

ARNÓR SIGHVATSSON¹

The current account deficit in an international and historical context

Is the current account deficit which has formed over the past few years a symptom of dangerous overheating in the Icelandic economy or of dynamic economic activity? This article approaches these questions from various angles. It discusses the different meanings of the concept “sustainable deficit” and the sensitivity of results to changes in certain assumptions. It also addresses the sources, characteristics and consequences of comparable periods of deficit in Iceland and other countries, and how they differ from the present one. Arguments put forward in recent years that the current account deficit is neither as large as official figures suggest, nor a serious threat to long-term stability, are also briefly discussed.

Iceland has run up a large current account deficit over the past three years and, according to economic forecasts, there are few signs that it will shrink significantly in the near future. Last year’s deficit is estimated at 9% of GDP and the deficit is expected to be even larger in 2001, despite clear indications that economic growth will slow considerably down. The deficit has prompted some discussion as to whether it actually poses a threat to economic stability. In its publications, the Central Bank has warned that the current account deficit is a sign of serious macroeconomic imbalances. However, it has also been pointed out that the rise in external debt has been offset by sizeable foreign asset accumulation, and that income from foreign assets may be underestimated. Bearing these factors in mind, it has been argued, the large measured current account deficit and debt accumulation can be seen as posing less risk. Some have argued that because of the emerging new economy in

Iceland a larger current account deficit does not pose much threat at all. Others have argued against this supposed risk, citing the young age of the population or by referring to theories on the nature of deficits in general. A study published by the University of Iceland Institute of Economics in the autumn emphasises that “a current account balance is inherently a neutral phenomenon” which does not belong among the main official economic policy objectives.² It does admit, however, that certain risks may accompany a large deficit, without assessing whether the present situation poses such risks.

Discussion of the conceivable damaging effects of a current account deficit is not confined to Iceland. It has appeared intermittently in connection with serious international balance of payment and financial crises in recent years, which have often been preceded by overheating of the economy leading to a large external deficit. The conceivable danger of a large current account deficit is also a matter of debate in the USA, although in rather different terms. The

1. The author is a Division Chief in the Economics Department at the Central Bank of Iceland. He would like to thank Jón Steinsson for important assistance in preparing this article. The views expressed in it are those of the author and are not necessarily the same as those of the Central Bank of Iceland.

2. Gústaf Sigurdsson, Gylfi Zoëga, Marta Skúladóttir and Tryggvi Thór Herbertsson: *Velferð og viðskipti: Um eðli og orsakir viðskiptahalla*, University of Iceland Institute of Economics, November 2000.

US deficit has been growing in recent years to reach a historical record, even though relative to GDP it is only half the size of Iceland's. Just as in Iceland, opinions there are divided, but in part they focus on other issues. In the USA the dispute largely hinges on foreign competition, the decline of American industry and claims by congressional protectionists that the deficit is caused by the US market being opened more to the rest of the world than the markets of its trading countries have been opened up for US goods and services.³ Attention there has often focused on bilateral trade deficits, such as with Japan, which are claimed to employ unfair tactics to protect domestic production. Advocates of free trade have based their arguments on standard trade theory and pointed out that the current account deficit is a macro phenomenon, reflecting different propensities to save and the position of the business cycle.

The debate in the USA has little in common with concerns in Iceland about the scale of the current account deficit. A fairly close consensus appears to prevail that free trade serves the interests of Iceland and other small nations best. The author is unaware of any claims that the causes of the deficit are structural in nature; instead, the general view is that it is macroeconomic in character. Thus the concerns voiced by the Central Bank and others are of a completely different nature from those of US protectionists. For as long as it remains within moderate limits, the current account deficit is not and should not be a cause for concern. This is not to say that it should be treated lightly, no matter how large it becomes.⁴ A large current account deficit may be a symptom of macroeconomic imbalance which can have a negative impact on future growth, just as an individual who borrows excessively may seriously impair his future living standard, especially if he spends the borrowed funds on consumption or unprofitable investments. Recent experience of financial and cur-

rency crises, e.g. in Mexico, Asia and Scandinavia, also suggests that a large current account deficit, coupled with various other indicators, is one of the leading indications of such crises. Empirical studies made in recent years support these findings.⁵ Thus there is every reason for keeping the current account deficit under close surveillance and adjust macroeconomic policy or the regulatory framework, as appropriate, to reduce the likelihood that the imbalance indicated by the deficit will later lead to a serious crisis. Nonetheless, it is important to realise that an excessive current account deficit is at worst a symptom and not the disease itself. Direct current account targets, as proposed in the University of Iceland Institute of Economics study (which in fact appear to contradict the main thrust of the study) are therefore misguided, since macroeconomic policy measures in order to counter the underlying overheating which is the source of external imbalances may indeed increase the deficit in the short term.⁶

The questions that a government at any time needs to consider are: When is a large current account deficit too large? How can a large current account deficit reflecting dynamic economic activity and investment be distinguished from one which is the symptom of overheating? Uncertainty surrounding the many factors affecting such an assessment makes these questions difficult to answer. In the following

3. The 12-member U.S. Trade Deficit Review Commission, USTRC, established by Congress in 1998, concluded that the US trade deficit was not sustainable in the long run and posed a threat to the US economy. However, the commission failed to agree on what action to take.

4. There is little justification for implying, as the University of Iceland Institute of Economics does (*op. cit.*, p. 8), that concerns about the persistent current account deficit are to a large extent a legacy from mercantilism. This may apply to the US debate to some extent – but hardly to Iceland.

5. A good starting point for examining the large and growing number of studies of leading indications of financial and currency crises is the *World Economic Outlook*, IMF, May 1998. A detailed survey is also found in Kaminsky, G. and Reinhart (1999), "The Twin Crises: Causes of Banking and Balance-of-Payment Problems", *American Economic Review*, vol. 89, no. 3. See also Berg, A. and C. Pattillo (1999), "Are Currency Crises Predictable? A Test", IMF Staff Papers, vol. 46, no. 2, 107-138. Berg and Pattillo summarise the findings of their studies and others whereby the typical buildup to a crisis is rapid growth in money supply, an excessively high real exchange rate, a high ratio of M2 to the foreign exchange reserve, and a large current account deficit. An interesting survey of the antecedents of a currency crisis is found in Eichengreen, B., A.K. Rose and C. Wyplosz (1995) "Exchange Market Mayhem: The Antecedents and Aftermath of Speculative Attacks", *Economic Policy* 21. By examining movements in several variables (including the current account balance) for eight quarters preceding and following a crisis, and their deviations from a "tranquil period", they highlight the characteristic features of a typical industrialised currency crisis country. Among the features are that the current account deficit is larger before a crisis than during a tranquil period, increases substantially one or two quarters before the crisis, but begins to narrow before the crisis strikes.

6. See Pitchford, J. "Current Account Deficits, External Liabilities and Economic Policy", *IMF Working Paper WP/92/54-EA*.

analysis the subject is approached from several different angles. First is a brief discussion of the concept of a sustainable deficit and the problem of assessing the sustainability of a current account deficits. This is followed by a review of comparable periods of current account deficits in mostly OECD countries in order to examine how countries which have run up large current account deficits have fared afterwards. A review of several deficit periods in Iceland over the past half-century is then presented, comparing these episodes to the present period of unsustainable current account deficit. Finally, an attempt is made to assess whether the size of the present deficit or the risk it poses has been overestimated. This is done by assessing the validity of three claims. Firstly, that the deficit is exaggerated due to underestimated income from foreign assets or less risky because the growth of foreign assets has offset the increase in foreign debt. Secondly, that the deficit may be partly explained by dynamic activity in the new economy and is therefore little cause for concern. Finally, that the deficit may be explained to some extent by Iceland's young population, making it less cause for concern than would otherwise be the case.

What is a sustainable current account deficit?

No universally recognised definition exists that states when a current account deficit can be regarded as sustainable. Several related concepts are conceivable.⁷ One possibility would be to consider a current account deficit sustainable if the country in question is capable of generating a sufficient future surplus to repay its foreign borrowing, in similar terms to the concept of solvency. However, this concept is not necessarily useful, because even if the capacity to pay is at hand, it may require such sacrifices on the part of future generations that the commitment to make such repayments can be questioned and it cannot be taken for granted that creditors would be prepared to lend on that scale anyway. Even if the accumulated debt can in principle be paid off, the deficit can still be undesirably large. It is thus more appropriate to define a sustainable deficit in broader terms. A deficit could conceivably be defined as sustainable

if it is not so large that it is likely to lead to a sudden reversal from deficit to surplus later on. An unsustainable deficit in this sense may be distinguished from an excessive one, i.e. a deficit which is too large to be explained in terms of any given model of consumption, investment and production. This article will primarily focus on the sustainability of a current account deficit in the sense that it does not lead to a sharp turnabout.

Uncertainties in the assessment of sustainability of current account deficits – a few simple scenarios

The above definition of an unsustainable current account deficit does not get us very far without an macroeconomic model which can at least provide an indication of whether a given economic position is unsustainable, i.e. could result in a downturn later. This model would need to be capable of forecasting turning points within a horizon of several years. Such a model scarcely exists.⁸ This makes assessing whether a given deficit is sustainable particularly challenging. On the other hand, the problem can be illustrated with a few simple calculations, based on assumptions which seem fairly realistic in light of historical experience and the present state of the economy. Such a scenario can be used to give a rough idea of how fast production and export income is required to grow, given certain foreign interest rates, an initial deficit and net foreign debt, if the current account deficit is to be sustainable. If the initial position, assuming economic growth and a foreign interest rate that seem reasonable from a historical perspective, leads to a deterioration in the external debt position without showing any signs of a return to the status quo, this can be read as a definite indication that the deficit is unsustainable. This exercise may also give an indication of the sensitivity of the results to changes in the various assumptions.

Let us look at the case of a fictitious country whose relative aggregates closely resemble those of Iceland today. In fact the assumptions for economic growth and domestic price developments are similar as those made by the NEI in its long-term projection for the last national budget.

7. See, for example, Milesi-Ferretti, Gian Maria and Assaf Razin, "Current Account Sustainability: Selected East Asian and Latin American Experiences". *IMF Working Paper*, WP/96/110, October 1996.

8. Models such as those used by the National Economic Institute of Iceland are hardly suitable for forecasting over periods of more than one or two years.

Long-term features		Initial position in 2000	
Economic growth	2.25	GDP	100
Export growth	3.5	Export	33
Import growth	3.0	Import	39
Inflation – domestic	3.0	Net factor income	-3.0
Inflation – foreign	3.0	Current account deficit	-9.0
Interest rates – foreign	6.0	Net external position	-60

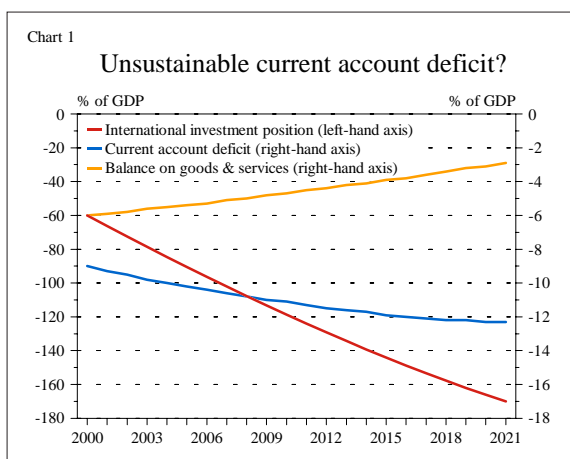
Economic growth, foreign trade growth, interest rates and inflation are expressed as annual % change. Other figures are in króna or an unspecified currency.

Basic relations

GDP: $Y_t = Y_{t-1} \cdot (1+y) \cdot (1+p)$
Exports: $X_t = X_{t-1} \cdot (1+x) \cdot (1+p^*)$
Imports: $M_t = M_{t-1} \cdot (1+m) \cdot (1+p^*)$
Current account balance: $CA_t = X_t - M_t + NFI_t$
Net factor income f. abroad: $NFI_t = NFI_{t-1} \cdot i^*$
Net international inv. position: . $NI_t = NI_{t-1} + CA_t$

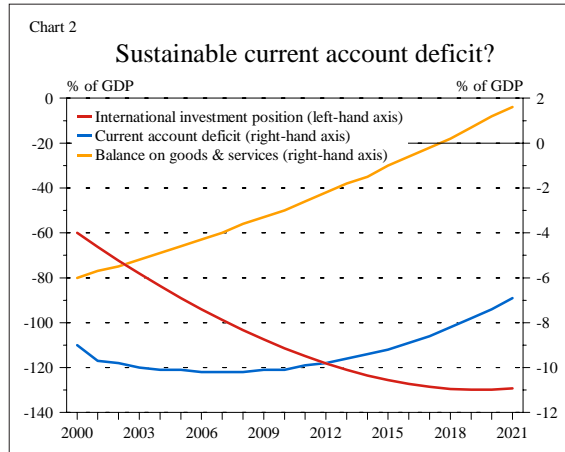
Capitals represent amounts in króna or unspecified currency, and minuscules the annual rate of growth. i^* is foreign interest rates, p domestic inflation and p^* foreign inflation.

The deficit for each year is funded by foreign borrowing at a 6% rate of interest, i.e. 3% real interest. The exchange rate remains stable for the foreseeable future and the country enjoys unlimited international creditworthiness (it should be repeated that this is not an economic model). What happens if growth and inflation turn out in line with the long-term features of the economy, from the initial position? This is shown in Chart 1.



Apparently, the situation is heading out of control. The deficit continues to increase despite export growth, and the net external position goes on deteriorating. After 20 years of deficit, net foreign debt has reached 170% of GDP and is still growing. For this trend to continue without leading to a serious crisis, unlimited creditworthiness would be required. Debt accumulation, on the other hand, leads to such a high interest burden that GNP at the end of the period only amounts to 90% of GDP. Living standards fall correspondingly.⁹

What if these assumptions are over-pessimistic? Perhaps the new economy is growing rapidly, so that productivity, GDP and exports increase more rapidly than assumed above. Assuming long-term economic growth at 3% and export growth at 5%, but import growth at 4% p.a., for example due to a greater propensity to finance investments with domestic saving, the outlook improves considerably, as Chart 2 shows. Although the net asset position continues to deteriorate until 2017, the current account deficit steadily shrinks as a proportion of GDP. On the other hand, if imports grow 4.5% p.a. the net asset position will deteriorate once again, beyond the next 20 years.



This simple exercise demonstrates that fairly small changes in the assumptions of a projection of

9. Net debt does not, however, increase indefinitely according to these assumptions. By 2043 the maximum (minimum negative position) would be reached, when debt would amount to 230% of GDP. Assuming 2% higher foreign interest rates or 0.3% faster import growth, the net foreign asset curve becomes concave, i.e. debt grows at accelerating rate.

this sort can be quite critical in assessments of current account sustainability. If foreign interest rates go up by roughly 2% the current account deficit described in the second scenario becomes unsustainable, in the sense that the initial net position is not restored, or at least does not stop deteriorating, during the period shown. The larger the net national debt, the more marked the impact. In the real world, of course, great uncertainty surrounds most of these parameters, including economic growth, inflation and interest rates. Given the scale of fluctuations in these parameters, countries can easily swing out of a sustainable position and into an unsustainable one. However, the features of a real economy imply that a deficit on the scale projected here cannot be maintained in the long run, but rather calls for adjustment to a more balanced position much sooner. Such a turnaround is rarely painless.

The current account deficit in an international context

A sufficiently powerful forecasting model is not available to forecast turning points and thereby identify unsustainable deficits. However, earlier episodes of large or persistent current account deficits may shed some light on the conceivable aftermath. The following section provides a review of periods of large current account deficits in mostly OECD countries since the 1970s. The scale, fundamental causes and duration of these episodes are described, as well as their macroeconomic consequences, in terms of economic growth and living standards. There are several caveats of such a comparison that should be kept in mind. The consequences depend on the respective countries' long-term growth potential, rate of capital formation and the real interest rates that need to be paid on foreign debt at any time. Major qualifications are needed in comparisons with less developed countries which by virtue of being underdeveloped can probably grow much faster in the long term simply by maintaining a high enough level of investment. Many of the least developed countries are also not suitable for comparison because they enjoy substantial development aid. Hence the comparison will largely be confined to countries at a similar level of development to Iceland, broadly speaking the OECD countries.

There can be a variety of reasons why countries

experience periods of large current account deficits. Their terms of trade may deteriorate temporarily (even permanently) or they may suffer other supply or demand shocks. An overvalued currency, i.e. a high real exchange rate, may undermine the competitive position of export firms or those that compete with imports on the domestic market. Fiscal policy may be in disarray, or over-optimism may encourage an excessive capital inflow and wave of investment.

Periods of large current account deficit experienced by OECD countries over the past three decades span most of the abovementioned types. Some of these periods have been relatively short, although a large deficit has been incurred for a while, and others longer but perhaps not with as large a deficit.

Two decades of current account deficits in Australia: Terms of trade shocks and insufficient saving

Australia has been tackling an extremely persistent current account deficit for a very long time. For 20 consecutive years the deficit has exceeded 3% of GDP – although the deficit has never been as large as during the past three years in Iceland. The deficit was widest at just over 6% of GDP in 1989. For a total of 7 years during three periods the deficit was 5% or more, and the average was 4.7%. The reason for this persistent deficit is perhaps not obvious. It is, however, tempting to explain it in part by a secular deterioration in the terms of trade, which amounted to 50-60% from the mid-1970s to the end of the 1990s. However, poorer terms of trade do not appear to have played a significant role in all the episodes of large current account deficit, i.e. periods when the current account deficit exceeded 5%. Nonetheless, due to worsening terms of trade it probably often took the Australian economy longer to restore external balance.

Three main periods of current account deficits exceeding 5% of GDP can be identified.¹⁰ The first

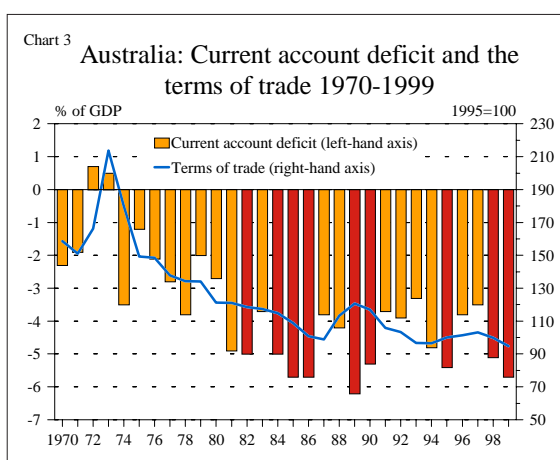
10. Admittedly, 5% is arbitrary and by no means to be taken for granted as the most natural reference. The reason for choosing 5% as the threshold value is that a substantially lower figure would create too many and very long episodes, while a higher one would leave them very few and rather short. It does not seem too wide of the mark to assume that most countries can sustain a deficit of less than approximately 5% of GDP for a considerable time without encountering serious problems, given that it is not unrealistic to assume a growth rate of nominal GDP of 5% in the long run.

deficit period was in 1984-1986, and lay in the range 5-6% of GDP. The terms of trade had deteriorated sharply in the preceding years and this pattern continued for the whole period. Nonetheless, a sharp economic upswing occurred in 1984 following a contraction the year before. Consequently, imports surged by 23%. Rather than being reflected in a marked slowdown of economic growth, the aftermath of this period was primarily characterised by a 30% depreciation of the Australian dollar from 1984-1986.

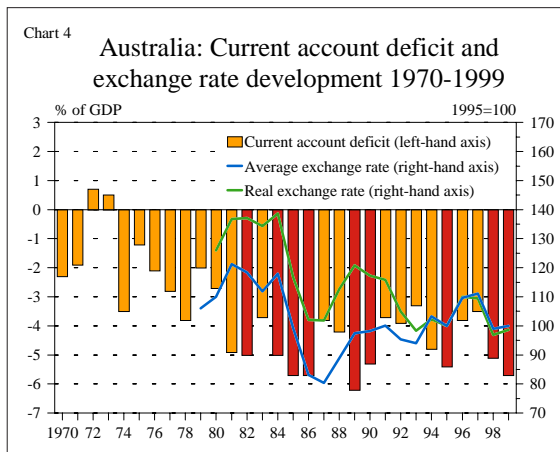
Worsening terms of trade did not play a direct part in the period of large current account deficit from 1989-1990. On the contrary, it was a strong improvement in the terms of trade (22%) in 1988-1989 which kindled overheating and triggered a sharp appreciation of the currency, pushing imports up by 22% in 1989. In the aftermath of this episode GDP contracted by 1.1% in 1991 (following a year of sluggish growth). Unemployment rose and the fiscal deficit widened, reaching 6% of GDP in 1992. The fiscal deficit was probably a consequence of a contraction in GDP the year before, after the economy had overheated, rather than an independent source of the current account deficit. As a result of loose fiscal policy, however, the current account deficit was probably slower to return to normal than it would have been otherwise.

The third deficit period (i.e. of 5% or more) was in 1998 and 1999 and in effect is still going on, because the deficit was estimated at only marginally under 5% last year and the OECD is forecasting 4½% for this year. In addition, the deficit also exceeded 5% in 1995. In all probability the roots of this most recent period lie in a strong capital inflow, in the wake of rapid economic growth and a tight monetary stance, which saw the currency appreciate by 10% in real terms in 1996. Imports rose by 16% that year. Following the Asian currency crisis, the stance was eased and the exchange rate depreciated. The only repercussion felt so far has been a significant depreciation of the Australian dollar. During the second half of last year it was around 35% lower against the US dollar than in the beginning of 1997.

Despite 20 years of continuous current account deficit, Australia has generally managed to maintain a fine level of economic growth. Only in the wake of a period of substantial overheating at the end of the



1980s, when the current account deficit went past 5% for two years in a row (plus a sizeable deficit in the preceding years), did any serious repercussions occur. The Australian dollar plunged during the period, probably contributing to fairly dynamic export growth which has averaged around 7% for the past 20 years. Imports have grown at a similar pace. The greater deficit at the end of the period than at the beginning can be largely explained by a deterioration in the terms of trade and net foreign asset position, and inadequate national saving.¹¹ The net foreign asset position, however, possibly worsened less than



11. Too low a level of national saving is of course only one side of the same coin. National saving is defined as the sum of gross fixed capital formation and the current account balance. All things being equal, a large current account deficit creates a low level of saving, unless capital formation is correspondingly larger.

might have been expected after such a long period of large deficit. The net external position deteriorated from less than -30% of GDP in the mid-1980s to around -45% in 1996, then improved substantially after two consecutive years of double-digit export growth. It should be borne in mind that in spite of everything, the average deficit was just over 1% above average GDP growth (3½%) and ran at a level close to GDP growth for most years.¹² Thus Australia's exceptionally persistent current account deficit can probably only be described as unsustainable for only a few years of those two decades.

New Zealand: Terms of trade, fiscal deficit and real exchange rate appreciation

Like Australia, New Zealand has experienced a persistent current account deficit for many years. From the beginning of the 1980s until last year it averaged 5½% of GDP. Occasionally, for a total of five years, the deficit measured 10% or more, peaking at 16% in 1984. Focusing only on years when the deficit measured 5% of GDP or more for at least two successive years, four separate periods can be distinguished: 1974-1976, 1984-1987, 1995-1997 and the past two years. Since only one year separates the last two periods, it is probably more appropriate to talk of three rather than four, and the start of the middle period can also be set at least in 1982, when the current account deficit exceeded 7%.

Terms of trade appear to have played a considerable part in the development of New Zealand's current account deficit during the first period, from 1974-1976, although New Zealand did not experience a secular trend of deteriorating terms of trade on the scale of Australia. In 1974 and 1975 the terms of trade plunged by more than 40%, following a strong economic upswing during the preceding years which was led by improving terms of trade. GDP growth peaked in 1973 at 7%, and domestic demand and import growth the following year, when import vol-

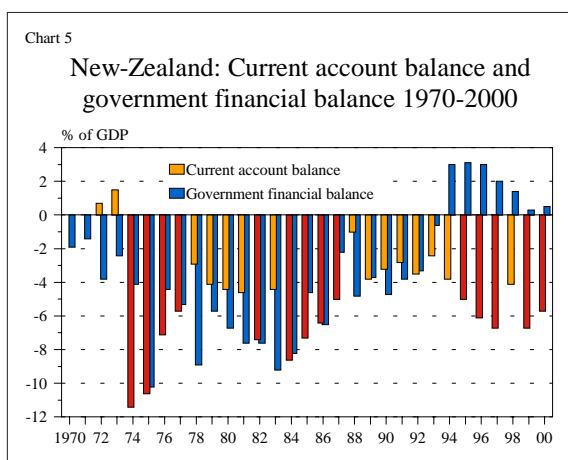
ume rose by 30% but imports contracted by 8% at the same time. During the 1973 upswing the New Zealand dollar appreciated by 19% against the US dollar, then fell the next year by one-third, which sufficed to revive export growth. In a nutshell, the scenario was: An improvement in the terms of trade kindled expansion in domestic demand, which plunged again when the terms of trade returned to their normal level – and beyond. Besides a devalued currency, the aftermath was several years of stagnation and a GDP contraction of almost 3% in 1977.

The deficit built up in 1984-1987 had other causes: the blame does not seem to rest either with the terms of trade nor a strong NZ dollar, which depreciated steadily from 1979 by 1986, by a total of 36% on average, although the real exchange rate remained fairly stable. A persistent fiscal deficit was the main characteristic of this period. In fact an excessive public sector deficit lasted more or less for 13 years (if defined as deficit in excess of 3% of GDP), ever since 1974 when the first current account deficit period was under way. The public sector deficit averaged 6.6% of GDP during this period, approached 10% several times and once reached double digits. The main repercussions of this period of excessive current account deficit were a prolonged stagnation from 1985-1992. GDP then grew by less than ½% annually, and contracted for four of the years.

Yet other reasons underlie the last deficit period which began in 1997 and is still going on. Neither the terms of trade nor public sector finances appear to offer valid explanations. Apart from one year there was a fiscal surplus during the last decade, and the terms of trade have remained fairly stable, after sharp improvements in the second half of the 1980s. The real exchange rate, on the other hand, appreciated sharply over the period 1992-1997 by a total of 30%, almost entirely due to appreciating nominal effective exchange rate. This appreciation can be attributed to a tight monetary stance after New Zealand adopted inflation targeting and a flexible exchange rate regime. Besides containing inflation, the strong exchange rate has dampened export growth and stimulated imports. Two years appear to have been crucial. Imports rose by 16% in 1994, which was the latter of two years of dynamic economic growth, and by 13% in 1999. In other respects import growth has been

12. Cashin and McDermott (1996) maintain, in fact, that until the deregulation of capital movements in the early 1980s, the deficit was lower than optimal from the perspective of consumption smoothing. In other words, Australia borrowed less abroad than would have been desirable. After deregulation of capital movements, on the other hand, Australia's current account deficit became excessively large. See Cashin, P. and C. J. McDermott (1996), "Are Australia's Current Account Deficits Excessive?", *IMF Working Paper WP/96/85-EA*.

within moderate limits, but this has not sufficed to close the deficit formed in those boom years. The repercussions of this last deficit period are still unclear, although the NZ dollar has depreciated rapidly in real terms since 1997, or by roughly one-quarter between that year and 1999. In the second half of last year the exchange rate was around 40% down from its peak at the beginning of 1997. GDP contracted by just over ½% in 1998, in part due to the Asian crisis.



Portugal: Three periods, the aftermath of the revolution and fiscal-driven overheating

In April 1974 a revolution took place in Portugal. One of its consequences was a fairly deep recession and large current account deficit from 1974 to 1977. The deficit over this period averaged 6.4% and peaked at 8.4% in 1976. In particular, it can be traced to massive increases in real wages, introduced by the government that took office after the revolution, which in turn boosted demand. The revolution and subsequent political uncertainty disrupted production and foreign trade, along with the loss of important export markets when Portugal's colonies became independent. As a result of this upheaval GDP contracted by 4.3% in 1975.

From 1980-1983 Portugal again experienced a very large current account deficit. This time its source was not political turmoil but an overheated economy, crop failures, deteriorating terms of trade, a large fiscal deficit (equivalent to 8-11% of GDP) and rapidly rising foreign debt service. Portugal's current account deficit widened from just under 4%

of GDP in 1980 to around 11.5% in 1981 and 14% in 1982. Apparently it was prompted by heavy public sector expenditures, which increased by 8% in 1980, and a subsequent upswing in investment, particularly in residential housing. At its peak, the fiscal deficit reached almost 11% of GDP in 1981. In the middle of 1983 a new Portuguese government imposed draconian measures to cut back the budget and trade deficits. These measures caused GDP growth to stagnate in 1983 and contract by 2% the following year. Unemployment also rose considerably. Consequently, the current account deficit largely disappeared in the space of two years.

The reasons for the third deficit period, which started in 1997 and is still going on, are not so easy to identify. The real exchange rate was fairly strong at the start of the period, compared with the 20-year average, but the main appreciation took place well before, in 1988-1992. Most probable causes are the lowering of interest rates and greater confidence in economic policy following Portugal's decision to join the European Monetary Union.¹³ So far there have been no repercussions and membership of EMU means that Portugal at least does not need to fear a devaluation and subsequent capital outflow.

Greece (1984-1985): Public sector deficit and deteriorating terms of trade

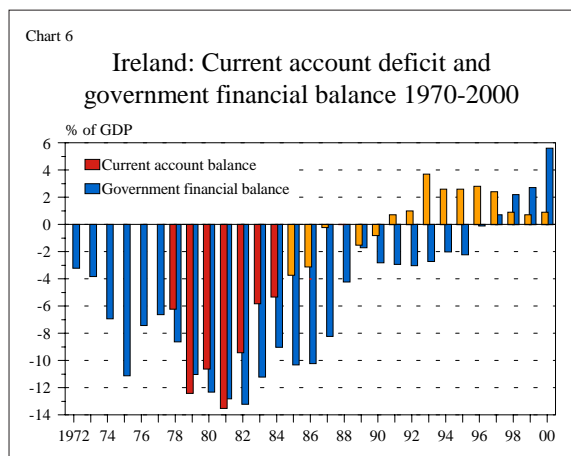
From 1979 to 1983 Greece's current account deficit averaged 4-5% of GDP. For two consecutive years, 1984 and 1985, it passed 5%, and went as high as 8% in the latter. A large deficit was also run up in 1973-1974. The Greek economy had been stagnant since the start of the 1980s and fixed capital formation shrank by 20% over the period 1980-1984. A 13% deterioration in the terms of trade from 1979-1983 played some part there. Also, the real exchange rate strengthened by one-quarter in 1981 and 1982 despite a nominal depreciation, and exports contracted by more than 13%. Rather than stimulating economic growth, lax fiscal policy led to an excessively large public sector deficit and caused a rapid rise in foreign debt. In 1985 the fiscal stance was tightened. The drachma was devalued and measures to restrain wages introduced. A relatively soft contraction of

13. The World Expo held in Lisbon in 1998 also exerted a considerable impact on demand.

½% resulted in 1987, but real wages fell by more than 20% in the space of two years. However, the devaluation and lower wage costs soon stimulated production, and in particular exports.

Ireland 1976-1984: Terms of trade and loose fiscal policy

In 1972-73 Ireland's terms of trade improved by 20%, but this was more than reversed in 1974. At the same time as the terms of trade worsened and for the following years, an expansionary fiscal policy kept demand buoyant despite a 12% contraction in fixed capital formation in 1974-1975 and a 3% drop in private consumption in 1975. The subsequent shock marked the start of a lengthy period of twin deficits, on the public sector as well as the current account.



From 1976-1984 the current account deficit averaged 10% of GDP, peaking at 14.7% in 1981. The public sector deficit was 7-14% of GNP for most of the period. In 1979 and 1980 Ireland's terms of trade deteriorated somewhat once again, widening the deficit even further. Towards the end of the 1980s the Irish government launched an adjustment programme. As taxes were raised and expenditure cut, both the treasury deficit and the current account deficit narrowed. Since economic policy was lax for so long, the repercussions appeared to some extent already within the period. GDP shrank by 2.3% in 1982 and 1983, and by 1% in 1986. On the unemployment front, the adjustment was even more painful. By loose fiscal policy, unemployment was

held back at first and was running around 7% at the end of the 1970s, but peaked at 17% in 1985-1986.

Despite economic imbalances, Ireland generally experienced favourable export growth, apart from 1974 and 1981. Since 1975, average annual export growth has been close to 10% and there is no end in sight to this trend. The current account deficit quickly vanished after the fiscal stance was tightened and the public sector has shown a surplus every year since 1987. The Irish economy was fairly dynamic in the second half of the period, despite lax policy. Investment, for example, ran high from 1978-1982. Nonetheless, the Irish economic miracle, which has largely been sustained by foreign direct investment, did not seriously take off until the 1990s.

Norway 1975-1978: The oil boom

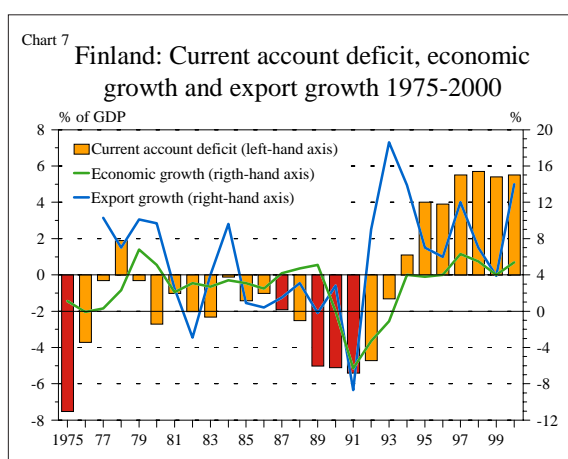
In the mid-1970s Norway's current account deficit grew sharply and exceeded 5% of GDP for four consecutive years, from 1975-1978. It peaked at 14% of GDP in 1978 and averaged just over 10%. The large deficit was mainly caused by heavy investment in North Sea oil development. As a proportion of GDP, fixed capital formation reached 36.3% in 1976. When investment tailed off and oil revenues increased, the current account deficit soon shrank again. Apart from two years, Norway has recorded a current account surplus since the early 1980s. Norway offers a textbook example of a large current account deficit with a benign effect.¹⁴

Finland (1989-1991): Overheating, worsening terms of trade and collapse of export markets

The 1980s saw a boom in the Finnish economy, but strong signs of overheating emerged in 1989. The current account deficit widened to 5% of GDP and remained at approximately that level for the following two years. In 1990 a fairly tight policy was adopted to reverse this trend. The public sector surplus amounted to 5% of GDP in 1990, interest rates were raised from 11% to 16% and the markka appreciated. A tougher exchange rate regime was introduced, based on the ECU. National saving rose as households increasingly sought to repay part of the debt they had taken on during the upswing. An adjustment

14. See Obstfeld, M. and K. Rogoff (1996), *Foundations of International Macroeconomics*, The MIT Press.

was under way in 1991 when the Soviet market for Finnish goods collapsed and exports contracted by more than 9%. Moreover, the terms of trade developed unfavourably from 1990-1993. The collapse of the Soviet Union turned a potential soft landing into a deep recession. Unemployment spiralled from 3.5% to 17%¹⁵, real estate prices plummeted and GDP shrank by around 11% from 1991-1993. The recession caused a fiscal surplus, amounting to 5.4% of GDP in 1990, to swing over to an 8% of GDP deficit in 1993. Finland abandoned its fixed exchange rate regime in 1992 and the markka fell by 27% between 1990 and 1993. A lower real rate of exchange – which fell 36% over the period 1990-1993 – made it easier for Finnish exporters to win footholds in new markets and exports began to rally. However, the Finnish economy has still not completely recovered from these shocks, because in spite of robust economic growth in recent years, unemployment is still fairly high, even by European standards.



Mexico (1991-1994): Overheating and capital inflows

Mexico's outlook was optimistic at the start of the 1990s following economic reforms and growing trade links with the USA. Economic growth, however, was more sluggish than had widely been expected. A fixed exchange rate regime was in place from the early 1990s as a counter-inflationary measure. By and large this policy was successful, but led to a con-

siderable appreciation in the real exchange rate of the peso. Admittedly, exports were buoyant, but as a share of GDP they were still not large enough to have a very large impact, and imports grew even faster. A combination of high interest rates and a policy of fixed exchange rate attracted large amounts of portfolio capital inflows, which kindled demand but also helped maintain the strength of the peso. From 1991 to 1994 the current account deficit was in the range 4-8% of GDP. The national saving rate was very low. Political unrest, disappointing economic growth and a widening current account deficit finally undermined confidence among investors, who began to withdraw their funds from Mexico. Eventually the capital drain made a devaluation inevitable and in December 1994 the peso was floated. After the fixed exchange rate policy was abandoned the peso plunged 50% over a short period. The contraction that followed a massive outflow of capital led to a growing public sector deficit, partly because of the collapse of revenue but also because a large proportion of debt was foreign-denominated. GDP contracted by more than 6% in 1995, and real wages fell substantially as well.

Thailand (1990-1997): Overheating and capital inflows

By 1997, Thailand had experienced an economic upswing lasting around three decades. Extremely rapid fixed capital formation often generated a wide current account deficit. Early deficit periods when Thailand was climbing from poverty to relative prosperity will not be discussed here. By the 1990s, however, it had become a fairly developed industrial nation and therefore has some comparative value for Iceland, although its potential rate of growth is still presumably much greater than that of most OECD countries. Economic growth averaged more than 7% over the period 1990-1997, there was an impressive public sector surplus and domestic saving was running fairly high, although the current account deficit was around 5-7% of GDP. The current account deficit was largely the result of the investment boom. In the course of the 1990s, the profitability of investment apparently became increasingly doubtful, especially in the real estate market, where a price bubble had formed. With a wide differential between foreign and domestic interest rates, many smaller finance

15. Annual averages. The highest unemployment in a single month exceeded 20%.

companies profited by borrowing short-term abroad and relending long-term at much higher rates in domestic currency. Thus the current account deficit was to a large extent funded by foreign short-term borrowing. In the first half of 1997 investors and creditors lost their confidence in Thai economic policy, capital flight ensued and a speculative attack was launched on the baht, which was devalued in July 1997. The outcome was not only the collapse of the Thai currency and a 12% contraction in GDP in 1997-1998. The global contagion that followed led to balance of payment and financial crises in many parts of the world.

The Czech Republic (1996-1997): Contagion

Among the countries hit by the repercussions of the crisis that began in Thailand in 1997 was the Czech Republic. Like Thailand, the Czech Republic had a large current account deficit, more than 6% of GDP in 1996 and 1997. Economic growth had been fairly rapid in 1995 but was slowing down. Export growth decreased from 15% in 1995 to a mere 2.6% in 1996, while strong demand from households drove up imports, by 19% in 1994 and 27% in 1996. In 1997 pressure on the Czech koruna led to a devaluation of just over 10%, although on average the currency only depreciated modestly.¹⁶ Although the value of the koruna increased by 30% in real terms over the period 1990-1996, this was apparently not a major cause of the slowdown in export growth in 1996. In the wake of the 1997 devaluation, the real exchange rate only depreciated temporarily and the appreciation trend resumed in the following years, without slowing down exports, which have been growing at a rapid pace. The main repercussions were a contraction in GDP by 3.5% in 1997-1999, an increase in unemployment from just under 5% in 1997 to 9% last year, and a rise in inflation after the devaluation, which soon slowed down again. The 1997-1999 recession in the Czech Republic was perhaps more a result of the capital flight caused by the contagion from the Asian crisis than of underlying imbalance. However, the current account deficit had left the Czechs more exposed to the turmoil that swept global finance markets in 1997 and 1998.

16. In terms of annual averages, the Czech currency depreciated by only 3% between 1996 and 1997 according to *OECD Economic Outlook*.

Shared characteristics

The above review, spanning all the main episodes of large current account deficits among OECD countries, identifies a number of leading causes. The periods of large current account deficit occurring in the 1970s and 1980s can be attributed almost without exception to either external shocks or loose fiscal policy, or both. In some cases an upturn in the terms of trade served to amplify a general economic upswing, leading to a rise in the real exchange rate, which finally resulted in a sharp increase in the current account deficit when the terms of trade swung down again. In most cases these episodes were followed by some contraction and higher unemployment and in some cases a fairly long period of stagnation, but not a deep recession.

However, the more recent episodes appear to be of a different kind. Invariably they seem to have been initiated by a large inflow of short-term capital, in the context of a general upswing in the economy and some appreciation of the real exchange rate (although it is hard to see that this could be the main cause of the deficit) following liberalisation of capital movements. The capital inflow served to undermine financial stability, causing the repercussion to be much more serious than in the aftermath of the earlier periods, notwithstanding that economic policy was in many respects exemplary. In these countries the current account deficit was widely considered not to pose much of a threat, because it was entirely the product of the private sector. In the event, the outcome was quite different. After the crisis in Mexico it was also widely believed that a low level of national saving had left the country more susceptible to the whims of the global finance market.¹⁷ The high level of national saving in most Asian countries, which also experienced large current account deficits, was regarded as one of the reasons they had fared much better. Experience would later show that this did not represent a perfect insurance against shocks.

Iceland's current account deficit, past and present

According to the most recent forecast of the National Economic Institute the accumulated current account deficit will this year become the largest since the

17. See for example Milesi-Ferretti and Razin (1996).

establishment of the Republic of Iceland in 1944. Using the same criteria as above, i.e. accumulated current account deficit over periods when it passed 5% of GDP for two consecutive years or longer, the deficit accumulated during the period from 1997-2000 was marginally smaller than in 1945-1947, amounting to 29% of GDP then, but has been 23% so far during the present period. If the NEI forecast holds, however, the accumulated deficit over the period 1997-2001 will reach 32%. The deficit also exceeded 5% of GDP for two consecutive years in 1967-1968 and 1974-1975. In the terms used here to define periods of exceptionally large current account deficit, the period of overheating in 1987-1988 is not included, since the deficit then amounted to only 3½%.

Iceland 1945-1947: The aftermath of the war

In 1946 and 1947, domestic and foreign demand joined forces to generate a large current account deficit in Iceland. The overheating of the war years had kindled inflation. As a result, the real exchange rate of the króna appreciated by 118% from 1939 to 1945. At the same time as exports contracted by 13%, investment almost doubled in the space of two years and public sector outlays were increased enormously in 1946. The aftermath was a four-year period of contraction when GDP shrank by an estimated 7%, the deepest recession in the Icelandic economy for the following half century.

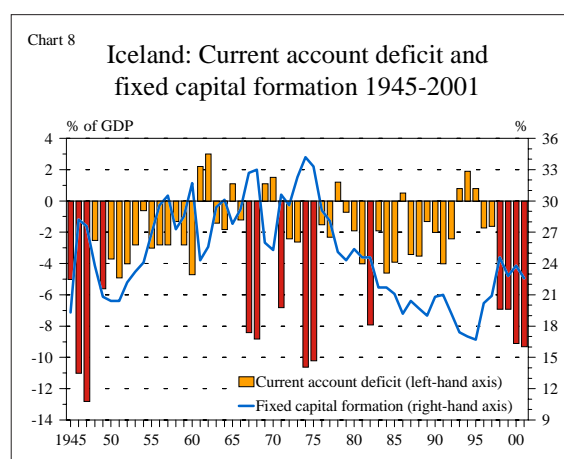
Iceland 1967-1968: The collapse of the herring stock

The years 1962-1966 witnessed a boom. Following extensive liberalisation of the current account and stimulated by favourable terms of trade developments, GDP growth averaged just under 9% a year and national expenditure rose even faster. The real exchange rate appreciated by one-third between 1962 and 1966. However, favourable terms of trade developments contained the current account deficit until a collapse of the herring stock caused exports to contract sharply. In 1967-1968, exports fell by almost one-fifth. The current account deficit ballooned, amounting to 8-9% of GDP for those two years. A harsh recession followed. GDP went down by almost 7% in 1967-1968, national expenditure by 14% in 1968-1969 and fixed capital formation by one-third. The króna was devalued twice, in 1967 and 1968,

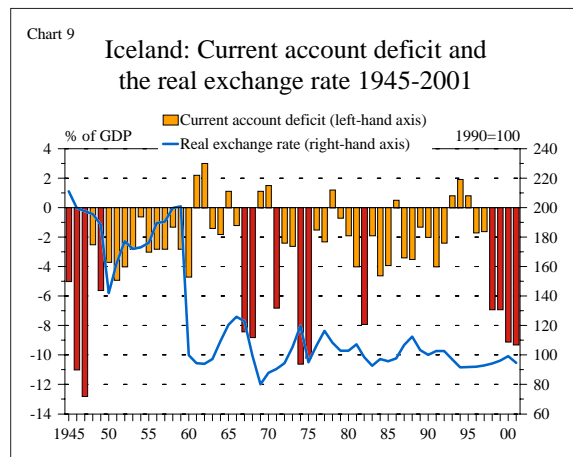
and the real exchange rate depreciated as a result by more than one-third. The devaluation served to restore the external balance, but at the cost of higher inflation in its wake.

Iceland 1974-1975: Investment wave and deteriorating terms of trade

Economic growth soon recovered after the devaluations of 1967 and 1968 and averaged almost 8% from 1970-1974, peaking at 13% in 1971. In 1972 Iceland extended its fishing limits to 50 miles, and in 1975 to 200 miles. An exceptionally high level of investment took place during this period and investment grew on average by 16% annually from 1970-1974, with a peak of 42% in 1971. Gross fixed capital formation during these years was equivalent to around one-third of GDP, its highest level ever. Imports rose by 17% a year over the same period. A 30% improvement in the terms of trade from 1969-1973 kept the current account deficit at a modest level until 1974, with the exception of 1971, when the investment boom was at its peak. Then the deficit reached almost 7% of GDP. In 1974-1975 the terms of trade deteriorated by 18%, exposing an overvalued exchange rate which had appreciated by almost 50% in real terms during the period 1969-1974. A current account deficit of more than 10% lasted for two years. In the aftermath national expenditures contracted by 9%, but a fall in imports and increased public sector outlays prevented a fall in GDP. A renewed surge in exports growth began in 1976, facilitated by the recent extension of fishing limits. In practical terms



the króna was floated at this time, because from 1974 to 1989 it was devalued 25 times, and allowed to depreciate gradually without formal announcements over the period 1975-1978.



The present deficit episode in historical and international comparison

A comparison with previous periods of large current account deficits could shed some light on what can be expected to follow the present deficit period. However, such a comparison calls for several qualifications, no less than the international comparison. Potential GDP growth, for example, is probably smaller this time than at the time of the previous episodes, reducing the economy's ability to sustain a persistent current account deficit. Foreign real interest rates have also varied sharply over the period.

Moreover, conditions are completely different insofar as cross-border capital movements are deregulated now. Free movement of capital makes it easier to fund a large current account deficit than before, but the turnaround can be correspondingly more dramatic if market participants lose their confidence in the sustainability of the deficit.

As pointed out above, Iceland is heading for its largest current account deficit period for half a century, i.e. considering only those periods when the deficit exceeded 5% of GDP for two consecutive years or more. To what extent does the present deficit period differ from those that Iceland has been through before?

- The first point to notice is that, unlike earlier deficit periods, neither a deterioration in the terms of trade nor a large-scale failure of the fish catch is involved. Although the fisheries sector has been stagnant in recent years the shock has not been on the same scale as during the earlier periods.

- Unlike earlier periods, a strong real exchange rate does not appear to have been a major source of the deficit. The real exchange rate is at present close to the average of the last twenty years, export segments which are not subject to supply restrictions are showing considerable growth and there are no signs that exporters are severely squeezed. However, a comparison with earlier periods is questionable insofar as most international trade barriers have been lifted, which may have served to lower the real equilibrium rate of exchange. Be that as it may, there is clearly a large difference between the more than 100% appreciation of the real exchange rate in the buildup to the deficit period of 1945-1947, one-third appreciation in 1962-1966, 50% before the period 1974-1975, and the 8% appreciation from a historical low in the buildup to the present deficit period.¹⁸ In fact, the real exchange rate also appreciated by much more, or 21%, over the period 1983-1988. The deficit then was only 3½%, in spite of GDP growth of 6½ and 8½%. Hence that period of severe overheating is not classified as one of exceptionally large current account deficits. This relatively moderate increase may result from the fact that the terms of trade have not improved as much in the buildup to the upswing which at present is reaching maturity as in the earlier ones. Also, inflation is much lower at present, which implies that the real exchange appreciates more slowly given stable nominal exchange rates.

- Although it is a matter of debate whether the fiscal stance has been sufficiently tight in recent years, public finances are in better shape than during previous episodes of large deficits.

The periods of large current account deficits in other countries in the 1970s and 1980s were also, as

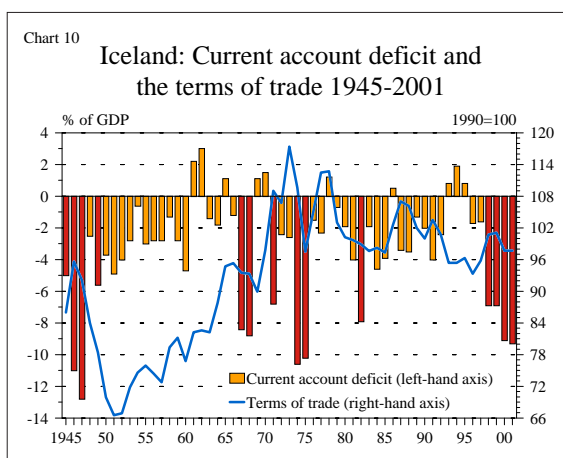
18. Based on real exchange rate in terms of consumer prices, the only reference available for earlier periods. Measured in terms of unit labour cost, the real exchange rate has appreciated more, but from an even lower level.

mentioned, almost without exception sparked off by changes in the terms of trade, a prior appreciation of the real exchange rate or poor fiscal policy. In the 1990s the source of the deficits appear to be of a different nature. What these episodes have in common with Iceland's present period of unsustainable current account deficit is that the deficit emerged in the wake of capital account liberalisation.

Can the historical experience from Iceland and abroad tell us anything about what to expect in the wake of the present period of unsustainable current account deficit? In most cases such periods ended with a contraction in GDP.¹⁹ However, it is often difficult to judge whether the contraction was caused by the adjustment of domestic demand required in the aftermath of the deficit episode, or by adverse external conditions which originally spawned it. In most cases, the recessions have been fairly short, although several have lasted for more than one year: in Iceland from 1949-1952 and 1967-1968, New Zealand from 1988-1991, Portugal from 1983-1984, Finland from 1991-1993, Thailand from 1997-1998 and the Czech Republic from 1997-1999. It is perhaps not encouraging that some of the largest contractions have occurred in the wake of the deficit periods which most closely resemble the present one in Iceland. This is because those deficit episodes culminated in a financial crisis. GDP contracted in Finland by 11%, in Mexico by 6% and in Thailand by almost 12%.

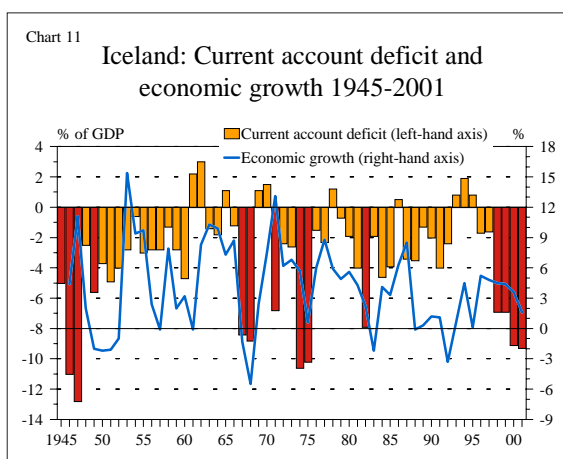
Unlike earlier deficit periods, the real exchange rate of the króna is not obviously out of step with the underlying economic trend, and the terms of trade are also close to the average value. These features entail both strengths and weaknesses. The strength is that there is no need for a devaluation to restore the position of export industries and establish external balance. On the other hand, the fact that a high real rate of exchange is not acting as a brake on export growth means that a devaluation cannot be as effective a tool for establishing external balance as it often used to be. If exports respond only sluggishly to a depreciation of the currency, the contraction in imports needs to be all the greater in order to achieve external balance. Given the position of the terms of trade, major shocks are unlikely to cause a crisis.

19. Although GDP did not shrink after the current account deficits of 1974-1975, national expenditure fell by 14%.



Nonetheless, it should be remembered that in the earlier deficit periods, the terms of trade had already weakened or the fish catch had failed. Part of the cure thus involved a recovery in the terms of trade or fish catch. If there is less hope of such an improvement, the role of domestic demand in the adjustment process is made all the greater.

A current account deficit may be considered unsustainable if it cannot be sustained without resulting in a sudden shock or diminishing future living standards. Most arguments suggest that the current account deficit of the past three years has been unsustainable in this sense. International and historical parallels invite the conclusion that a deficit on the scale which has been witnessed in recent years and is foreseeable in the near future could have serious repercussions for the Icelandic economy. However,



the deficit is conceivably overestimated, for example because the income from assets in mutual funds abroad, owned by Icelandic residents, has been underreported. It has been argued that, as the University of Iceland study points out, the consequences of the deficit will be cushioned by growing national saving due to demographic changes. What follows is an attempt to assess the validity of those arguments.

The current account deficit and population ageing

One idea that has been put forward is that the current account deficit may be partly explained by the young age of the Icelandic population, making it less of a cause for concern than could be expected. According to the life-cycle hypothesis of savings, young countries should show a tendency to spend in excess of income, with a corresponding current account deficit, but save more as they age. The causal relationship could also run from the tendency of a young nation to run up a fiscal deficit resulting in a tendency to run up a current account deficit. The statistical relationship, however, has not turned out to be strong. Moreover, the public sector has generated a surplus in recent years. The idea is an interesting one but seems to have little relevance for the current debate, for the simple reason that such consumption smoothing from one generation to the next must surely be a very slow process. In Iceland, on the other hand, the current account balance has swung from a surplus to a deficit amounting to almost 10% of GDP in the space of a very few years. Such swings have nothing to do with the ageing of the population, but are rather signs of macroeconomic fluctuations. Furthermore, it has not been proven that the demographics of the Icelandic population differ so radically from that of other nations to warrant the low level of saving and a propensity to run up large current account deficits. On the contrary, the rapid building of pension fund saving, partly in the form of investment abroad, rather suggests that the current account should be in surplus.²⁰ Countries' needs to export or import capital are

20. For a discussion of most efficient level of national saving and the impact of saving on the current account deficit, see Besanger, S., R.S. Guest and Ian McDonald, "Demographic Change in Asia: The Impact on National Saving, Investment and the Current Account", *IMF Working Paper* WP/00/115.

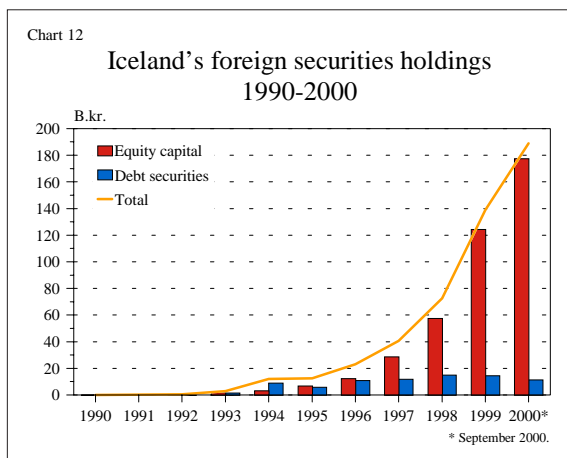
probably more closely related to their level of development than their demographics, although this is not certain either (cf. China). Be that as it may, the point is that such hypotheses are scarcely necessary to explain the current account deficit Iceland has experienced in recent years.

Will the new economy come to the rescue?

It has also been claimed that the rapidly growing new economy in Iceland explains part of the current account deficit and prevents it from being a cause for concern, just like the US trade deficit. For example, it has been pointed out that the activities of deCODE genetics and many software companies is largely measured in terms of their contribution to the current account deficit, without their investment in know-how being recorded as investment. By their very nature, such activities require a long gestation period, from investment in knowhow to the emergence of a marketable product. Given the scant data at hand on these activities and the fact that their success is inherently prone to very large uncertainty, such a claim is hardly based on anything more than faith. It probably contains at least a grain of truth, but what is known for sure does not weigh particularly heavily. Technology exports are growing, admittedly, but still only account for a minor part of total exports. In 1999 exports of technology products accounted for just over 3% of total exports, or just under 1% of GDP. Thus it would need very rapid growth in exports of software, genetics knowhow, etc. to close the 9% of GDP current account deficit that has emerged over the past few years. Finally, it should be pointed out that growth of the new economy can hardly serve as an explanation for the current account deficit unless it is taking place at a faster rate than among Iceland's trading partners, because it is impossible for all countries to run up a current account deficit at the same time. So there are grounds for having doubts about such explanations until more reliable information is available.

Will fixed capital formation abroad alleviate the situation?

Accounting for income from Iceland's stock of foreign securities has been the subject of some dispute recently. In particular the problem involves income from assets in terms of foreign equities, which are



largely concentrated in mutual funds. Rather than paying dividends, these funds generally reinvest the return on the underlying assets. Only dividends paid out to the Icelandic investor are entered as factor income from abroad in the balance of payments.²¹ At the end of 1999 Iceland's total equity stock abroad was valued at 124 b.kr. By last September these holdings had swelled to 177 b.kr. At a rough estimate, the return on these assets in 1999 was just under 15 b.kr, or 2.4% of GDP that year.

However, it would be highly unrealistic to expect such a return for the foreseeable future. A major part of the return in 1999 was the result of a surge in equity prices. Commonly used indicators such as P/E ratio suggest that these had become unrealistic by then, relative to the historical norms. Looking at a period of three decades, historical experience seems to promise a real return on equity holdings in the range 4-6%, but less if an even longer period is considered.²² Thus it seems questionable to assume a greater long-term return than roughly half of that calculated for 1999. Including a return on that scale would lower the current account deficit as a proportion of GDP by just over 1%. While this is admittedly a significant change, it hardly makes much difference as to whether the current account deficit in recent years is regarded as sustainable or not. Also, it

21. In fact, the Central Bank tried for a while to assess this return in its accounts, but the practice was abandoned since the methodology was not considered consistent with international accounting standards.

22. See Marías Halldór Gestsson, "Langtímaávöxtun fjármagns", unpublished manuscript, Central Bank of Iceland 1996.

should be remembered that neither a 4% real rate of return on equities, nor any other, can be taken for granted. Although, in retrospect, equities have generated a somewhat higher return in the long run, there have also been long periods of negative returns, as last year's equity price slump reminds us. So it is far from true that this income represents a guarantee that the current account deficit is less cause for concern than it otherwise would be.

Another related point of view which has emerged in the debate on the current account deficit is that the accumulation of foreign debt ought not to cause concern because it is offset by sizeable assets. Presumably the underlying notion is that these assets could be sold to amortise the debt. The first flaw in this argument is that the economy's debts and assets, unlike those of companies, private individuals or the public sector, are not necessarily in the same hands. A large share of the assets, for example, are held by pension funds which are spreading their long-term risks by building up assets abroad. The currency risk faced by those who have taken foreign-denominated loans remain the same as before, even though pension funds have accumulated considerable assets.

Secondly, it can be concluded that this position actually poses more risk for the economy as a whole than a simple rise in foreign indebtedness would. As a rule a current account deficit involves a deterioration in the net asset position of the economy, regardless of whether asset formation takes place or not.²³ The fact that some players in the Icelandic economy are accumulating foreign debt while others are building up assets abroad implies that the gross inflow of capital needs to be correspondingly greater, since (disregarding errors and omissions) a given current account deficit always involves a net capital inflow on the same scale. In other words, a larger proportion of the economy is exposed to currency risk than if only the current account deficit needs to be funded. If the additional capital inflow which corresponds to the build-up of foreign assets (in addition to the

23. If the deficit is not large, the net balance can remain stable as a proportion of GDP. Of course special conditions cannot be ruled out which could generate higher returns on the asset side than on the debt side (as was the case in 1999), but there is no reason to assume a large discrepancy over longer periods.

inflow financing the current account deficit) is a direct foreign investment, the risk is probably fairly low.²⁴ But if foreign credit is involved, as has been the case in Iceland in the past few years, the result is likely to be a larger currency exposure for the economy and the financial system in particular. The asset and debt composition of the Icelandic economy also entails a considerable interest rate risk. Where assets are largely in the form of equities, the price of which tends to fall when interest rates go up, and debts in the form of borrowing, a rise in foreign interest rates might lead to a drop in the value of foreign assets at the same time as the debt service burden increases.

The build-up in foreign assets might still come to the rescue of the króna under certain circumstances. If the króna depreciates substantially, and then beyond what market participants regard as its long-term equilibrium level, the outcome would be to increase the proportional value of foreign assets owned by residents. For this reason and because sizeable gains could be expected once the exchange rate recovers, there would be a strong incentive to sell foreign assets and invest in domestic securities, which would strengthen the recovery of the domestic currency.

Summary and conclusions

The major findings so far can be summarised as follows:

- The net foreign asset position of the Icelandic economy will continue to deteriorate for the foreseeable future, unless exports grow considerably faster or imports more slowly than in the NEI long-term forecast. A contraction in domestic demand may be required in order to restore the external balance.
- The antecedent of the present period of large current account deficit differs from earlier ones in Iceland

and abroad, but resembles those in other countries in the 1990s.

- Most earlier episodes of large current account deficits, in Iceland and abroad, have ended with a contraction of output – the largest ones where conditions most resembled those in Iceland.
- Under present macroeconomic conditions, the burden of adjustment needed to restore external balance may rest disproportionately on domestic demand, compared with earlier episodes.
- Notwithstanding problems of accounting for factor income from abroad, there are few signs that the present current account deficit is overestimated to such a degree as fundamentally to affect judgement on its sustainability.

Views about the current account deficit show a tendency towards extremism. In some places, especially in the past, a mercantilist view may have emerged which tended to overreact to the tiniest of current account deficits, regardless of its causes. The example of Australia demonstrates that such fears are generally unfounded. Recently, however, there has been a certain amount of indifference towards a deficit many times larger than one which would previously have been thought to have serious economic consequences. Perhaps such nonchalance is partly rooted in notions that the new economy will enable Iceland to grow its way out of the problem. The view has also been heard that there is little to fear because the public sector is generating a surplus and the deficit is entirely due to a buoyant private sector. But the same could also be said of Finland, Mexico and most of the Asian countries where periods of excessive current account deficit ended with a serious currency and financial crisis. This is not to say that these countries suffered crises directly as a result of their current account deficits. If investor and creditor confidence had not evaporated, external balance could have been restored through a soft landing rather than a sudden crisis.

The reason that investor and creditor confidence in future growth dwindled in Asia and elsewhere may have been that very rapid growth was accompanied by an increasing tendency towards ever riskier investments. This risk remained hidden for as long as economic growth ran high and optimism was wide-

24. Not everyone agrees that a current account deficit formed as the corollary to foreign direct investment is without risk. Calvo (1998a) maintains that a currency crisis is possible even if the current account deficit is entirely funded with direct investment, if this involves an acquisition of a company (rather than a greenfield investment) whose former owners spend the proceeds on domestic demand. See Calvo, Guillermo A., "Capital Flows and Capital Market Crises: The Simple Economics of Sudden Stops", *Journal of Applied Economics*, vol. 1, no. 1, November 1998.

spread. But the expected profitability of any project is not independent of the profitability of all the others, and the expectations of market participants are interrelated. The herd behaviour in a market can therefore be a fully rational. This applies even more so in markets such as the financial market, where information is at best imperfect and at worst quite asymmetric. Under such conditions a state of multiple equilibrium may exist, whereby the economy can easily shift from one type of equilibrium to another according to changes in market expectations. In recent years a large number of theoretical studies have presented currency crisis models along these lines – known as third-generation models.²⁵

As demonstrated above, fairly minor shifts in assumptions for economic growth, external trade and foreign interest rates can prove crucial in assessing the sustainability of a current account deficit. In the simple calculations cited above, the fictitious country was in the enviable position that nothing could alter its citizens' steadfast faith in economic growth or that of creditors in their solvency. In reality a sustainable position can become unsustainable merely because the expectations of market participants towards it change.²⁶ The larger the current account deficit, and consequently closer to the limits that the

market may deem unsustainable under certain conditions, the more exposed a country is to sudden shifts in the expectations of market participants. On the other hand, a real economy, unlike the fictitious one in the example, has properties which can force an adjustment before the debt burden of future generations gets out of hand.

Financial systems and currencies are inherently illiquid phenomena. Once someone begins to doubt the safety of the assets which he has tied up in a financial system or specific currency he will want to liquidate them. If a sufficiently large number lose confidence at the same time, financial institutions will not have a sufficient amount of liquid assets nor will a country have currency reserves to fulfil all these wishes at once. A country that opts to maintain an independent currency and at the same time abolishes all restrictions on currency inflows and outflows relies entirely on market participants maintaining their confidence in the currency and the financial system. Economic policy therefore needs to aim at maintaining sufficient economic stability to keep market participants confident about the stability of the currency. A prolonged unsustainable current account deficit undermines such confidence.

25. Examples of the growing number of studies include the following: Jeanne, Olivier (1999), "Currency Crises: A Perspective on Recent Theoretical Developments", Discussion Paper no. 2170, June, Center for Economic Policy Research. Obstfeld, M. (1994), "The Logic of Currency Crises", *Cashier Economiques et Monetaires*, Banque de France, 43. Calvo, G.A. (1998b) "Balance of Payment Crises in Emerging Markets: Large Capital Inflows and Sovereign Governments", NBER conference on currency crises in Cambridge Mass., February. Burnside, C., M. Eichenbaum and S. Rebelo (2000) "On the Fundamentals of Self-Fulfilling Speculative Attacks", *NBER Working Paper* No. 7554.

26. Calvo (1998a), for example, demonstrates that market expectations can shift to become self-fulfilling even if solvency is not jeopardised.