed.

the opportunity locus. A point of tangency in the solid part of the opportunity locus (A) indicates a current account surplus, with some saving placed in safe net foreign assets (Figure 1). A tangency in the dotted part of the line (B), by contrast, indicates net borrowing abroad at the world rate of interest to finance risky investment in excess of saving. A tangency at point C indicates current account equilibrium with investment in risky capital exactly equal to saving.

The possibility of investing in two types of risky capital, domestic and foreign, with uncorrelated returns is illustrated in Figure 2. In this case, Tobin's separation theorem applies and the decision on the mix of the two risky assets is independent of the decision on the mix between riskless and risky assets. Here again we have different possible solutions depending on the leverage and risk that investors are willing to bear, but the implications for the current account are no longer obvious. A tangency in point A' with positive holdings of both riskless and risky foreign assets still implies a current account surplus, but a tangency in point C' also implies a surplus, with some saving invested in risky foreign assets, and a tangency in point B' need not imply a deficit as foreign borrowing may have as its counterpart investment in foreign risky assets. This latter possibility brings out the limitations of the current account as an indicator of an economy's behavior toward risk. 1/

b. The incidence of risk under the gold standard:  
Borrower beware

As was already noted, the period of the gold standard witnessed large and persistent current account imbalances among the major economies. A closer look at this experience is warranted for several reasons. First, to the extent that such imbalances are the natural outcome of financial integration, macroeconomic performance in the period ahead may resemble that under the gold standard. The permanent fixing of exchange rates, in particular, which EEC countries aspire to achieve in the process of monetary unification, may eliminate the exchange risks that may have hindered capital flows in the recent past. 2/ Evidence from the period of the gold standard could moreover help ascertain the empirical relevance of the results of our theoretical model. The model's most important proposition is that the current account could be a proximate indicator of an economy's exposure to risk even when

---

1/ A case in point is the U.S. balance of payments position during the 1960s. Although the current account was, on average, near balance, there was a net outflow of direct foreign investment, which was financed through official and private short-term capital inflows. According to the analysis above, the United States pursued a high-risk, high-expected-return investment strategy during that period, notwithstanding its current account position.

2/ For an articulation of this view, see The Economist, "A capital mystery," October 7, 1989, p. 83.

Figure 1  
Riskless foreign asset with risky domestic capital

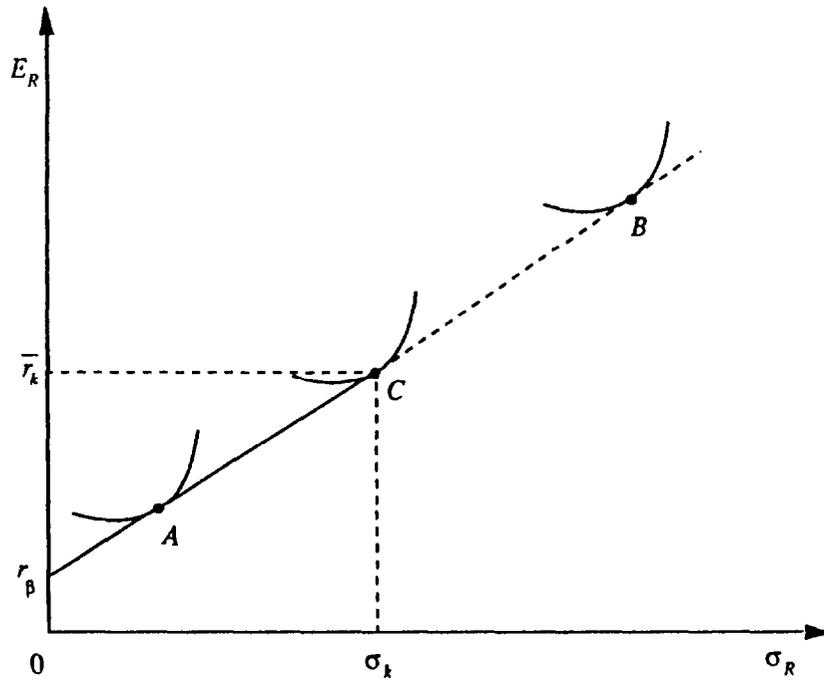
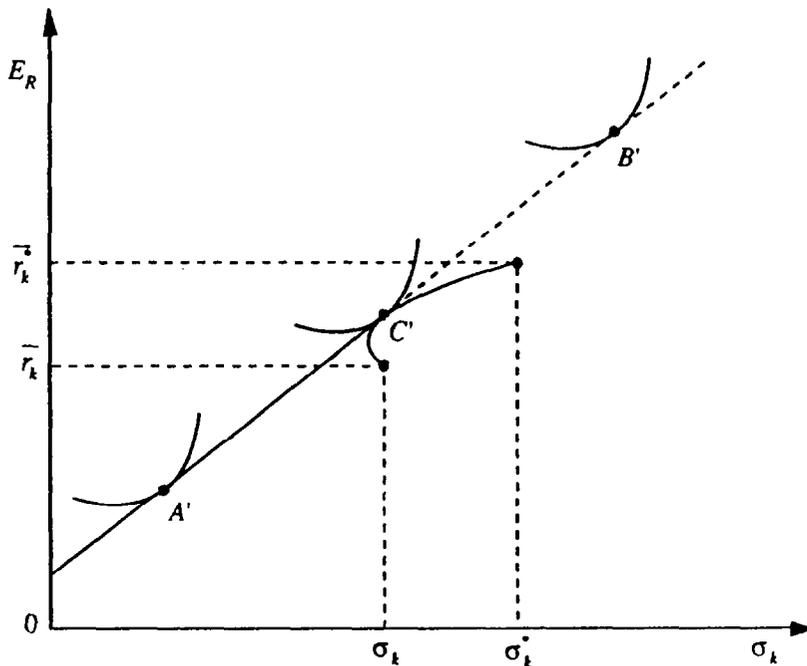


Figure 2  
Riskless foreign asset with risky domestic and foreign capital





exchange risks can be perfectly hedged. A period of fixed exchange rates and large current imbalances seems highly suitable for the testing of this proposition.

Evidence from the 1880-1913 period supports the view that current imbalances provided mutual benefits to creditor and debtor countries, but these benefits seem to have been at the expense of a heavy burden of risk on the latter. The notion of risk is of course elusive and it is difficult to make inferences about subjective perceptions (*ex ante* risk) based on objective or realized outcomes alone. Nevertheless, there is sufficient quantitative and anecdotal information to suggest both that foreign borrowing carried substantial risks and that contemporary policy makers were keenly aware of these risks.

From the point of view of creditors, the presence of risk does not seem to change the positive overall picture on the rewards of foreign investment under the gold standard. Realized returns on foreign assets generally exceeded returns on like domestic assets by handsome margins. Edelstein (1982, p. 126), for example, has estimated that domestic shares in the United Kingdom had a geometric mean return of 4.6 percent per annum over the 1870-1913 period, compared with a geometric mean return of 5.7 percent on foreign shares. Even if the gap between domestic and foreign returns reflects a higher perceived risk of loss from default or insolvency abroad, the realization of such losses is unlikely to have reversed the favorable ranking of foreign asset performance. <sup>1/</sup> The holding of foreign assets could moreover serve to buffer the domestic economy from external shocks, by allowing the smoothing of consumption through temporary reduction, or even reversal, in foreign investment flows.

From the perspective of borrowing countries, the gains from foreign investment appear to include higher average rates of economic growth, which however seem to have been achieved at the expense of greater short-run variability in domestic consumption. Comparing average economic performance in a sample of seven countries over the 1880-1913 period brings out a strong positive relationship between the growth rates of domestic investment and output, with a correlation coefficient of 0.88 (see Table 2 below and Chart 1). To the extent that foreign funds provided some of the resources for domestic investment, it can therefore be argued that current account deficits had a beneficial effect on growth. Chart 2 confirms the apparent positive impact of current account deficits on the average rate of growth of consumption (bottom panel). The top panel of Chart 2, however, also shows an

---

<sup>1/</sup> Edelstein (1982), pp. 128-30.

apparent inverse relationship between a country's current account position and the variability of its domestic consumption. The correlation coefficient between the two variables is  $-0.77$ . <sup>1/</sup>

Table 2. Comparative Economic Performance Under the Gold Standard, 1880-1913

	Current Account Balance		Annually Compounded Average Growth Rate of:			Standard Deviation of Rate of Growth of		
	Average	Standard deviation	GDP/GNP	Invest-ment	Con-sumption	GDP/GNP	Invest-ment	Con-sumption
	In percent of GDP		In percent per annum					
Australia	-3.8	4.9	3.2	3.5	3.3	7.0	19.3	7.8
Denmark	-2.6	1.6	3.3	4.8	3.3	3.9	12.2	4.8
Norway	-2.5	2.9	2.9	4.0	2.7	4.1	9.2	3.7
Sweden	-2.5	2.1	3.5	4.3	3.3	5.1	13.5	5.3
Germany	1.8	0.7	3.5	5.7	3.2	3.2	17.9	1.9
Italy	0.6	1.8	2.3	3.0	2.1	5.6	49.7	4.3
United Kingdom	4.5	2.1	2.1	1.5	1.9	2.7	9.2	2.7

Source: B. R. Mitchell, European Historical Statistics, 1750-1970 and International Historical Statistics: The Americas and Australasia.

Australia, in particular, with the highest average current account deficit (3.8 percent of GDP) also registers one of the highest average rates of growth of consumption (3.3 percent) with the largest standard deviation (7.8 percent). The United Kingdom at the other extreme, has the largest average current account surplus (4.5 percent of GNP) and the

<sup>1/</sup> The statistical significance of this relationship is confirmed by cross-section regression analysis, whose results however must be viewed with caution as there are only seven observations. Regressing the standard deviation of the annual rate of growth of consumption (STD.CON) on the average current account balance expressed in percent of GDP (CA) yields the following estimates (numbers in parentheses are T-statistics):

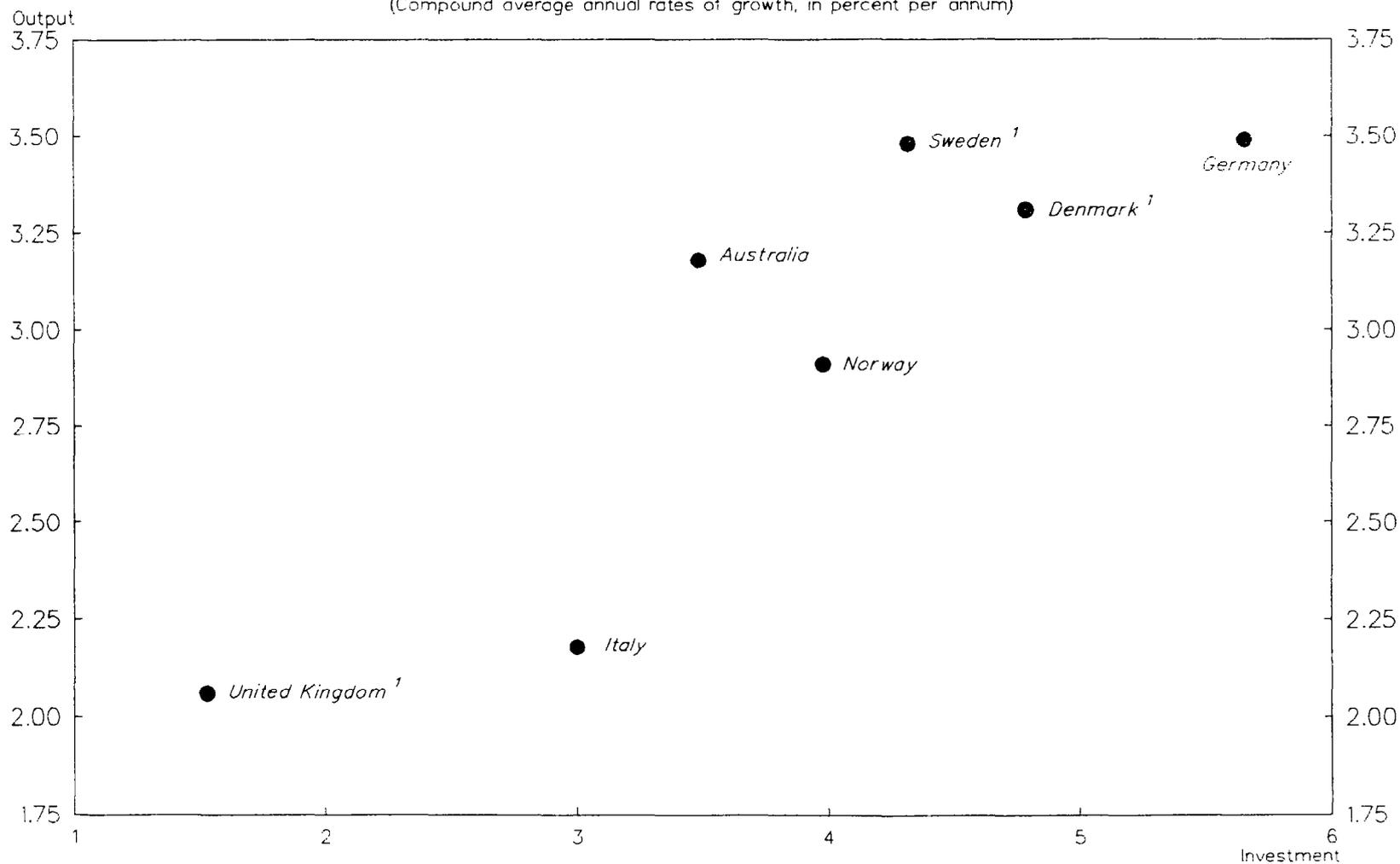
$$\text{STD.CON} = 4.04 - 0.49 \text{ CA} \quad R\text{-Squared} = 0.59$$

$$(7.83) \quad (-2.71) \quad \text{Durbin-Watson} = 1.59$$

Both coefficients are statistically significant at the 5 percent level and the coefficient of the current account has the expected negative sign. The estimates imply that a deterioration of the current account by 1 percentage point of GDP would increase the standard deviation of the annual rate of growth of consumption by about 1/2 of a percentage point.

CHART 1  
 COMPARATIVE OUTPUT AND INVESTMENT PERFORMANCE  
 UNDER THE GOLD STANDARD, 1880-1913

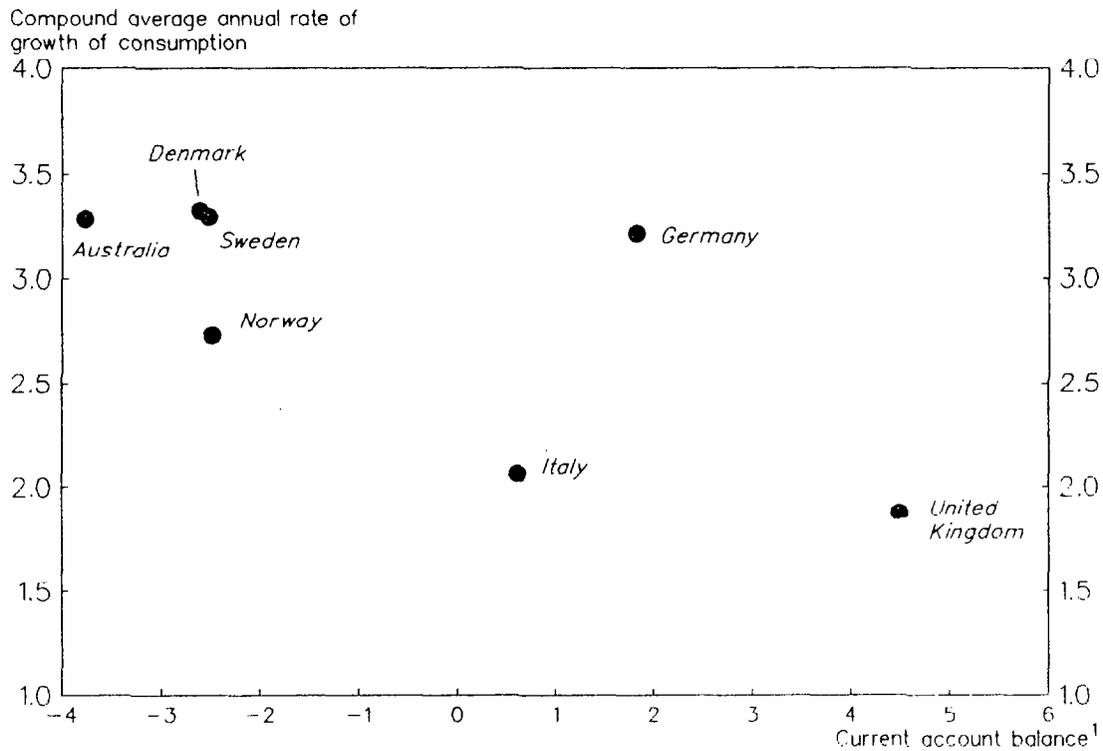
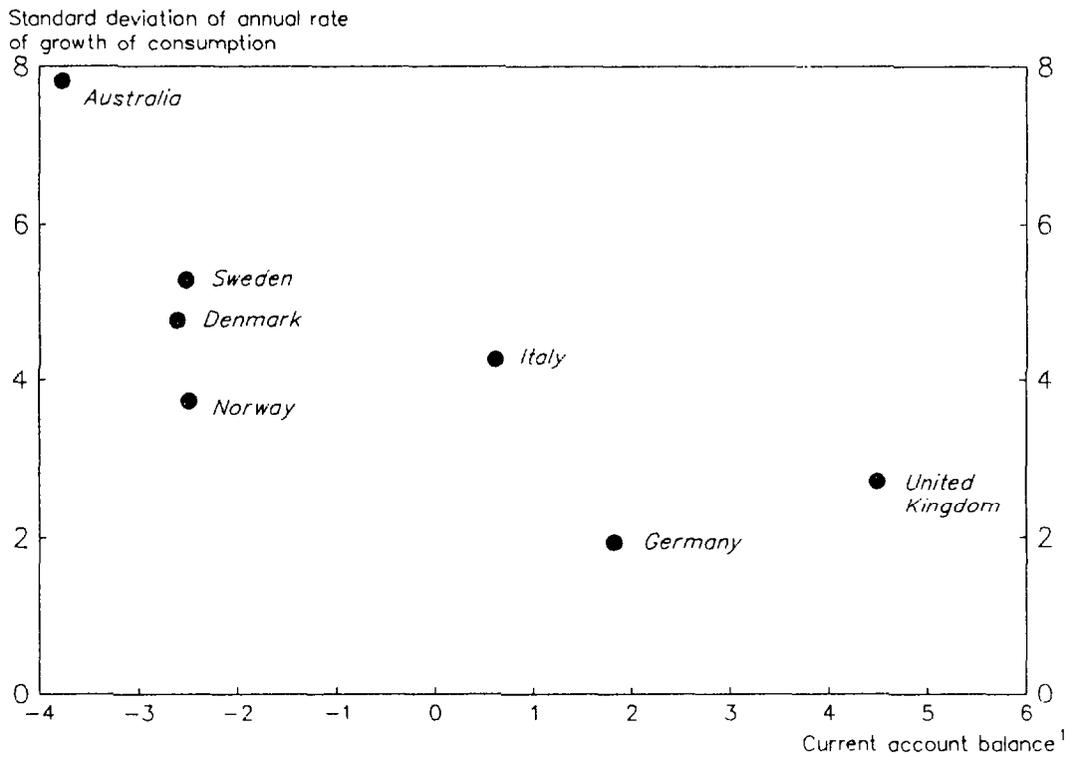
(Compound average annual rates of growth, in percent per annum)



Sources: Mitchell, B., *European Historical Statistics and International Historical Statistics: the Americas and Australasia*.  
<sup>1</sup>Investment: excludes stocks



CHART 2  
COMPARATIVE CONSUMPTION AND CURRENT ACCOUNT  
PERFORMANCE UNDER THE GOLD STANDARD, 1880-1913  
(In percent)



Sources: Mitchell, B., *European Historical Statistics and International Historical Statistics; The Americas and Australasia*.  
<sup>1</sup>In percent of GDP/GNP.



lowest average rate of growth of consumption (1.9 percent) with the second lowest standard deviation (2.7 percent). The lowest standard deviation of consumption growth (1.9 percent) is registered by Germany, which has the second largest average current account surplus (1.8 percent of MNP). Unlike the United Kingdom, however, Germany also has a high average rate of growth of domestic investment (5.7 percent), which is more than financed with domestic saving. This allows it to attain rates of growth of output and consumption in line with those of the highest-growth deficit countries, which have the greatest variability of consumption. Finally, Italy has a small average current account surplus (0.6 percent of GDP) and a relatively low rate of growth of domestic investment. As a result, it registers lower rates of growth of output and consumption than both Germany and the deficit countries, with a standard deviation of consumption growth that is about average (4.3 percent).

The apparent correlation between the current account and the riskiness of consumption is in line with the predictions of the already described model of the current account. Stated in general terms, the principal insight from this model is that the larger the proportion of future income pledged for the servicing of past debts, the lower the flexibility in coping with unfavorable contingencies in the future. Such contingencies may include not only worse-than-expected returns on risky investments as described in the model, but also terms-of-trade shocks, aggregate supply shocks, and shortfalls in financing. As the amount of discretionary income falls there is a greater likelihood that adverse shocks will impinge on future consumption. Default can shift some of the incidence of risk from debtors to creditors, but this option is typically ruled out by borrowers that need continued access to the credit market. In this regard, the pre-eminence of the London capital market seems to have assured the enforceability of most debt contracts during the heyday of the gold standard. Because debt repudiation would preclude further access to this market, initial defaults rarely persisted (Fishlow (1986, pp. 69-70)).

The asymmetric incidence of risk between surplus (creditor) and deficit (debtor) countries is a feature of the gold standard that has been appreciated for some time. Triffin (1964, p. 4), for example, has described this asymmetry as follows:

The cyclical pattern of international capital movements, however, had a very different impact upon the capital-exporting and the capital-importing countries.

A mere slowdown of capital exports could help relieve, in the first countries, any pressures on central bank--and private bank--reserves arising from unfavorable developments in other balance-of-payments transactions ....

The borrowing countries, on the other hand, were far less able to control the rate of their capital imports which tended, on the whole, to swell in boom times and dry up in hard times, contributing further to the economic instability associated with their frequent dependence on one or a few items of raw material or foodstuff exports, themselves subject to quantity and/or price fluctuations. All in all, therefore, the balance of payments of the countries of the so-called "periphery" would be assisted, over the long run by the large capital imports available to them from the financial markets of industrial Europe, but these countries would pay for this dependence through perverse fluctuations in the availability of such capital and in their terms of trade over the cycle.

In a similar vein, in discussing the Australian experience, Cain (1970, pp. 101-2) has noted:

It is an interesting sidelight on the mechanism of gold-standard adjustment at the periphery that heavy unemployment and not gold flows brought the level of local expenditure (and with it absorption of imports) abruptly into line with a suddenly constricted capacity to import; and, in time, the money-wage rate more into line with the course of import prices. We need to recall, here, that capital ebbs and flows which were marginal to Britain were far more than that at the periphery: in the 1880s, after all, the ratio of capital inflow to Australian fixed capital formation had been about 50 percent.

The previous section's key finding that debt-financed investment raises the riskiness of consumption was also appreciated long ago on an intuitive level. Wood (1930, p. 90), for example, likened the "over-indulgence in international credit" to "furnishing the national house on the hire-purchase system; a plan which may result eventually in ownership, but which always entails a long struggle to satisfy the demands of the mortgagee, and too frequently leaves insufficient living expenses out of the national income."

A closer look at the Australian experience over the 1880-1913 period provides a good insight into the risks faced by capital-importing countries under the gold standard. This experience is instructive because, among the seven countries cited above, Australia registered, over that period, the highest average current account deficit and the highest variability of consumption. Australia was by all accounts a model debtor with a large reservoir of natural resources. This should have helped insure the confidence of its creditors and, thereby, the orderly inflow of foreign capital. But if, despite its advantages, even Australia suffered greater economic instability on account of its dependence on foreign funds, then the risks of foreign borrowing must have been even greater for countries with lower credit ratings.

The large average current account deficit of Australia over the whole 1880-1913 period (3.8 percent of GDP) conceals a sharp change in regime as of the early 1890s. The earlier part of the period, which can be defined to end in 1891, was one of strong growth in investment, output, and consumption in the context of large sustained inflows of foreign investment. The current account deficit averaged 8.6 percent of GDP during that period, while gross domestic capital formation averaged 19.4 percent of GDP (see Table 3 below). The subsequent period, by contrast, began with a sharp economic contraction in 1892, which lasted through 1895. By that time, nominal GDP had declined by 30 percent from its 1891 level, with the investment and consumption components falling by a cumulative 60 percent and 26 percent, respectively. The current account deficit narrowed in 1892 and turned into a small surplus in 1893-94, before reverting to a deficit in 1895. Thereafter, the economy recovered, but it was not to attain the 1891 level of investment until 1910, with foreign capital playing a much less significant role. Over the 1892-1913 period, the current account deficit averaged a mere 1.1 percent of GDP, a dramatic change from the previous subperiod, while total investment averaged 13 1/2 percent of GDP or about 6 percentage points less than in 1880-91. The sharpest decline was in private investment, which fell from an average of 11 1/2 percent of GDP in 1880-91 to 6.7 percent of GDP in 1892-1913. Public investment also declined in relation to GDP as did domestic consumption, albeit by more modest amounts (see Table 3 below).

Table 3. Australia: Summary Economic Indicators, 1880-1913

(In percent of GDP)

	Current Account Balance	Gross Domestic Capital Formation			Domestic Consumption
		Total	Private	Public	
1880-91 Average	-8.6	19.4	11.5	8.0	89.2
1892-1913 Average	-1.1	13.5	6.7	6.8	87.6

Sources: Mitchell, International Historical Statistics: The Americas and Australasia; and N.G. Butlin, Australian Domestic Product, Investment and Foreign Borrowing, 1861-1938/39 (pp. 16-17).

What accounted for the abrupt change in Australia's investment and consumption profile beginning in the 1890s? Real sector developments undoubtedly played an important role. The overinvestment of the 1880s had made some retrenchment inevitable and terms-of-trade losses were to exacerbate the downturn. But there is also evidence that the severity of the recession and the long-run decline of the investment ratio were

to some extent due to a growing reluctance of investors in London to continue financing Australia's deficit. Net yields on new colonial securities issued in London by the governments of New South Wales and Victoria were already rising in 1889-90 while, at the same time, brokers were finding it increasingly difficult to place such securities. 1/ Despite these difficulties and the unfavorable climate created by the Baring failure of 1890, New South Wales was compelled to issue a new loan in London to fulfill its commitment to extend the railway system. Security prices fell sharply in 1891, however, forcing New South Wales to contract its investment plans as soon as possible and causing a sharp downturn in expenditure in 1892. Victoria was also forced out of the London market and, unlike other colonial governments, it was unable to resume borrowing in that market for most of the remainder of the 1890s. But the most severe and long-lasting financial constraints were felt by private investors. As Butlin (1964, p. 450) puts it "the private sector was still afflicted, even after the turn of the century, by its uncertain position in the London capital market and plagued by the risks of capital withdrawals." 2/ The colonial authorities were themselves keenly aware of these risks. In 1893, the Premier of New South Wales reportedly expressed his wish to achieve a budget surplus within a year and to see his way "never to borrow another shilling on the English market except for the consolidation of ... debt, or for the removal of existing obligations as they become due." 3/

---

1/ Butlin (1964), pp. 446-50.

2/ The risks of foreign borrowing were just as compelling for New Zealand, which had to stay away from the London market for extended periods during the 1880s. The implications of dependence on this market have been aptly described by Simkin (1951, pp. 164-5): "After 1885 everything conspired to produce depression. Improving investment prospects in England, and deteriorating prospects in New Zealand, led to a heavy decline in private capital imports, and soon to actual withdrawals of private capital. The collapse of the colony's credit in London forced [the Government] to give up borrowing for development, and under [its] successors loan expenditures dwindled to negligible proportions; the overseas debt service became an unrelieved strain on depressed export receipts."

3/ The Finances of New South Wales, The Economist, October 21, 1893, p. 1259. Contemporary opinion was not much different in Victoria, where some observers came to view most foreign loans as an "unmitigated curse" (Wood (1930, p. 63)). Wood (1930, p. 92) himself put it in more poetic terms:

The underlying causes of 1893, and of every other major crisis in Australian history ... [are] the natural accompaniments of the borrowing cycle. Our progress, like that of Dante, has been through a series of heavens, each one more glitteringly radiant than the last; but, to our discomfort, we have discovered that to each paradise is annexed a peculiar and appropriate purgatory wherein the errors of misapplied capital may be expiated.

In sum, international financial flows conferred substantial benefits on both creditor and debtor countries under the gold standard, but the attendant risks seem to have fallen disproportionately on debtors. These risks were present even as exchange rates remained rigidly fixed. Although capital markets could finance large current account deficits over prolonged periods, capital inflows remained liable to sudden withdrawal. Such withdrawal often required drastic cuts in consumption, investment, and output, which deficit countries found painful. Policy makers recognized the risks of overreliance on foreign capital inflows, but they did not target the current account properly, which was probably an unfamiliar concept at the time. Nonetheless, budgetary and debt management policies were at times geared toward limiting new government borrowing abroad. As the post-1891 Australian experience suggests, this could be tantamount to targeting the current account as long as the private sector has limited access to international credit.

c. The current account in the 1990s: The case against benign neglect

The foregoing discussion has identified some of the potential risks of external imbalances, which however do not suffice to make a case for government concern over the current account. In particular, if the government's own accounts are in equilibrium, so that it does not directly contribute to any imbalance, it can be argued that it is up to private agents to determine their optimal debt contracts, presumably after weighing all the associated risks. As long as the risks are borne directly by the parties to these contracts, there is no apparent reason for corrective action by the government. A case for intervention could be made only if there were some identifiable externality or other type of market imperfection that might distort private agents' behavior toward risk. The discussion below identifies two potential sources of externality in the integrated European market, which seem to call for continued vigilance about current imbalances.

(1) Country risk

Market perceptions about country risk are one important source of distortion that is unlikely to be eradicated by financial integration. Although typically associated with LDCs, country risk is also relevant for the smaller, less advanced EC countries. In each of these countries, private firms' credit worthiness often hinges on the country's overall credit rating partly because international investors do not have enough information to differentiate among debtors. Implicit in the notion of country risk is the assumption that the risk of default on a country's private debts depends more on the country's overall financial situation than on the particular situation of each debtor. The presumption is that private sector defaults on foreign loans will be made good by governments seeking to safeguard the country's overall

credit worthiness. Defaults that are not made good will typically impair the credit rating of seemingly unrelated debtors within the same country. 1/

As long as creditors base their lending decisions on country risk analysis, there is a reputational externality that warrants government concern even about private imbalances. To the extent that the government intends to assume the foreign loans of bankrupt companies, private foreign debt is its contingent liability over which it must exercise some control. But even if no bailout is contemplated, the risk of withdrawal of new foreign loans calls for a close monitoring over aggregate foreign debt. Perceptions of overindebtedness, which could bar whole countries from further borrowing under the gold standard, could also arise under European integration. Because individual agents are in no position to appreciate how their own borrowing may impinge on the stability of future loan supply, the government has an important role to play in monitoring and perhaps even containing the country's overall foreign indebtedness.

The EC could use its own credit facilities more actively so as to insure the orderly flow of financing toward deficit countries, but this would merely shift the incidence of risk within the Community. Withdrawal of financing is the most powerful disciplining tool at the disposal of creditors. Although its effects may be painful for debtors, this is the most direct way for investors to correct past mistakes or to cut the resulting losses. Substituting EC funds for spontaneous financing will alleviate the burden of risk on the debtor countries only at the expense of increasing the Community's contingent liabilities. But this may endanger price and financial stability and may ultimately test the cohesiveness of the Community. To guard against such problems, the Community itself thus has a vested interest in checking the magnitude of imbalances among its constituent members. 2/

## (2) Deposit insurance

An additional source of distortion affecting both domestic and international financial flows is the existence of risk-related externalities in the process of financial intermediation. Over the last 50 years, industrial countries have been able to avert systemic financial

---

1/ For more extensive analysis and evidence on the issue of country risk, see Cooper and Sachs (1986).

2/ The same considerations that call for concern over inter-country imbalances within the EC may apply for sectoral imbalances within national economies. Friedman (1989), for example, argues that the U.S. corporate sector's extraordinary increase in reliance on debt during the 1980s has increased the risk of a debt default crisis. The need to minimize this risk is likely to circumscribe the Federal Reserve's ability to conduct anti-inflationary policy in the period ahead. The overindebtedness of the corporate sector could thus jeopardize price stability in the U.S. economy at large.

crises, owing mainly to the safeguards introduced in the wake of the widespread defaults and bank failures of the 1930s. These safeguards were intended to eliminate the negative externalities associated with bank failures, which became evident during the 1930s. Nonetheless, a new kind of externality has emerged in the process, whose potential costs have come to be appreciated only recently. By maintaining confidence in the banking system through explicit deposit insurance schemes or through ad hoc deposit guarantees whenever large financial institutions face imminent collapse, the authorities of industrial countries have inadvertently allowed borrower-investors in effect to share the downside risk of their investments with taxpayers. The most recent illustration of this externality is the costly bailout of failed thrift institutions in the U.S., but one can also argue that taxpayers will ultimately bear some of the costs of the LDC debt problem. In each case, private agents were induced to invest excessive and socially sub-optimal amounts of borrowed funds in risky assets, by a combination of limited liability and deposit insurance arrangements. 1/

The first-best solution to such problems would be to remove the source of the externality, by reforming deposit insurance systems so as to minimize the problem of moral hazard and by strengthening the enforcement of prudential controls over financial institutions. Deposit insurance reform may have limited effectiveness, however, as long as depositors are convinced that large banks would never be allowed to fail. With regard to prudential controls, a sustained effort is under way to strengthen capital requirements and harmonize practices internationally, especially in the context of European financial integration. Even so, national regulators may be hard pressed to keep up with the rapid process of internationalization of capital flows and may find it difficult closely to supervise the attendant risks.

In light of the prominent role of deposit-taking institutions in the cross-border movement of capital, there may be significant externalities in the financing of otherwise benign current account deficits. Unlike in the 19th and early-20th centuries, when the risks associated with international financial flows were borne fully by private holders of stocks and bonds, the incidence of the risks of international lending is now less transparent. The major banks that dominate activity in the Euromarkets currently effect a large share of the international flow of funds, whereas direct investment in foreign securities by the private sector plays a relatively less important role. Although in principle the shareholders of financial intermediaries should bear the risks of their international operations, this may prove unenforceable in practice. The recent LDC debt crisis has been a clear manifestation of the potential external costs of international loans that have gone bad. The

---

1/ For a concise review of the main issues relating to the S&L crisis in the U.S., see Jaffee (1989). A discussion of the potential costs to taxpayers stemming from the LDC debt crisis is included in Bulow and Rogoff (1990).

direct or indirect bailing out of large banks whose bad foreign loans are set to exceed their capital is tantamount to a taxpayer subsidy to high-risk loan-financed foreign ventures.

Under such circumstances, targeting the current account can be viewed as a valuable second-best method for minimizing the negative externalities of investor-borrowers' behavior toward risk. European financial integration calls for a reconsideration of explicit and implicit risk-sharing arrangements among financial market participants and taxpayers. It is not clear who would bail out a failed institution in country A with liabilities in country B and bad loans in country C. Until appropriate norms are agreed on and more accurate indicators of risk are devised, both surplus and deficit countries should remain concerned about widening current imbalances. Although by itself it is a crude measure of overall exposure to risk, the current account in conjunction with the capital account can help warn about incipient financial weaknesses. Even in a monetary union like the United States, the monitoring of inter-state imbalances may provide policymakers with valuable information. A closer monitoring of such imbalances might have indeed alerted the U.S. authorities earlier about the inflow of out-of-state funds into the ailing thrifts of Southwestern states. The saving versus productive investment criterion, by contrast, would have suggested no cause for concern insofar as most funds were invested in real assets.

#### IV. Conclusions

The simple saving-investment criteria on the sustainability of current imbalances have many limitations. Distinguishing between consumption- and investment-driven imbalances is difficult in practice and any such distinction is usually plagued by serious problems of measurement. Uncertainty moreover complicates the task of determining which investments will actually pay off, as is attested by the recent experience of LDC debtors. In the absence of credit market imperfections that favor government borrowing, the distinction between private and public imbalances may also be misplaced. Foreign-financed domestic spending affects future consumption regardless of whether the debt servicing comes out of the private sector's future income or out of its future tax payments and recent studies suggest that public investment in infrastructure is no less productive than private investment.

Introducing risk into the saving-investment framework provides new insights on the significance of the current account. Risk aversion helps explain why some economies may find it optimal to pursue current account balance even though others have successfully carried out higher-growth strategies by relying on foreign debt. Recent external imbalances may reflect different attitudes toward risky domestic investment between surplus and deficit countries rather than systematic differences in the productivity of capital. The existence of risk does not in itself invalidate the case for allowing private capital flows

efficiently to finance national investment-saving gaps, but it does suggest that this may be at the expense of extra risk in the future consumption possibilities of deficit countries. Such risk depends not only on the size of the current imbalance, but also on the composition of its financing. In this regard, it is somewhat surprising that the popular reaction in deficit countries tends to be more averse to direct foreign investment than to debt finance. When default is ruled out, foreign debt places the burden of extra risk on residents, whereas foreign direct investment transfers this burden to nonresidents.

The process of European integration is likely to ease the financing constraints that have in the past dictated the prompt correction of external deficits in EC countries, but this does not warrant the disregard of current imbalances. Even if these imbalances reflect private sector decisions, their financing may be associated with risk-related externalities as long as there is a nonzero probability of default on private loans. The first-best solution would be to eradicate these externalities, but this is likely to prove difficult during the early phases of European integration. To prevent the emergence of financial weaknesses that could create serious dilemmas for EC's policies, national authorities should remain concerned both about widening current imbalances and about the nature of corresponding capital flows.

References

- "A Capital Mystery," The Economist, October 7, 1989, p. 83.
- Aschauer, David Alan, "Is Public Expenditure Productive," Journal of Monetary Economics, 23 (1989), pp. 177-200.
- Banca d'Italia, Bollettino Economico, various issues.
- Banca d'Italia, Relazione Annuale, various issues.
- Barro, Robert, "A Cross-Country Study of Growth, Saving and Government," NBER Working Paper No. 2855, 1989.
- Bayoumi, Tamim, "Saving-Investment Correlations: Immobile Capital, Government Policy or Endogenous Behavior," IMF Working Paper, WP/89/66, August 1989.
- Bini Smaghi, Lorenzo and Stefano Vona, "Le tensioni commerciali nello, SME: il ruolo delle politiche di cambio e della convergenza economica," in Banca d'Italia, Contributi alla analisi economica, No. 2, December 1986.
- Brown, William, The International Gold Standard Re-interpreted, 1914-34 (NBER, 1940).
- Bryant, Ralph C., Money and Monetary Policy in Interdependent Nations, (Washington, D.C.: Brookings), 1980.
- Bulow, Jeremy and Kenneth Rogoff, "Cleaning Up Third World Debt Without Being Taken to the Cleaners," Journal of Economic Perspectives, Winter 1990, pp. 31-42.
- Butlin, N.G., Australian Domestic Product, Investment and Foreign Borrowing, 1861-1938/39, (Cambridge University Press), 1962.
- \_\_\_\_\_, Investment in Australian Economic Development, 1861-1900, (Cambridge University Press), 1964.
- Cain, N., "Trade and Economic Structure at the Periphery: The Australian Balance of Payments, 1890-1965;" in C. Forster, ed., Australian Economic Development in the Twentieth Century, (Praeger: New York-Washington), 1970, pp. 66-122.
- Cooper, Richard and Jeffrey Sachs, "Borrowing Abroad: The Debtor's Perspective," reprinted in Richard Cooper, Economic Policy in an Interdependent World (MIT Press: Cambridge, Mass), 1986, pp. 229-88.

- Edelstein, M., Overseas Investment in the Age of High Imperialism: The United Kingdom, 1850-1914, (Columbia: New York), 1982.
- Eisner, Robert, "Divergences of Measurement and Theory and Some Implications for Economic Policy," American Economic Review, 79 (1989), pp. 1-13.
- Fishlow, A., "Lessons from the Past: Capital Markets during the 19th Century and Interwar Period," reprinted in Kahler, Miles, ed., The Politics of International Debt (Ithaca and London: Cornell), 1986, pp. 37-93.
- Friedman, B., "Implications of Corporate Indebtedness for Monetary Policy," unpublished, September 1989.
- Haberler, G., "The Market for Foreign Exchange and the Stability of the Balance of Payments: A Theoretical Analysis," Kyklos, 3 (1949), pp. 193-218.
- IMF, World Economic Outlook, October 1989.
- Jaffee, D. M., "Symposium on Federal Deposit Insurance for S&L Institutions," Journal of Economic Perspectives 3 (Fall 1989), pp. 3-9.
- Johnson, H.G., "Towards a General Theory of the Balance of Payments," International Trade and Economic Growth, London: George Allen and Unwin (1958), pp. 153-68.
- Krugman, Paul, "Differences in Income Elasticities and Trends in Real Exchange Rates," European Economic Review, 33 (1989), pp. 1031-54.
- Lawson, Nigel, Statement before the 1989 IMF-World Bank Annual Meetings (Washington, September 1989).
- Lever, Harold and Christopher Huhne, Debt and Danger: The World Financial Crisis, Penguin Books, 1985.
- Lucas, Robert E. Jr., "Principles of Fiscal and Monetary Policy," Journal of Monetary Economics, 17 (1986), pp. 117-34.
- Markowitz, Harry, Portfolio Selection (New York, 1959).
- Mitchell, B., European Historical Statistics, 1750-1975, (New York, N.Y. 1980).
- \_\_\_\_\_, International Historical Statistics: The Americas and Australasia, (Detroit, Michigan, 1983).
- Molho, Lazaros, "The Current Account in Perspective: Lessons from the Italian Experience," unpublished, IMF, 1990.

- Nurkse, R., "International Investment Today in the Light of Nineteenth Century experience," Economic Journal 64 (1954) reprinted in R.N. Cooper, ed., International Finance (Penguin Books), 1969, pp. 358-74.
- Pagliano, P. and F. Barca, "Il risparmio del settore privato 1960-88: Ricostruzione statistica," unpublished, Bank of Italy, March 1989.
- Sachs, Jeffrey D., "The Current Account and Macroeconomic Adjustment in the 1970s," Brookings Papers on Economic Activity, 1981:1, pp. 201-268.
- Sachs, Jeffrey D., "The Current Account in the Macroeconomic Adjustment Process," Scandinavian Journal of Economics, 84 (1982), pp. 147-59.
- Salop, Joanne and Erich Spitaller, "Why Does the Current Account Matter?" Staff Papers 27 (1980), pp. 101-34.
- Sandmo, Agnar, "Capital Risk, Consumption, and Portfolio Choice," Econometrica, 37 (1969), pp. 586-99.
- Sandmo, Agnar, "Two-Period Models of Consumption Decisions Under Uncertainty: A Survey," reprinted in Jacques Dreze, ed., Allocation Under Uncertainty: Equilibrium and Optimality (New York: John Wiley), 1974, pp. 24-35.
- Schuker, Stephen A., "American 'Reparations' to Germany, 1919-33: Implications for the Third World Debt Crisis," Princeton Studies in International Finance, No. 61, July 1988.
- Sharpe, William F., "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk," The Journal of Finance, 19 (1964), pp. 425-42.
- Simkin, C.G.F., The Instability of a Dependent Economy: Economic Fluctuations in New Zealand, 1840-1914, Oxford University Press, 1951.
- Spaventa, L., "The Growth of Public Debt in Italy: Past Experience, Perspectives and Policy Problems", Banca Nazionale del Lavoro Quarterly Review, June 1984.
- Spitaller, Erich, "Short-Run Effects of Exchange Rate Changes on Terms of Trade and Trade Balances", Staff Papers 27 (1980), pp. 320-348.
- "The Finances of New South Wales," The Economist, October 21, 1893, p. 1,259.
- Tobin, James, "Liquidity Preference as Behavior Toward Risk," Review of Economic Studies 26 (1958), pp. 65-86.

Triffin, R., "The Myth and Realities of the so-called Gold Standard," The Evolution of the International Monetary System: Historical Reappraisal and Future Perspectives, (Princeton University Press), 1964, pp. 2-20, reprinted in R. N. Cooper, ed., International Finance: Selected Readings, (Penguin Press), 1969, pp. 38-61.

Tsiang, S.C., "The Role of Money and Trade Balance Stability; Synthesis of the Elasticity and Absorption Approaches," American Economic Review, 51 (1961), pp. 912-36.

Wood, Gordon, Borrowing and Business in Australia: A Study of the Correlation Between Imports of Capital and Changes in National Prosperity, (Oxford University Press), 1930.

Yeager, Leland B., International Monetary Relations: Theory, History, and Policy (New York: Harper and Row), 1976.

