

Description of the sources and methods used to compile quarterly non-financial accounts by institutional sector (QSA) in Finland



Table of contents

| 1 | General de | escription | 3 |
|---|-------------|--|----|
| | 1.1 | Organisational aspects | 3 |
| | 1.2 | Sources | 4 |
| | 1.2.1 | S11 Non-financial corporations | 4 |
| | 1.2.2 | S12 Financial Corporations | 5 |
| | 1.2.3 | S13 General Government | 5 |
| | 1.2.4 | S14 Households | 6 |
| | 1.2.5 | S15 Non-profit institutions serving households | 6 |
| | 1.2.6 | S2 Rest of the world | 6 |
| | 1.2.7 | Other important data sources used in QSA | 6 |
| | 1.3 | Methods | 7 |
| | 1.3.1 | Overview of the benchmarking and balancing methods | 7 |
| | 1.3.2 | A chronological description of a QSA compilation round | 9 |
| | 1.4 | QSA consistency with related data sets | 10 |
| | 1.5 | Short description on the methods used to estimate backdata | 10 |
| | 1.6 | Seasonal adjustment policy | 10 |
| | 1.7 | Release and revision policy | 11 |
| | 1.7.1 | Release policy | 11 |
| | 1.7.2 | Revision policy | 11 |
| | 1.8 | Remarks or problems | 12 |
| | 1.9 | Future plans | 12 |
| 2 | Description | by transaction | 13 |
| | 2.1 | Transaction P1 | 15 |
| | 2.2 | Transaction P2 | 19 |
| | 2.3 | Transaction P3 | 22 |
| | 2.4 | Transaction P5 | 24 |
| | 2.5 | Transactions P6 and P7 | 26 |
| | 2.6 | Transaction D1 | 27 |
| | 2.7 | Transaction D2 | 30 |
| | 2.8 | Transaction D3 | 32 |
| | 2.9 | Transaction D41 | 33 |
| | 2.10 | Transaction D4N | 38 |
| | 2.11 | Transaction D5 | 47 |
| | 2.12 | Transactions D61 and D62 | 49 |
| | 2.13 | Transactions D71 and D72 | 55 |
| | 2.14 | Transaction D7N | 57 |
| | 2.15 | Transaction D8 | 63 |
| | | | |



| | 2.16 | Transaction D91 | | | | |
|------------|--------------------------------------|------------------|-----|--|--|--|
| | 2.17 | Transaction D9N | .64 | | | |
| | 2.18 | Transaction P51C | .68 | | | |
| | 2.19 | Transaction NP | .69 | | | |
| | 2.20 | Transaction B9FX | .70 | | | |
| | 2.21 | Transaction F4 | .71 | | | |
| ANNEXES | S | | 72 | | | |
| | | | | | | |
| Annex 1: F | Annex 1: FISIM-related transactions7 | | | | | |
| A O. I | uppey 2: List of abbreviations used | | | | | |
| | | | | | | |



1 General description

This document describes how quarterly non-financial accounts by institutional sector (QSA) are compiled in Finnish national accounts.

Please note that abbreviations used in the text are described in the annex.

1.1 Organisational aspects

Production of national accounts statistics is divided into two units under the Economic statistics division of Statistics Finland: the National accounts (NA) unit and the Government finance and sector accounts (GS) unit. Both units share a team-based matrix organisation, which means that people usually belong to multiple teams, also across the two units. This arrangement promotes cooperation between teams.

Economic and Environmental Statistics, 31.1.2020 Economic and Environmental Statistics Ville Vertanen Director Steering group for national accounts and Steering group for balance of payments 617 Balance of 616 Government Nationa Accounts Payments Sector and Accounts Financial Accounts Elina Sari Kuisma Toni Udd Statistics Finland

Figure 1. Economic and Environmental Statistics unit at Statistics Finland (31.1.2020)

All national accounts data sets (quarterly and annual sector accounts, productions accounts, supply and use tables, financial accounts) are stored in a common SQL Server database, where all teams in both NA and GS units can find all the data. The database is not only used as a storage but also as a calculation platform. For instance, SQL procedures are used to transfer data between QNA and QSA in the database. The common compilation system is designed to facilitate data transfers and benchmarking between accounts.



Sector accounts team (6.2.2020)

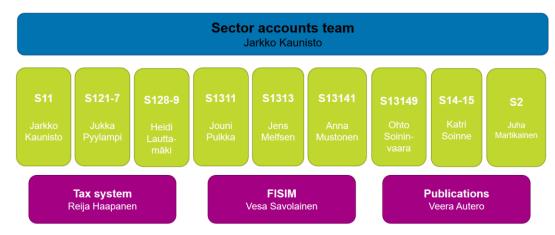


Figure 2. Members of the Sector Accounts team (6.2.2020)

Quarterly sector accounts are a responsibility of the Sector accounts team in the GS unit. However, the QSA figures are indirectly influenced by almost all teams in NA and GS units because 1) the quarterly sector accounts are benchmarked to the annual sector accounts and 2) a large part of the final QSA figures (especially those of S11 and S14) are heavily influenced by QNA.

As a note, QNFAGG compilation has been fully integrated into the QSA compilation system. QSA and QNFAGG are compiled by the same team in the same compilation system.

QSA inventory contact person:

Jarkko Kaunisto - Senior Statistician, Government finance and sector accounts

tel. + 358 504308392, jarkko.kaunisto@stat.fi

1.2 Sources

QSA is integrated with ASA and QNA, ASA is integrated with ANA and both QSA and ASA are for the most part integrated with Balance of Payments (BoP) as well. Thus, almost all data sources used in QNA, ASA, ANA and BoP affect QSA indirectly. Here, the focus is on sources and methods used in QSA directly since there are separate inventories for the sources and methods used in ASA, QNFAGG and QNA.

An overview of the main data sources for each sector are described below. More detailed information is provided in Chapter 2.

1.2.1 S11 Non-financial corporations

The most substantial transactions of S11 belong to the production and capital accounts. These transactions are derived from QNA. The main data sources in QNA compilation include monthly indices of turnover made in Statistics Finland and periodic tax data received from the Tax Administration. The latter contains information on wages and social security contributions paid by enterprises. Other important sources include



volume indices of industrial output and the volume index on new building, both compiled in Statistics Finland.

Direct quarterly sources for distributive transactions of S11 remain few so S11 transactions are usually allowed to adjust when resources and uses are balanced across sectors. Often, S11 is treated as a simple residual sector in balancing.

1.2.2 S12 Financial Corporations

The most comprehensive source for S12 is regulatory data collected by the Finnish Financial Supervisory Authority (Fin-FSA). Financial statements form the most important part of this data from QSA's point of view. Financial reporting (FINREP) data contains information on monetary financial institutions, fund management companies and investment firms. National Supervisory reporting for insurance undertakings (Vakra) data contains information on insurance corporations.

Data sources for mutual funds is collected by the central bank. The reporting data of mutual funds contains information on the mutual funds' property income flows, dividends distributed to investment fund shareholders and reinvested earnings. Balance of Payments (BoP) data is used for the cross-border flows.

Additional sources include a quarterly questionnaire for BoF's bookkeeping data, monthly insurance related statistics from the Federation of Finnish Financial Services (an industry interest group) and regulatory data from the Finnish Financial Supervisory Authority.

1.2.3 S13 General Government

The state bookkeeping system gives detailed quarterly information for the central government sector (S1311). The state bookkeeping system also gives reliable counter-party sector information and is thus in use for other sectors as well, especially regarding current transfers.

For the local government (S1313), the main source is the Quarterly statistics on local government finances compiled in Statistics Finland. This data source includes municipalities, joint municipal authorities and municipal quasi-corporations. Another important data source is a monthly tax data publication by the Tax Administration, which is used to compile tax flows.

As for the statutory earnings-related pension system (S13141), we collect a separate monthly questionnaire from the pension providers. For other social security funds (S13149), the most important data source is bookkeeping data from Kela, the national institution responsible for providing social benefits.

The periodic tax data from the Tax Administration contains reliable quarterly information on wages and social security contributions paid. It is used to compile D.1 (pay) and related transactions for S1313 and S13141 as well.



Transactions interest, other current transfers, investment grants and other capital transfers are consolidated within the general government sector.

1.2.4 S14 Households

Very little direct quarterly information on households is available, so households' quarterly sector accounts are largely based on counterparty-sector data. Relatively good counterparty-sector sources are available for the most important flows: received wages, paid taxes, social contributions and social benefits.

Consumption expenditure of S14 is calculated in QNA and then transferred to QSA. Data sources used to compile households' consumption in QNA include monthly indices of turnover, consumer price indices, some volume data (like number of registered cars, amount of used household electricity, data on traveling etc.) and the centralized FISIM calculations (see annex).

1.2.5 S15 Non-profit institutions serving households

Very little direct quarterly information is available. Periodic tax data (Tax Administration) includes information on the wages and social security contributions paid by the sector. Most of the quarterly sector account transactions are roughly estimated based on this information.

1.2.6 S2 Rest of the world

Quarterly S2 data is based on information collected by three organizations. The Finnish Customs collects information on trade of goods, BoF collects some of the primary income transactions and Statistics Finland collects data on services and most of the primary and secondary income transactions. These data are collected in Statistics Finland to compile Balance of Payments (BoP).

The production of rest of the world sector is integrated to the production of Balance of Payments. The time series are harmonized from the beginning of 2006 (exception D51, which is still missing in S2-sector). Some minor vintage differences between BoP and QSA can surface due to the different compilation frequencies.

1.2.7 Other important data sources used in QSA

Other important data sources (concerning transactions that are compiled in a centralized manner for all sectors at once) include:

Indicators for most sectors' interest flows are based on BoF's interest rate information combined with QFA's financial balance sheets by sector.

For the dividend income flows, various data sources are in use. For the domestic part of the flows, data from the Holding Securities Statistics is used along with public share-specific dividend information. For the cross-border dividend flows, data from the BoP is used.

Indicators for the reinvested earnings of mutual funds are compiled by dividing the mutual funds' property income flows (this data is received from the central bank) according to QFA's financial balance sheets by sector.



Taxes and some tax-like payments have since summer 2019 been treated in a separate Statistics Finland's Tax system, which is integrated with other National Account's subsystems. Data from various sources are fed into the Tax system, the procedures required for transactions (e.g. time-adjusting of cash accruals, benchmarking, allocating tax payments to sectors) are carried out within the system and the results are transferred to other systems, such as QSA, for further use. Major data sources are Tax Administration, the state bookkeeping system, quarterly statistics on local government finances, Finnish Customs, Finnish Transport and Communication Agency, The Finnish Government Shared Services Centre for Finance and HR, and Financial Supervisory Authority.

1.3 Methods

1.3.1 Overview of the benchmarking and balancing methods

Two problems need to be solved for each QSA compilation round: the benchmarking problem and the balancing problem. The benchmarking problem means that for each QSA transaction - for instance, interest income received by households - the quarters of any statistical year have to sum up to the annual level of the corresponding ASA transaction. The balancing problem means that for each quarter in QSA, the sum of all sectors' resources and uses of a single transaction must always be equal.

The usual solution to the benchmarking problem is to treat source data as indicators that are benchmarked to match the ASA levels. Most transactions in the Finnish QSA are compiled this way¹. First, indicator time series are derived from various source data and inputted to the compilation system. Sometimes indicator can be formed by using other indicators within the system. Then, a benchmarking process adjusts this indicator to match the series to the corresponding ASA transaction. The benchmarking process also extrapolates estimates for the latest quarters for which no ASA data is yet available. Compilation of the last quarter of t-1 (March) differs from other compilation rounds (June, September and December). Only S13's t-1 ASA data is available when compiling Q4 of t-1. Hence, the S13 ASA transactions are flagged, which means that in QSA S13 is benchmarked to ASA and other sectors are extrapolated. In other compilation rounds, t-1 quarters are always benchmarked to ASA.

After most series have been produced via the indicator method and direct data transfers, resources and uses are balanced for each transaction on each quarter. The balancing of rest of the series is done by treating one sector as residual.

A general description of the indicator method

¹ Not all transactions in QSA are subject to the benchmarking procedures. Some transactions are directly imported into the QSA system from other national accounts subsystems. These directly inputted transactions are not subject to QSA's benchmarking procedures (or balancing procedures, for that matter), but they have been benchmarked in other sub systems of the National Accounts.



Most transactions in the Finnish QSA are compiled by first feeding an indicator time series to the compilation system. A benchmarking process then adjusts this indicator to match the series to the corresponding ASA transaction.

The indicator time series may or may not match the level of the corresponding ASA transaction. In the ideal case, the quarterly indicator is derived from the exact same data that is used in ASA compilation. An indicator of this kind obviously matches ASA levels by default. This is the case for MFI's, for example. We receive reliable and comprehensive quarterly source data from a questionnaire to credit institutions. This quarterly source data is used as QSA indicators while annual sums of the quarters are used in ASA compilation.

In other cases, no direct source data is available. In these cases, we try to use an indicator that correlates to the transaction even if the indicator is not perfect. This is the case for many transactions on the household sector account. For instance, we use QNA's total level of S1 investments in dwellings as an indicator for the gross capital formation of S14. Indicators can also be formed using benchmarked transactions. For instance, sector's S128 transactions are in many cases inter-connected. In these cases, we can calculate indicator values within the system using equations of already benchmarked variables.

In many cases, no reliable indicator has been found. In this case, we usually feed a series of 1's as the indicator. This results in a smooth quarterly distribution of the ASA levels and a level estimate for each of the latest quarters that do not yet have a matching ASA level available. This method is referred to as unit-denton in the tabular overviews of section 2. In some cases, we use an estimate of trend with or without an estimate of a seasonal pattern as the indicator.

Single variable benchmarking

We used to have two benchmarking methods: single variable benchmarking and multivariate benchmarking. Since SAS-based multivariate benchmarking had in some cases difficulties in finding a proper balance, we abandoned multivariate benchmarking method.

Single-variable benchmarking is done via simple proportional Denton method. This method takes in one indicator time series at a time (for instance, S14/D411/Use) and adjusts the path of this indicator to match the annual levels of the corresponding ASA transaction. The benchmarking process also extrapolates the indicator series to produce an estimate for the latest quarters for which an ASA transaction is not yet available. The BIratio (Benchmark-to-Indicator ratio) used for the latest quarters is the last annual BI-ratio available for the specific series.

Denton method solves following minimization problem for each indicator times series

$$\min \sum_{t=2}^{T} \left[\frac{x_t}{i_t} - \frac{x_{t-1}}{i_{t-1}} \right]^2$$



Where x_t represents benchmarked value and i_t value of the indicator respectively. T represent the last quarter of the series. The condition for the minimization problem is that the benchmarked values of the quarters for each year must equal to its corresponding annual level in ASA. Solving the equation for each indicator series results a BI-ratio

$$BI_t = \frac{x_t}{i_t}$$

As mentioned, extrapolating uses constant BI-ratio. Overall the purpose of using the proportional Denton method is to follow closely the business cycles suggested by indicator series while reducing volatility of BI-ratio between two consecutive quarters.

Balancing

From the point of view of balancing, three methods are in use:

Treating one sector as a simple residual that absorbs the imbalance in full. This is done after all other sectors are benchmarked using the single variate Denton method.

Compiling a transaction on a full sector-by-counterparty sector basis and using the exact same time series on both accounts (sector and counterparty sector). For instance, we benchmark the indicator of S1311/D75/U/S14 (here, S14 is the counterparty sector of this transaction) and transfer the resulting time series to S14/D75/R/S1311. This method is only available if the transaction is compiled on a full sector-by-counterparty sector basis in both QSA and ASA. Only D73, D75, D92 and D99 are compiled this way.

The simple residual method obviously cannot take an indicator as input for the residual sector. It is only able to adjust the single residual sector according to the changes in the exogenous components.

1.3.2 A chronological description of a QSA compilation round

An ordinary QSA compilation round proceeds as follows:

- 1. During QNA compilation QSA offers input to QNA system. Namely, P1/R, P2/U, P3/U, P51/U of S13 and P1/R, P2/U, P51/U of S12 are transferred from QSA to QNA.
- 2. After QNA compilation is finished at around T+60, data is imported from QNA to QSA. The data that are imported this way are not allowed to change during QSA's benchmarking and balancing procedures. The figures imported this way include P1, P2, P3, P5-transactions, D11 and D12 and statistical discrepancy. These transactions (excl. statistical discrepancy) are treated as economy's aggregated level. Typically, S11 is treated as residual sector.
- 3. Source data is collected and entered into the QSA compilation system as indicators by the Sector Accounts team.
- 4. A large part of the series are benchmarked to ASA figures using the single variable Denton method. This step includes extrapolation of the series for the latest quarters which do not yet have a matching ASA figure available.



- 5. For D73, D75, D92 and D99, the benchmarked series are transferred to the counterparty sector's account (which solves the balancing problem for these transactions).
- 6. Many transactions are balanced by simply using one sector as a residual.
- 7. Figures are cross-checked with the Sector Accounts team. Some indicators, especially interests and dividends may need adjustments. Ad-hoc adjustments are needed in order to achieve a plausible balance between the sectors.
- 8. Seasonally adjusted series and trend series are computed.

All the figures are stored and compiled in an SQL Server -based compilation system. When the compilation phase is finished, the national QSA publication and the SDMX transmission to Eurostat are done at t+85 days. The SDMX reporting process includes some adjustments. For instance, S14 and S15 figures are combined to create the S1M sector.

1.4 QSA consistency with related data sets

QSA is benchmarked to ASA. Hence, when publishing or transmitting dataset to Eurostat, QSA and ASA are consistent. At T+85 QNA and QSA are consistent as well. BoP and QSA are almost fully consistent. For more information, see chapter 1.7.

1.5 Short description on the methods used to estimate backdata

Currently not relevant.

1.6 Seasonal adjustment policy

Seasonally adjusted series and trends are computed, in principle, for all sectors and all transactions. The level of disaggregation is less detailed, though. For instance, we only adjust D4 instead of its subtransactions. After all transactions have been seasonally adjusted, all balancing transactions are calculated indirectly from the adjusted transactions.

The method used to produce the seasonally adjusted series and the trend series is TRAMO/SEATS (general information on the method can be found at http://stat.fi/til/tramo_seats_en.html). Currently we use JDemetra+ 2.2.2 software to do the adjustments.

After seasonal adjustment, we use the proportional Denton algorithm again for each adjusted series to make sure that their annual levels (that match ASA) do not change due to seasonal adjustment.

The seasonally adjusted series and trend series are not balanced. This is problematic since it results in statistical discrepancies between resources and uses in the seasonally adjusted series. On the other hand, balancing the series would obscure the seasonal adjustments of the series that are allowed to adjust due to balancing. For now, we allow the statistical discrepancies in order to keep the seasonal adjustments as transparent as possible.



1.7 Release and revision policy

1.7.1 Release policy

Quarterly sector accounts are published nationally at the same time that they are reported to Eurostat at T+85. The national publication is webbased and similar to Statistics Finland's other statistics publications.

As for the level of detail, our principle is to nationally publish the figures on at least the same level of disaggregation as reported to Eurostat. In 2019 we began to publish the figures in more detailed level than before. However, ASA is still published at significantly more granular level than QSA. In practice, our compilation system allows for a little more detailed data and the national publication is a little more detailed than what is reported to Eurostat. For instance, S14 and S15 are separated and many transactions are shown on a more detailed sub-transaction level.

The national publication currently contains a press release and a short analysis of the figures. Almost all parts of the publication are available in English. More information on the national publication can be found on the publication's web site at http://www.stat.fi/til/sekn/index_en.html.

1.7.2 Revision policy

Regarding QSA, we begin to follow the Harmonized European Revision Policy (HERP) in 2020. This means that only the latest 15-18 quarters are open to revisions depending on the compilation round (15 quarters in March, 16 in June etc.). In September we may open all the quarters for revisions in case of longer indicator time series revisions or, for instance, benchmark revisions.

However, because of balancing to ASA and QSA-ASA consistency, editing a QSA indicator for a given quarter only affects the quarterly distribution within the year and not the annual level. This is the case when the transaction is already compiled in ASA. On the other hand, if an ASA transaction is revised, these revisions automatically carry over to QSA through the benchmarking procedures.

Since QSA and ASA are published four times a year on exactly same day, we always keep QSA and ASA consistent.

The revision policy of QNA also affects that of QSA. QNA begins to follow the same revision policy as QSA. Furthermore, QNA will be retransmitted to Eurostat in QSA schedule (t+85). Thus, concerning transactions that are imported to QSA from QNA, there is always full consistency between QSA, QNA and ASA.

Large ASA revisions always take place in QSA's June (Q1) and September (Q2) compilation rounds, since the ASA figures are properly calculated from 'bottom up' for the first time in June. Large revisions for the latest complete statistical year in QSA can thus be expected in both June and September.

Revisions are always published nationally. The major revisions are reported to Eurostat via metadata report.



1.8 Remarks or problems

There are large vertical discrepancies between QSA and QFA. We have identified these to largely originate from the QFA time series of S12 and S2. We are not aiming at full vertical integration but identifying and rectifying problematic transactions is firmly on the agenda. We have also considered using methodological tools to narrow the discrepancies. BoP is almost fully consistent with QSA and according to FA's mid-term strategy QFA and BoP have been integrating their figures as well. Regarding S2, our objective is to achieve vertical discrepancy which equals to the net errors and omissions of BoP. However, it must be noted that current net errors and omissions are very large, which is also one of our current key improvement areas. Consequently, until BoP's large net errors and omissions periods are resolved, we face a problem with reducing the discrepancies of other sectors (esp. non-financial corporations).

The seasonally adjusted series and trend series are not benchmarked or balanced. This issue might be investigated in the future.

1.9 Future plans

At the moment there are no short-term plans for larger reforms concerning QSA compilation other than possible vertical discrepancy related issues. This is in part due to the fact that resources are in general tight in the statistical office.

Smaller improvements to QSA will be done on an ad hoc basis. Especially developing our indicators is an important issue we constantly tackle to reduce revisions.

Implementing the HERP in QSA is one of our main goals in 2020. This should create a full consistency between QSA, ASA and QNA.

In the long term, more analysis of the B9 statistical discrepancy between QSA and QFA is to be done. Statistical discrepancy between the two balancing items will still be allowed, though. We think of the statistical discrepancy as a tool with which to identify problematic areas in QSA and QFA compilation.



2 Description by transaction

The following notes apply to all the transaction-specific sections below.

The tabular overviews in this section are presented at the level of detail that is used when QSA is compiled. For instance, D.4N figures are compiled by summing up independent components D.42, D.43, D.44 and D.45. In turn, D.42 consists of two components that are compiled (and balanced) independently.

Also, the sectors are disaggregated down to the level that is used in compilation. We compile S12 and S13 on a subsector level. The subsectors follow ESA2010, although there is one national addition:

S13141 Employment pension schemes

S13149 Other social security funds

The accounts of S1, S12 and S13 are always calculated as sums of the relevant subsectors.

The tabular overview tables are organized slightly differently than the QSA inventory framework suggests. Namely, resources and uses for each transaction are separated as a distinct variable. This is done to separate sources for the resources and uses sides, as these usually differ. The tabular overviews provide more detailed information this way. Also, another column "counterparty sector" is included. Some transactions are compiled on a sector by counterparty sector basis, e.g. the D75 (use) total is the sum of all D75 (use) flows related to each counterparty sector. The value N/A in this column can be interpreted as "sum of all counterparty sectors".

In the tabular overviews the expression (sum of other transactions) refers to a transaction that is not produced using the regular indicator method but instead calculated from other transactions using an identity. For instance, we could calculate P32U as the difference between P3U and P31U if the latter two are already produced via the indicator method. When a transaction is calculated from other transactions this way, more details are provided in the notes section under each transaction.

Concerning some tables, the expression boundary condition is used. This refers to a case where a transaction is imported from QNA to be used as a strict boundary for the S1 total of the transaction in question. For instance, we want D11 of S1 to match the corresponding QNA figure exactly, so this figure is imported to QSA to be used as a boundary condition to be used in the balancing.

It should also be noted that the tables in this section always refer to notseasonally-adjusted figures. Seasonal adjustment is done afterwards.

The following expressions are used to describe the benchmarking and balancing methods used (see section 1.3. for a description of the methods):

 DENTON BENCHMARKING: A univariate Denton process (adjusts only one time series at a time) is used to benchmark this transaction's indicator series to match ASA levels. None of the series benchmarked this way are allowed to be adjusted when resources and uses are



balanced across sectors. In other words, the balancing problem remains for the transaction in question.

- RESIDUAL SECTOR (no indicator used): Many transactions are balanced by simply treating one sector as residual. Naturally, indicators cannot be used for transactions calculated this way.
- DIRECT DATA INPUT: Some transactions are produced via a direct data transfer from other NA subsystems. Most notable cases are S2 figures (BoP-based compilation system that does not support indicator benchmarking) and tax-related transactions (benchmarking and balancing in Tax system). These transactions are not subject to QSA's benchmarking and balancing procedures and they are not allowed to adjust due to balancing of resources and uses.

In this section, transactions are referred to with codes like P1R and D1U. The first letter and number refer to the transaction in question and the last letter is one of the following:

R: Resources

U: Uses

N: Net (a balancing item in net terms)

G: Gross (a balancing item in gross terms)



2.1 Transaction P1

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------------|---------------------|--------|--------------------|--|-----------------------------|
| P11 Market output | Resources | S11 | N/A | N/A | Residual sector |
| | | | S121 | N/A | (Sum of other transactions) |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S126 | N/A | Regulatory data from Fin-FSA & estimate of trend for items with no source of data available used as a component in the indicator | Denton benchmarking |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | N/A (estimate of trend used as indicator) | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | Indicator Imported from QNA: Output (P1) of S14 | Denton benchmarking |
| | | S15 | N/A | Periodic tax data | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | | | |
|------------------------------|---------------------|--------|--------------------|---|-------------------------------------|-------------------------------------|------------------------|-------------------------------------|------------------------|
| P12 Output for own final use | Resources | S11 | N/A | Indicator Imported from QNA: S11 Market output (P1) | Denton benchmarking | | | | |
| | | S121 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | |
| | | S1313 | N/A | Periodic tax data | Denton benchmarking | | | | |
| | | | | | | S13141 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | | | | | | | | |
| | | S14 | N/A | Indicator Imported from QNA: Output (P1) of S14 | Denton benchmarking | | | | |
| | | S15 | N/A | Periodic tax data | Denton benchmarking | | | | |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------------------------|---------------------|--------|--------------------|--|------------------------|
| P131 Sales of non- market products | Resources | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S15 | N/A | Periodic tax data | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|----------------------------------|---------------------|--------|--------------------|-----------------------------|---------------------------|
| P132 Other non- market output | Resources | S1311 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S1313 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13141 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13149 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S15 | N/A | (Sum of other transactions) | Sum of other transactions |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---------------------------------|------------------------|
| P1191 Financial intermediation services indirectly measured FISIM (loans) | Resources | S122 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| P1192 Financial intermediation services indirectly measured FISIM (deposits) | Resources | S122 | N/A | N/A | Residual sector |

Additional information on sources and methods

For all sectors, P1 is formed as a sum of independently compiled subtransactions P11, P12, P131, P132, P1191R and P1192R. The last two are FISIM-related. They refer to the domestic FISIM-production on the loans side and deposits side respectively. See the annex for a more detailed description of FISIM compilation.

For S11 P11 is treated as a residual. P1 of S1 is imported from QNA and the S11/P11 follows equation S11/P11= S1/P1 – Sx/P1 – S11/P12, where Sx represents all the other sectors except for S11.

The cost approach (P1 has to equal P2U+P51CU+D1U+B2N) is used for sectors S121, S1311, S1313, S13141, S13149 and S15. In particular:

For S121, P11R = P2U+P51CU+D1U

For the S13 subsectors and S15, P132R is the residual transaction. Specifically, P132R = P2U+P51CU+D1U-D29U+D39R+B2N-P11R-P12R-P131R

When P1 is compiled this way, B2N is also needed as an input if it is not zero by default. This item is compiled via the indicator method for these sectors:



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|----------------------------|---------------------|--------|--------------------|--|------------------------|
| B2N Operating surplus, net | Balancing item | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S14 | N/A | Indicator imported from QNA: S14 Gross value added (industry 68202 operation of dwellings) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



2.2 Transaction P2

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | | | |
|------------------------------------|---------------------|--------|--------------------|--|-------------------------------------|--|------------------------|--|------------------------|
| P22 Other intermediate consumption | Uses | S11 | N/A | N/A | Residual sector | | | | |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking | | | | |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking | | | | |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S126 | N/A | Regulatory data from Fin-FSA & estimate of trend for items with no source of data available used as a component in the indicator | Denton benchmarking | | | | |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S128 | N/A | Regulatory data from Fin-FSA | Denton benchmarking | | | | |
| | | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking | | | | |
| | | | | | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | | | | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking | | |
| | | | | S14 | N/A | Indicator imported from QNA: Intermediate consumption (P2) of S14 | Denton benchmarking | | |
| | | S15 | N/A | Periodic tax data | Denton benchmarking | | | | |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | |
|---|---------------------|--------|--------------------|---|---------------------------------|------------------------|
| P1191 Financial intermediation services indirectly measured | Uses | S11 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| FISIM (loans) | | S125 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| | | S126 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| | | | S127 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S128 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| | | S1311 | N/A | Centralized compilation (FISIM) & Unit-denton | Denton benchmarking | |
| | | | S1313 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S13141 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| | | S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |
| | | S15 | N/A | Centralized compilation (FISIM) | Denton benchmarking | |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|---|------------------------|
| P1192 Financial intermediation services indirectly measured | Uses | S11 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| FISIM (deposits) | | S125 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S126 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S128 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S1311 | N/A | Centralized compilation (FISIM) & Unit-denton | Denton benchmarking |
| | | S1313 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S13141 | N/A | Centralized compilation (FISIM) | Denton benchmarking |



| S13149 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
|--------|-----|---------------------------------|------------------------|
| S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| S15 | N/A | Centralized compilation (FISIM) | Denton benchmarking |

Additional information on sources and methods

For all sectors, P2 is formed as a sum of independently compiled subtransactions P22U, P1191U and P1192U. The last two are FISIM-related and despite the confusing naming convention, they are indeed parts of P2. They refer to the domestic intermediate consumption of FISIM on the loans side and deposits side respectively. See the annex for a more detailed description of FISIM compilation.

The P22U of S11 is compiled and balanced treating S11 as a simple residual sector. It is compiled in a similar fashion as P11 of S11 (described above).



2.3 Transaction P3

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---|---|
| P31 Individual consumption expenditure | Uses | S1311 | N/A | Periodic tax data & questionnaire from YLE (National broadcasting company) & data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | N/A (P3 of S1313 used as indicator) | Denton benchmarking |
| | | S13141 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13149 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S14 | N/A | N/A | Equal to rigid margin imported from QNA |
| | | S15 | N/A | (Sum of other transactions) | Sum of other transactions |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|-------------------------------------|---------------------------|
| P32 Collective consumption expenditure | Uses | S1311 | N/A | (Sum of other transactions) | Sum of other transactions |
| | : | S1313 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13141 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

Additional information on sources and methods

The individual consumption expenditure P31 for S14 is derived from QNA to be used as a boundary condition in QSA. S14/P31/U is then made equal to this transaction.

For the S13 subsectors, the P31 and P32 figures are calculated via a combination of the indicator method and use of accounting identities:



For S13141 and S13149 P3U is compiled as the sum of P132R (described under P1) and D632U² (compiled via the indicator method). For P32U the unit-denton method is used and P31U is calculated as P31U = P3U - P32U.

For S1311 and S1313, P32U is compiled using equation P32U = P3U - P31U, where P31U is compiled via the indicator method and P3U is calculated as P3U=P132R (described under P1) + D632U (compiled via the indicator method).

For all the S13 subsectors, D632U is needed as an input in the equations derived from the accounting identities. It is produced via the indicator method as follows:

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|--|------------------------|
| D632 Social transfers in kind — market production purchased by general government and NPISHs | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

_

² Social transfers in kind



2.4 Transaction P5

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|------------------------------------|---------------------|--------|--------------------|---|------------------------|
| P51 Gross fixed capital formations | Uses | S11 | N/A | N/A | Residual sector |
| | | S121 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Questionnaire from YLE (National broadcasting company) & data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics & Volume index of newbuilding | Denton benchmarking |
| | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | Indicator imported from QNA: S1 total investment in dwellings (N111) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------------|---------------------|--------|--------------------|---|---|
| P52 Change in inventories | Uses | S11 | N/A | N/A | Residual sector |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | No Indicator used - this item is an estimation and allowed to change due to QNA balancing | Direct data input (manual benchmarking) |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--------------------------------------|---------------------|--------|--------------------|-------------------------------------|------------------------|
| P53 Net acquisitions of Us valuables | Uses | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | N/A | Residual sector |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

Additional information on sources and methods

The total S1 levels of P51, P52 and P53 are derived from QNA to be used as boundary conditions in QSA. Other sectors except for S14 are produced via the indicator method while S11 is formed as the residual. P52 of S14 is fed into the system manually and the figure is not automatically balanced to ASA within the system. This is the only case where manual balancing to ASA is needed.

There are few direct sources available for these transactions, so the unitdenton method is used as the indicator for most sectors.



2.5 Transactions P6 and P7

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--------------------|---------------------|-------------------------------------|
| P61 Exports of goods | Uses | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P6211 Exports of FISIM (loans) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P6212 Exports of FISIM (deposits) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P622 Other exports of services | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--------------------|---------------------|-------------------------------------|
| P71 Imports of goods | Resources | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P7211 Imports of FISIM (loans) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P7212 Imports of FISIM (deposits) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P722 Other imports of services | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

Additional information on sources and methods

P6 and P7 are formed as sums of the independent goods, services and FISIM-related components. The indicator method is not used for any S2 figures, as these are all directly inputted from BoP into our RoW compilation system and transferred from there to QSA.

See the annex for more information on the FISIM-related components.



2.6 Transaction D1

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / | Sector | Counterpart | Sources | Methods |
|------------------------|-------------|--------|-------------|--|-------------------------------------|
| | Uses | | sector | | l |
| D11 Wages and salaries | Resources | S14 | N/A | N/A | Residual sector |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| | Uses | S11 | N/A | N/A | Residual sector |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S126 | N/A | Periodic tax data | Denton benchmarking |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | Periodic tax data | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Periodic tax data | Denton benchmarking |
| | | S13141 | N/A | Periodic tax data | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S14 | N/A | Periodic tax data | Denton benchmarking |
| | | S15 | N/A | Periodic tax data | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | |
|-------------------------------------|---------------------|--------|--------------------|--|--|------------------------|------------------------|
| D12 Employers' social contributions | Resources | S14 | N/A | N/A | Residual sector | | |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | | |
| | Uses | S11 | N/A | N/A | Residual sector | | |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking | | |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking | | |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | |
| | | S126 | N/A | Periodic tax data | Denton benchmarking | | |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | |
| | | S128 | N/A | Periodic tax data | Denton benchmarking | | |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking | | |
| | | S1313 | N/A | Periodic tax data | Denton benchmarking | | |
| | | S13141 | N/A | Periodic tax data | Denton benchmarking | | |
| | | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking | |
| | | S14 | N/A | Periodic tax data | Denton benchmarking | | |
| | | | | S15 | N/A | Periodic tax data | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | | |

Additional information on sources and methods

The S1 totals of D11U and D12U are derived from QNA to be used as a boundary condition in QSA. This margin is used for both resources and uses side in QSA. For most sectors, D11U and D12U are produced via the



indicator method. These figures along with boundary condition from QNA are then used to calculate S11/D11U and S11/D12U as simple residual transactions for the uses side. Then, D11R and D12R of S14 are calculated as simple residual transactions for the resources side.



2.7 Transaction D2

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|---------------------|--|
| D211 VAT | Resources | S1311 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| D212 Taxes and duties on imports excluding VAT | Resources | S1311 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| D214 Taxes on products, except VAT and import taxes | Resources | S1311 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| and import taxes | | S1313 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------------------------|---------------------|--------|--------------------|---------------------|--|
| D29 Other taxes on production | Resources | S1311 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| D29 Other taxes on production | Uses | S11 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S122 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S1313 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

Additional information on sources and methods

As seen in the first table, all the transactions are recorded as resources. The uses side is only recorded on S1 level. We have a sector in the system which represents transactions that are only recorded in S1, it's called S1N. Thus, S1N refers to transactions included in S1 figures that are not



calculated on a sub-sector level. The only transactions that involve this "imputed sector" are D21U and D31R. Those transactions are not distributed to subsectors in ASA either.

The compilation, benchmarking and balancing of D29 and subtransactions of D21 is done in Tax system and then the figures are transferred to QSA. D21R is always a sum of its subtransactions and it's compiled in QSA.

Regarding D2, major data sources fed to Tax system are Tax administration, the state bookkeeping system, quarterly statistics on local governments, Finnish Customs, Finnish Transport and Communication Agency and the Finnish Government Shared Services Centre for Finance and HR.



2.8 Transaction D3

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------------|---------------------|--------|--------------------|--|-------------------------------------|
| D31 Subsidies on products | Uses | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Data from Helsinki Region Transport | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--------------------|-------------------------------------|--|
| D39 Other subsidies on production | Resources | S11 | N/A | N/A | Residual sector |
| | | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

Additional information on sources and methods

The D31 resources is included in S1 using sector S1N. S1N refers to transactions included in S1 figures that are not calculated on a sub-sector level. The only transactions that involve this "imputed sector" are D21U and D31R. Those transactions are not distributed to subsectors even in ASA.



2.9 Transaction D41

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / | Sector | Counterpart | Sources | Methods | | | | |
|-----------------------|-------------|--------|-------------|--|------------------------|--------|-----|-------------------------------------|------------------------|
| | Uses | | sector | | | | | | |
| D411 Actual interests | Resources | S11 | N/A | N/A | Residual sector | | | | |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking | | | | |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking | | | | |
| | | S123 | N/A | Data on property income of mutual funds from Bank of Finland | Denton benchmarking | | | | |
| | | S124 | N/A | Data on property income of mutual funds from Bank of Finland | Denton benchmarking | | | | |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S128 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | S129 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | S1311 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | S1313 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | S1313 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | | | | | S13141 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | S14 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |
| | | S15 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | | | | |



| S2 | N/A | Balance of Payments | Direct data input |
|----|-----|---------------------|-------------------|
| | | | (no benchmarking) |

| Transaction | Resources / | Sector | Counterpart | Sources | Methods | |
|-----------------------|-------------|--------|-------------|-------------------------------------|-------------------------------------|------------------------|
| | Uses | | sector | T | T | |
| D411 Actual interests | Uses | S11 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking | |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking | |
| | | S125 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S128 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S129 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1311 | S0-S13 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1311 | S1313 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1311 | S13141 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1311 | S13149 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1313 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1313 | s1311 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | S1313 | s13141 | Centralized compilation (QFA+rates) | Denton benchmarking | |
| | | | S1313 | s13149 | Centralized compilation (QFA+rates) | Denton benchmarking |
| | | S13141 | S0-S13 | Centralized compilation (QFA+rates) | Denton benchmarking | |



| | S13141 | S1311 | Centralized compilation (QFA+rates) | Denton benchmarking |
|--|--------|-------|-------------------------------------|-------------------------------------|
| | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S14 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking |
| | S15 | N/A | Centralized compilation (QFA+rates) | Denton benchmarking |
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|------------------------------------|---------------------|--------|--------------------|---------------------------------|---------------------------|
| D412 Fisim adjustment, deposits | Resources | S11 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S122 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S125 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S126 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S128 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S129 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S1311 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S1313 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13141 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13149 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S15 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S2 | N/A | (Sum of other transactions) | Sum of other transactions |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------------------|---------------------|--------|--------------------|---------------------------------|---------------------------|
| D412 Fisim adjustment, loans | Uses | S11 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S122 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S125 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S126 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S127 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S128 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S129 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S1311 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S1313 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S13141 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S15 | N/A | (Sum of other transactions) | Sum of other transactions |
| | | S2 | N/A | (Sum of other transactions) | Sum of other transactions |

Additional information on sources and methods

D41 is compiled as two separate subtransactions that are discussed in turn below.

D411 refers to the actual (recorded) interest flows. For some sectors, there is a direct quarterly data source available. In this case, the direct source is used along with the simple benchmarking method to produce the best fitting quarterly path for the series. For most sectors, no direct quarterly data source is available, in which case we use centrally compiled indicators. These are calculated using the sectoral balance sheets from QFA multiplied by interest rate data from Bank of Finland. D411 is balanced treating D411R of S11 as residual sector. Sometimes indicators produced



in centralized compilation need further adjustments in order to find a plausible level of D411R of S11. Note also that for the S13 subsectors on the uses side, interest flows are further divided by counterparty sectors. This is due to the fact that D41 flows between S13 subsectors have to be removed due to consolidation of S13.

Due the regulatory changes, there is only one small unit in S123 at the time of writing, and the values of the sector are rounded to zero. It should also be noted that both D411U and D412U of S14 are further divided into subtransactions and D411U and D412U are, in fact, compiled as a sum of these subtransactions. The subtransactions of S14 are, for interests, D411U/A, D411U/B and D411U/C, where A refers to interests paid from consumer credits, B housing loans and C business loans.

For most sectors in the tables above, the FISIM components D412R and D412U are compiled as sums of other transactions. This means, in this case, that they are equal to the corresponding production or intermediate consumption transactions of the sector (see the chapters on P1 and P2). S14 is the only exception, as it has final consumption in addition to intermediate consumption. See the annex for more information on the FISIM components.



2.10 Transaction D4N

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / | Sector | Counterpart | Sources | Methods |
|----------------------|-------------|--------|-------------|--|------------------------|
| | Uses | | sector | | |
| D421 Dividend income | Resources | S11 | N/A | N/A | Residual sector |
| | | S121 | N/A | Questionnaire to Bank of Finland | Denton benchmarking |
| | | S122 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S123 | N/A | Data on property income of mutual funds from Bank of Finland | Denton benchmarking |
| | | S124 | N/A | Data on property income of mutual funds from Bank of Finland | Denton benchmarking |
| | | S125 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S126 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S129 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S14 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S15 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |



| S2 | N/A | Balance of Payments | Direct data input |
|----|-----|---------------------|-------------------|
| | | | (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|----------------------|---------------------|--------|--------------------|---|-------------------------------------|
| D421 Dividend income | Uses | S11 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S121 | N/A | Questionnaire to Bank of Finland & data from the state bookkeeping system | Denton benchmarking |
| | | S122 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S125 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S126 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | Balance of Payments & Centralized compilation (Domestic dividends) | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|--|------------------------|
| D422 Withdrawals from income of quasicorporations Resources Uses | Resources | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S11 | N/A | N/A | Residual sector |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | | | |
|--|---------------------|--------|--------------------|---------------------|-------------------------------------|-------------------------------------|------|-----|---------------------|
| D43 Reinvested earnings on direct foreign investment | Resources | S11 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| Toreign investment | | S122 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S124 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S125 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S126 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S127 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S128 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | Uses | S129 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S1311 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | | S13141 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | |
| | | S14 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S11 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | S122 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | | S124 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | |
| | | S125 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |
| | | | | | | | S126 | N/A | Balance of Payments |
| | | S127 | N/A | Balance of Payments | Direct data input (no benchmarking) | | | | |



| | S128 | N/A | Balance of Payments | Direct data input (no benchmarking) |
|--|------|-----|---------------------|-------------------------------------|
| | S129 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| | S14 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|--|-------------------------------------|
| D441 Investment income attributable to | Resources | S11 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| insurance policyholders | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | N/A | Residual sector |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| | Uses | S128 | N/A | N/A (indicator compiled using other S128 indicators) | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--|-------------------------------------|--|
| D442 Investment income payable on | Resources | S14 | N/A | N/A | Residual sector |
| pension entitlements | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| Uses | S128 | N/A | N/A (indicator compiled using other S128 indicators) | Denton benchmarking | |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | | | | | | | | | |
|---|---------------------|--------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------------------|------------------------|-----|-------------------------------------|--|-------------------------------------|------------------------|
| D4431 Dividends attributable to collective investment | Resources | S11 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| fund shareholders | | S121 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S124 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S127 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | | | | | | | | | | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | | | S13141 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | |
| | | | | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | |
| | | | | | | | | | | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | |
| | | | | | | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | |
| | | | | | | | | | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | | |
| | Uses | S123 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | | | | | | |
| | | S124 | N/A | N/A | Residual sector | | | | | | | | | | |



| S2 | N/A | Balance of Payments | Direct data input |
|----|-----|---------------------|-------------------|
| | | | (no benchmarking) |

| Transaction | Resources / | Sector | Counterpart | Sources | Methods | | | | | | |
|--|-------------|--------|-------------|---|---|------------------------|--------|-------|---|---|------------------------|
| | Uses | | sector | | | | | | | | |
| D44321 Retained interest income to collective investment | Resources | S11 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| fund shareholders | | S121 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | S122 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | S123 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | S124 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | S125 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | | | | | | | S126 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S127 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | | S128 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | |
| | | S129 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | | S1311 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | |
| | | | | | | | | S1313 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | | | | | | S13141 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | |
| | | S13149 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |
| | | S14 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking | | | | | | |



| | S15 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
|------|------|-----|---|-------------------------------------|
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| Uses | S123 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S124 | N/A | N/A | Residual sector |
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|---|------------------------|
| D44322 Retained dividends to collective investment fund | Resources | S11 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| shareholders | | S121 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S122 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S123 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S124 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S125 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S126 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S127 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S128 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S129 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | | S1311 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |



| | S1313 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
|------|--------|-----|---|-------------------------------------|
| | S13141 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S13149 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S14 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S15 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| Uses | S123 | N/A | Balance of Payments & Centralized compilation (D4432) | Denton benchmarking |
| | S124 | N/A | N/A | Residual sector |
| | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------|---------------------|--------|--------------------|--|------------------------|
| D45 Rents | Resources | S11 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| Use | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | N/A (estimate of trend/quarterly path used as indicator) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S11 | N/A | N/A | Residual sector |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



| S14 | | N/A (estimate of trend/quarterly path used as indicator) | Denton benchmarking |
|-----|-----|--|------------------------|
| S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

Additional information on sources and methods

D4N is compiled as a sum of independent subtransactions.

D421, or dividend flows, are produced via the indicator method. For some sectors, direct source data is available and used. For most sectors this is not the case, so we use a centrally compiled set of indicators that consist of a domestic component and a cross-border component. The domestic component is based on public information on share-specific dividend flows of listed companies combined with the Bank of Finland's SHS data. The cross-border component is derived from BoP. There can be major revisions in BoP data in September's compilation round. Consequently, D421 transactions in QSA can be heavily revised in September as well.

D421R of S11 balances the economy. A rather prominent defect of the centrally produced indicators is the fact that dividends from privately held companies are currently not included in the source data at all. In practice this means that information on listed shares is used to estimate flows related to unlisted shares as well. Typically, some indicators are to be adjusted in order to find a plausible balance between the sectors. The lack of timely data is not the only issue of compiling dividend flows. Another one is that the two components of the indicators are not necessarily always commensurable. In general, the components are consistent. However, in some cases summing up the two components into one indicator, which is then benchmarked, may cause either the domestic part or cross-border part of the indicator dominate more than it should. The cross-border data can be more comprehensive than the domestic data or vice versa. If either of these components are missing, it needs to be manually estimated into the system.

D43 is received from BoP for all sectors. The same source is used for QSA and ASA, making the three consistent.

D44321 and, D44322 refer to interests and dividends (respectively) received by and reinvested into mutual funds. For all sectors, the indicators are produced in a centralized manner. The method works by distributing the flows received by the funds (as reported to us by BoF) to the beneficiary sectors according to QFA's balance sheets. BoP data is used for the cross-border flows. The univariate Denton method is used to benchmark the figures. D44321R and D44322R of S124 are used as balancing items. Due the regulatory changes, there is only one small unit in S123 at the time of writing, and the values of the sector are rounded to zero.

For D422 and D4431 and D45, very few data sources are available on a quarterly basis.



2.11 Transaction D5

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|------------------|---------------------|--------|--------------------|---|-------------------|
| D51 Income taxes | Resources | S1311 | N/A | Tax system | Direct data input |
| DSI meome taxes | Resources | 31311 | 13/7 | Tax system | (benchmarking in |
| | | | | | Tax system) |
| | | S1313 | N/A | Tax system | Direct data input |
| | | 31313 | IN/A | Tax system | (benchmarking in |
| | | | | | Tax system) |
| | Uses | S122 | N/A | Tax system | Direct data input |
| | 0303 | 0122 | .,,,, | Tux system | (benchmarking in |
| | | | | | Tax system) |
| | | S125 | N/A | Tax system | Direct data input |
| | | 0123 | .,,,, | Tux system | (benchmarking in |
| | | | | | Tax system) |
| | | S126 | N/A | Tax system | Direct data input |
| | | | 1.7. | | (benchmarking in |
| | | | | | Tax system) |
| | | S127 | N/A | Tax system | Direct data input |
| | | | , | , | (benchmarking in |
| | | | | | Tax system) |
| | | S128 | N/A | Tax system | Direct data input |
| | | | | , | (benchmarking in |
| | | | | | Tax system) |
| | | S129 | N/A | Tax system | Direct data input |
| | | | | · | (benchmarking in |
| | | | | | Tax system) |
| | | S1311 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S13141 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S14 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S15 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------|---------------------|--------|--------------------|------------|-------------------|
| D59 Other current | Resources | S1311 | N/A | Tax system | Direct data input |
| taxes, excl. tax on | | | | | (benchmarking in |
| capital | | | | | Tax system) |
| | | S1313 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | Uses | S122 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S126 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S128 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S129 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S1311 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S13141 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S14 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |
| | | S15 | N/A | Tax system | Direct data input |
| | | | | | (benchmarking in |
| | | | | | Tax system) |

Additional information on sources and methods

D5 is divided into D51 and D59 in the compilation system. The figures are transferred to QSA from Tax system.

Major data sources in Tax system are Tax Administration, the state bookkeeping system, quarterly statistics on local government finances, and Finnish Transport and Communication Agency.



2.12 Transactions D61 and D62

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---------------------|--|
| compulsory actual social contributions | Resources | S121 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S1313 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|------------|--|
| D61112 Employers' voluntary actual social contributions | Resources | S128 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S129 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|------------|--|
| D61121 Wage and salary earners' compulsory social contributions | Resources | S128 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13149 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|------------|--|
| D61122 Wage and salary earners' voluntary social | Resources | S13149 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| contributions | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|-------------------------------------|--|
| D612 Employers' imputed social contributions | Resources | S11 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S14 | N/A | N/A | Residual sector |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|------------|--|
| D61311 Households' compulsory actual pension contributions | Resources | S121 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S1313 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|------------|--|
| D61312 Households' voluntary actual pension contributions | Resources | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|------------|--|
| D61321 Households' compulsory actual non-pension contributions | Resources | S13141 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | | S13149 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|------------|--|
| D61322 Households' voluntary actual non- pension contributions | Resources | S13149 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---|------------------------|
| D614 Households' social contribution supplements | Resources | S128 | N/A | N/A (indicator compiled using other \$128 indicators) | Denton benchmarking |
| | Resources | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S14 | N/A | N/A | Residual sector |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|-------------------------------------|------------------------|
| D61SC Social insurance scheme service charges | Resources | S128 | N/A | N/A (P11 of S128 used as indicator) | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | Uses | S14 | N/A | N/A | Residual sector |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|----------------------|---------------------|--|------------------------|
| D6211 Social security pension benefits in | Resources | S14 | N/A | N/A | Residual sector |
| cash | | S2 N/A Balance of Pa | Balance of Payments | Direct data input (no benchmarking) | |
| | Uses | S121 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|--|------------------------|
| D6212 Social security non-pension benefits in cash | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S13141 | N/A | Monthly survey from employment pension scheme | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) & Monthly statistics on benefits in respect of unemployment in Finland (Kela & FIN-FSA) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|--|------------------------|
| D6221 other social insurance pension benefits | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S128 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system & unit-denton | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|------------------------------|-------------------------------------|
| D6222 other social insurance non-pension benefits | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S128 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|--|------------------------|
| D623 Social assistance benefits in cash | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S1311 | N/A | Data from the state bookkeeping system & unit-denton | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S13149 | N/A | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

Additional information on sources and methods

Subtransactions of D611 and D613 are compiled in Tax system and transferred to QSA system. The original data sources fed into Tax system include Financial Supervisory Authority and quarterly statistics on local government finances. The source data for D61R and D62U of the general government subsectors and the insurance corporations is mostly very



accurate. As households are the only counterparty sector, these figures are accurate for S14 as well.



2.13 Transactions D71 and D72

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | |
|-------------------------------------|---------------------|--------|--------------------|--|-------------------------------------|------------------------|
| D71 Net non-life insurance premiums | Resources | S128 | N/A | Regulatory data from Fin-FSA & estimate of trend for items with no source of data available used as a component in the indicator | Denton benchmarking | |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | |
| | Uses | S11 | N/A | N/A (indicator compiled using S128 indicators) | Denton benchmarking | |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | | | S14 | N/A | N/A |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) | |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------------------------|---------------------|--------|--------------------|--|------------------------|
| D72 Non-life insurance claims | Resources | S11 | N/A | N/A (indicator compiled using S128 indicators) | Denton benchmarking |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | N/A | Residual sector |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
|--|------|------|-----|------------------------------|--|
| | Uses | S128 | N/A | Regulatory data from Fin-FSA | Denton benchmarking |
| | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |

Additional information on sources and methods

Good direct quarterly source data is available for the total D72U paid by S128. For the sectoral distribution of D71U and D72R, no reliable sources are currently available. Household sector and non-financial corporation sector pays most of the premiums and receive most of the claims paid by insurance sector. D71U and D72R indicators are compiled for S11 by using S128 indicators as input. S14 is treated as residual sector for both transactions D71U and D72R.



2.14 Transaction D7N

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--------------------------------------|---------------------|--------|--------------------|--|-------------------------------------|
| D73 Current transfers within general | Resources | S1311 | S1313 | Data from the state bookkeeping system | Denton benchmarking |
| government | | S1311 | S13141 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S13149 | Data from the state bookkeeping system | Denton benchmarking |
| | | S13141 | S1311 | N/A | Transferred from counterpart sector |
| | | S13141 | S13149 | N/A | Transferred from counterpart sector |
| | | S13149 | S1311 | N/A | Transferred from counterpart sector |
| | | S13149 | S1313 | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | Uses | S1311 | S1313 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S13141 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S13149 | Data from the state bookkeeping system | Denton benchmarking |
| | | S13141 | S1311 | N/A | Transferred from counterpart sector |
| | | S13149 | S1311 | N/A | Transferred from counterpart sector |
| | | S13149 | S1313 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13149 | S13141 | N/A (unit-denton used as indicator) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------------------|---------------------|--------|--------------------|---------------------|-------------------------------------|
| D74 Current international | Resources | S1313 | S2 | N/A | Transferred from counterpart sector |
| cooperation | | S13141 | S2 | N/A | Transferred from counterpart sector |
| | | S13149 | S2 | N/A | Transferred from counterpart sector |
| | | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |
| | | S2 | S13149 | Balance of Payments | Direct data input (no benchmarking) |
| | 5 | S1311 | S2 | N/A | Transferred from counterpart sector |
| | | S13149 | S2 | N/A | Transferred from counterpart sector |
| | | S2 | S1313 | Balance of Payments | Direct data input (no benchmarking) |
| | | S2 | S13141 | Balance of Payments | Direct data input (no benchmarking) |
| | | S2 | S13149 | Balance of Payments | Direct data input (no benchmarking) |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | | | | | |
|----------------------------------|---------------------|--------|--------------------|--|-------------------------------------|------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------|
| D759 Other miscellaneous current | Resources | S11 | S13149 | N/A | Transferred from counterpart sector | | | | | |
| transfers | | S11 | S2 | N/A | Transferred from counterpart sector | | | | | |
| | | S122 | S121 | N/A | Transferred from counterpart sector | | | | | |
| | | S1311 | S11 | Data from the state bookkeeping system | Denton benchmarking | | | | | |
| | | S1311 | S128 | Data from the state bookkeeping system | Denton benchmarking | | | | | |
| | | S1311 | S14 | Data from the state bookkeeping system | Denton benchmarking | | | | | |
| | | S1311 | S15 | Data from the state bookkeeping system | Denton benchmarking | | | | | |
| | | | S1313 | S11 | N/A (unit-denton used as indicator) | Denton benchmarking | | | | |
| | | | | | S1313 | S14 | N/A (unit-denton used as indicator) | Denton benchmarking | | |
| | | S1313 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | |
| | | S13149 | S128 | N/A (unit-denton used as indicator) | Denton benchmarking | | | | | |
| | | S14 | S1311 | N/A | Transferred from counterpart sector | | | | | |
| | | | | | | S14 | S15 | N/A | Transferred from counterpart sector | |
| | | | | | S14 | S2 | N/A | Transferred from counterpart sector | | |
| | | | | | | S15 | S11 | N/A | Transferred from counterpart sector | |
| | | | | | | | | | S15 | S1311 |
| | | | | S15 | S1313 | N/A | Transferred from counterpart sector | | | |
| | | S15 | S13149 | N/A | Transferred from counterpart sector | | | | | |



| | S15 | S14 | N/A | Transferred from counterpart sector |
|--|-----|-----|---------------------|-------------------------------------|
| | S15 | S2 | N/A | Transferred from counterpart sector |
| | S2 | S14 | Balance of Payments | Direct data input (no benchmarking) |
| | S2 | S15 | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|--|-------------------------------------|
| D759 Other miscellaneous current transfers | Uses | S11 | S1311 | N/A | Transferred from counterpart sector |
| transiers | | S11 | S1313 | N/A | Transferred from counterpart sector |
| | | S11 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S121 | S122 | (Sum of other transactions) | Sum of other transactions |
| | | S128 | S1311 | N/A | Transferred from counterpart sector |
| | | S128 | S13149 | N/A | Transferred from counterpart sector |
| | | S1311 | S14 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S15 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13149 | S11 | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S13149 | S15 | Monthly bookkeeping data from the National Pensions Institute (Kela) | Denton benchmarking |
| | | S14 | S1311 | N/A | Transferred from counterpart sector |
| | | S14 | S1313 | N/A | Transferred from counterpart sector |



| S14 | S15 | Percentage of S1 total wages paid (from QNA) is used for an estimate of trade union fees; simple estimate for items with no sources data available used as a component in the indicator | Denton benchmarking |
|-----|-------|---|-------------------------------------|
| S14 | S2 | N/A | Transferred from counterpart sector |
| S15 | S1311 | N/A | Transferred from counterpart sector |
| S15 | S1313 | N/A | Transferred from counterpart sector |
| S15 | S14 | N/A (unit-denton used as indicator) | Denton benchmarking |
| S15 | S2 | N/A | Transferred from counterpart sector |
| S2 | S11 | Balance of Payments | Direct data input (no benchmarking) |
| S2 | S14 | Balance of Payments | Direct data input (no benchmarking) |
| S2 | S15 | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---------------------|--|
| D761 The VAT-based third EU own resource | Resources | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |
| | Uses | S1311 | S2 | N/A | Transferred from counterpart sector |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---------------|---------------------|--------|--------------------|---------------------|-------------------------------------|
| fourth EU own | Resources | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |
| resource | Uses | S1311 | S2 | N/A | Transferred from counterpart sector |



Additional information on sources and methods

The D7N subtransactions are compiled on a sector by counterparty sector basis. A transaction is always calculated (Denton-benchmarked) for one sector and then the same figure is transferred to the counterparty sector's account. This takes care of the balancing problem for D7N.

For the subtransactions of D7N, the most important source is the state bookkeeping system.



2.15 Transaction D8

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---|------------------------|
| D8 Adjustment for the change in pension entitlements | Resources | S14 | N/A | N/A | Residual sector |
| | Uses | S128 | N/A | Difference between D61 and D62 of S128 is used as indicator | Denton benchmarking |
| | | S129 | N/A | Difference between D61 and D62 of S129 is used as indicator | Denton benchmarking |

Additional information on sources and methods

D8U of S129 follows the equation D8U = D61R - D62U. Even though the indicator of D8U of S128 is calculated the same way, benchmarked D8U of S128 does not follow the equation. That's because D61R and D62U of S128 include workers' compensation insurance which is not included in D8U in ASA.

On resources side S14 is the only sector receiving D8. Thus, S14 balances the economy.

2.16 Transaction D91

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------------|---------------------|--------|--------------------|------------|--|
| D91 Capital taxes | Resources | S1311 | N/A | Tax system | Direct data input (benchmarking in Tax system) |
| | Uses | S14 | N/A | Tax system | Direct data input (benchmarking in Tax system) |

Additional information on sources and methods

D91 is compiled in the Tax system. The state treasury publishes very reliable information on the tax on capital.



2.17 Transaction D9N

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / | Sector | Counterpart | Sources | Methods | |
|-----------------------|-------------|--------|-------------|--|--|------------------------|
| | Uses | | sector | | | |
| D92 Investment grants | Resources | S11 | S1311 | N/A | Transferred from counterpart sector | |
| | | S11 | S1313 | N/A | Transferred from counterpart sector | |
| | | S11 | S2 | N/A | Transferred from counterpart sector | |
| | | S1311 | S1313 | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S1311 | S2 | N/A | Transferred from counterpart sector | |
| | | S1313 | S1311 | N/A | Transferred from counterpart sector | |
| | | S1313 | S2 | N/A | Transferred from counterpart sector | |
| | | S14 | S1311 | N/A | Transferred from counterpart sector | |
| | | S14 | S2 | N/A | Transferred from counterpart sector | |
| | | S15 | S1311 | N/A | Transferred from counterpart sector | |
| | | S15 | S1313 | N/A | Transferred from counterpart sector | |
| | | S15 | S2 | N/A | Transferred from counterpart sector | |
| | Uses | S1311 | S11 | Data from the state bookkeeping system | Denton benchmarking | |
| | 5 | | S1311 | S1313 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S14 | Data from the state bookkeeping system | Denton benchmarking | |
| | | S1311 | S15 | Data from the state bookkeeping system | Denton benchmarking | |
| | | S2 | S11 | Balance of Payments | Direct data input (no benchmarking) | |



| | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |
|--|----|-------|---------------------|-------------------------------------|
| | S2 | S1313 | Balance of Payments | Direct data input (no benchmarking) |
| | S2 | S14 | Balance of Payments | Direct data input (no benchmarking) |
| | S2 | S15 | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--------------------------------|---------------------|--------|--------------------|--|-------------------------------------|
| D99 Other capital transfers | Resources | S11 | S1311 | N/A | Transferred from counterpart sector |
| | | S11 | S1313 | N/A | Transferred from counterpart sector |
| | | S11 | S13141 | N/A | Transferred from counterpart sector |
| | | S122 | S1311 | N/A | Transferred from counterpart sector |
| | | S125 | S1311 | N/A | Transferred from counterpart sector |
| | | S1311 | S11 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S122 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S125 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S1313 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S14 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S2 | N/A | Transferred from counterpart sector |
| | | S13141 | S1311 | N/A | Transferred from counterpart sector |
| | | S13141 | S1313 | N/A | Transferred from counterpart secto |



| | S13141 | S13149 | N/A | Transferred from counterpart sector |
|--|--------|--------|---------------------|-------------------------------------|
| | S13149 | S1311 | N/A | Transferred from counterpart sector |
| | S14 | S128 | N/A | Transferred from counterpart sector |
| | S14 | S1311 | N/A | Transferred from counterpart sector |
| | S15 | S1311 | N/A | Transferred from counterpart sector |
| | S15 | S14 | N/A | Transferred from counterpart sector |
| | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |
| | S2 | S13141 | Balance of Payments | Direct data input (no benchmarking) |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------|---------------------|--------|--------------------|--|-------------------------------------|
| D99 Other capital transfers | Uses | S11 | S1311 | N/A | Transferred from counterpart sector |
| | | S128 | S14 | N/A (ad-hoc manual input) | Denton benchmarking |
| | | S1311 | S11 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S122 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S125 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S1313 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S13141 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S13149 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | S14 | Data from the state bookkeeping system | Denton benchmarking |
| | | S1311 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking |



| | S1311 | S2 | N/A | Transferred from counterpart sector |
|--|--------|--------|-------------------------------------|-------------------------------------|
| | S1313 | S11 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S1313 | S1311 | N/A | Transferred from counterpart sector |
| | S1313 | S13141 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S13141 | S11 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S13141 | S2 | N/A | Transferred from counterpart sector |
| | S13149 | S13141 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S14 | S1311 | N/A | Transferred from counterpart sector |
| | S14 | S15 | N/A (unit-denton used as indicator) | Denton benchmarking |
| | S15 | S1311 | N/A | Transferred from counterpart sector |
| | S2 | S1311 | Balance of Payments | Direct data input (no benchmarking) |

Additional information on sources and methods

The D9N subtransactions are compiled on a sector by counterparty sector basis. A transaction is always calculated (Denton-benchmarked) for one sector and then the same figure is transferred to the counterparty sector's account. This takes care of the balancing problem for D9N.

For the subtransactions of D9N, the most important source is the state bookkeeping system.



2.18 Transaction P51C

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--------------------|-------------------------------------|------------------------|
| P51C Consumption of fixed capital | Uses | S11 | N/A | N/A | Residual sector |
| | | S121 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S125 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S126 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S128 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S129 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13141 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S13149 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

Additional information on sources and methods

A unit-denton estimate is used for most sectors' P51CU. Then, the S1 total of P51C is imported from QNA to be used as a boundary condition in QSA. S11 is calculated as a simple residual sector.



2.19 Transaction NP

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|-------------------------------------|--|------------------------|
| NP11 Acquisitions of natural resources | Uses | S11 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | Data from the state bookkeeping system | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking | |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------------------------------|---------------------|--------|--------------------|--|------------------------|
| NP12 Disposals of natural resources | Uses | S11 | N/A | N/A | Residual sector |
| | | S122 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S1313 | N/A | Quarterly local government finances Statistics | Denton benchmarking |
| | | S14 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S15 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|-------------------------------------|-------------------------------------|
| NP2 Acquisitions less disposals of non- produced resources | Uses | S11 | N/A | N/A | Residual sector |
| | | S1311 | N/A | N/A (unit-denton used as indicator) | Denton benchmarking |
| | | S2 | | Balance of Payments | Direct data input (no benchmarking) |

Additional information on sources and methods

Unit-denton estimates are mostly used for this transaction as direct source data is scant. NP1U is formed as NP11U-NP12U.

2.20 Transaction B9FX

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods | |
|--|---------------------|--------|--------------------|--------------------|-------------------------------------|-------------------------------------|
| B9FX Net lending/borrowing of Financial Accounts | N/A | S11 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| Financial Accounts | | S121 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S122 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S123 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S124 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | | S125 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | | S126 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S127 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S128 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S129 | N/A | Financial accounts | Direct data input (no benchmarking) | |
| | | S1311 | N/A | Financial accounts | Direct data input (no benchmarking) | |



| and the second s | | | | |
|--|--------|-----|--------------------|-------------------------------------|
| | S1313 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | S13141 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | S13149 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | S14 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | S15 | N/A | Financial accounts | Direct data input (no benchmarking) |
| | S2 | N/A | Financial accounts | Direct data input (no benchmarking) |

Additional information on sources and methods

B9FX represents net lending/borrowing of sectors in financial accounts. It is not directly a part of QSA compilation but serves its purpose in monitoring vertical discrepancies.

2.21 Transaction F4

Tabular overview of QSA sources and methods by institutional sectors

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-------------|---------------------|--------|--------------------|--------------------|-------------------------------------|
| F4 Loans | N/A | S14 | N/A | Financial accounts | Direct data input (no benchmarking) |

Additional information on sources and methods

F4 of S14 is used in calculating indebtedness ratio. Household sector's indebtedness ratio is one of our key indicators alongside of profit share of S11, savings rate of S14 and investment rates of S11 and S14.



ANNEXES

Annex 1: FISIM-related transactionsAnnex 2: List of abbreviations used



Annex 1: FISIM-related transactions

FISIM calculations are done on a quarterly basis. This means that the same core calculations can be used both in QSA and ASA. The main idea of the FISIM calculations is to compile all the FISIM-related transactions as independent components (with separate transaction codes) and include them within sectors' P1, P2, P3 and D41 as subtransactions.

Fundamentally, the calculations are based on the demand-supply identity: domestic production + imports = intermediate consumption + final consumption + exports. All of these transactions are compiled quarterly for all sectors, with the loans side and deposits side calculated separately. To say this with the transaction codes we use, we have two identities:

Loans side:

 $P1191R + P7211R = P1191U^3 + P31U(part) + P6211U$

Deposits side:

P1192R + P7212R = P1192U + P31U(part) + P6212U

All of these FISIM-related transactions are compiled centrally for all sectors on each quarter. The quarterly figures are used as indicators in QSA⁴ while their annual sums are used in annual national accounts as levels

The quarterly source data used in the FISIM calculations are:

- MFI data collection, which includes profit & loss accounts, balance sheets and interest rates by counterpart user sectors.
- BoP, for the cross-border flows.

And the annual data source, for the breakdown of FISIM by industries, is:

- Outstanding credit statistics (compiled in Statistics Finland)

As the FISIM calculations follow the international instructions, the exact mechanics are not described in this manual. The general idea is to first calculate the amount of FISIM production within the interest flows received and paid by banks. This is done by comparing the interest rates related to the loans given and deposits taken by banks to a reference rate that depicts the FISIM-free market interest rate. After the production of FISIM has been calculated this way, it is allocated to the user-sectors according to information of the banks' loan and deposit portfolios.

After all the transactions are compiled for all sectors, they can be used as separate transactions within P1, P2 and P3. As a final step, since FISIM has to be removed from the interest flows, we include a separate FISIM-removal component D412 within D41 that equals the sectors' FISIM production or use.

³ P1191U and P1192U are indeed intermediate consumption, despite the confusing naming convention.

⁴ There are two exceptions: the imports and exports are inputted directly to the RoW compilation system that does not support indicators and transferred to QSA from there. Also, in QSA S122/P1192/R is calculated as a simple residual transaction to ensure that all the FISIM-related components balance out.



A tabular summary of all the FISIM-related transactions in QSA looks as follows:

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|---|---------------------|--------|--------------------|---|------------------------|
| P1191 Financial intermediation services indirectly measured FISIM (loans) | Resources | S122 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | Uses | S11 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S125 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S126 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S127 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S128 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S1311 | N/A | Centralized compilation (FISIM) & Unit-denton | Denton benchmarking |
| | | S1313 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S13141 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S15 | N/A | Centralized compilation (FISIM) | Denton benchmarking |



| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|--|---------------------|--------|--------------------|---|------------------------|
| P1192 Financial intermediation services indirectly measured FISIM (deposits) | Resources | S122 | N/A | N/A | Residual sector |
| | Uses | S11 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S125 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S126 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S128 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S1311 | N/A | Centralized compilation (FISIM) & Unit-denton | Denton benchmarking |
| | | S1313 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S13141 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S13149 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S14 | N/A | Centralized compilation (FISIM) | Denton benchmarking |
| | | S15 | N/A | Centralized compilation (FISIM) | Denton benchmarking |

| Transaction | Resources / Uses | Sector | Counterpart sector | Sources | Methods |
|-----------------------------------|---------------------|--------|--------------------|---------------------|--|
| P6211 Exports of FISIM (loans) | Uses | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P6212 Exports of FISIM (deposits) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P7211 Imports of FISIM (loans) | Resources | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |
| P7212 Imports of FISIM (deposits) | | S2 | N/A | Balance of Payments | Direct data input (no benchmarking) |



| Transaction | Resources / | Sector | Counterpart | Sources | Methods |
|----------------------|-------------|--------|-------------|-------------------------|--------------|
| | Uses | | sector | | |
| D412 Fisim | Resources | S11 | N/A | (Sum of other | Sum of other |
| adjustment, deposits | | | | transactions) | transactions |
| | | S122 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S125 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S126 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S128 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S129 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S1311 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S1313 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S13141 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S13149 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S14 | N/A | Centralized compilation | Denton |
| | | | | (FISIM) | benchmarking |
| | | S15 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S2 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |



| Transaction | Resources / | Sector | Counterpart | Sources | Methods |
|-------------------|-------------|--------|-------------|-------------------------|--------------|
| | Uses | | sector | | |
| D412 Fisim | Uses | S11 | N/A | (Sum of other | Sum of other |
| adjustment, loans | | | | transactions) | transactions |
| | | S122 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S125 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S126 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S127 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S128 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S129 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S1311 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S1313 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S13141 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S14 | N/A | Centralized compilation | Denton |
| | | | | (FISIM) | benchmarking |
| | | S15 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |
| | | S2 | N/A | (Sum of other | Sum of other |
| | | | | transactions) | transactions |

In the above tables, the D412 transactions that are calculated as a (sum of other transactions) are simply equal to the production or intermediate consumption of FISIM of the sector in question. There is one exception: S14 also has final consumption of FISIM that cannot be separated from the final consumption in QSA. For this reason, separate indicators for the S14/D412 transactions are produced during the FISIM compilation.



Annex 2: List of abbreviations used

ANA Annual National Accounts
ASA Annual Sector Accounts
BoP Balance of Payments

BoF Bank of Finland, the central bank (S121) Fin-FSA Finnish Financial Supervisory Authority

GS Government finance and sector accounts. This is one of the

two organisational units where national accounts are

compiled in Finland

HERP Harmonized European Revision Policy

Kela The main institution responsible for providing social benefits

in Finland, belongs to S13149

MFI Monetary financial institutions, i.e. credit institutions (sector

S122) and the central bank (S121)

NA National accounts. Also used to refer to one of the two

organisational units where national accounts are compiled in

Finland

QFA Quarterly Financial Accounts (financial flows and balance

sheets)

QNA Quarterly National Accounts

QNFAGG Quarterly Non-Financial Accounts for General Government.

ONFAGG has its own regulations and national publication,

but the compilation is done in the QSA system.

QSA Quarterly Sector Accounts

RoW Rest-of-the-world (=sector S2)

SDMX Statistical Data and Metadata exchange. The standardized file

format used in international statistical data reporting.