How do large current-account surpluses co-exist with a weak international investment position?

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In the past ten years the current account for Sweden has shown large surpluses without this leading to a corresponding improvement in the international investment position. A major explanation lies in valuation changes to external financial assets and liabilities. The gross stocks that make up the international investment position have grown dramatically in the past fifteen years and currently total SEK 13,400 billion. The parts played by exchange rate fluctuations, equity price movements in Sweden and abroad and the market value of direct investment entities are factors that we discuss in this article. We also consider the extent to which the statistics on Sweden's international investment position are reliable.

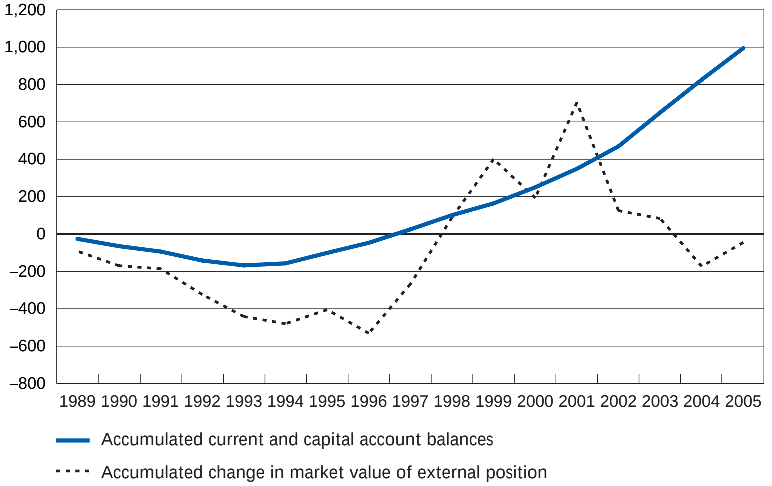
What is the problem?

The net of surpluses and deficits on Sweden's current and capital accounts represents saving abroad (see the box "Balance of payments – some concepts") in terms of the real transactions. The accumulated net surplus for the period since 1989 is SEK 995 billion, while the reduction of external liabilities at market values amounts to around SEK 50 billion – very much less than the improvement one might expect in the light of the current-account surpluses.

The development of accumulated saving abroad is becoming increasingly independent of the changes in the international investment position.

Figure 1 presents accumulated saving abroad (the current and capital account balances) since 1989 together with the accumulated changes in the international investment position at market values. In an ideal case where the net outcome of the financial transactions matches saving abroad in terms of the current and capital account balances and the international investment position is unaffected by valuation changes, the two curves would not diverge from one another. For some years in the early and mid 1990s there was relatively little difference between the current-account surpluses and the reduction of external liabilities. The late 1990s and early 2000s, on the other hand, are characterised by a notably weaker correspondence. In the last three years, the statistics give a relationship that is actually negative (see Figure 1).

Figure 1. Accumulated current and capital account balances and accumulated change in market value of international investment position; 1989–2005
SEK billion



Source: The Riksbank.

So why has saving abroad apparently become increasingly independent of the changes in Sweden's international investment position in recent years?

We approach this question by describing the real and financial flows in the balance of payments and the factors that affect the investment position. The period described is 1989–2005. The reason for starting with 1989 is that the abolition of exchange controls in that year fundamentally altered the conditions for financial flows to and from Sweden. Cross-border financial transactions were no longer restricted.

Record current-account surpluses

Sweden's current account for 2005 shows a surplus of SEK 163 billion, equivalent to about 6 per cent of GDP. A long series of years with current-account deficits came to an end in the mid 1990s. For the period since 1989 the current account shows an accumulated surplus of SEK 1,065 billion. Never before in the modern era has Sweden had such large surpluses for so many years.

The surpluses come mainly from a strong balance of trade.

The current-account surpluses come mainly from a strong balance of trade (the net of exports less imports). Net exports have developed very favourably since the beginning of the 1990s. The surplus on trade in

The balance of payments – some concepts

The balance of payments for a country is a compilation of that country's real and financial transactions with the rest of the world. These transactions are divided into three main components:

- The current account, which covers current transactions in goods and services, income from financial assets and liabilities, and current transfers.
- The capital account, which covers assistance provided for real capital formation, transfers of rights and debt forgiveness agreements. Prior to 2002 this account was called "Capital transfers, etc." to avoid confusion with the financial account.
- The financial account, which covers cross-border transactions in financial assets and liabilities. Foreign exchange reserves are included in the financial account. Prior to 1997 this account was called "Capital account".

The balance of payments covers transactions with the rest of the world. It does not include changes in value arising, for example, from exchange rate fluctuations. The sum of the current and capital account balances is defined as net saving abroad.

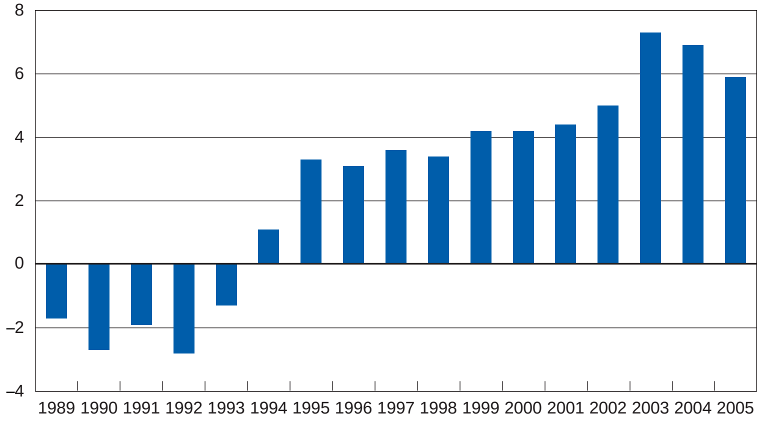
goods has grown from SEK 15 billion in 1989 to over SEK 142 billion in 2005.

Trade in services has swung to a surplus.

Apart from negligible surpluses in 1993 and 1994, trade in services resulted in deficits throughout the 1990s and early 2000s. From 2002 onwards, however, the balance of services has generated surpluses; these have come mainly from transportation as well as from merchanting. The latter item, which is included in business services, refers to goods that are both purchased and resold abroad by firms in Sweden. Merchanting services are defined as the trade margin, for instance on Swedish firms' acquisitions and subsequent sale of goods produced abroad. In 2005, merchanting contributed 12 per cent of Sweden's total exports of services.

Net capital income has improved in connection with the reduction of external liabilities and this is another factor behind the stronger current-account balance.

Figure 2. Sweden's current-account balance; 1989–2005
Per cent of GDP



Source: The Riksbank.

The capital account is in deficit as a rule

A complete picture of the real exchange between Sweden and the rest of the world also includes the capital account. This is a minor item that covers immaterial rights such as licences and patents, debt forgiveness, etc., and it normally shows a deficit. It should not be confused with the financial account, which covers the financial flows between Sweden and the rest of the world. For the period 1989–2005 the capital account shows an accumulated net deficit of SEK 70 billion.

Factors that affected financial integration

Deregulations in Sweden since 1989 …

The abolition of exchange control in 1989 altered the conditions for cross-border financial transactions. The earlier bans on buying/selling various financial instruments were lifted, as were the restrictions on cross-border lending and direct investment, and capital was free to move into and out of Sweden.

Investment in foreign assets has also been facilitated by changes to guidelines and regulations in the 1990s. For example, the successive relaxation of investment rules for insurance companies in the 1990s has made foreign assets eligible for a larger share of investment. The introduction of the premium pension system (PPM) in 2000 and more liberal investment rules for some national supplementary pension funds (AP funds) has also led to increased investment in foreign assets.

… have contributed to international financial integration.

Changes of this kind were not confined to Sweden. Similar moves had already been made in many other countries. Some aspects of the changes in Sweden were a consequence of EU membership in 1995 and the common rules adopted by the Union.

The technical infrastructure and new financial instruments have also contributed.

The liberalisation accordingly paved the way for increased outward as well as inward investment. Together with the introduction of new financial instruments and technical infrastructures that facilitated cross-border trading, this resulted in rapidly growing financial flows between Sweden and the rest of the world. Sweden became increasingly integrated with the European and global financial markets.

Saving surplus and capital outflow – two sides of the same coin

Since 1989 the combined balance on the current and capital accounts – the real flows – has given an accumulated inflow of SEK 995 billion. This represents Sweden's financial saving surplus for this period.

The other side of this real surplus is the outflow or export of capital.

The surplus has been used for, for example, Swedish financial investment abroad. The statistics show that in this period Sweden has, for instance, repaid foreign loans and purchased bonds, equity and foreign enterprises to a greater extent than entities abroad have done in Sweden.

There has been a lively discussion about causal connections between the current-account surplus and these capital outflows. However, the question of whether the large export surplus has driven the capital outflow or whether it is high saving in Sweden that has restrained domestic consumption and provided scope for high net exports (e.g. via the exchange rate) is not considered in this article.

The disagreement between financial flows and net saving is due to statistical deficiencies.

According to the balance of payments, in the period 1989–2005 the accumulated deficit on the financial account was only around SEK 557 billion. In principle, the net of the financial flows should equal the net balance on the current and capital accounts and both these results should represent Sweden's net saving abroad, measured with different methods. A discrepancy is not uncommon and as a general rule, the sum of the balances on the current and capital accounts – saving measured from the real side – is then defined as net financial saving abroad.

The reasons why the financial balance so seldom agrees with the combined balance on the current and capital accounts lie in the statistical bases, mainly because of difficulties in measuring the financial flows correctly. The discrepancy is booked as a residual item for net errors and omissions.

TABLE 1. THE BALANCE OF PAYMENTS, ACCUMULATED VALUES 1989–2005

	SEK billion
Balance on current account (a)	1 065
Balance on capital account (b)	–70
Net financial saving (a + b)	**995**
Balance on financial account (c + d + e + f)	**–557**
Direct investment (c)	–214
Portfolio investment (d)	–1 040
Other financial flows (e)	780
Foreign exchange reserve (f)	–84
Net errors and omissions*	**–438**

* The discrepancy between net financial saving and the balance on the financial account.

As shown in Table 1, the accumulated residual for the period 1989–2005 implies an unexplained outflow of around SEK 438 billion. This has a bearing on the international investment position and is considered further on.

Portfolio investment has resulted in large net outflows

Portfolio investment has generated considerable capital outflows ever since exchange controls were removed. In Figure 3, the gap between the two curves indicates that the accumulated net outflow in the period 1989–2005 is SEK 1,040 billion.

Swedish portfolio investment took off in the mid 1990s.

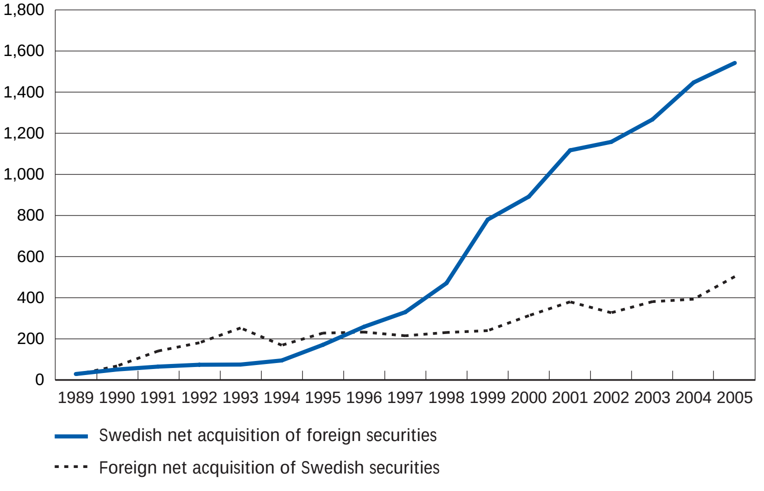
In the early years after the deregulation, foreign investment in Swedish securities predominated and portfolio investment resulted in a net capital inflow. The inflow reflected portfolio rearrangements by foreign investors to include Swedish securities when exchange controls were lifted in the summer of 1989. Meanwhile, Swedish investment abroad was slack on account of the economic slowdown and low saving in those years. This has changed since the mid 1990s, when Swedish portfolio investment took off and foreign investment in Sweden remained at a much lower level.

The largest item in the outflow is investment in foreign equity securities, which has risen very rapidly.

Small net outflows from direct investment

Direct investment differs from portfolio investment in that it concerns a more lasting interest in and greater control of enterprises in other countries. A direct investment is defined as financial transactions with an enterprise in which the investor holds at least 10 per cent of the voting rights or equity; it includes, for example, contributions to the establish-

Figure 3. Portfolio investment, accumulated net flow; 1989–2005
SEK billion



Source: The Riksbank.

ment of an enterprise, the acquisition of the whole or part of an enterprise and both short and long-term loans to an enterprise.

The direct investment transactions in the period 1989–2005 generated an accumulated net outflow of about SEK 214 billion (see Figure 4). Inward and outward direct investments are considered separately below.

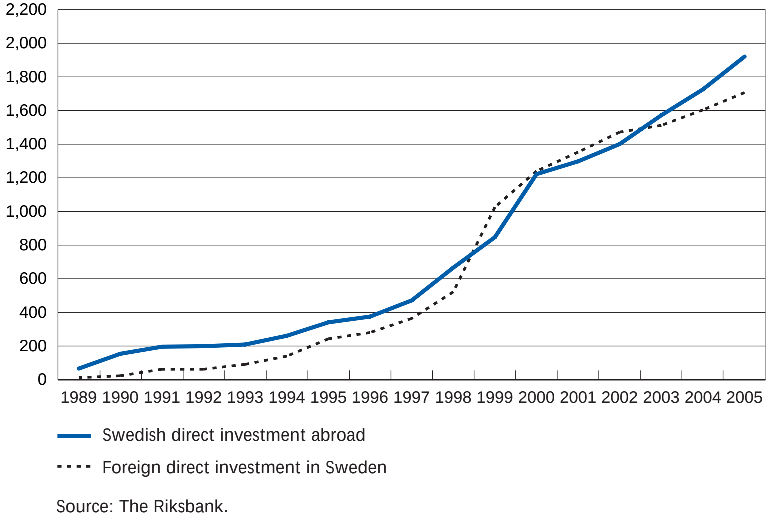
OUTWARD DIRECT INVESTMENT WAS SUBDUED AFTER THE IT BOOM

In the 1980s Sweden had one of the largest direct investment outflows.

In the 1980s Sweden was one of the countries where direct investment outflows were largest in relation to the size of the economy. The conditions for such investment were largely unaffected by the abolition of exchange control in 1989, except that long-term external financing was no longer required. A majority of the direct investment transactions concerned acquisitions and investments in what were then the EEC countries. In the period 1987-90, for example, Stora acquired Feldmühle in Germany, SCA purchased Reedpack in the United Kingdom and Asea merged with Brown Boveri in Switzerland.

In the early 1990s (1991–93) the international economic slowdown reached Sweden and investment abroad came to a halt. There was a general decline in direct investment flows in the global economy. Reckless lending to Swedish investors to finance the acquisition of real estate abroad added to the crisis in the financial system. Sweden's application for EU membership in the summer of 1991 also probably tended to weaken the investment propensity for a time because there was no longer a risk of being left out in the cold.

Figure 4. Direct investment, accumulated net flow; 1989–2005
SEK billion



Source: The Riksbank.

In the latter part of the 1990s, the economic recovery contributed to a strong increase in outward direct investment.

Swedish investment abroad picked up again during 1994. In the latter part of the 1990s, the economic recovery and high corporate liquidity then contributed to a strong increase in outward direct investment. Moreover, direct investment transactions were inflated by high equity prices during the IT boom.

When the global slowdown early in 2001 led to lower profits, falling equity prices, above all in IT companies, and rationalisation, outward direct investment decreased in the following years. In the past two years there has been an increase.

DEREGULATION AFFECTED INWARD DIRECT INVESTMENT

In the 1980s the inflow of direct investment to Sweden was modest compared with the outflow. A number of rule changes then facilitated inward investment. The abolition of exchange control in 1989 was followed by amendments to the law on corporate acquisitions, making it more possible for nonresidents to make sizeable purchases of Swedish enterprises without requiring government approval.

In the late 1980s and early 1990s inward direct investment picked up and 1993 was the first year ever in which the level exceeded outward direct investment. The statistics were greatly affected by a few major transactions, such as Tetra Pak's acquisition of Alfa-Laval, the Volvo-Renault business, Akzo's purchase of Nobel, and Al Amoudi's of OK Petroleum.

The late 1990s saw a sharp increase in inward direct investment.

In the late 1990s inward direct investment rose strongly. Factors behind the interest from abroad included a weak exchange rate, high economic activity and the IT boom. In 1999, moreover, Zeneca purchased Astra, the largest merger ever in Sweden; together with a number of other foreign acquisitions of large listed companies, this raised that year's inflow of direct investment capital to a record level.

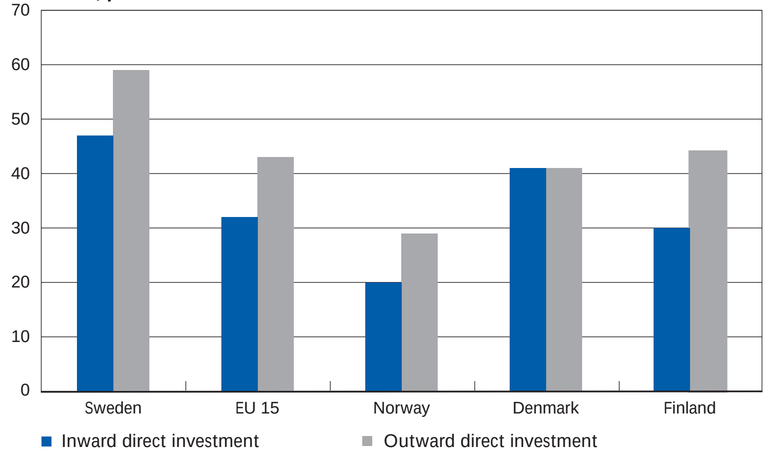
HIGH LEVEL OF INWARD DIRECT INVESTMENT

Since 2001 the inflow of direct investment to Sweden has stabilised at a lower level.

The decreased direct investment inflow is partly a structural phenomenon. The value of nonresidents' assets in the form of direct investments in Sweden is now high in both a Nordic and a European perspective. Relative to GDP, the level of direct investment assets in Sweden is about 47 per cent, which is considerably higher than in other Nordic countries (see Figure 5).

At the same time, a growing global share of direct investment is

Figure 5. Direct investment; 2004
Stocks, per cent of GDP



Source: World Investment Report 2005 (WIR), Unctad

A growing global share of direct investment is flowing to emerging market countries.

flowing to emerging market countries. The OECD area's share of international direct investment has been falling since 2000, with a particularly marked decline to EU countries. Direct investment in global terms has tended to flow instead to regions such as Southeast Asia.[1]

This suggests that the portfolio imbalances created by the earlier regulations and the need for adjustments in favour of increased foreign ownership in Sweden's corporate sector should largely belong to the past. Together with the growing tendency to channel direct investment to emerging market countries, this points to the conclusion that inward direct investment's lower level in recent years is a trend that will continue.

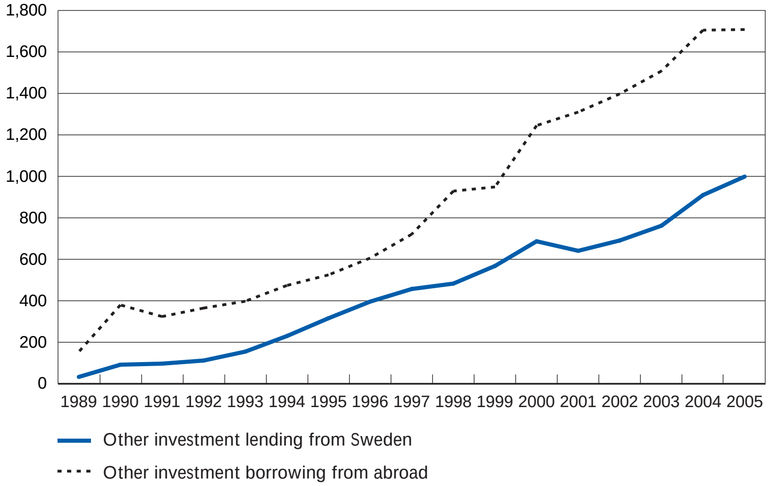
Large inflows from other financial items

The MFI sector's borrowing abroad has been used to finance lending in Sweden.

Other financial flows comprise loans, deposits, trade credits, derivatives, etc. In the period 1989–2005 the total item generated an accumulated net inflow of about SEK 780 billion, thereby partly offsetting the outflows for direct and portfolio investment. The dominant component is borrowing and lending abroad by MFIs (monetary financial institutions). One explanation for the occasionally large inflows is that the MFI sector borrows abroad to finance lending in Sweden. Swap agreements are used to convert the foreign currency loans into SEK holdings that can then be used to finance SEK loans to enterprises and households in Sweden.

1 Source: Invest in Sweden Agency, ISA.

Figure 6. Other investment, loans, etcetera, accumulated net flow; 1989–2005
SEK billion



Source: The Riksbank.

Sweden's external assets and liabilities

The next question is how Sweden's assets and liabilities, which make up the international investment position, have developed in the period from 1989 to 2005. We have chosen to describe this in terms of the international investment position at market values (see the box "Two ways of presenting the international investment positions").

Two ways of presenting the international investment position

The international investment position is a compilation of the value of a country's total external assets and liabilities. In accordance with international recommendations (the IMF's Balance of Payments Manual, Fifth edition), the Riksbank presents two versions of the international investment position: the traditional position and the position at market values.

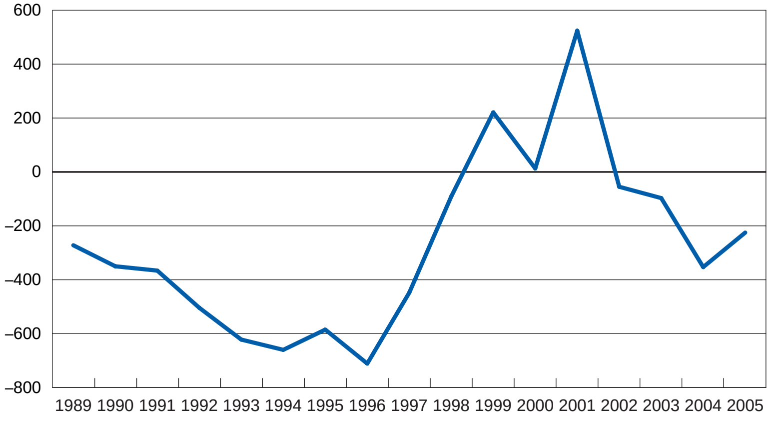
In the traditional version, some items (e.g. direct investment, loans, deposits and miscellaneous) are included at book or nominal values, while market values are used for other items (e.g. portfolio investment and derivatives). Valuations are invariably made at current exchange rates and include accrued interest.

For the position at market values, the direct investment item is also valued by the Riksbank at market values (see the box on p.54) and the other items are valued as in the traditional version.

The international investment position has weakened.

The market-values version of the international investment position fluctuates markedly from year to year. In the period 1999–2001 the position was actually positive but in recent years it has weakened appreciably again. The position at the end of 2005 was negative, representing a net liability with the rest of the world (see Figure 7).

Figure 7. Sweden's net international investment position at market values; 1989–2005
SEK billion



Source: The Riksbank.

An international investment position in which market values are also used for direct investment gives a fairer picture of national wealth or net worth and has therefore been chosen here.

How is the international investment position connected to saving abroad?

As mentioned initially, in the period since 1989 the combined balance on the current and capital accounts has accumulated to a surplus of over SEK 995 billion, whereas the international investment position has not improved nearly as much. In December 2005 Sweden's net external liabilities at market values totalled SEK 225 billion, a reduction of around SEK 50 billion since 1989, which is far less than one might expect from the surplus on saving abroad.

Basically, the discordance between the combined current and capital account balance and the change in the international investment position stems from factors of two kinds:

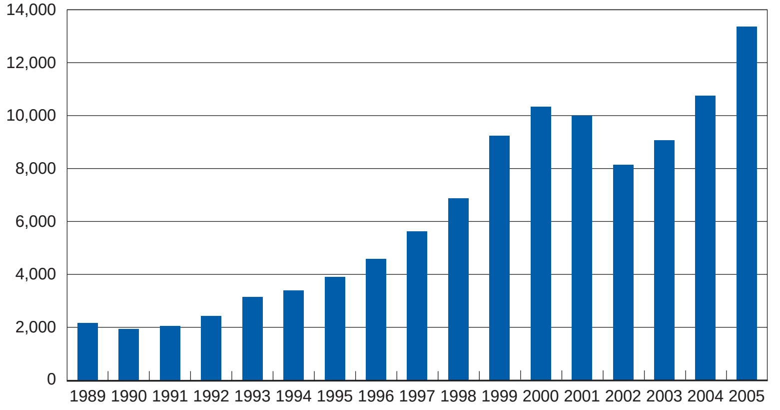
- Valuation changes are the primary reason for the discrepancies (see Figure 1). These changes now have such a marked impact on the investment position because in this period the gross stocks have become much larger.
- Measurement errors, e.g. in the international investment position, due to a systematic underestimation of certain assets abroad. This applies mainly to assets abroad that are owned by households and other economic agents and are not covered by the statistics on the

international investment position. Another factor is measurement errors in the current account. The importance of measurement errors is considered below.

Much larger stocks in the international investment position

The expansion of cross-border capital flows has led to much larger stocks of assets and liabilities in the international investment position (see Figure 8).

Figure 8. Sweden's international investment position at market values, gross figures; 1989–2005
SEK billion



Source: The Riksbank.

In 2005 these stocks were six times larger than in 1989 and at the year-end they totalled around SEK 13,400 billion, which is equivalent to around five times Sweden's GDP. For comparison it can be mentioned that in this period GDP doubled and the value of foreign trade in goods and services virtually trebled, all calculated in nominal figures.

The marked expansion is the main reason why fluctuations now have a greater impact on the international investment position.

The very marked increases in external assets and liabilities are the main reason why fluctuations in market values now have a considerably greater impact on the international investment position.

We shall now take a closer look at three kinds of change in value: exchange rate movements (changes in the value of the Swedish krona), equity price movements, and changes in the value of direct investment enterprises.

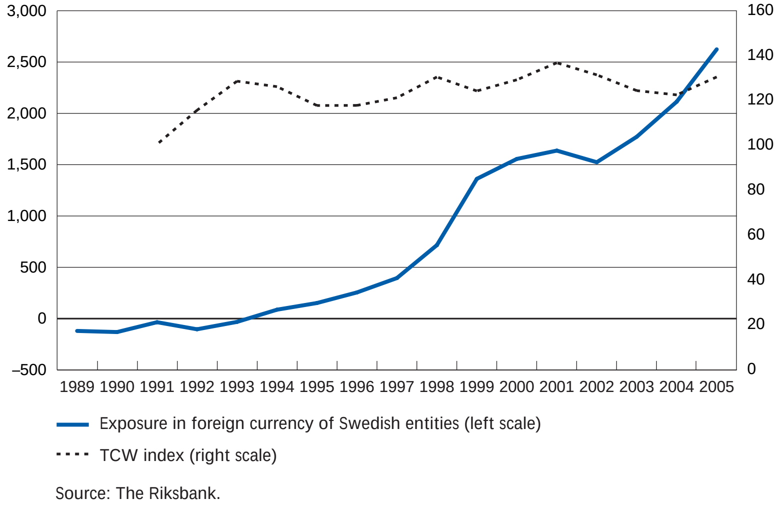
Since the abolition of exchange control, the aggregated foreign currency position of Swedish residents in the international investment position has become very much larger (see Figure 9). This foreign currency position is shown here as the net foreign currency assets of all Swedish residents. Net foreign currency assets are defined as total foreign currency assets minus total foreign currency liabilities.

An important cause of the growing foreign currency exposure is the larger stocks in the international exchange position. Assets abroad are denominated as a rule in a foreign currency, just as Swedish assets are usually denominated in Swedish kronor. A growing foreign currency exposure as a result of the larger stocks is then to be expected, in that Swedish assets held by nonresidents are predominantly in Swedish kronor and foreign assets held by residents are mainly in foreign currency.

In 1989, foreign currency liabilities outweighed assets, mainly because exchange controls had previously permitted extensive private borrowing in foreign currency. This borrowing exceeded the value of Swedish foreign currency assets, which at that time mostly consisted of direct investment abroad.

The Swedish krona's marked depreciation at the end of 1992 and during 1993 no doubt had a limited net effect on the overall wealth of Swedish residents because foreign currency assets were more or less balanced by liabilities.[2]

Figure 9. Exposure in foreign currency of Swedish entities; 1989–2005
SEK billion and TCW index



Source: The Riksbank.

2 The Riksbank's extensive interventions in the forward market meant that debt exposure in foreign currency was transferred to the Riksbank but the interventions did not alter the total exposure of Swedish participants.

At the end of 2005 the net value of Swedish residents' foreign currency assets and liabilities was over SEK 2,600 billion.

Since then, the foreign currency position has become much larger; at the end of 2005 the net value of Swedish residents' foreign currency assets and liabilities was over SEK 2,600 billion. Exchange rate fluctuations accordingly have a considerable effect on wealth and hence on the international investment position. A 5 per cent weakening of the krona's exchange rate means that the value of the foreign currency assets of Swedish investors rises by about SEK 130 billion.

At the same time, nonresidents invest in SEK assets, which represent SEK liabilities for residents. In this respect, SEK exchange rate fluctuations have no direct effect on the international investment position. So the loss that foreign investors incur on these SEK assets in the example above does not affect Sweden's international investment position.

From Figure 9 it will be seen that in the period 2001–04 the Swedish krona's TCW index fell (the krona's average annual TCW value declined). This represented an appreciation of the krona by almost 12 per cent and a corresponding loss for Swedish investors in the region of roughly SEK 200 billion (12 per cent of the average foreign currency exposure in these years). During 2005 the exchange rate swung and weakened 6 per cent, which in turn should have had a positive effect on the international investment position.

A depreciation in the krona usually has an effect on the international investment position.

It must be underscored that this estimate is very approximate. The balance of payments statistics do not provide information about the foreign currency composition of external assets. The extent to which Swedish assets and liabilities abroad are affected by exchange rate fluctuations in a particular year depends on the mutual relationships between foreign currencies together with the currency composition of net foreign currency assets. The calculated impact of exchange rate fluctuations on foreign currency assets and liabilities is therefore bound to be approximate.

It will also be seen from Figure 9 that there were lengthy periods before 2001 when the krona weakened. This wholly or partly offsets the wealth effects of the krona's appreciation 2001–04, which probably limits the total wealth effects that fluctuations in the krona's exchange rate have had since 1992.

EXCHANGE COVER AFFECTS RESIDENTS' FOREIGN CURRENCY POSITIONS

The distribution of foreign currency exposures between residents and nonresidents is affected by forward cover in Swedish kronor. At present the Riksbank does not have comprehensive information about Swedish entities' forward cover in kronor with the rest of the world. Foreign currency positions are affected by straight forward transactions in the foreign exchange market as well as by swaps involving the krona and foreign currencies. Forward cover for foreign currency assets such as export claims, holdings in subsidiaries abroad and portfolio investment abroad reduced the foreign currency asset position of Swedish residents. On the other hand, banks and mortgage institutions are known to obtain extensive foreign currency loans that they swap into krona liabilities. Such swaps add to residents' net foreign currency positions because a proportion of the foreign currency liabilities is converted into a krona liability and thereby increases net foreign currency assets.

Swaps and forward exchange cover can thus involve foreign currency assets as well as liabilities, so that they partly cancel out. In the absence of comprehensive information, however, such cover cannot be allowed for in an account of residents' foreign currency position.

Such exchange cover cannot be allowed for in an account of residents' foreign currency position.

EQUITY PRICES ARE ONE EXPLANATION FOR THE WEAK INTERNATIONAL INVESTMENT POSITION

Another factor with a marked effect on the value of Sweden's international investment position is changes in equity prices in Sweden and abroad. Such price movements affect the item Portfolio equity.

The magnitude of the equity price gains/losses incurred by Swedish and foreign investors is partly dependent on the distribution of cross-border equity investments over the period since 1989.

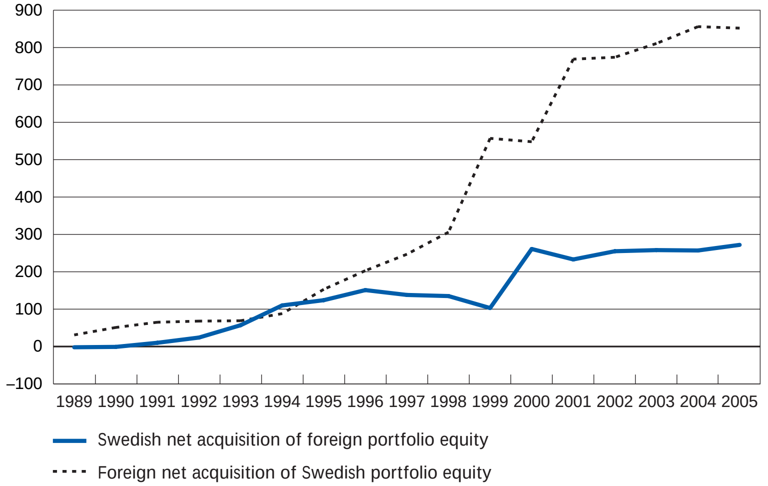
After the krona's depreciation in 1992, when Swedish equity was cheap and profit expectations were high, foreign investors were active net purchasers. In 1993 and 1994 foreign investors purchased Swedish equity for a net total of around SEK 90 billion, which was more than the accumulated net figure in the following five years, 1995–99 (see Figure 10).

The pattern of Swedish investment in foreign equity was different. The level rose in the mid 1990s and then took off around the turn of the millennium, when equity prices reached a high. In these years, Swedish investment abroad was appreciably higher than the equivalent foreign investment in Sweden.

So how have equity prices developed in Sweden and abroad? Developments in the 1990s favoured foreign investors who purchased Swedish equity. In every year except 1997 in the period 1992–99, the Swedish stock market, represented by the general index, was stronger than a weighted index for global stock markets (MSCI).

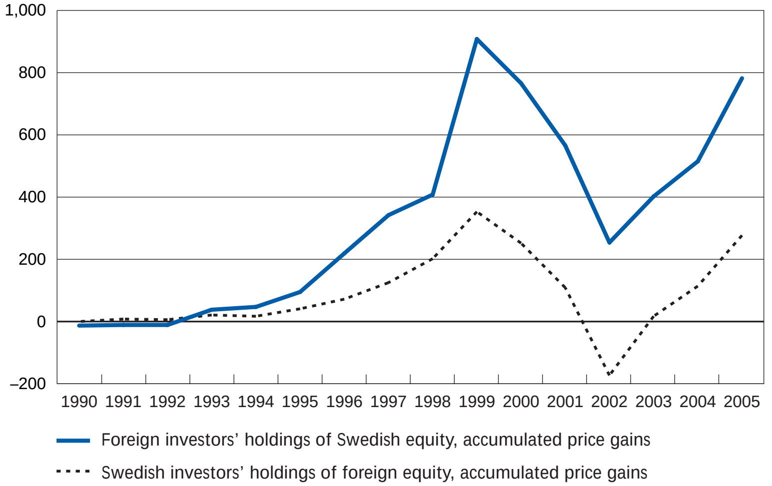
The differences in equity price developments between Sweden and abroad have affected price gains/losses on cross-border portfolio holdings of equity. A calculation of how the stock market fluctuations affected the

Figure 10. Portfolio equity, accumulated net flow; 1989–2005
SEK billion



Source: The Riksbank.

Figure 11. Portfolio equity, accumulated price gains/losses in the international investment position; 1990–2005
SEK billion



Source: The Riksbank.

value of such portfolio equity holdings is presented in Figure 11. This shows the accumulated calculated annual effects of equity prices and thus provides a picture of the total price gains that foreign and Swedish investors made in this period.

Throughout the period, the price gains made by foreign investors on Swedish equity have been appreciably larger than the gains made by Swedish investors on foreign equity. One explanation is that foreign holders of Swedish equity benefited from the Swedish stock market's very favourable development compared with stock markets elsewhere. Another explanation is that Swedish investors did not increase their foreign equity holdings markedly until the mid 1990s, when equity prices were at a high. According to this estimate, total price gains to foreign investors have been about SEK 500 billion larger than Swedish price gains on foreign equity.

Foreign investors' price gains on Swedish equity have exceeded those made by Swedish investors on foreign equity.

It must be underscored that this calculation is very approximate. The extent to which annual equity price fluctuations affect the international investment position cannot be computed exactly because information is lacking about the size of holdings in particular equities. All calculations are based on a global price index and the Swedish general index. The actual compositions of foreign and Swedish holdings do not necessarily agree with these indices.

As a result of all this, equity price changes are an important factor behind the weak development of Sweden' international investment position in the past fifteen years.

It should be noted that the increase in net liabilities that is due to the different development of equity prices in Sweden compared with abroad does not say anything about how successful Swedish equity investors have been. The more positive equity price trend in Sweden leads in itself to a negative effect on Sweden's international investment position. At the same time, Swedish residents have made large equity investments in their domestic market and benefited from the favourable equity price trend there.

In addition to the profits on portfolio equity, foreign investors presumably made price gains on Swedish fixed-income securities in the 1990s. The sharp drop in the long-term interest rate from 1992 onwards generated considerable price increases on long-term fixed-income SEK securities. As the interest rate fell more in Sweden than elsewhere, it is reasonable to suppose that foreign investors gained more in Sweden than Swedish investors did abroad. However, no attempt has been made to estimate these effects.

Foreign investors presumably also made price gains on Swedish fixed-income securities in the 1990s.

Large fluctuations in the market value of direct investments

In the case of direct investment, the market value of the stocks of assets and liabilities is calculated by the Riksbank. For portfolio equity, for example, market values can be derived from stock-market prices but for direct investment this is usually not possible. Most of the enterprises that are owned or acquired by nonresidents are not listed on the stock exchange.

Neither can information about the market value of subsidiaries be obtained from the enterprise.

The Riksbank calculates the market value of direct investments with its own model.

The market value of direct investments is therefore calculated with a model. In the absence of international recommendations on the methods for such calculations, the Riksbank has developed a method internally. Direct investment stocks are also calculated at the book value of the equity in the subsidiary and included in this form in the traditional account of the international investment position.

The method developed by the Riksbank for calculating direct investment at market values uses stock-market data on P/E ratios, that is, the market values of listed companies divided by their trend-adjusted earnings (see the box "P/E method for market valuation of direct investments"). A capital valuation based on P/E ratios cannot measure market value exactly but compared with book values it does give a sounder picture of direct investment and thereby of the "proper economic value" of Sweden's international investment position.

P/E METHOD FOR MARKET VALUATION OF DIRECT INVESTMENTS

The calculation of market value starts from the assumption that the relationship between historical price and historical profits in direct investment enterprises is the same as the price/earnings ratio in listed companies. For the valuation of Swedish direct investment assets abroad, P/E ratios for a number of countries are weighted together in proportion to the book value of the direct investment assets. Market value is then calculated as the product of the weighted P/E ratio and the direct investment enterprises' combined earnings abroad, subject to the assumption that the market value cannot be less than the book value of the capital in the enterprises (the break-up value). As the long-term profit trend is, on average, a better approximation of the market's profit expectations than the most recent result, the P/E ratios used in these calculations are partly based on trend-adjusted earnings.

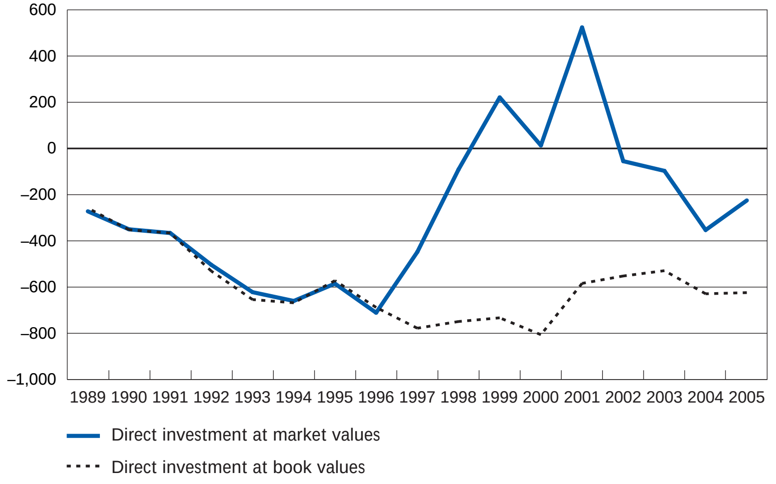
The effect on the international investment position of a market valuation of direct investment is shown in Figure 12. The gap between the two curves represents the effect of the Riksbank's calculation of direct investments at market values.

The increase in market value in the late 1990s had to do with a global increase in equity pries and high P/E ratios.

In the late 1990s the market value became notably higher than the book value on account of a global increase in equity prices and the high P/E ratios associated with peak expectations of future earnings. The subsequent fall in equity prices then led to a decline in the market value. This decline has been most marked for Swedish direct investment abroad. Between 2000 and 2002 the market value of outward direct investment dropped SEK 1,000 billion compared with a fall of SEK 650 billion for direct investment in Sweden.

So in recent years the market valuation of direct investment has given a loss of value for direct investment abroad that is greater than for foreign direct investment in Sweden. This is another reason why, despite

Figure 12. International investment position with direct investment at market and book values, respectively; 1989–2005
SEK billion



Source: The Riksbank.

sizeable current-account surpluses, the international investment position has weakened since 2001.

The international investment position does not cover all assets abroad

Statistical shortcomings result in an unduly negative picture of the international investment position.

Statistical shortcomings lead to uncertainty about Sweden's international investment position. There are many indications that these shortcomings entail a systematic underestimation of assets abroad, so that the statistical picture of the position is unduly negative.

What, then, can be said about the magnitude of this measurement error in the international investment position? As shown earlier, in the period 1989–2005 net saving abroad as measured from the real side (the current and capital accounts) accumulated to SEK 995 billion. In the same period, the financial flows accumulated to a net outflow of around SEK 557 billion. It may then be asked whether the unexplained outflow of SEK 438 billion, which is booked as the residual, is entirely attributable to assets that ought to be included in the international investment position.

The residual is not a reliable yardstick of errors in the international investment position

There are reasons for supposing that the effect on the international investment position is smaller than the accumulated residual since 1989.

One reason is that the reported current-account balances have prob-

Comparisons of EU statistics show that net exports are systematically overestimated.

ably been on the high side. Bilateral statistical comparisons of trade in goods show unduly low values for imports and hence a systematic overestimation of net exports. These comparisons indicate that the overestimations could add up to about SEK 50 billion, in which case the accumulated current-account surplus for the period 1989–2005 may have been overestimated by the same amount. This overestimation of the current-account balance would help to explain the period's negative accumulated residual.

When this effect from the balance of trade has been subtracted from the residual, we are left with an unexplained outflow of around SEK 390 billion. This represents an underestimation of financial outflows (investment abroad) in this period.

The next question is whether this underestimation of financial outflows is a good measure of the asset stocks that do not show up in the international investment position.

The data for the international investment position are based to a large extent on bank and other corporate balance sheets. This makes it possible to compare the statistical foundation for external positions with the balance sheet data in corporate annual accounts. Checking and confirming statistics on transactions is considerably more difficult. Assuring their quality is complicated by the large volume of the transactions and the influence from fluctuating market prices and exchange rates. In the case of certain items such as equity and direct investment, it is also difficult to confirm transactions through comparisons with stocks and changes in value.

This leads to the conclusion that the data on the international investment position are more reliable than those on the financial transactions. The size of the accumulated residual for the period 1989–2005 is a very uncertain yardstick of the assets that are not covered by the international investment position.

Direct personal saving abroad is difficult to catch.

In some respects it is difficult or even impossible to measure assets abroad correctly. A case in point is direct personal investment abroad in shares, mutual funds, bank accounts, etc., where the holdings are deposited abroad. It is difficult to identify these assets in statistical studies.

To sum up, there are measurement errors in the international investment position and the balance on current account that work in the same direction. The overestimation of the current-account balance and the underestimation of Swedish assets abroad both contribute to the discrepancy shown in Figure 1 between the changes in the international investment position and the accumulated current-account balance.

Value changes are the chief cause of the fluctuations in the international investment position

The krona exchange rate, equity prices and the value of direct investment companies have the most significance.

Prior to the early 1990s the balance on Sweden's current account matched the change in the international investment position relatively closely. The current-account balance used to be the main determinant of the investment position but this is no longer the case. The growth of cross-border financial flows has greatly increased the gross stocks that make up Sweden's international investment position. These stocks currently total SEK 13,400 billion, which is more than five times the size of Sweden's GDP.

As a result, since the mid 1990s fluctuations in market values have been increasingly important for changes in the international investment position. Today, changes in value arising from the fluctuations in market values have become the chief determinant of how the international investment position develops. The position is still affected by the current-account balance, which together with the capital account reflects financial saving abroad, but its relative importance has declined appreciably since the early 1990s.

The market values with the largest consequences for the international investment position are the Swedish krona's exchange rate, equity prices in Sweden and abroad and the market value of direct investment enterprises.