

Net lending in the Swedish economy

**Analysis of differences in net lending
National accounts, NA – Financial accounts, FA
Final report**

2005:05

The series Background facts presents background material for statistics produced by the Department of Economic Statistics at Statistics Sweden. Product descriptions, methodology reports and various statistic compilations are examples of background material that give an overview and facilitate the use of statistics.

Publications in the series Background facts on Economic Statistics

- 2001:1 Offentlig och privat verksamhet – statistik om anordnare av välfärdstjänster 1995, 1997 och 1999
- 2002:1 Forskar kvinnor mer än män? Resultat från en arbetstidsundersökning riktad till forskande och undervisande personal vid universitet och högskolor år 2000
- 2002:2 Forskning och utveckling (FoU) i företag med färre än 50 anställda år 2000
- 2002:3 Företagsenheter i den ekonomiska statistiken
- 2002:4 Statistik om privatiseringen av välfärdstjänster 1995–2001. En sammanställning från SCB:s statistikällor
- 2003:1 Effekter av minskad detaljeringsgrad i varunomenklaturen i Intrastat – från KN8 till KN6
- 2003:2 Consequences of reduced grade in detail in the nomenclature in Intrastat – from CN8 to CN6
- 2003:3 SAMU. The system for co-ordination of frame populations and samples from the Business Register at Statistics Sweden
- 2003:4 Projekt med anknytning till projektet "Statistik om den nya ekonomin". En kartläggning av utvecklingsprojekt och uppdrag
- 2003:5 Development of Alternative Methods to Produce Early Estimates of the Swedish Foreign Trade Statistics
- 2003:6 Övergång från SNI 92 till SNI 2002: Underlag för att bedöma effekter av tidsseriebrott
- 2003:7 Sveriges industriproduktionsindex 1913–2002 – Tidsserieanalys
The Swedish Industrial Production Index 1913–2002 – Time Series Analysis
- 2003:8 Cross-country comparison of prices for durable consumer goods: Pilot study – washing machines
- 2003:9 Monthly leading indicators using the leading information in the monthly Business Tendency Survey
- 2003:10 Privat drift av offentligt finansierade välfärdstjänster. En sammanställning av statistik
- 2003:11 Säsongrensning av Nationalräkenskaperna – Översikt
- 2003:12 En tillämpning av TRAMO/SEATS: Den svenska utrikeshandeln 1914–2003
- 2003:13 A note on improving imputations using time series forecasts
- 2003:14 Definitions of goods and services in external trade statistics

Fortsättning på omslagets tredje sida!

These publications and others can be ordered from:
Statistics Sweden, Publication Services, SE 701 89 ÖREBRO, Sweden
phone +46 19 17 68 00 or fax +46 19 17 64 44.

You can also purchase our publications at our Statistics Shop:
Karlavägen 100, Stockholm, Sweden

Net lending in the Swedish economy

**Analysis of differences in net lending
National accounts, NA – Financial accounts, FA
Final report**

2005:05

**Statistics Sweden
2005**

Economic Statistics

Net lending in the Swedish economy

Analysis of differences in net lending

National accounts (NA) – Financial accounts (FA)

Final report

Statistics Sweden
2005

Tidigare publicering Publicerad årligen sedan 2001
Previous publication Previous publication has been made since 2001

Producent SCB, Avdelningen för ekonomisk statistik
Producer Box 24 300
 104 51 Stockholm

Förfrågningar Bo Bergman, tfn: +46 8 506 945 42
Inquiries bo.bergman@scb.se

Omslag: Ateljén, SCB

Om du citerar ur denna publikation, var god uppge källan:
Källa: SCB, Bakgrundsfakta

© 2005 Statistiska centralbyrån
Enligt lagen (1960:729) om upphovsrätt till litterära och konstnärliga verk är det förbjudet att helt eller delvis mångfaldiga innehållet i denna publikation utan medgivande från Statistiska centralbyrån

ISSN 1650-9447

Printed in Sweden

SCB-Tryck, Örebro 2005.04  Trycksak 341590

Preface

This report concludes the project *Net lending in the Swedish economy*, which started in 2002. The report presents analyses, conclusions, recommendations and suggestions. The efforts of improving the statistics on net lending now continues at Statistics Sweden. We are firmly convinced that the results from the project will facilitate the possibilities of decreasing the discrepancies found in the Swedish statistics on net lending.

Last year an interim report was published in Background facts for Economic statistics 2004:12. That report contains an extensive description of background and possible areas for analyses of net lending. The report also provides details for specific sectors, in particular the non-financial corporations.

This report has been produced by the project leader Bo Bergman at the unit for Economic analysis. The project group also includes persons from the national accounts, the financial accounts, the structural business statistics and the statistics on public finance. Their efforts are highly appreciated.

Statistics Sweden, April 2005

Staffan Wahlström
Head of the Department for Economic Statistics

Innehåll

Preface	3
1 Summary	7
2 Aims and goals	13
3 Project organisation, work description	15
4 Calculation routines, sector- and financial accounts	16
4.1 Sector accounts in units for the National Accounts.....	16
4.2 Financial accounts.....	19
5 User contacts and user needs	24
6 Work completed	28
6.1 Investigatory work including interim reports in Background facts 2004:04 and 2004:12	28
6.2 Work in sub-projects during 2004.....	28
7 Reconciliation procedures, organisation	36
7.1 Methods.....	36
7.2 What is the situation in the rest of the world?	36
7.3 Example – ONS (Office National statistics)	38
7.4 Ongoing organisational review within Statistics Sweden.....	40
8 Results, analysis and assessments	43
9 Proposals and recommendations	47
General recommendations and proposals	47
Measures which are considered vital for implementation in 2005.	48

Appendices, references¹

- Directives and project plan
- Background facts for Economic statistics 2004:04 and also 2004:12 (English version)
- Reports from sub-projects (see section 6.2)
- Report from study visit to ONS in the UK.

¹ The appendices are not published in this report but can be obtained direct from Statistics Sweden. bo.bergman@scb.se, however not available in English.

1 Summary

Background

The project "net lending"² started in 2002. The objective was to obtain better consistency between the non-financial and financial parts of the national accounts system, NA (national accounts) and FA (financial accounts) by looking at the problems, discussing, and proposing measures for remedies. In this report, the abbreviation NA will be used to refer to the non-financial accounts and FA for the financial accounts.

The lack of correspondence between the non-financial and financial side is revealed in the discrepancies in calculations of net lending for different societal sectors. This creates uncertainty about the level and development of i.a. household savings, the government sector's net lending, the balance of current accounts, and not least the net lending of the corporate sector in the economic statistics.

Stage 1 – interim report

The first stage in the project resulted in two interim reports in the series "Background facts for Economic statistics".³ These contain a short description of the current problems, earlier measures and the project organisation. Some part of the reports contain a pedagogical description of concepts and relationships in the area, and also a description of the national and financial accounts from a sector perspective. Descriptions and analyses of net lending in recent decades is described in a separate chapter.

The report provides a fairly detailed description of the main issue in the project – namely, the discrepancies in net lending. Emphasis is put on the non-financial corporate sector. The other sectors are treated in a more concise fashion in the interim report.

Seminars, conferences and study visits

A number of seminars have been held for some of the staff of Statistics Sweden. The project has also been presented abroad, at workshops to the EU accession countries⁴, and at conferences held by Statistics Sweden on development of Sweden's economic statistics (Saltsjöbaden, October 2003 and 2004).

A study trip was made to ONS in London, spring 2004. The visit provided valuable information about work on sector accounts and financial accounts in the UK, reconciliation of calculations, methods for handling discrepancies, the use of statistics, as well as work routines and organisation of the work.

² Investigations within Statistics Sweden of the differences in net lending between the National Accounts, NA, and the Financial Accounts, FA.

³ Net lending in the Swedish economy 2004:04 and Net lending in the Swedish economy 2004:12. <http://www.scb.se/templates/publdb/publikation>.

⁴ Under the auspices of Eurostat in Bratislava 2001, Tallinn 2002 and Budapest 2003.

Stage 2 – sub-projects

The second stage in the project has been run in seven different sub-projects with broad participation from other statistical units in Statistics Sweden. The work has been carried out over a limited period of approximately six months. This has resulted in a significant number of proposals for improvements.

Stage 3 – user contacts and organisation

In the final phase of the project, a number of users were informally asked how they regarded the problems concerning shortcomings in reconciliation and consistency. There were no unequivocal answers. It is widely agreed that discrepancies gives rise to problems in drawing conclusions and analysis, but when it comes to measures to remedy this, views differ. Many take the view that Statistics Sweden should consider abandoning the current method of calculating non-financial corporations residually, and instead base information on existing business statistics. This would create better opportunities to carry out i.a. analyses at the branch level. The business sector would also like to see more rapid information on profitability. Others, however, fear that putting greater priority on the company sector might mean that the figures on the government sector and households would become "less stable " than they are today.

Parallel with the work in the project, organizational issues have been discussed, based on the ambition of reducing the discrepancies between the national and financial accounts. No details about this project are presented in this report since the work has not yet been completed. What remains indisputable is that closer cooperation and more coordination in the first instance between the NA and FA units is necessary to achieve substantial improvements. This is also the starting point for the current process. The exact forms of the coordination will be developed in the ongoing investigation work during spring 2005 concerning a new organisation. The investigation will present a proposal for a new work organisation on 1 April.

Current questions

The recent debate on the surplus in the balance on current account in Sweden and the deficit in the US Federal budget, and the balance on current account, as well as its implications for foreign exchange rates has focused attention on the correspondence between the non-financial and financial flows in the statistics. Quite simply, there is a need for reliable figures on how and by whom, surpluses and deficits are invested and financed in financial markets.⁵ Without reliable statistics in the area, conclusions cannot be drawn with any confidence, for example, concerning explanations on how Sweden's surplus on the balance on current accounts has been invested abroad.

During the EU's most recent examination of Swedish statistics concerning the government deficit and debt (EDP), criticism was directed to the major discrepancies in the statistics. Even though the margin for the permitted deficit of 3 percent of GDP is still adequate, the discrepancies indicate uncertainty in the statistics concerning government sector finances.

⁵ See, for example, Sweden's economy, statistical perspective second quarter 2004. Statistics Sweden (obtained from web site of Statistics Sweden).

The major systematic discrepancies found in recent years in the household sector have led to a situation where the item "other financial assets" in the financial accounts, which is the difference between net lending in the non-financial accounts and the financial accounts, grew to SEK 415 billion at the end of 2003. Given the importance that is attached to this figure, especially as an indication of households' hidden assets abroad, it is important that Statistics Sweden can analyse and explain the contents in other items. For this reason there is a need to introduce a new calculation model for households in the financial accounts.

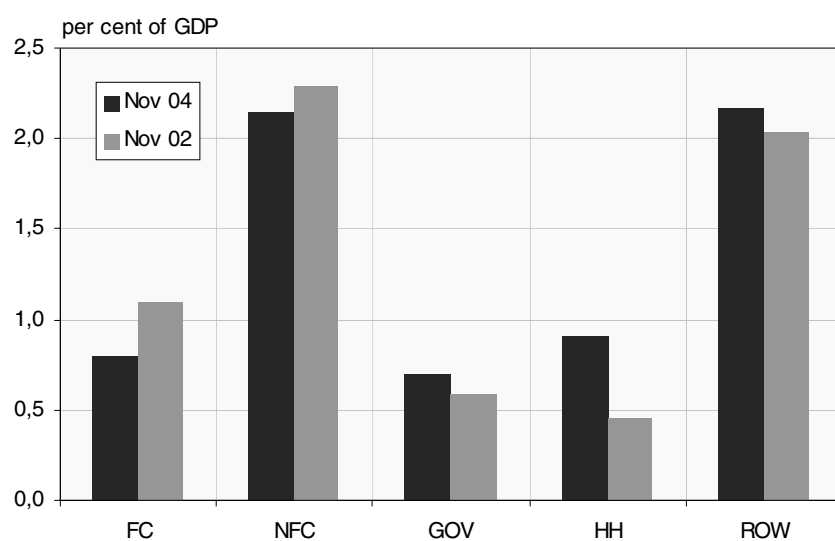
What has been achieved in the project – what remains to be done?

The statistical picture at the end of 2004 comparing net lending calculated in non-financial and financial terms still reveals very large discrepancies.

When we started the project in 2002, the statistical material could be summarised in a "sprawling" diagram of discrepancies since 1980. Particularly prominent were the changes after 1989, which could largely be attributed to deregulation, structural transformation and globalisation with their consequent negative impact on the statistics. The picture we have today shows a similar pattern. For certain sectors, the picture is better, and for others worse. A comparison of the average deviations between then and now shows that these have actually increased somewhat since the start of the project. This depends, however, exclusively on the poor correspondence for 2003 (published in November 2004). The discrepancies (net lending NA minus net lending FA) amounted to 57 billion in the financial sector, 170 billion in the non-financial corporate sector, 48 billion for households, and 80 billion in the rest of the world sector. In the government sector, correspondence is somewhat better i.e. SEK 15 billion in discrepancies for year 2003.

The diagram below shows the average discrepancies in absolute figures (i.e. irrespective of sign) for calculations in November 2002 and 2004 for the periods 1995 to 2001 and to 2003.

Figure 1
Discrepancies in net lending in the national accounts – the financial accounts. Average deviations 1995 – 2003 (2001)



FC = financial corporations
 NFC = non-financial corporations
 GOV = government sector
 HH = households
 ROW = rest of the world

The primary task of the project, however, has not been to eliminate or drastically reduce the discrepancies during the project. Instead the aim has been to map and propose measures to reduce the discrepancies.

The results obtained are that the lack of consistency in the statistics is due to both external and internal factors. International structural transformation, globalisation, valuation problems and complicated financial constructions exacerbate the difficulty of making accurate measurements. It is thus not entirely justifiable to make a comparison with the situation 25 years ago as deregulation and stable structural conditions at that time provided good prerequisites for producing consistent statistics. But internal factors (in Statistics Sweden) have also played a major role in the occurrence of discrepancies. These relate to how we make our calculations, and also whether there are or shortcomings in coordination, cooperation and work routines. The current work organisation does not contribute positively to increased reliability in the statistics, the converse appears to be the case.

A major shortcoming is that there is a lack of reliable information concerning the non-financial corporate sector in the national and financial accounts. The corporate sector is a residual in the calculations, which makes interpretation and analysis of the information presented more difficult. Another shortcoming is the lack of information concerning property income and expenditure (interest and dividends) of the institutional sectors.

The statistical material for making calculations concerning the government sector and financial corporations is relatively substantial and rich in detail. However, it should be noted that the underlying material is used for reporting and inspection, and is thus not specifically appropriate for statistical purposes. Furthermore there are problems with a lack of consistency in the material and between annual, quarterly and monthly reports.

Concerning the question of reconciliation procedures i.e. how to best balance the same calculations and what is presented to users defies simple solutions. Different countries use different methods depending on the statistical material they have available and the institutional (organisational) conditions in their respective countries. It is hardly meaningful to copy another country's model before certain measures are implemented (in terms of content and organisation).

The view is that discrepancies in the domestic sectors can be substantially reduced by systematically examining and remedying the shortcomings which were identified in the project work. In all probability the measures proposed in the different sub-projects would make a significant contribution to reducing/eliminating residual items. The results of the improvement measures should determine how and to what extent special general rules for reconciliation should be applied.

However, it is significantly more difficult to see how the rest of the world sector could be reconciled so that the differences between the balance of current accounts and financial balances are substantially reduced. Here perhaps a somewhat more radical solution needs to be tackled, such as for example allowing the non-financial calculated value to apply as the balance on current accounts in the financial calculation as well. There is also a difference between the balances on current accounts used by NA and the Riksbank. This may be largely related to differences in the revision and publication policy of Statistics Sweden and the Riksbank.

Despite the efforts to develop institutional sector accounts in NA in recent years, the view is that the information is too insubstantial and possesses shortcomings in a number of respects. Sector accounts are published on Statistics Sweden's web site under the heading (Nationalräkenskaperna) National accounts. Since they have not yet been entered into the official databases, it may be difficult for a user to find information about income transfers between different sectors, savings and savings ratios, as well as information about the rest of the world sector (balance on current accounts). In addition, as mentioned above, there is a lack of information about interest and dividend incomes, both separately and by sector. Such data is calculated in the NA system for all sectors apart from non-financial corporations (only net calculations). This information will be published as of autumn 2005.

The financial accounts present specific NA information about the non-financial components (income and expenditure) which determine net lending. These only refer to the main domestic sectors, not the components of the balance on current accounts.

Proposals and recommendations. Summary

The main proposals from the project are set out below. A somewhat more detailed report can be found in section 9, proposals and recommendations, page 49.

- 1) Ongoing efforts with the non-financial accounts by institutional sector at the NA unit⁶ is desirable in terms of developing tables and methods, as well as dissemination and analysis.

⁶The creation of a new organizational unit containing both NA and FA is currently being investigated.

- 2) Interest and dividend matrices drawn up for incomes and expenditure, and paying/recipient sector should be developed.
- 3) The method for calculating residual items for non-financial corporations should be phased out and replaced by a model based on existing business statistics.
- 4) The work of developing what are called the NA- FA tables in the annual company statistics should continue so that non-financial corporations can more easily be brought into NA and FA (supplemented by balance sheet values, continue work with population definitions, handling of large corporations and large dividends).
- 5) Preliminary business statistics annually, or alternatively on a quarterly basis, should be built up through supplementing the quarterly survey of non-financial corporation's balance sheets with profit items.
- 6) Tax periodisation in NA and FA should be coordinated i.e. the correctional item should be introduced into FA. The new tax accounting periods in NA (full accrual basis) is one cause of the major discrepancies in the state, the corporate sectors and households.
- 7) Causes of the lack of consistency between profit and loss accounts and the balance sheets in the Summary of municipal accounts should be investigated and remedied.
- 8) Causes of the lack of correspondence between the quarterly credit market statistics for the municipalities and county councils and their respective balance sheets in the Summary of municipal accounts should be investigated and remedied.
- 9) An alternative model for calculating net lending for the social security sector should be tested. Whether the question of financial derivatives can be solved residually should be investigated.
- 10) The "other item" in the household sector should be investigated and explained, or alternatively new calculation models should be brought into FA. This should be done at the same time as unreported (black) household incomes are investigated in terms of NA's income calculations, since there is a great deal of uncertainty in these figures.
- 11) Co-operation with the Riksbank should continue and preferably be developed and intensified so that the discrepancies in the rest of the world sector/statistics on the balance of payments can be held down to reasonable levels.
- 12) The revision and publication policy in Statistics Sweden and between Statistics Sweden and the Riksbank should be investigated and coordinated. Above all, this means coordinating annual and quarterly publication dates of financial accounts with their corresponding non-financial calculations.
- 13) The work on sector and classification issues should be given higher priority. Differences in classifying institutional units is one of the causes of the discrepancies between NA and FA.

2 Aims and goals

The aim of the project has been to take stock of the problems and propose measures for achieving better consistency between the non-financial and financial parts of the national account system. The goal is that the currently large discrepancies in the calculations of net lending be substantially reduced.

Net lending is a balancing item⁷ in the national accounting system. What distinguishes it from other balancing items is that net lending is usually reported with two different values, calculated from two different sides. *First of all*, in the financial accounts (FA), net lending is net investments in the form of financial assets minus liabilities. Negative net lending means that a sector needs to borrow to cover the deficit. *Secondly*, in the non-financial national accounts here referred to as NA, net lending is defined and calculated as income minus expenditures. Net lending can thus be calculated in two ways. It is unusual to obtain the same results in the NA and the FA. Discrepancies of varying magnitudes occur. These discrepancies create difficulties in the statistics, especially for users of macro-economic statistics.

The problem of shortcomings in comparability between NA and FA is not new. During the last few decades, this problem has been given much attention and studied a number of times. In addition to efforts made by Statistics Sweden, it can also be mentioned that a number of public investigations, articles and similar have examined the problem.⁸ These efforts have often coincided with a general focus on problems in connection with economic crises. Some examples of these problems are the weak balance of current accounts and low household savings during the 1980s, and the government financial crisis of the 1990s. Deregulation and structural transformations of the business sector are sometimes listed as causes of the problems in measuring net lending; in recent years, globalisation of industry is listed as a major factor.

Most countries with developed national and financial accounts have similar problems. Eurostat has studied the situation in different countries and has issued some fairly general recommendations. The European Central Bank, ECB, has highlighted the problem and is planning efforts to alleviate it.⁹

A lack of consistency between NA and FA could be an indication of shortcomings in primary statistics for the different sectors. It is important to reduce the discrepancies to an acceptable level, not only to obtain better information for institutional sector analyses, but also to improve the quality of the whole system of national accounts.

⁷ Examples of other balancing items are value added, operating surplus, disposable income and savings.

⁸ Unknown savings 1984. SCB. Calculation of balance of current accounts - an illusory exactness. 1987. Statistics Sweden Savings Delegation SOU 1989:11. Return on capital in the balance of current accounts. SOU 1991: 27. IMF 2001 (ROSC), Tax base study SOU 2002:7. Monetary and currency policies 2003:2. The Riksbank.

⁹ Particularly in connection with development of quarterly financial accounts for the Euro area. In addition, there is also ongoing development of quarterly sector accounts. Sweden is participating in this cooperation, but not fully since it is not a Euro country.

The significant discrepancies in net lending indicate serious problems of consistency in economic statistics. A common view, often well founded, is that the accuracy of financial measurements is not known since the financial flows are irregularly volatile and difficult to capture in the statistics. For this reason, financial measurements of net lending are often met with scepticism, and discrepancies are considered to be a priori related to a lack of quality in financial market statistics. However, experiences from more comprehensive quality studies and comparisons between the two ways of measurement show that deficiencies are not infrequently revealed in the non-financial statistics¹⁰. Calculations of net lending from two directions are thus an important quality instrument for financial as well as non-financial statistics.

A general reflection is that institutional sector accounts have been given lower priority as opposed to the product accounts in NA. One reason why sector accounts have not been given priority is that resources have mainly been allocated to improving GDP and GNI measures instead. The product accounts with important GDP calculations and with the continuously increasing requirements from the EU have been excluded wherever possible from reductions that have affected other parts of economic statistics. Since the project on net lending started in 2002, the level of ambition has been raised in the NA unit. More resources have been allocated to the sector accounts. See further section 4.1.

Working methods are also important. Experience from other countries indicate that coherent non-financial and financial calculations provide higher quality, and a better basis for analysis and substantially increased use of the statistics. The project has reached the conclusion that coordination and cooperation between the NA unit and the statistical area working with financial accounts, i.e. financial market statistics (FM unit) could be more substantial since they are actually using a common accounting system.

¹⁰ Studies of the balance of payments during the 1980s and revisions of household savings in the USA. Presented i.a. at a seminar at ECB in 1999.

3 Project organisation, work description

The project "net lending"¹¹ started in 2002. The objective is to achieve better consistency between NA and FA by looking at the problems and discussing how to alleviate them. Bo Bergman at the unit for economic analysis in the Department for Economic Statistics has been the project manager. The project has been managed by a steering group consisting of heads of the statistics units involved and also a departmental director. A number of sub-projects are connected to the main project (see below). A project group with representatives from the statistical units involved has been assigned to report, follow up and implement sub-projects at each respective statistical unit.

A number of seminars have been held for staff at Statistics Sweden. The project has also been presented abroad at workshops to the EU accession countries¹², and at a conference hosted by Statistics Sweden on changes in economic statistics (Saltsjöbaden, October 2003 and 2004).

A study trip was made to ONS in London during Spring 2004.

During 2004, the project was expanded by seven different sub-projects working for a limited period (up to 1 October). Slightly more than 20 persons from the different units including the steering group and project group¹³ have participated in the project work.

The sub-projects have been the following:

- 1) Non-financial corporations
- 2) Financial institutions
- 3) Property income
- 4) Insurance
- 5) Households
- 6) Government sector
- 7) Rest of the world

During late autumn 2004, there were discussions concerning work routines and work organisation. A proposal for organisational changes has been presented by a special organisational investigation (see section 7.4). The point of the proposal is that national and financial accounts should be coordinated and the work organised on the basis of institutional sectors.

The project was completed in December 2004 and presented in this final report. This final report together with the earlier published interim reports should be regarded as the project's overall report.

¹¹ Investigations within Statistics Sweden of the differences in net lending in the National Accounts, NA - Financial Accounts, FA.

¹² Under the auspices of Eurostat in Bratislava 2001, in Tallinn 2002 and Budapest 2003.

¹³ Annika Rosengren, Marcus Johansson, Leif Svantesson, Michael Wolf, Sofia Nilsson, Marianne Biljer, Torkel Brinkenfeldt, Jonas Ehrnst, Hans Olsson, Mattias Bågling, Ingegerd Hörnström, Christina Liwendahl, Ann-Louis Päivinen, Kristina Söderström, Sam Nilsson, Jonas Larsson, Linda Nyström, Christina Ekblom, Alf Pettersson, Katarina Wizell, Kaisa Ben Daher, Staffan Wahlström, Per Ericson, Inger Sohlberg, Lena Hagman, Bo Bergman.

4 Calculation routines, sector- and financial accounts

How the national accounts are built up is described in the international recommendations and system of rules.¹⁴ In the earlier interim report,¹⁵ national and financial accounts are described from a sector perspective.

For a detailed description of the national accounts system refer to Appendix 3 of the Utredningen om översyn av den ekonomiska statistiken (Commission on the review of economic statistics (SOU 2002:118). According to this the national accounts can be divided up into four parts: product accounts (PA), sector accounts SA, non-financial), financial accounts (FA) and balance sheets (BS). The most important part of the product accounts, which is the general term used to refer to the National accounts where GDP is calculated from the production – user– and income side.

This section describes the work on sector and financial accounts, how it is organised, the work process and what is calculated/published in the respective organizational units (NA unit and FM unit).

4.1 Sector accounts in the unit for National Accounts

The work on sector accounts in NA is basically divided into three areas: government sector, other domestic sectors (corporations and households) and also the rest of the world. The whole reconciliation process takes place in stages so that data necessary for PA is produced first. When this is reconciled, it forms the starting point for SA in that operating surplus can then be calculated. The rest of the world in PA is made up of exports and imports, as well as salaries and other compensation to employees.

The work of producing sector accounts is, however, mainly integrated with other parts of the work in NA, i.e. calculations of GDP within the framework of the product accounts. This means, amongst other things, that it is difficult to delimit and state how many persons are working with sector accounts. Significant resources have been allocated to SA in recent years and amount to approximately five full-time annual positions.

Sector accounts are set up with nominal values. Valuation is generally based on observable market value i.e. the values in which the transactions are carried out. If there are no market values, these can be estimated in different ways e.g. by summing components such as costs including a market-based profit mark-up to put a value on income from production. The NA system is based on incomes and costs, and as such should be periodised i.e. accrued costs and incomes are what should be presented for the respective accounts.

¹⁴ System of national accounts (SNA1993) and the European system of accounts (ESA95; ENS 95).

¹⁵ Background facts for economic statistics 2004:4.

Reconciliation

- 1) The starting points for the annual SA is i.a. the total operating surplus/-mixed income which is calculated from PA. For the government sector, there is complete material in the form of separate summaries of accounts. These have been assessed as having sufficiently high quality so that only adjustments for definitional differences with respect to ESA95 are normally needed. This means, for example, that data from the Riksbank for the rest of the world is only adjusted where there is better material available in the central government accounts or in the municipal summaries of accounts.
- 2) The remaining operating surplus/mixed income is allocated between companies and households. For financial corporations, an operating surplus is calculated in PA assuming that the financial sector and the financial industry are identical. What remains is the part to be allocated between households and non-financial corporations.
- 3) First, the factor incomes of households are determined. These consist of salaries incl. social security contributions, corporate incomes/mixed income and imputed operating surplus. The latter is then also transferred as consumption and thus does not have an impact on net lending. Of total incomes, one part is made up of unreported salaries and company incomes/ mixed income (i.e. "black income"). This corresponds to about 5 percent of GDP.
- 4) The operating surplus in non-financial corporations is what remains after households' operating surplus and mixed income (incl. the unreported part) is deducted from the joint total. In this way results are calculated for non-financial corporations as a residual.
- 5) Thereafter a comparison is made between the operating surplus of non-financial corporations in NA and corresponding information obtained from business statistics which have been roughly corrected for definitional and population differences to enable comparison with NA. Deviations between business statistics and NA, however, seldom lead to corrections in the residually calculated operating surplus.
- 6) After supplementing this with other income and expenditure (e.g. taxes and other transfers) and also investments etc, a figure for net lending is obtained. Property income is calculated residually in the non-financial corporations, i.e. the total of all the other sectors' transactions is net of interest and dividends.
- 7) Finally net lending of all sectors is compared with corresponding information obtained from the financial accounts.

Compilations and publishing

Sector accounts,(SA) are compiled five times a year. The coverage, however, varies depending on the phase in the compilation and the particular year we are working with. Currently information for the rest of the world sector and the government sector is compiled about 70-90 days after the end of the respective quarter. This calculation is being tested on the government sector as a part of the EU's attempts to build up quarterly non-financial accounts. For some time the NA unit has had access to quarterly data for the rest of the world.

Earlier the household sector was compiled on a six-month basis but with separate data for the respective quarters. This applies with one exception, the item for capital formation is not complete except for the data in the first year which is made up of the total of the four quarters together with the preliminary annual value for capital formation. Since December 2004, the household sector is compiled each quarter.

The data for the corporate sectors is only compiled annually i.e. when there is information for all four quarters. This takes place by first forming a joint residual sector for corporations and then approximately 11 months after the end of the year, dividing these up into financial and non-financial corporations.

The fifth reconciliation is carried out in connection with the annual calculations of the NA unit. At the same time this is the most comprehensive compilation since it is done for all sectors. In this phase, about 23 months after the end of the year, financial corporations are presented separately and the residual sector thus consists only of non-financial corporations.

Publication of sector accounts has until now mainly used annual values. A preliminary calculation was done in March concerning the previous year, and a more complete report was issued in November, 23 months after the end of the reporting year. From 2005 there will be a revised version of the preliminary annual accounts presented in connection with the calculations for the first quarter. Quarterly data for the household sector is presented in March and September and as of December 2004, reports for the household sector will be published quarterly.

Disposable income for households, adjusted for purchasing power, is also published. Regional allocation of different transactions is also carried out to make it possible to compile disposable household income by region. These will be published in December.

The main publication dates for NA in 2005 also cover sector data:

March	1-4 qtr 2004
June	1 qv 2005 (revision of 2003)
September	1-2 qtr 2005
November	year 2003-2004
December	1-3 qtr 2005
December	Regional accounts 2003

EU requirements

According to the Regulation of the European Council (No. 2223/96 and later) sector accounts should be reported annually in the EU Table 0800. This is the most comprehensive sector table and contains all the accounts from the production account to the non-financial part of the capital account. EU Table 0200 covers the government sub-sectors. The financial transactions are covered by EU tables 0601 and 0602 and corresponding balance sheet data by tables 0701 and 0702. See 4.2 below.

Table 0800 refers to annual data. This covers all sectors and should be compiled at the latest 12 months after the end of the year. The table contains information for corresponding sectors and detailed allocation of the rest of the world in sub-sectors (EU countries, EMU countries, EU institutions and other parts of the world). The NA unit cannot satisfy the demands for

information on many of the corresponding sectors and sector subdivision for external accounts. Currently this table like many others is being re-worked. The new ambitions mean i.a. delivery by at the latest 9 months after the end of the year, removal of information on corresponding sectors and stricter requirements on reporting of sub-sectors for the rest of the world e.g. EU countries, EMU countries and EU institutions.

Apart from several detailed tables on tax incomes (EU table 0900) and regional allocation of household disposable incomes (EU table 1300) a somewhat aggregated sector table is supplied for the total government sector and its sub-sectors. This deals with consolidated sector data and should be delivered by at the latest 8 months after the end of the year.

To this should be added the quarterly reports of data on the government sector and incomes according to EU tables 2501 and 2502 which were introduced as a result of Regulation no. 2223/96. And as earlier mentioned these tables are on a pilot basis and have not yet reached publication stage. According to the European Council's Regulation (No. 14658/04) a quarterly sector table should be presented covering all five main sectors for the first time at the beginning of January 2006 (EU table 0801Q). There are plans to publish this table. In addition, the new proposal also contains annual balance sheet data for housing (EU table 2600).

4.2 Financial accounts

Background

The financial accounts (FA) have been produced annually in Sweden since the beginning of the 1970s. In the middle of the 1980s a number of quarterly calculations were also started. The whole time the calculations have been organisationally separated from the sector accounts, SA (National accounts). Instead the financial accounts have been produced by the unit producing financial statistics (FM unit). Since the beginning of the 1990s, the financial accounts have been funded by the Swedish Financial Supervisory Authority. In connection with the statistical reform some years later, the Swedish Financial Supervisory Authority was given the formal role of being the authority responsible for statistics on the financial market, of which FA is a part. Statistics Sweden produces the major part of the statistics for the Swedish Financial Supervisory Authority.

The financial accounts at the FM unit

The work of producing financial accounts is carried out by a work group consisting of seven persons. Three of these also work a large part of their time in the production of primary statistics. The work group is organisationally located at the unit for finance markets, FM unit. In the group there are persons responsible for different sectors, i.e. the calculations for one or more sub-sectors. One group leader is responsible for the reconciliation work, questions and planning etc for all the financial accounts. The whole group participates in the reconciliation process for all sectors and all financial instruments. The persons responsible for different sectors are also responsible for one or more different financial instruments, for example bonds. The person responsible for financial instruments also assesses and ensures that issues, redemptions, the secondary market and changes in

value provide a reasonable overall picture of the whole economy and the net lending balances of the different sectors.

Production of financial accounts

The financial accounts are compiled six times a year, four quarterly reports and two annual reports. The goal is that the quarterly accounts should be compiled and published within 90 days of the end of the quarter, which is done today except for the fourth quarter (around 96 days).

The financial accounts report transactions (net flows) and balance sheet values (outstanding balance values at the end of the current period) for different financial instruments and for the different sectors. In contrast to NA, financial corporations are reported on in greater detail. Monetary financial institutions are sub-divided into the Riksbank, banks, housing finance institutions, municipal and corporate finance institutions and also other credit market institutions. There is a separate report for the insurance sector, but other financial corporations are reported as a group.

Since the middle of the 1990s, the production of financial accounts has moved further in the direction of quarterly accounts. This can be explained by a number of factors. One is increased access to primary statistical material, another is the interest on the part of users. The material for primary statistics has been extensively developed on a quarterly basis, both in terms of coverage, content and speed of production. Quarterly accounts have also generated greater interest from users since they have been produced more quickly and are thus more up-to-date than the annual reports.

Schematic overview of quarterly production

Quarterly production		What is done?
t+60 days	Stopping input of data	Compiled in a matrix which is later "run" the same day or day after data entry has been stopped. ¹⁶
About t+67 days	Matrix meeting 1	Reconciliation: person responsible for sector "briefs". A first overall review which is documented below in an "error report", or list of measures.
About t+74 days	Matrix meeting II	Reconciliation: preliminary sector tables, follow-up of error reports.
About t+80 days	Matrix meeting III	Reconciliation: follow up of error reports, checking revisions. Finalise the figures
About t+85 days	Matrix meeting IV	Review of preliminary. # SM-text, outline of press release
About t+90 days	Publishing	Statistical information, press releases, official databases of Statistics Sweden (SSD)

¹⁶ A small flying start was done by matrix reconciliation before data entry is stopped, about t+50, since much of the data to be input is ready, particularly for parts of financial corporations. The main aim of this exercise is to find errors and inconsistencies at an early stage between financial corporations.

Annual accounts are published twice a year each year. Since 2001 a very preliminary "annual calculation" is done which builds on an aggregate of the four quarters i.e. the four quarters of the most recent year are totalled and then added to the most recent annual calculation. This provides the basis for reporting to Eurostat for the latest reporting year (yr t). The reason for doing this is that it is necessary to supplement material which is only available on an annual basis in most cases, and not completed until September. This information would be expected to delay Eurostat reporting excessively.

Production in the autumn of the annual accounts is then supplemented by material which is only available on an annual basis. Quarterly statistics are supplemented by annual data, if this is more comprehensive.

Annual production, year t

First publication	April, t+4 months	Total of the four quarters for year t, earlier years are unchanged. The basis for the reports of year t in June the following year i.e. t+ 6 months
Other publications	November, t+11 months	The calculations are supplemented by annual material for year t, revision from early years where necessary. New report to Eurostat/ECB.

The reconciliation process for the annual accounts (autumn) are in principle the same as for the quarterly reports.

Reconciliation

During the reconciliation process, initial comparisons are made between primary data and what the production system (the matrix) generates. Since there is information from many sectors and for some financial instruments (accounts) with information from the corresponding sector, data must be compared and chosen depending on source. For certain sectors, there is only information on corresponding sectors, e.g. households and households' non-profit organisations. The choice between different sources is fixed between production phases, but during these comparisons errors may be detected if the data deviates substantially. This choice may, of course, also be changed if new facts suggest that other sources would be more reliable.

In connection with the first comparisons between primary data and the matrix data, the sector for which residual calculations are made is examined, namely the non-financial corporate sector. Residual calculation refers to starting from the total value on the liability side (total of all sectors' liabilities for a given financial instrument) – and from this the assets of the different sectors are deducted. The remaining amount, the residual, is attributed to the sector for which there is no data or which is regarded as most uncertain in relation to other sources. If the residuals appear to be "strange" this may largely be due to errors in some other sector. For the non-financial corporate sector, there is a quarterly survey of the main financial variables (however no complete balance). This makes it possible to compare the residuals for many financial instruments with data from these primary statistics.

The person responsible for a sector monitors what has happened in "his/her" sector: changes in the surrounding world, major events, explanations of changes etc. Cooperation with the person responsible for primary statistics is important here, in certain cases the same person has been responsible for a sector and the production of primary statistics. An important step is to check that the flows (transactions) are reasonable in relation to the change in stock values (balances).

The major financial instruments (loans, short and long-term securities i.e. certificates and bonds, as well as quoted shares) are subject to special scrutiny. Here there is also close cooperation between producers of primary statistics in order to find explanations for changes in different markets.

Finally, the balance item in net lending is examined and then compared with net lending calculated from the non-financial side.

EU requirements – annual reports

Since 1995 when Sweden became a member of the EU, the production of FA has been steered by the EU Regulation 2223/96 (ESA 95) and annual series must be reported to Eurostat by the latest 30 September (t+9 months) in the following year (the tables 601, 602, 701 and 702 see above).

The agreement on supplying Eurostat was expanded in 2004. The process has been accelerated so that corresponding reporting done hitherto will be reported at the latest t+6 months after the current period. In addition, two new tables with further disaggregation are sent in t+9 months.

As of 2004 these tables are sent to the European Central Bank, ECB. Eurostat and ECB have a cooperation agreement whereby ECB receives and examines the data. These will be published and delivered later to Eurostat.

EU and ECB requirements – quarterly accounts

The EU requirements which determine the production of FA on a quarterly basis are the Regulation on quarterly financial accounts for the government sector, EG 501/2004. According to this Regulation, which entered into force in 2004, both balance sheet values and transactions should be reported within 90 days of the end of the quarter. Reporting is to both Eurostat and ECB.

Apart from Eurostat, ECB also puts demands on the financial accounts. According to the Guideline (ECB 2002/7) quarterly financial accounts are to be reported to ECB within 130 days after the end of the current quarter. Since many countries do not have regular quarterly financial accounts, the work has been done gradually over time using a seven sector approach, in other words reporting is done step-wise for each sector. The work has now reached the stage where reporting is provided for all sectors apart from the rest of the world and to a certain extent other financial institutions (sectors s.123 and s.124).

As long as Sweden is not a member of the EMU, this requirement is not compulsory, but there are wishes that potential new Euro members should be prepared to provide reporting in accordance with the requirements which exist. The Riksbank is Sweden's counterpart at ECB in this work. Since Statistics Sweden already produces quarterly financial accounts

commissioned by the Swedish Financial Supervisory Authority, these are sent direct from Statistics Sweden to ECB without going via the Riksbank.

Reporting of government deficits and debts (EDP)

Regulation 3605/93 determines the reporting of data on the government sector's deficit and debts in accordance with what is called Excessive Deficit Procedure (EDP). The data is obtained both from the national accounts (deficit) and the financial accounts (known as the Maastricht debt).

Reporting takes place twice a year (March and September).

Reporting of the government sector's gross debts (as per 3605/93) as of the end of 2004 should also take place on a quarterly basis.

5 User contacts and user needs

In the final phase of the project, a number of important users were informally asked how they personally regarded the problems concerning shortcomings in reconciliation. There were no unequivocal answers. It is widely agreed that discrepancies gives rise to problems in drawing conclusions and analysis, but when it comes to measures to remedy this, views differ. Many take the view that Statistics Sweden should consider abandoning the current method of calculating non-financial corporations (residually), and instead base data on existing business statistics. This would create better opportunities to carry out i.a. analyses at the branch level. The business sector would also like to see more rapid information on profitability. Others, however, fear that putting greater priority on the company sector might mean that the figures on the government sector and households would become "less stable" than they are today. Not many have pointed out the need for financial statistics in their descriptions and analyses. This may be because the financial analysis in Sweden is undeveloped compared with a number of other countries.

The questions which were put :

- 1) Is it important that net lending shows essentially the same values if we make the calculations from the non-financial or the financial side?
- 2) How do you as a user handle discrepancies between the financial and national accounts? Are important analyses made more difficult?
- 3) We are considering changing calculation methods so that the corporate sector in the national and financial accounts will gradually be based on business statistics. This means that we will obtain better material for analysing changes in corporate profitability, investments and savings by industry etc. At the same time, it may be the case that the discrepancies must be allocated to other parts of the system (households, government sector, rest of the world), otherwise the calculations will not fit together at the aggregate level.
- 4) Would it be interesting and important to have greater insight into the corporate sector in the macro economic statistics, at the same time as statistical uncertainty could increase in other parts of the economy?

A sample of answers to question 1:

- "It is important, i.a. to reduce uncertainty about the reliability of the statistics. The discrepancies show that either one or the other side must be incorrect, or both".
- "Of course, it is important that net lending is essentially the same if we make calculations from the non-financial as opposed to the financial side. Normally we take as our starting point the NA values when it comes to net lending per sector. If one wants to analyse net lending in different sectors in greater detail, then the financial accounts have to be used, but what should then be done about the residual between NA and FA?
- "Generally there must be an effort to minimise discrepancies between net lending measured from the non-financial and the financial perspective. It is of great importance that the main aggregates such as households, the government sector and corporate net lending and also the ba-

lance of current accounts is reflected by reliable statistics. Today there are problems on that front. As regards government net lending, the effects of allocations to different accounting periods may sometimes lead to major revisions. When it comes to the balance of current accounts, it is important that the discrepancies in the balance of payments (residual entries) do not contribute to an incorrect picture of the economic position. It is thus in the first instance net exports of goods and services that must be correctly measured."

- "... major differences between NA and FA are very difficult for users to interpret. They create great uncertainty as to which source can be relied on."

A sample of answers to question 2:

- "Not only are important analyses made more difficult, e.g. those of a structural character, the effects of taxes, increases in interest etc on the sectors where there is incomplete financial information and also because of factors affecting the business cycle. But also, which perhaps may be worse, one tends to avoid making analyses when you know that data is lacking, or it is not reliable."
- ". the lack of good information about household savings is in my view a shortcoming. What one would really want to have is consistent micro and macro data for households' savings which is also consistent with the statistics on households' wealth assets."
- "The discrepancies between the Financial and National accounts mean that financial analysis at a detailed level become more uncertain. However, we mainly analyse the government sector and households."
- "Currently the financial accounts are used very little in the work. One reason is discrepancies between the national accounts and also between annual and quarterly data in the financial accounts. In addition, non-financial corporations are a residual item in the financial accounts. This means that in terms of definitions their delimitation is unclear and data quality is low. Most often, however, it is not important for monetary policy to be able to analyse in detail how a sector in the economy allocates financial assets/ liabilities by type of instrument or by corresponding sector. It is thus not likely that the use of financial statistical data in our work will increase dramatically even if a large amount of resources were invested in improving the financial accounts."
- "But there is another aspect which I think must be given great weight. The net lending of the government sector is not just any statistical indicator, but is used in areas where the figures are of operational importance. Thus - as is well known - both the national budget policy goal and that used in the EU is based on net lending in the government sector. Important budget decisions etc are thus influenced by this measure."
- "Regarding different sectors, financial assets and liabilities of the household sector are of major interest.. Differences in net lending between the financial and non-financial accounts are, of course, a source of difficulty but something we have learned to live with."
- "difficulties of interpreting the budget balance of the government sector are particularly serious in Sweden given its size. Our obligations with respect to the EU became unclear."

A sample of answers to questions 3 and 4:

- "We consider it important that the corporate sector is no longer a residual, but also see the problem of increasing discrepancies in other sectors. Based on our users, perhaps the function of the goal must be that Statistics Sweden stops using the corporate sector as a residual, providing the discrepancies in the other sectors are minimised. Whether it is possible or not we cannot determine, but it is not so good that such an important sector as the corporate sector is today a residual. At the same time we understand – perhaps not fully – why the discrepancies in the others must increase, when better data is produced. As a result of this, the total discrepancy in the financial accounts should in any case be reduced and that would be valuable "
- "Clearly shows how weak the GDP measure is, and how doubtful it is to focus so much on what we do in society and the economic policy discussion."
- "We are working hard on making simulations. In the model the corporate sector is a residual. This means that the effects which occur in the government sector and the household sector of various changes always feel slightly uncertain, since we cannot check that the result is consistent as we don't have any detailed calculations of the effects in the corporate sector.
- This is why it is interesting and important that the corporate sector be better illuminated in the macro economic statistics even though statistical uncertainty may increase in other parts of the economy. The statistical accuracy in other parts of the economy in today's statistics is based on the fact that we really don't know how accurate they are. "
- "Business statistics could be used much more than is the case today in the work of providing supporting material for monetary policy. The statistics can, for example, supplement the picture of profitability in the business sector which the national accounts give as the proportion of value added accounted for by the operating surplus. Statistics can also provide a basis for analysing the financial effects of investments. The prevailing situation in the business sector is of interest, but corporate statistics are based on annual reports.. Would it be possible for Statistics Sweden to publish more up-to-date business statistics, perhaps even statistics based on interim annual reports? ... In order to develop material for monetary policy, we do not need sophisticated detailed data for branches, but on the other hand current information about the main accounts and main aggregates."
- "If the precondition for getting better information on the corporate sector, is that measuring errors are introduced into the figures for the government sector, I am very doubtful about the wisdom of the proposal. The public interest in getting better statistics for the corporate sector must here be balanced by the specific interest in having a correct measure of the government sector.
- One idea would be to move the residual item to a different sector, e.g. households and thus make no adjustments to the government sector. But of course I don't know if this is consistent with what the system looks like and other principles on how the NA and financial accounts should be built up."

- "... thus firmly reject the proposal that a reconciliation between non-financial and financial accounts should in the first instance apply to the corporate sector and allocate the residuals to i.a. the government sector. The answer to question 3 and 4 is thus no."
- "The rate at which the operating surplus has changed currently plays a key role in assessing tax revenues from corporations in the medium-term. ... From the annual reports of companies, the following is compiled (i) operating profit (ii) operating profit after financial adjustments, (iii) profits for the period and (iv) taxes. A desirable improvement in official statistics would be to increase the correlation between operating surplus and company profits ...".
- "It is acceptable if the discrepancies are allocated to a number of sectors, provided that non-financial corporations are built on good primary data. It would be good if the size of the residuals were reported per sector.
- It would be very good if the calculations for the corporate sector could be used. A precondition is good primary data. Users need aggregated figures on changes in profits etc. Now they are compelled to try to produce aggregate data from the annual reports of companies. Efforts made by users to aggregate, for example, at the branch level do not correspond well with the NA's calculations on gross surpluses etc. Summary: If Statistics Sweden had good material for the calculations of the company sector, users would undoubtedly ask for and use the figures."
- "Good, if existing business statistics can be better used, but as stated above, I do not think it would be so good if the statistics for the household sector and the government sector were to become worse as a result. Should be possible to avoid. The answer is that business statistics should be used so that accuracy in all sectors is improved."
- "If we are to choose where errors occur, from our perspective it is more important that the household sector can be clearly interpreted in the macro statistics than the corporate sector. My view is that very little of the data for national accounts is used for company analysis. Profits, investments and savings per industry should not be given priority at the cost of households, and the government sector from the user viewpoint. The answer to question 4 is thus no."
- "We lack a coherent picture of profit changes in the company sector. In the USA this is published in connection with preliminary quarterly statistics for GDP".

6 Work completed

6.1 Investigatory work including interim reports in Background facts 2004:04 and 2004:12

So far, the work has concentrated on compiling data, mapping discrepancies, making analyses of return on capital and drawing up an interim report. The reports primarily describe the background to the project, indicate the analysis areas for net lending, throw light on discrepancies and their possible causes, as well as outline plans for future work. One part of the report contains an educational description of concepts and relationships in the subject area.

Education and the provision of information are important aspects of the work. A number of seminars have been held for staff at Statistics Sweden. The project has also been presented abroad, at workshops to the EU accession countries¹⁷, and at a conference hosted by Statistics Sweden on changes in economic statistics (Saltsjöbaden, October 2003 and 2004).

A study trip was made to ONS in spring 2004. Notes from the visit are in the Appendix to this report which can be obtained from Statistics Sweden.

6.2 Work in sub-projects during 2004

In the second phase of the project, seven sub-projects were formed. The work was carried out over a limited period – from February to 1 October 2004 (deadline for project reports). The idea was that certain questions which came up in the main project would be investigated and discussed in the working groups responsible for the calculations. Recommendations and proposals were welcomed, but were not a requirement. It was sufficient to document the results of the investigations and discussions and formulate some of the conclusions of the work.

Below follows a summary of the content of the sub-projects' reports.

Sub-project 1, non-financial corporations

The non-financial corporate sector can in principle be calculated residually in both NA and FA. This means that business statistics are not used to a satisfactory degree when calculating net lending.

The work has mainly focused on how the annual business statistics BS can be used in NA and FA.¹⁸ The following improvements were proposed in order to increase reconciliation possibilities NA/FA - BS.

- 1) The work on developing what are called NA-FA tables and in BS should continue so that the non-financial corporations can more easily be brought into NA and FA. Also proposed is that work in the future should be on population definitions, in the first instance regarding dormant companies, holding companies and real estate companies.

¹⁷ Under the auspices of Eurostat in Bratislava 2001, in Tallinn 2002 and Budapest 2003.

¹⁸ A more detailed description of the problem can be found in the interim report "Background facts for Economic Statistics 2004:4"

These companies make a marginal contribution to production value (operating surplus) but have large financial items. It is proposed work should continue on handling large companies and handling large dividends. The level of detail in the NA and FA tables will be reviewed with the aim of increasing quality of the different sub-items which determine net lending.

- 2) Year 2003 will be used as a benchmark for backward revision for all years up to 1997. When these annual rounds are finalised, the results for the different years can be implemented in NA and FA. In order to break down BS to a more detailed level in FA, it should be investigated whether BAST¹⁹ and other sources can be used to produce keys for disaggregation.
- 3) In order for FA to implement BS information on balance values is needed. Here we must develop a method to get the information in the same way as net lending in accordance with net lending in the NA/FA model.
- 4) To increase the possibilities for reconciliation, NA's branch calculations should be made at the sector level so that all adjustments which have an impact on NA/FA tables can be easily compiled. This wish also applies to other information for NA's sector production items. However, the information will not be published.
- 5) It is proposed that there should be an investigation of whether BAST should be expanded to completely cover profit and loss accounts and balance sheets. As a result the earlier preliminary statistics on results would be brought back. A brief description of this study follows below. For a more detailed description, refer to the special sub-project report.

From 1978 to 1996, Statistics Sweden produced rapid statistics on profitability of large industrial corporations. The study covered about 500 industrial companies covering different company forms i.e. limited companies, economic associations and partnerships, with at least 200 employees. All corporations with at least 500 employees were surveyed. Other corporations were studied in the sample and thereafter adjusted upwards. The results were presented both as a total and by branch. The companies reported were considered to account for about 65% of the turnover of all industrial corporations. The data concerned the interim results for the first six or eight months of the year and the results were published in October.

Examples of reported variables:

- Turnover
- Results before depreciation
- Depreciation
- Operating profit
- Net finance
- Results after net finances (but before extraordinary adjustments, balance sheet allocations and taxes)

Non-response was low in the survey. This was estimated as being 1.5% of total corporate turnover.

¹⁹The quarterly survey of the financial assets and liabilities of non-financial corporations.

Another measure which may be regarded as an alternative or supplement to an expanded BAST for performing rapid calculations is to investigate whether a preliminary BS is of sufficient quality and if it could be ready before NA and FA publish their annual calculations.

Sub-project 2, financial institutions

For the financial institutes, i.e. the financial corporations apart from insurance companies, the problem is comparing and coordinating the different statistical sources used for the calculations. The project has thus given priority to mapping the primary statistics which are the basis for or could be the basis for the calculations. The populations have been compared, and coverage, concepts examined in detail and compared with different statistical sources. Proposals for measures and future work:

- 1) It is important to make reconciliations between the monthly statistics of the Riksbank and standard reports of the Financial Supervisory Authority when calculating net lending – both in non-financial and financial terms. If the financial accounts start making greater use of standard reports, there is a higher probability of obtaining better correspondence between NA and FA when calculating net lending than if only the monthly statistics of the Riksbank are used.
- 2) The calculations should be consistent and reconciled in Statistics Sweden. The suggestion is that the unit for the Financial markets (FM) be responsible for the overall calculations.
- 3) In the long-term the ambition is that standard reports become more adapted to the needs of the financial and national accounts, especially on an annual basis. For example, the "other items" for reporting branches needs to be reported so that the items covered such as financial derivatives on the asset side and on the liability side are broken down, as well as differentiating between fund cash claims and debts.
- 4) If a source other than the standard report is used, this should be documented, particularly if net lending is affected.
- 5) To start the work of getting better correspondence between monthly statistics and standard reports, the FM unit will begin to carry out quality controls of reports from the four large banks. Reporting on foreign branches and their intermediates will be the subject of special analysis.
- 6) Methods for calculating taxes need to be coordinated between NA and FA.
- 7) The finance market programme will continue to correct the financial branches and sectors in the company database, FDB.
- 8) A review will be carried out in the financial accounts over the choice of matrix made when calculating net lending. The choice will be documented more clearly and in certain cases will be changed in relation to the current situation. The review is generally expected to lead to an increase in the quality of the financial accounts.
- 9) It is important to co-ordinate in terms of time the calculations between NA and FA. The NA calculations can be done much more quickly.

Sub-project 3, property income

Official statistics provide little information about interest and dividends. The data presented cannot be used for analysing the corporate sectors. The work has involved identifying problems and examining and partly evaluating earlier measures in the area. Valuable information was obtained from the project's study trip to the ONS in London. A PM on what should be defined as dividends has been written.

The goal is to build up matrices for interest and dividends which are sufficiently specific to provide a basis for analyses. A proposal for a matrix on interest is outlined in the report. It is possible to build up an implicit interest model based on the balance sheet values in the financial accounts on interest-bearing assets and liabilities as well as assumptions about interest rates. It should be possible to evaluate interest flows in relation to general changes in interest. No residually calculated items should be included in the calculation, which means i.a. that non-financial corporations must build on explicitly calculated figures (stocks). Allocation to corresponding sectors, i.e. information about to/from which sector interest is paid, may be simplified.

Sub-project 4. Insurance

The discrepancies in the insurance sector are very large. One reason is that calculations of household's insurance savings have not been coordinated between NA and FA. The work in the first stage in the sub-project has focused on coordinating these calculations. Definitions of insurance savings in NA and FA have been co-ordinated, but there are still major discrepancies in net lending. To solve this the following is proposed:

- 1) It has been stated that greater cooperation between the national accounts and the financial accounts is required. Amongst other activities, regular meetings should be held prior to each production round to check material, population, time series and calculations. It is important that both NA and FA are informed of changes such as those which are due to the detection of errors in the material. Both NA and FA should participate in investigations concerning insurance companies.
- 2) Criticism has been directed towards the material obtained from the Swedish Financial Supervisory Authority which is used in both NA and FA. More effective examination and quality auditing both at Statistics Sweden and the Swedish Financial Supervisory Authority is desirable.
- 3) Pension allocations in the municipal sector are calculated differently in NA and FA which has an impact on the insurance sector. Comparisons of occupational pensions between NA and FA would be easier if this problem was solved.
- 4) The difference in lending between NA and FA should be investigated in greater detail. FA must examine the causes of the unreasonably large negative figures for net lending, especially from years 1999 and 2000.
- 5) Statistics Sweden must work in such a way that the Swedish Financial Supervisory Authority's insurance forms better fit the purposes of the statistics. In addition, the new calculations for insurance savings and non-life insurance should be implemented in the annual calculations for 2003 in NA and FA.

- 6) Statistics of the financial assets of charitable institutions must be improved, and statistics should also be collected on pension funds.
- 7) Possible differences resulting from duplication of work will be made easier when NA and FA have access to each other's calculation material. This can be solved by putting the files on a server and allowing both NA and FA access to them.

Sub-project 5. Households

One major problem is the consequences of the coordination of calculations implemented in the middle of the 1980s, and which means that net lending is made the same in NA and FA and that the discrepancy which occurred is reported as "other" financial assets of households. Since the values of NA have systematically been higher than those of FA for net lending, a considerable stock of wealth has been built up in the financial accounts. This has often been interpreted as a measure of household's unreported assets abroad.

There is every justification for a new calculation model. As preparation for a more extensive change in methods, the sub-project has focused on examining the account items in FA in order to determine if the statistics can be made more comprehensive. Here there were expectations that the residual item could be reduced by proposing an explicit calculation of households' other accounts, receivable/payable. Proposals for improving certain account items have been presented in the project, but no concrete results have yet been achieved. The arguments for and against closer organisational coordination between NA and FA have been discussed. Proposals concerning subjects and methods are the following:

- 1) As regards the question of whether residual items shall continue to be reported as now, i.e. as other financial assets in the financial accounts or explicitly for other sectors, no conclusion has been reached nor proposal put forward in the sub-project.
- 2) Periodisation of taxes and interest etc must be coordinated between NA and FA.
- 3) The category of non-life insurance should be incorporated as soon as possible in FA. The data material is available.
- 4) NA's standard supplement for unreported incomes of 5 % of GDP should be developed (see proposal from the Commission SOU 2002:118).

Sub-project 6.1. Central government sector and social security

Above all the problem relates to shortcomings in the implementation of ESA95 and difficulties in measuring financial derivatives in the social security sector.

Transition to ESA95 in terms of NA reporting, means using the accrual principle, i.e. periodised reporting. In terms of FA, this means that accrued items shall be introduced corresponding to the difference between cash and accrual accounting. Periodised items according to ESA 95 should be done for i.a. taxes and social fees. No such items are put into FA.

The conclusion is that comparisons must be continuously made and continue after accrual items and transactions for derivatives have been included in FA. It should thus be easier to identify a large number of areas.

The results of the group's work can be summarised in the following proposals for measures

- 1) Supplement FA with accrued items in the first instance for taxes, social contributions and EU grants.
- 2) Transactions in derivatives are entered into FA
- 3) The national pension funds' (AP funds) definition of interest needs to be examined by NA.
- 4) Update the population in FA by following up changes in the balance sheets.
- 5) Classification in NA and FA: Investigate the Arlanda link and A-train

There are extensive statistics for the state and social security sector. What has been lacking until now is an overall review of statistics in the area, and a comparison and evaluation of them. Greater use should be made of ESV's material. In addition, data in the annual accounts of the state should be compared and analysed, as well as data in budget forecasts and in budget bills. The tasks of the Riksbank vis-a-vis the rest of the world should be coordinated with those in the ESV (Swedish National Financial Management Authority) material.

Apart from the five points mentioned above which the project considered most important to remedy, there is much to do in terms of taking advantage of ESV's material on the annual reports of the authorities. Financial items reported by the authorities are an example of what can be compared with the reports FA makes use of. ESV's material could perhaps also be used to update the population in FA.

Sub-project 6.2. Local government (Municipalities and County Councils)

The problem is that difference in net lending between NA and FA are mainly due to inconsistencies in the basic material and between different data sources. The work has been divided up into three different stages.

The first stage has been to map the differences in net lending between NA and FA and study their causes. Mapping shows that there are major differences between NA and FA which are mainly related to two different sets of factors. One reason is that there are inconsistencies in the different parts of the summary of accounts of the primary municipalities.²⁰ i.e. that the profit and loss statements and balance sheets are not consistent. Another is that NA and FA do not make use of SUMA for primary municipalities and county councils, but rather use information from a number of different sources. This data often differs from that of SUMA.

The second stage has been to go through the primary statistics and see what improvements can be made there. Until now only the differences between the balance sheet in SA and FA's quarterly sources for the financial assets

²⁰Summary of accounts abbreviated to SUMA.

and liabilities of the county councils and municipalities²¹ have been studied. The review shows that many of the differences between both of the investigations arise from the fact that MAL/CAL is reported at a time when not all annual reports are ready. Not much can be done about this.

The third stage has been to go through the calculation routines of NA and FA and see what can be coordinated there. The review shows that there are calculation routines which can be improved in terms of income taxes and central government grants. NA uses different sources for these items. This is also something that FA should take into account in their calculations. Other calculation routines which can be improved are FA's use of balance sheets in SUMA for primary municipalities. Here a number of diverse items are lacking which should have been entered in both the asset and liability side.

The sub-project proposes a number of measures be taken to improve correspondence in net lending between NA and FA. These are measures concerning both primary statistics and calculation routines, as well as subject/method.

- 1) Primary statistic should be improved so that there is correspondence between external income/expenditure and the balance sheet in primary municipalities' SUMA. The unit for public sector finances PSF needs to investigate this by calculating net lending according to both sides for the respective municipalities.
- 2) The correspondence between the balance sheet in SA and MAL/CAL must also be improved. Work has already been initiated with 18 municipalities, but must also continue with other municipalities.
- 3) Calculation routines should be improved by making adjustments in FA for reallocation of income taxes and for the use of other sources for central government grants in NA. It is fairly simple to do this.
- 4) More important areas to remedy are to go through and examine FA's choice of other sources. The other sources differ very much in terms of the information in the balance sheet and contribute substantially to differences in net lending between NA and FA. The financial accounts should also make greater use of balance sheets. Today there are items lacking in the balance sheet, which must be entered and certain rows must be further disaggregated to be used.
- 5) Measures needing to be taken concerning subject/method in the first instance are the treatment of individual pensions. Here help could be received from knowledgeable persons in the area so that there could be agreement on proper treatment from both an NA and FA perspective.

The conclusion that can be drawn from the work in the sub-project is that a pre-requisite for correspondence in net lending between NA/FA is that the same basic source is used for the different calculations, i.e. SUMA for primary municipalities and county councils.

It can be mentioned that there have been diverging views in the project concerning conclusions and what it is important to remedy. In principle there is agreement on what measures should be implemented, but from the

²¹The financial assets and liabilities of the municipalities and county councils are abbreviated to MAL/CAL.

perspective of the financial accounts it can be pointed out that the lack of consistency within the primary statistical material, SA and MAL, is a major problem which must be solved before measures for linking the statistics to NA and FA are taken.

Sub-project 7, rest of the world

Despite the fact that residual items in the balance of payments and the corresponding items in the NA system are very large and an important cause of shortcomings in consistency in the domestic sectors, the sub-project has had a limited ambition. It was not thought to be possible within the limited time and resource frame of the project to provide a complete comparison in line with earlier investigations. A number of current issues have been handled. Observations and conclusions are the following:

- 1) Explain the major differences in level between NA and the Riksbank concerning not only the balance on current accounts (essentially net lending), but also the different components in the balance of current accounts (trade in goods and services, return on capital, transfers) in recent years.

The problem has been ventilated in the ongoing debate concerning the importance of the large surpluses in the balance of current accounts of the Swedish economy. It can also be noted that the Ministry of Finance in its budget bill uses the Riksbank's on the balance on current accounts also as a measure of total domestic net lending. This means that i.a. another residual item is added to corporate savings in the ministry's description of total savings in the country. There is ongoing cooperation between the Riksbank and NA for the purpose of achieving a common PM describing the differences in the balance on current accounts and how the different figures are to be interpreted.

- 2) The attempt to draw up a joint model for estimating household investments abroad.

The question has been discussed by Statistics Sweden and the Riksbank. Some hypotheses were set up based on different assumptions as to what rational behaviour is if you want to transfer money out of the country without too much difficulty, either for taxation reasons or because the return on capital on foreign assets is expected to be higher. One model could take as its starting point the fact that foreign investments make up a certain proportion of household savings for the respective years. The conclusion, however, was that it might be inappropriate to make an explicit calculation based on uncertain assumptions since there is a risk that this might be understood as a more or less official figure.

- 3) The overestimate of foreign trade occurring through Intrastat should be further investigated.

A short interim investigation (see appendix to the sub-project report) shows that what are called mirror statistics in the EU present systematic asymmetries between exports and imports in the Intrastat system. The reason, amongst other things, is that there are incentives to make illegal transactions, or rather to use the VAT rules in an illegal way.

7 Reconciliation procedures, organisation

7.1 Methods

Net lending is in principle calculated for NA and FA independently of each other. Two values are published for one and the same concept²². Often there are major differences. It is a policy issue whether the goal should be that discrepancies be completely eliminated or reduced to acceptable levels in the reconciliation work. Real improvements should preferably be achieved so that the underlying calculations become more consistent and reliable, thereby reducing the discrepancies.

If the ambition is to more or less eliminate discrepancies, more than cosmetic attempts must be applied as a complement, namely to link the underlying calculations so that they are consistent with each other. This is also conceivable for net lending. Another alternative is to allocate discrepancies to some other item in the accounts, usually the financial accounts.

In general, we can distinguish three strategies or combinations thereof.

- 1) To openly report discrepancies, i.e. report two values for net lending for each sector - a calculated non-financial value and a calculated financial value.
- 2) To hide all discrepancies, i.e. report a single value and adapt the underlying aggregates.
- 3) To allow discrepancies up to a certain size, or alternatively, within certain pre-determined intervals, report two values but in certain cases (for large discrepancies) adapt the underlying aggregates.

Statistics Sweden in principle applies alternative 1. The exception is the calculation of household savings in the financial accounts, where alternative 2 is applied. A clear drawback in doing this is when the differences are systematic. Discrepancies accumulate and build up stocks of unexplained/undiscovered financial instruments.

7.2 What is the situation in the rest of the world?

See the following figure for some selected countries.

Spain

The government sector, the financial sector and the rest of the world are balanced (net lending is made the same), while discrepancies are reported for non-financial corporations and households. The Spanish model for reconciliation of net lending is an interesting example of how strategies 1 and 2 above can be combined. The work of compiling national and financial

²² Eurostat has solved this problem so that "net lending" according to NA is the official net lending, while the corresponding balance in the financial accounts is referred to as "net financial transactions".

accounts is carried out jointly by Banco de Espana, BE and the statistical institute, INE. INE does the NA while BE handles the FA.

Two separate teams work on the calculations. The first covers the financial sector, the government sector and the rest of the world (balance of payments). For these sectors, net lending should be identical in accordance with both the non-financial and financial calculations. In the majority of cases the non-financial value calculated applies, while discrepancies in the calculations are allocated to other financial assets, F.79 in the respective sectors. This solution can be justified by the fact that the coverage of the government sector and the financial sector is complete with consistent data material. This is, however, not the case for the rest of the world sector, but nevertheless the fact that one balances this sector may be because there are important analytical needs for presenting a single value, and possibly because it is considered impossible to reconcile the calculations so that the discrepancies are at a reasonable level. Compare this with what was stated on page 8 in the summary. It can be noted that there has been a conscious decision not to follow Article 5.122(d) in ESA 95 which states that "errors and omissions" should not be classified in Category F.79.

The second team takes care of non-financial corporations and the household sector. In this respect Spain lacks consistent, comprehensive data material compared with what exists for financial corporations and the government sector. The view is that there is no basis for choosing one or the other value as being more reliable. The final value is thus determined in the NA and FA (separately) after quality checks and reciprocal adjustments, without, however, reaching a common value for net lending. The result is that the Spanish national and financial accounts provide a consistent picture of net lending patterns in the economy. The discrepancies reported, namely only those for non-financial corporations and households, with the same amounts but with opposite signs amounted on average to 0.3 % of GDP for the period 1995 – 2003 with minor variations between the years.

Germany

The government sector, financial sector and households are balanced. Discrepancies are reported for non-financial corporations and the rest of the world i.e. the residual item in the balance of payments occurs with a reversed value in the corporate sector. The work is shared between the central bank and national statistical offices. The German model is similar to the Spanish with three balanced sectors and two with openly reported discrepancies. The difference is that in Germany households are reconciled as opposed to the rest of the world. It is unclear whether this is because of the quality of the data material or to satisfy particular analytical needs.

Finland

In Finland discrepancies are reported separately for all sectors (strategy 1). The discrepancies are high in the household sector but low in the government sector.

UK

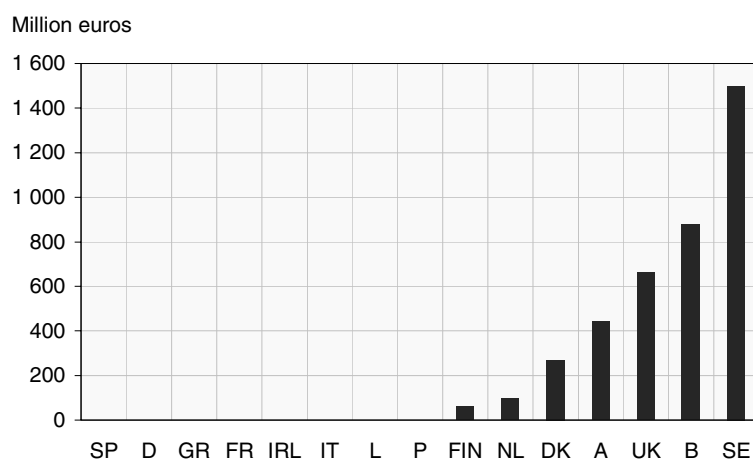
In the UK, strategy 3 above is applied. Discrepancies within a certain interval are allowed – approximately Pounds 10 billion for each main sector, apart from the government sector (1 billion). See further section 7.3

Common to all the countries investigated above, is that the discrepancies reported in net lending are lower than in Sweden. This applies particularly to the government sector where discrepancies are non-existent or very small.

Government sector – Sweden has the largest discrepancies

A comparison with all the former 15 EU member countries provides a similar picture. The Swedish discrepancies are very large. This is evident from the figure which shows the discrepancies from the reports of deficits and liabilities for the Stability Pact (EDP reporting). 2002 may be regarded as a "normal year" in terms of the size of the Swedish discrepancy.

Figure 2
Statistical discrepancies (differences in net lending NA – FA for the government sector) based on EDP reporting. Year 2002



7.3 Example – ONS (Office National statistics)

A study trip to the British statistical agency, ONS, was part of the project. The aim of the visit was to get information about the work on sector accounts and financial accounts, reconciliation of calculations, handling discrepancies, use of statistics, as well as work routines and work organisation. ONS has integrated the work of developing sector accounts with the production of national and financial accounts, as well as statistics on the balance of payments.

The "NA department" at ONS, NAG consists of approximately 210 persons. NAG has responsibility for annual and quarterly calculations within a broad subject area:

- 1) GDP calculations from the production, expenditure and income side
- 2) Institutional sector accounts
- 3) Financial accounts (flows and balance sheet values)

- 4) Balance of payments
- 5) Special accounts for the government sector

There are what is known as compiler teams with responsibility for GDP, non-financial corporations and stocks of capital, financial corporations, foreign trade, government sector, households, gross capital formation and balance of payments.

Compilers are experts within their area, but may also be responsible for transactions which overlap different areas, such as e.g. share transactions. One sector expert checks that the statistical data of corporate profits (more about this below) is consistent with changes in GDP, financial transactions, interest, dividends and net lending. It can be noted the work on the financial accounts is primarily carried out within the framework of sector accounts for the different sectors. It is only after compilation that a complete picture of the financial accounts is obtained.

An important task for compilers is to maintain contact with data suppliers, i.e. those who produce and supply primary statistics.

Since the corporate sector is not used as the residual in the reconciliation, it is based on the primary statistics. The non-financial corporate sector is broken down into two sub-sectors, public and private non-financial corporations. The information for public corporations is based on quarterly surveys to the largest companies, supplemented by information from published annual accounts and administrative material from ministries (e.g. National Health Service Trusts). The information on private corporations comes from data on profits which are collected by the Inland Revenue in standard tax returns. ONS uses a sample of 35 000 of the 200 000 largest corporations. These account for approximately 85% of the profits which are subject to corporate tax.

A new model for calculating interest and dividends was developed at the beginning of the 1990s. Earlier data was obtained from different sources, on an ad hoc basis and differently for different institutional sectors. The new model builds on logical connections between underlying financial assets and liabilities, and also interest and dividend flows. The method is common to all sectors.

What is known as DIM (Dividends and Interest Matrix) has fairly general divisions and lacks information on corresponding sectors (i.e. to/from whom one has given/received specific interest or dividend payment). The model was developed before ESA95 and it is somewhat unclear as to the extent to which the model is adapted for accruals. By consistently building up both stocks and income-expenditure flows, implicit interest rates can be calculated throughout.

In terms of reconciling net lending between NA and FA, the starting point is that the calculations should theoretically provide identical results. In practice it is virtually impossible if residuals are not allocated to one or the other calculation. ONS tries to adjust the calculations within certain specified goal intervals known as "relaxed targets". These differ between sectors so that for the government sector a discrepancy of only £1 billion is accepted: For households and the corporate sector, the permitted interval is £ 7–10 billions while ONS for the rest of the world (residual entry in the balance of payments) accepts an annual difference of £ 10-15 billion. It is the finan-

cial accounts which normally have to be subordinated since adjustments to net lending in NA has consequences on the non-financial calculations, including GDP. According to a representative of ONS: " GDP is the thing that you don't change, the SFA (sector and financial accounts) reconciliation process does not have any effect on GDP. Does not think of challenging any GDP areas". i.e. GDP calculations are not normally affected by contradictory information from sector and financial accounts. On the other hand, reconciliation allows us to get a consistent and reasonable picture of net lending disaggregated by different societal sectors. This provides users with better material for analysing changes in the different sectors.

The reconciliation model applied by ONS, however, does not solve the fundamental problem of input data which give different results. If lower discrepancies are achieved or identity between the two calculations, then the problem will resurface elsewhere in the system so long as use is not made of some means for "allocating" the discrepancies.

In terms of reconciliation in the financial accounts, there are two types of balancing . The first is called "Transaction line balancing" which in principle is based on allocating liabilities to the corresponding sector (data on liabilities is regarded as more reliable). For financial instruments lacking complete allocation to corresponding sectors, residual calculations are used. The residuals, i.e. the differences between total assets and total liabilities, are allocated to the sector or sectors for which either there is no or little information and this, of course, depends on what financial instrument is involved. The sectors for which there is least information are households including households' non-profit organisations, rest of the world, and in certain cases private non-financial corporations, as well as other financial institutes (OFI's, ESA-code s.123 and s.124).

The second type of balancing which is done involves the change between stocks and flows. Some financial instruments are compared with relevant indices. ONS has, however, no revaluation account implemented. A common way of looking at errors is to analyse changes in the residual sector and levels, and many errors are detected in this way.

ONS has a common revision and publication policy for all statistical areas.

A distinguishing characteristic of the British system is a high degree of coordination between the different statistical areas. At the same time responsibility and powers are rigorously delimited within ONS when it comes to different phases of the statistical work, at least on paper. Decision-making processes and responsibilities are clear. Sector- and financial accounts appear to have greater weight in the calculations and analysis than is the case in Sweden. This is mainly observed in making the corporate sector more transparent.

7.4 Ongoing organisational review within Statistics Sweden

Viewpoints in the sub-project (see section 6.2)

Reports from the sub-projects contain a number of views and proposals for changes in work routines. This mostly deals with increasing coordination of calculations. In general wishes have been expressed for increased co-

operation and coordination of the work at the sector level. Shortcomings in communication is one view which often recurs. In addition, there are shortcomings in the information about changes and there is uncertainty as to who makes decisions. The fact that calculations are made at different points in time and that revision and publication policy differ are both problems which are mentioned.

Discussion within the Economic Statistics department concerning closer cooperation between NA and FA ²³. Summary, conclusions

It has been stated that it is important that the discrepancies due to internal factors (organisation etc) be remedied. The user perspective should be instrumental in the analyses and also for how discrepancies are to be reported. Greater cooperation and an overall view is required as is better documentation. Clear processes for managing and how changes are to be handled should be created. A coordination group should be built up along the lines of the English model. FA - work should be streamlined (no work on primary statistical production).

Sub-objective

Given the background of what is stated above, a number of sub-goals were set up for possible changes in the organisation. The following should be achieved:

- increased coordination of calculations at the sector level
- as far as possible common statistical sources should be used
- improved communication
- greater information about changes
- more common decision-making
- broaden competence, create a shared knowledge base
- increased reconciliation with other economic statistics (business cycle statistics etc)
- more structured documentation of contacts with primary statistics
- NA-FA personnel should not produce primary statistics
- joint actions at international level/joint revision and publication policy

Principal decisions

A principal decision was made containing the following factors and proposals:

NA and FA should together form a new unit at DES. This is probably the best way of achieving the sub-goals set up.

The decision was made prior to a possible new division of units in the department (a consequence of the major changes which are currently underway).

²³In connection with the investigation carried out by the Department of economic statistics concerning the transfer of work tasks from the NA unit to the public sector finance unit (OE), the conditions were discussed for possibly putting together NA and FA into a smaller project group. This work has continued and should be finalised by April 2005.

The role of the analysis unit in the reconciliation work on net lending between the non-financial and financial accounts will be further investigated.

A new investigation will start at the beginning of 2005 with the task of examining how the work of national and financial accounts is to be organised.

Sketch

A preliminary non-binding outline of the new organizational unit has its starting point in how the English and the Dutch have organised their NA work. The proposal is the following:

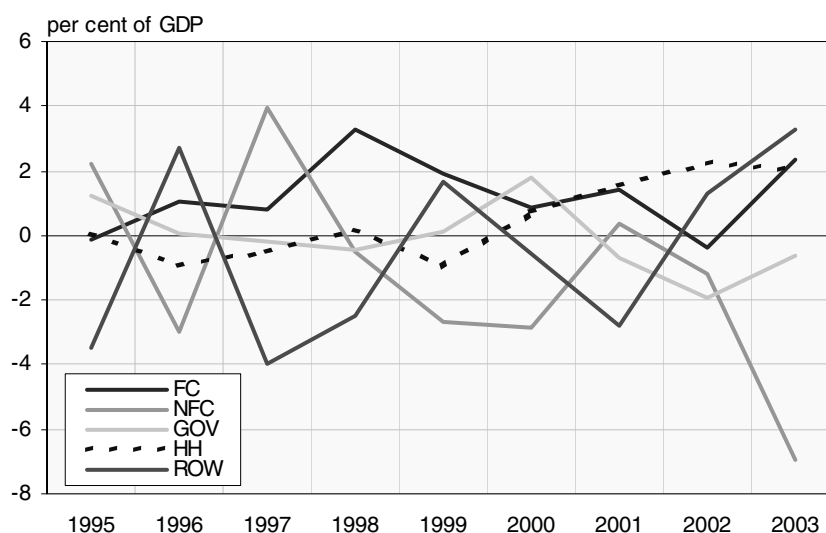
- The new unit is organised into calculation groups based in the first instance on institutional sectors (non-financial corporations, financial corporations, the government sector, households, rest of the world).
- Within each group, product accounts PA, sector accounts SA, and financial accounts FA, are calculated and in principle compiled.
- The groups are in principle responsible for handling the contacts with primary statistics.
- SLA (service level agreement) agreement should be established, documentation should be structured.
- Calculations should be both annually and quarterly.
- A coordination function be established (corresponding to "centre" at ONS) for coordination, reconciliation, analysis. In the first instance for SA and FA, but possibly also PR, and later national wealth calculations, NF, and possibly the balance of payments, BOP.
- Regular checking meetings should be held where persons from outside the NA unit should also be involved, e.g., from Economic analysis unit.

It is important that competence concerning the whole subject area in the units and in the groups is represented in the management of the unit and the group.

8 Results, analysis and assessments

Project work has been underway since March 2002. The origins of the project were the major differences in net lending calculated in non-financial terms in NA and financially in FA. The main aim of the project has been to explain and propose measures to reduce discrepancies.

Figure 3
Discrepancies in net lending NA– FA. 1995 – 2003, according to calculations in November 2004. Per cent of GDP



FF = financial corporations

NFC = non-financial corp.

GOV = government

HH= households

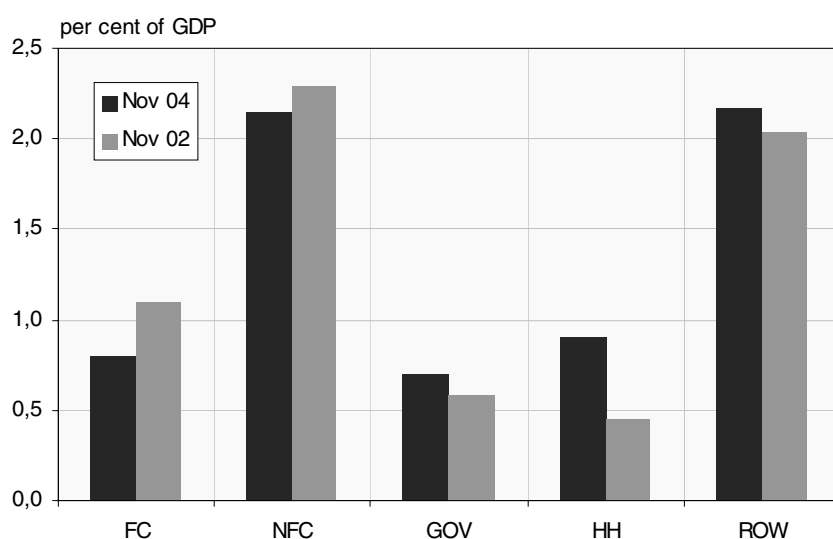
ROW = rest of the world.

The statistical picture at the end of 2004 of comparisons of net lending calculated in non-financial and financial terms still reveals very large discrepancies.

When we started the project in 2002, the statistical "position" could be summarised in a "sprawling" diagram of discrepancies since 1980. Particularly prominent were the changes after 1989, which could be largely attributed to deregulation, structural transformation and globalisation with their consequent negative impact on the statistics. The picture we have now, approximately two years after the start of the project, shows a similar pattern. For certain sectors, the picture is better, for others worse. A comparison of average deviations from earlier vis a vis the situation today shows that these have actually increased somewhat since the start of the project. This depends, however, almost exclusively on the poor correspondence for 2003 (published in November 2004). The discrepancies (net lending NA minus net lending FA) amounted to 57 billion in the financial sector, and to 170 billion in the non-financial corporate sector, to 48 billion among households and 80 billion in the rest of the world sector. For the government sector, the position is somewhat better (SEK 15 billion in discrepancies year 2003).

The average deviations during the period 1995 to 2003 are thus still unacceptably high in principle for all the main sectors. Compared to the situation two years ago, no substantial improvements can be perceived. For government sector, households and the rest of the world it is more a question of deterioration. Some improvement has taken place in the financial sector. The figure below shows the average discrepancies in absolute figures (i.e. irrespective of sign) for calculations in November 2002 and 2004 for the periods 1995 to 2001, and to 2003.

Figure 4
Discrepancies in net lending in the national accounts - the financial accounts.
Averag deviations 1995 – 2003 (2001)



However, the primary task of the project has not been to eliminate or drastically reduce the discrepancies during the time of the project. The task has been to map out and propose measures to enable the discrepancies to be reduced.

The results which have emerged are that the lack of consistency in the statistics is due to both external and internal factors. International structural change, globalisation, valuation problems and complicated financial constructions exacerbate the difficulty of making accurate measurements. It is thus not entirely justifiable to make a comparison with the situation 25 years ago, as regulations and stable structural conditions at that time provided good prerequisites for producing consistent statistics. Internal factors (in Statistics Sweden) have also played a major role in the occurrence of discrepancies. This involves how we make our calculations, but also whether there are shortcomings in coordination, cooperation and work routines. The current work organisation does not contribute positively to increasing the reliability of the statistics, but might in fact create obstacles.

A major shortcoming is that there is a lack of reliable information concerning the non-financial corporate sector in the national and financial accounts. The corporate sector is a residual in the calculations, which makes interpretation and analysis of the information presented more difficult. Another shortcoming is the lack of information on property incomes and expenditures (interest and dividends) of the sectors.

The statistical material for making calculations concerning the government sector and financial corporations is relatively substantial and rich in detail. It should, however, be noted that the underlying material is used for reporting and supervision, and is thus not primarily adapted for statistical purposes. Furthermore there are problems with a lack of consistency in the material and between the annual, quarterly and monthly reports.

Concerning the question of reconciliation procedures i.e. how to best balance the same calculations and what is presented to users defies simple solutions. Different countries use different methods depending on the statistical material they have available and institutional (organisational) conditions in different countries. It is hardly meaningful to copy another country's model before implementing certain measures (in terms of content and organisationally).

The view is that discrepancies in the domestic sectors can be substantially reduced by systematically examining and remedying the shortcomings identified in the project work. In all probability the measures proposed in the different sub-projects would make a significant contribution to reducing/ eliminating residual items. It is possible that thereafter we will not need to apply any special general rules for reconciliation.

However, it is significantly more difficult to see how the rest of the world could be reconciled so that the differences between the balance on current account and financial balances are substantially reduced. Here perhaps a somewhat more drastic solution needs to be tackled, such as, for example, allowing the non-financial calculated value to apply as the balance on current account in the financial calculation as well. There is also a difference between the balances on current accounts as used by NA and the Riksbank. This may be largely related to differences in the revision and publication policy of Statistics Sweden and the Riksbank.

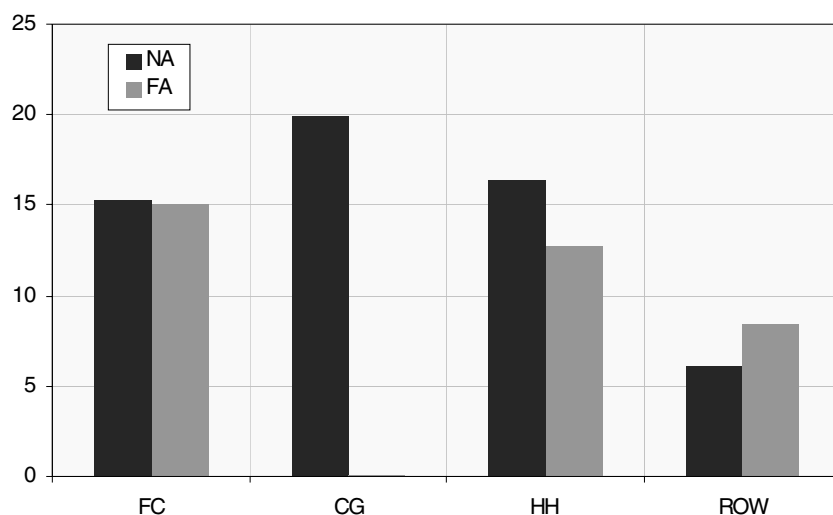
Despite these efforts to develop institutional sector accounts in recent years, the view is that the information is too insubstantial and with shortcomings in a number of respects. Sector accounts are published on the web site of Statistics Sweden under the heading National accounts (Nationalräkenskaperna). Since they have not yet been incorporated into the official databases, it may be difficult for users to find information about income transfers between different sectors, about savings and savings ratios, and also information about the foreign sector (balance on current accounts). In addition, as mentioned above, there is a lack of information about interest and dividend incomes, both separately and by sector. Such data is calculated in the NA system for all sectors apart from the non-financial corporations (only net calculations). This information will start to be published as of autumn 2005.

One thing which has an impact on the reported differences between FA and NA are revisions of published figures. As mentioned earlier there is no common publication or revision policy for the two statistical products. Implementation of the European system, ESA95, has in addition not taken place in a coordinated way, which means that one-sided changes have had a direct impact on increasing discrepancies.

One example is the central government sector. Here major transfers of tax revenues have taken place in NA between individual years as a result of

changes in the rules for different tax accounting periods. A comparison of the state's net lending according to the November calculations in 2004 with the corresponding year 2002 shows that the average annual revisions in NA amount to SEK 20 billion, but totalled over the whole period 1995–2001, the revisions only amount to 2 billion. The reason is a transition to accrual accounting of taxes in autumn 2003. The state's net lending changed, for example, in year 2001 by SEK 46 billion. The corresponding values of the financial accounts are, on the other hand in principle completely unchanged for the current years if what was presented in December 2004 is compared with the report two years earlier. However, there are also examples of revisions carried out in principle at the same time between NA and FA. These are the very substantial transfer of pension savings from the household sector to financial corporations – in total about 100 billion during the period.

Figure 5
Revisions in net lending years 1995 – 2001. Comparisons of November calculations in 2004 with the corresponding ones for 2002. Annual average. SEK billions



FC = financial corporations

CG = central government

HH = households.

9 Proposals and recommendations

The overall purpose of the project has been to bring about greater correspondence between the non-financial and financial parts of the statistics. The investigation has shown that there are weaknesses in Swedish statistics. These relate to how we calculate, but also whether there is reliable information on non-financial corporations in the national and financial accounts. Another shortcoming is the lack of information on interest and dividends.

In order to solve the problem the project proposes a number of measures²⁴. Not only are there proposals for changes and improvements in calculation methods, how the statistics are used, and how the underlying statistical material for calculations can be improved. But they also deal with proposals for changes in work routines and work organisation.

The question of changes in work organisation is being further investigated, however, in a special project, within the framework of a general review of the organisation of Statistics Sweden. What has come out of the project Net lending and is indisputable, is that closer cooperation and more coordination in the first instance between the unit for national accounts and the unit for Financial markets (FM) is necessary for improvements to be achieved. This is also the starting point for the process in the future. The exact forms of co-ordination will be developed in the investigation work in the future concerning a new organisation. The project thus does not propose concrete measures for changes in the work organisation. These will be taken care of in the new project.

As regards the proposal concerning subjects and methodological issues, there are three categories of proposals. *The first* contains general recommendations and proposals for raising the level of ambition. *The second* is concrete measures whose implementation in 2005 is considered vital. They are expected to make a contribution to explaining the residual entries and the elimination of discrepancies and have in addition the nature of "easy pickings", in the sense that they are considered to be relatively simple to implement. The need for resources varies, but in most cases involves marginal resources. *The third* category of proposals are those which have materialised in the work in the sub-projects and which it is considered should be implemented in the slightly longer term. These proposals can be found in the reports of the sub-projects and are not presented here.

General recommendations and proposals

- 1) An ongoing initiative on non-financial accounts by institutional sector at the NA unit would be desirable for developing methods and tables, as well as their dissemination and analysis. Coordination of the financial accounts is necessary.
- 2) The method of calculating non-financial corporations residually should be phased out and replaced by a model based on existing business sta-

²⁴This is a proposal which is based on the project work carried out during the whole period (since 2002) including the proposals that were made from the sub-projects during 2004.

tistics. The fundamental issue of reconciliation and allocation of residuals must be solved.

- 3) Other items in the household sector should be investigated and explained, alternatively new calculation models should be brought into FA. This should be done at the same time as unreported incomes (black) are investigated in terms of NA's income calculations since there is a great deal of uncertainty in these figures.
- 4) Cooperation with the Riksbank should continue and preferably be developed and intensified so that the discrepancies in the rest of the world sector/statistics on the balance of payments can be held down to reasonable levels.
- 5) Revision and publication policy in Statistics Sweden and between Statistics Sweden and the Riksbank should be investigated and coordinated. This means above all coordinating annual and quarterly publication dates of FA with the corresponding non-financial calculations.
- 6) Work on sector and classification questions should be given higher priority. Differences in classifying institutional units is one cause of the occurrence of discrepancies between NA and FA.

Measures which are considered vital for implementation in 2005.

- 1) Tax periodisation in NA and FA should be coordinated i.e. the correctional item should be introduced into FA. The new tax accounting periods in NA (full accrual basis) is one cause of the major discrepancies in the state, corporate sector and household sectors. Responsible NA and FM units.
- 2) An alternative model for calculating net lending for social security from the financial side based on a common (NA/FA) form with extended result items should be examined. Financial derivatives can possibly be derived from the residual amounts. Responsible FM unit together with the NA Unit.
- 3) Causes of the lack of consistency between profit and loss accounts and balance sheets in the municipal summary of accounts should be investigated and remedied. Responsible unit for public sector finances, PSF.
- 4) Causes of the lack of correspondence between quarterly credit market statistics for the municipalities and county councils and their respective balance sheets in MA to be investigated and remedied. Responsible OE unit.
- 5) The discrepancies in the financial sector for years other than 2001 should also be studied in greater detail. Responsible FM unit.
- 6) Calculations of pension allocations in the municipal sector should be co-ordinated. Responsible NA unit and FM unit.
- 7) Doubtful classification of major non-life insurance companies in the statistics should be checked. This possibly concerns a life insurance company. Responsible FM unit.
- 8) Preliminary annual business statistics, alternatively on a quarterly basis, should be built up through supplementing the quarterly survey of non-

financial corporations' balance sheets, BAST with profit items. Responsible FM unit, alternatively SBS, unit for structural business statistics. .

- 9) Work on developing what are called the NA- FA tables in annual business statistics should continue so that non-financial corporations can more easily be brought into NA and FA (supplemented by balance sheet values, continue work with population definitions, handling of large companies and large dividends). Responsible SBS unit together with NA unit, FM unit and the newly formed unit for submission of corporate information (CI unit).
- 10) Interest and dividend matrices drawn up for incomes and expenditure, and paying/ recipient sector should be developed. Responsible NA unit and FM unit.

- 2004:01 Hjälpverksamhet. Avrapportering av projektet Systematisk hantering av hjälpverksamhet
- 2004:02 Report from the Swedish Task Force on Time Series Analysis
- 2004:03 Minskad detaljeringsgrad i Sveriges officiella utrikeshandelsstatistik
- 2004:04 Finansiellt sparande i den svenska ekonomin. Utredning av skillnaderna i finansiellt sparande Nationalräkenskaper, NR – Finansräkenskaper, FiR
Bakgrund – jämförelser – analys
- 2004:05 Designutredning för KPI: Effektiv allokering av urvalet för prismätningarna i butiker och tjänsteställen. Examensarbete inom Matematisk statistik utfört på Statistiska centralbyrån i Stockholm
- 2004:06 Tidsserieanalys av svenska BNP-revideringar 1980–1999
- 2004:07 Labor Quality and Productivity: Does Talent Make Capital Dance?
- 2004:08 Slutrapport från projektet Upps snabbning av den ekonomiska korttidsstatistiken
- 2004:09 Bilagor till slutrapporten från projektet Upps snabbning av den ekonomiska korttidsstatistiken
- 2004:10 Förbättring av bortfallsprocessen i Intrastat
- 2004:11 PLÖS. Samordning av produktion, löner och sysselsättning
- 2004:12 Net lending in the Swedish economy. Analysis of differences in net lending National accounts (NA) – Financial accounts (FA). Background – comparisons - analysis
- 2004:13 Testing for Normality and ARCH. An Empirical Study of Swedish GDP Revisions 1980–1999
- 2004:14 Combining leading indicators and a flash estimate
- 2004:15 Comparing welfare of nations
- 2004:16 ES-avdelningens utvecklingsplan 2004
- 2004:17 Den svenska konsumentprisindexserien (KPI), 1955–2004. En empirisk studie av säsongsmönstret. En tillämpning av TRAMO/SEATS
- 2004:18 Skola, vård och omsorg i privat regi. En sammanställning av statistik
- 2005:01 An ignorance measure of macroeconomic variables
- 2005:02 Svenska hälsoräkenskaper. Ett system framtaget inom ramen för de svenska nationalräkenskaperna
- 2005:03 The sample project. An evaluation of pps sampling for the producer and import price index
- 2005:04 Finansiellt sparande i den svenska ekonomin. Utredning av skillnaderna i finansiellt sparande. Nationalräkenskaper, NR – Finansräkenskaper, FiR. Slutrapport

