Net lending of households and non-profit institutions serving households: an analysis of discrepancies between financial and non-financial accounts*

Jon Ivar Røstadsand, senior economist in the Statistics Department

Introduction

Monetary and financial stability constitute prime objectives for central banks. Monetary policy decisions are taken on the basis of information concerning developments in a number of economic and financial indicators. It is important that these indicators are reliable at an early stage, i.e. that they have good real-time properties, so that they can provide relevant input for interest rate decisions. Norges Bank releases financial and monetary statistics on a monthly and quarterly basis. These statistics form part of the input upon which the Bank's monetary policy decisions are based[1]. Among the statistics are quarterly financial accounts for households and non-profit institutions serving households (NPISH), which are compiled in the database system FINSE (FINancial SEctor accounts).

In Norway, considerable attention has been paid to the discrepancy between net lending / net borrowing in the financial and non-financial accounts, respectively, which has grown in recent years. There has been an increasing lack of consistency in the derived relationship between the resources generated by disposable income and borrowing on the one hand, and the use of resources on consumption expenditures and the acquisition of non-financial and financial assets on the other. A supply of financial resources that exceeds use may lead to the question: where does the money go?

Transparency is important to enable users to achieve a better knowledge of financial accounts and to facilitate the use of the statistics. This paper is intended to describe the main concepts of the financial accounts compiled in Norges Bank. The discussion is based on the FINSE system and mainly addresses issues linked to the financial accounts for households and NPISH. The purpose of the analysis is to draw attention to the weaker points in the financial accounts with the aim of providing an explanation for the causes of the observed discrepancies between the non-financial and the financial accounts.

1. Institutional arrangement

Statistics Norway (SN) has the overall responsibility for classification, methods and principles in the Norwegian statistical system. SN also compiles and releases statistics on non-financial accounts. Responsibility for financial accounts is shared between SN and Norges Bank (NB). NB has the main responsibility for compiling and releasing statistics on securities market and the financial corporations sector. This also implies compilation of indicators for financial aggregates (money supply and credit supply) and compilation of financial accounts, which takes place in the database system FINSE. NB releases quarterly financial accounts for households and NPISH (i.e. the household sector), while annual financial accounts for all institutional sectors are released when financial accounts data are transmitted to Eurostat. SN is responsible for compiling accounting statistics for insurance enterprises and pension funds and has released a set of annual financial balance sheets for the period 1993 to 1997 (main instruments and main sectors).

2. Framework and observed discrepancies

In the national accounts system we face several identities, which in principle should be fulfilled. In our context this is also the case for the relationship between non-financial and financial accounts. In theory, net lending derived from the non-financial accounts should be identical to net financial transactions[2] derived from the financial accounts. However, experience shows that significant discrepancies occur for the household sector.

To start with, it is essential to emphasise that discrepancies in data may be ascribed to flaws and shortcomings in both sets of accounts. In both the non-financial and the financial accounts the balancing items are calculated on the basis of large aggregates. Even relatively small errors in these aggregates may result in large fluctuations in balancing items like net lending and net financial transactions. There are also differences in input statistics. Therefore, we are faced with a major challenge with regard to harmonising principles, methodologies and data sources in order to reduce these discrepancies as much as possible. This should, however, enhance user confidence in both sets of accounts.

The tasks of quantifying the financial assets, liabilities and financial transactions of the household sector are particularly demanding, as the data to a large degree come from indirect sources. A very limited portion of

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1 Real-time properties and the degree of revisions of Norges Bank's statistics were analysed in the Bank's quarterly *Economic Bulletin*, 3/2003.

2 We will use the term net financial transactions for the balancing item B9 in financial accounts.

Chart 1 Framework

Opening balanse sheet	Transactions Accounts	Revaluations Account	Other change in volume account	Closing balance sheet
	Disposable income + adjustment, pens. funds – consumption expenditures + net capital transfers – net acquisition of non-financial assets = **Net lending (B9)**			
	Discrepancy			
Net financial assets = .. - ..	**Net financial transactions (B9)** = Net acquisition of financial assets - Net incurrence of liabilities	Net changes due to holding gains/losses = .. - ..	Net change due to other change in volume = .. - ..	Net financial assets = .. - ..

the statistics is based on household surveys appropriate for compilation purposes. The sector's financial accounts are therefore mainly based on data from administrative sources or counterpart sector information. Accounting statistics with reconciled operational accounts and balance sheets, which may be used to check compilation results, do not exist for the household sector.

The relationship between non-financial and financial accounts is illustrated in Chart 1. Both net lending and net financial transactions are calculated as residual items. In non-financial accounts, net lending is calculated as the difference between all income items and all expenditure items including consumption expenditures and the acquisition of non-financial assets.

In the financial accounts, transactions in every financial instrument on the financial balance sheet of the household sector are summarised by net financial transactions. To a large degree, financial accounts are based on statistics on stocks of financial instruments. The most widely used method in FINSE is to quantify financial transactions as residuals, subtracting all other known changes in assets from changes in stocks in the same period. For some financial instruments, directly observed transactions are used in the compilations. In these cases, the consistency between stocks and flows is maintained by the holding gains and losses quantified residually.

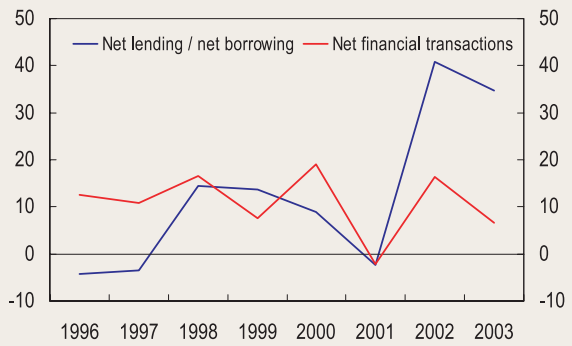
Chart 2 shows the discrepancy between non-financial and financial accounts. The chart covers the years 1996 to 2003 and is based on the most recently released statistics. The chart shows that the discrepancy is largest at the beginning and at the end of the eight-year period. For the years 1998 to 2001 the discrepancy is moderate and the general picture is quite consistent. However, the discrepancy widens considerably over the last two years of the period. The recent developments can be explained by high income growth and high growth in indebtedness. Developments in the household sector's consumption expenditures and their acquisition of non-financial and financial assets have not kept pace. The imbalance is shown as a large and growing discrepancy between non-financial and financial accounts.

3. Why do discrepancies occur?

3.1 Cycles of revisions – when do we have final statistics?

Discrepancies in published statistics are often explained by lack of accuracy in the first preliminary versions. This is an important problem, which concerns the assessment of the real-time properties of the statistics. For decision-makers it is a problem if the preliminary general picture changes substantially when final versions of the statistics are released. An essential question is: when can statistics be regarded as final?

Chart 2 Households and NPISH . Net lending (+) / net borrowing (-) and net financial transactions. In billions of NOK



Sources: Norges Bank and Statistics Norway

The answer to this question will depend, inter alia, on the frequency and the cycles of the revisions. Two types of revisions occur in the statistical system. The first type is the general or main revision. These are exhaustive revisions which take place periodically. In these processes, classifications, the quality and adequacy of the basic data and the methods of compilation are examined. The overall picture can change considerably after this main revision. The second type of revision is what we call current data revisions. These are revisions in time series caused by changes in the input data from indicator-based statistics and preliminary estimations to final primary statistics.

Table 1. General revisions of the statistical system in the last ten years

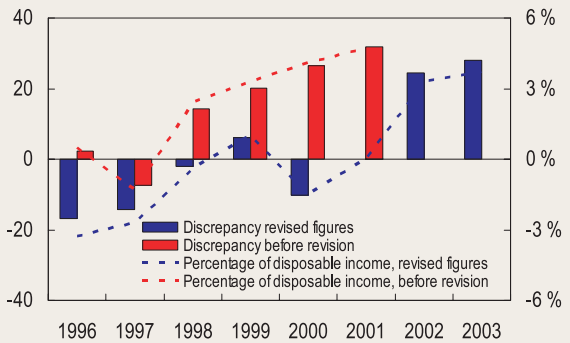
Finished	Released time series	Part of the system	Main objective
June 1995	1988 to 1992	National accounts system, Statistics Norway	Implementation of SNA 93/ESA 95 and data sources/statistics not used as input in old system
June 2002	1995 to 1999	National accounts system, Statistics Norway	Implementation of new structural business statistics
October 2003	1st quarter 1996 to 2nd quarter 2003	Financial balance sheets and financial accounts, Norges Bank	Implementation of ESA 95 and data sources/statistics not used as input in old system

• General revisions of the system

Table 1 gives an overview of the three general revisions of the system which have been made in the last decade. The national accounts have been subjected to two of them and the financial accounts system to one. The table shows that it may take a considerable time before accounts are "final". The final versions of the national accounts, in particular, are available with such a long time lag that they have no direct relevance for current policy decisions at the time of their publication. The results of the revisions may, however, be relevant for a general understanding of economic processes. The revised national accounts form part of the basis for compiling preliminary national accounts statistics and are thus indirectly of significance for the assessment of the prevailing economic situation.

Chart 3 shows the effects of the revisions in 2002 and 2003 on the discrepancies between the non-financial and financial accounts. The discrepancies were substantially reduced during the period. In the first two years covered by the chart, the discrepancy increased somewhat. In 1996 it amounted to 3.3 percent of disposable income. The picture for the remainder of the revision period is substantially improved. The average absolute values of the discrepancies, as a percentage of disposable income, decreased from 3.7 per cent to 0.7 per cent a year during the period 1998 to 2001.

Chart 3 Households and NPISH. Discrepancies[1] before and after revisions in 2002 and 2003. In billions of NOK (left) and discrepancies as percentage of disposable income (right)



[1] Net lending / net borrowing minus net financial transactions

Sources: Norges Bank and Statistics Norway

The major changes in the general picture after the revisions in 2002 and 2003 are partly attributable to the implementation of new structural business statistics in non-financial accounts. New structural business statistics were established in the 1990s, but in the interests of maintaining long time series[3], only development trends from the new statistics were implemented in the non-financial accounts during the 1990s (value indices combined with the existing value figures), while the implementation of new nominal value figures was postponed until the 2002 revision. This is of great importance for the discrepancy between the accounts, as the relationship between non-financial and financial accounts is based on differences between macroaggregates in nominal terms (see chapter 2). In the general revision of financial accounts in 2003 the main task was to implement new concepts and classifications and to adjust calculation methods, while the implementation of new statistics was a less central task. However, the incorporation of a new time series for foreign assets made an important improvement in financial accounts for the household sector[4].

• Data revisions

In the financial accounts, data revisions are made continuously and revised primary statistics are implemented as soon as they are available. The first preliminary figures from the financial accounts for the first three quarters are available three months after the end of a quarter. This work is completed with the publishing of "Household sector, financial accounts". The first fourth quarter figures are available four months after the end of a year, while preliminary annual financial accounts for all institutional sectors are available with a time lag of six months. SN publishes the first preliminary annual data from the national accounts three months after the end of the year.

Both the financial and the non-financial accounts are

[3] National accounts place great emphasis on long and consistent time series. Breaks in time series are avoided.

[4] The results of the revision of the national accounts were presented for the year 1997. Households' final consumption expenditures and acquisition of non-financial assets were adjusted upwards, thereby reducing saving and net lending. Minor adjustments were made to disposable income. The saving rate was adjusted downwards 2.0 percentage points to 2.9 per cent in the revised version of the national accounts.

available in final versions with a time lag of two years. The revisions have been larger in the non-financial accounts than in the financial accounts. This can be explained by the fact that the core statistics in the financial accounts are available in final versions after a short time lag (four months). Experience from the years prior to 2002 and 2003 indicates that the discrepancies were reduced between the preliminary and the final versions of the accounts. After the finalisation of the last two general revisions, the picture has unfortunately deteriorated substantially. The discrepancies in both 2002 and 2003 was large, and in 2003 was as high as 3.7 per cent of disposable income.

3.2 Core statistics

Money and banking and securities market statistics are a central data source for the household financial accounts. These statistics comprise detailed counterpart sector information and cover financial instruments such as deposits, loans, insurance technical reserves, mutual fund shares and marketable instruments such as bonds and shares. The money and banking statistics are released on a monthly basis, while the securities market statistics are released on a quarterly basis. Analyses show that the real-time properties of these statistics are very good (see note 2). Revisions are mainly small and insignificant. Nor is there any indication that the revisions are systematic.

The money and banking statistics cover almost 95 per cent of the value of the household sector's total debt. The good real-time properties of these statistics imply that the debt side of the balance sheet is revised only to a limited extent and that the financial accounts with a short time lag provide a reliable picture of household sector debt. The money and banking and securities market statistics cover 80 per cent of the value of the household sector's financial assets. Revisions in net financial transactions relate almost without exception to the asset side of the balance sheet.

3.3 Harmonised classifications

One of the main tasks of the general revision of financial accounts in 2003 was to implement the ESA classifications of financial instruments and institutional sectors. The sector classification in FINSE following the revision is in line with the official institutional sector classification co-ordinated by SN. In the previous financial accounts system there were borderline problems caused by financial holdings corporations and financial auxiliaries. These sub-sectors were not specified in the old system and assets and liabilities were included in the non-financial sector's financial balance sheets. The implementation of new accounting statistics for these sub-sectors has made it possible to move them to the financial corporation sector. This has also improved the data basis for the financial accounts for the household sector, since the new accounting statistics provide counterpart information, which can be utilised in the compilations.

3.4 Non-harmonised compilation methods

One remaining task is to clear up the discrepancies for the financial corporation sector. The accounting statistics for this important sector are inputs for the compiling of both the non-financial and the financial accounts. The discrepancies are probably caused by non-harmonised compilation methods. Accounting statistics for financial corporations are important sources when the households sector's assets and liabilities are quantified, and non-harmonised compilation methods for these sectors may also cause discrepancies for the household sector. The problem is particularly relevant for the instrument insurance technical reserves and the flows (income and capital) associated with this instrument.

3.5 Lack of information, divergence in timing and valuation

The weakest points in the present system relate to household holdings of unquoted shares and foreign assets. There are few data sources with information on these assets and the compilations are based on weakly founded assumptions.

The main sources of data for quantifying foreign assets are balance of payments (BOP) statistics and tax return accounts statistics. The main data source for BOP is a payment-based international transaction reporting system[5]. Households are in principle included, but cannot be identified and transactions with the rest of world have to be estimated indirectly. The payment-based BOP statistics also deviate from the accrual accounting principle in the national accounts. The tax return accounts statistics provide direct information on households' foreign assets and liabilities. However, problems are linked to underestimated foreign assets as a result of unreported foreign assets and figures at assessment value, which diverge from the recommended market value.

Shares are derived using information from two sources: the Norwegian Business Register, where all shares issued by domestic joint-stock companies are registered, and the Norwegian Central Securities Depository (VPS), which provides data on shares quoted on the Oslo Stock Exchange (OSE) and unquoted shares registered in VPS on a voluntary basis. The VPS register is the source for compilations in the financial accounts of quoted and unquoted shares issued by joint-stock companies registered in VPS.

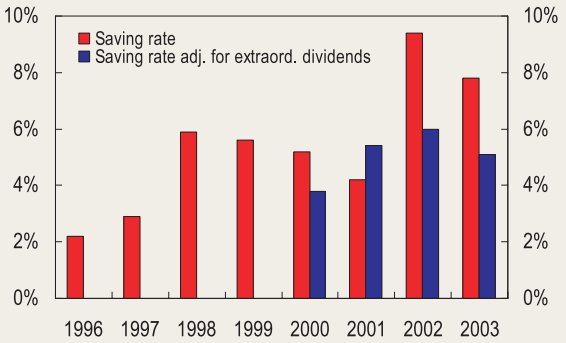
The VPS register cannot provide any data on the vast

[5] This will be changed to a survey-based direct reporting system from 2005 onwards.

majority of unquoted companies. The total holdings by private non-financial corporations and the household sector of shares not registered in the VPS can be estimated as a residual, by combining business register data with data from the VPS register and holdings of shares by other sectors. The residual is split between the two sectors and the estimations are executed in a simple manner; the data are valued in nominal terms and transactions are estimated as changes in stocks by convention.

The data problems associated with unquoted shares and foreign assets cause serious noise in the financial accounts data and place limitations on the utilisation of the data for policy purposes.

Chart 4 Households and NPISH. Saving rate (published) and saving rate adjusted for extraordinary dividends. Percentage of disposable income



Sources: Statistics Norway and Norges Bank

4. Experience of recent years

For the past year, the focus of work on the financial accounts has been concentrated on two issues. The first is related to an amendment of fiscal legislation, which consists of a proposed new rule for the taxation of dividends in the hands of shareholders. The other issue is the increased interest in the acquisition of real estate abroad.

4.1 The link between dividends and transactions in unquoted shares

During the four-year period 2000 to 2003, shareholders have withdrawn extraordinary large dividends from their corporations. The change in behaviour has been prompted by the proposed change in dividend taxation. A significant share of dividends is reinvested in corporations as equity and loans to corporations. The purpose is to avoid taxation in the future (i.e. withdrawal of equity is not subject to taxation).These financial resources are assumed not to contribute to consumption demand or acquisition of non-financial assets, but increase the household sector's saving and net lending.

Taxation of dividends in the hands of shareholders was introduced for a short period, from September 2000 to the end of 2001. The change in the tax regime significantly affected dividends received by the household sector. Dividends were sharply reduced in 2001, while dividend payments to shareholders were substantially higher in the years 2000, 2002 and 2003 compared with the previous four-year period from 1996 to 1999.

We have attempted to quantify the extraordinary dividends for the period 2000 to 2003. The estimates are based on the assumed relationship between dividends and annual results for selected joint-stock companies[6]. Results are shown in Chart 4, but must be interpreted with caution. According to the estimates, the household sector received more than NOK 50 billion in extraordinary dividends, which is 40 per cent of total dividends received in the four-year period. Adjusted saving rates – estimated as a percentage of disposable income on the basis of normal dividends – for the years 2002 and 2003 are 3.5 and 2.5 percentage points, respectively, lower than the official saving rates released by SN (see Chart 4). Tax return accounting statistics indicate that extraordinary dividends are reinvested in corporations[7]. The household sector's financial transactions in unquoted shares and loans to non-financial corporations are therefore adjusted upwards in the same proportion, i.e. 3.5 and 2.5 per cent of disposable income in 2002 and 2003, respectively.

4.2 The household sector's foreign assets

The household sector has changed its net foreign assets position during the last few decades.

Higher income and technological advances have increased both interest in and access to securities markets. Since these markets are to a large degree global markets, the threshold for acquiring foreign securities has been reduced. More frequent travelling abroad has also increased interest in buying real estate in other countries. This has led to the establishment of estate agents who specialise in selling foreign real estate to domestic households. This is part of the background for the initiative taken to improve the compilation of the household sector's foreign assets in connection with NB`s general revision, which took place in 2002 and 2003. During the revision a project was launched. The main task was the estimation of a new time series for the household sector's foreign assets.

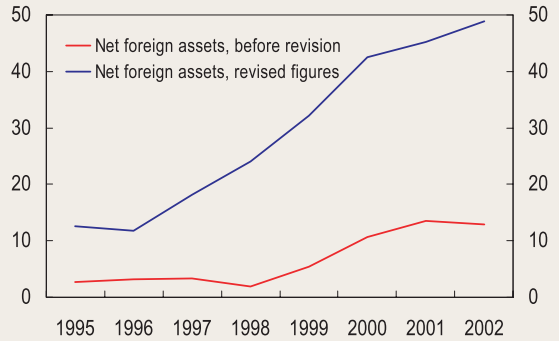
Chart 5 shows the effect of the revision on net foreign assets. The household sector's net foreign assets have been substantially adjusted upwards for the revision period, especially from the year 1997. Adjustments are due to the incorporation of tax account statistics and improved estimations[8] of domestic households' acquisition of real estate abroad. Interest in foreign real estate

6 The method is straightforward. Normal dividends are estimated in the same proportion to the companies' annual results as the observed average for the four-year period 1996 to 1999.

7 Observations based on time series covering the period 1998 to 2002 for a sample consisting of 12 800 shareholders, which have been drawn from the tax return accounts statistics.

8 Estimates are made by combining tax return accounts statistics, price information from real estate agents and independent market surveys.

Chart 5 Households and NPISH. Net foreign assets. In billions of NOK



Source: Norges Bank

increased in the late 1990s and explains much of the development in net foreign assets shown in Chart 5. Asset transactions with the rest of the world, measured as a percentage of disposable income, were adjusted upwards by about 1 percentage point in the last year of the revision period.

5. Conclusion

The financial account for households and NPISH is regarded as important input to Norges Bank`s monetary policy decisions. Our judgment is that the financial accounts provide a reliable description of households and NPISHs financial position and their financial transactions. This view is supported by reliable input statistics with good real-time properties, which cover the main financial instruments on the balance sheet with some few exceptions.

The problems relate to the asset side of the financial balance sheet and the discussion shows that there is still considerable potential for improvements. Financial assets with the weakest information base are unquoted shares and foreign assets. This is due to inadequate primary statistics in both the short- and long-term perspective and may explain much of the discrepancies. Non-harmonised compilation methods in the different parts of the statistical system may also contribute to observed discrepancies for households and NPISH.

However, the increase in the discrepancies in net lending has been considerable in recent years. Major upward revisions of transactions in unquoted shares and foreign assets have not prevented the observed discrepancies between non-financial and financial accounts from reaching historically high levels. This implies that other explanations have to be taken into account. These explanations may be found in the national accounts released by Statistics Norway.

The national accounts serve two main objectives. The system provides statistics on nominal values and growth rates for macroaggregates. However, in the current national accounts attention is paid to the recent economic developments and computation of economic growth trends is given priority at the expense of estimation of nominal values of macroaggregates. This particularly affects areas which are less thoroughly covered by statistics, such as households' and NPISHs' final use of goods and services. Important aggregates, such as household consumption expenditures and acquisition of non-financial assets, have to be compiled in an indirect manner (households and NPISHs are often regarded as the residual sector). Estimating the nominal values of these macroaggregates is particularly challenging. Underestimation of the nominal values of these final use components may be one explanation for the observed discrepancies.[9]

In attempting to respond to the problems described in the introduction, we would suggest that a major part of the discrepancies in net lending / net borrowing can probably be explained by lack of relevant statistical information on

- foreign assets,
- unquoted shares,
- the nominal value of household consumption expenditures and acquisition of non-financial assets, and by
- non-harmonized compilations methods.

In our view, discrepancies between non-financial and financial accounts should be published. These discrepancies underline the need for awareness of quality issues in financial accounts for households and NPISHs. In future work, harmonising methods and principles for compiling of the financial corporation sector between non-financial and financial accounts will be an important task. A very important event will be the launch of a shareholder register, which will take place this autumn. The register will provide information on an area currently covered inadequately. Thus, a major objective in the forthcoming work is to renew efforts to reduce observed discrepancies.

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9 Two factors can be put forward. The first concerns cross-border shopping. Cross-border shopping has grown to high proportions in recent years. The question is whether national accounts manage to incorporate all expenses attached to direct purchases abroad by resident households. The second concerns the extraordinary high dividends paid to households over the last four year period. A fair question is whether some of the dividends are used on the acquisition of valuables, and how this is dealt with in the national accounts.

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Appendix:

HOUSEHOLDS AND NPISH. National accounts and financial accounts. In billions of NOK

		2001	2002	2003
A.	**NATIONAL ACCOUNTS**			
	Disposable income	667	732	764
	Adjustment, households pension funds	12	18	17
	Final consumption expenditure	651	680	722
	Saving	28	69	60
	Capital transfers, net	-1	-1	-1
	Net acquisition of non-financial assets	29	28	24
	Net lending	-2	41	35
B.	**FINANCIAL ACCOUNTS**			
	Financial assets (stocks)	1370	1446	1602
	Currency and deposits	481	530	556
	Securities other than shares, excluding financial derivatives	22	23	28
	Loans	9	16	23
	Shares and other equity	152	159	188
	Mutual funds shares	77	60	84
	Insurance technical reserves	490	506	559
	Other assets	140	152	164
	Liabilities (stocks)	1011	1104	1214
	Securities other than shares, excluding financial derivatives	0.0	0.1	0.2
	Loans	934	1026	1137
	Other liabilities	78	78	77
	Net financial assets	359	342	388
	Change in net financial assets	-34	-17	46
	Net changes due to holdning gains/losses and oth. change in vol.	-32	-33	40
	Net financial transactions	-2	16	7
C.	**MEMO**			
	Resources	774	848	889
	Disposable income, adjustment pen. funds & cap.transfers net	679	749	781
	Net incurrence of liabilities	96	99	108
	Uses	774	823	861
	Final consumption expenditure	651	680	722
	Net acquistion of non-financial assets	29	28	24
	Net acquistion of financial assets	93	116	115
	Statistical discrepancy (resources minus uses)	0	25	28

Sources: Statistics Norway and Norges Bank