

# **QUALITY REPORT CONCERNING STATISTICS UNDERLYING THE MACROECONOMIC IMBALANCE PROCEDURE (MIP) INDICATORS – Level 3**

## **National self-assessment report on the quality of financial accounts for Bulgaria**

**Reporting institution:** Bulgarian National Bank and Bulgarian National Statistical Institute

### **A. INSTITUTIONAL ENVIRONMENT**

#### **A.1 CoP1 Professional Independence/PC1 Professional Independence**

##### **A.1.1 Legal basis:**

EU Legislation:

Regulation (EC) 223/2009 Article 2 (amended in Regulation (EU) 2015/759) is the relevant reference for ESS.

A reference to Article 130 of the EU Treaty and Article 7 of the Statute of the ESCB and of the ECB are the relevant references for ESCB.

National Legislation:

The legal basis for statistical activities in Bulgaria is the Statistics Act (Promulgated, SG No. 57/25.06.1999, amended and supplemented, SG No. 42/27.04.2001, amended, SG No. 45/30.04.2002, amended, SG No. 74/30.07.2002, amended, SG No. 37/4.05.2004, effective 4.08.2004, SG No. 39/10.05.2005, effective 11.08.2005, amended and supplemented, SG No. 81/11.10.2005, supplemented, SG No. 88/4.11.2005, SG No. 100/30.11.2007, effective 20.12.2007, amended and supplemented, SG No. 98/14.11.2008, supplemented, SG No. 42/5.06.2009, amended, SG No. 95/1.12.2009, effective 1.01.2010, SG No. 97/10.12.2010, effective 10.12.2010, SG No. 38/18.05.2012, effective 1.07.2012, supplemented, SG No. 15/15.02.2013, effective 1.01.2014, amended, SG No. 7/19.01.2018, SG No. 38/24.04.2020, effective 1.01.2022, SG No. 84/6.10.2023, effective 6.10.2023).

Article 2 (2) Statistical activity shall be carried out in compliance with the following principles: professional independence, impartiality, objectivity, reliability, statistical secret and cost efficiency.

Article 3 (Amended, SG No. 42/2001, amended and supplemented, SG No. 81/2005, amended, SG No. 98/2008) (1) The National Statistical System shall include the National Statistical Institute, the statistical authorities and the Bulgarian National Bank.

Article 6 (1) (Supplemented, SG No. 81/2005, amended, SG No. 98/2008) The National Statistical Institute shall carry out independent statistical activity of the State and other activities assigned by law.

The Supplementary provision of the Statistics act, § 1.11-13 defines the principles in Article 2 (2) as:

"Professional independence" is a principle according to which statistical information shall be developed, produced and disseminated regardless of any pressure from political or interested parties.

"Impartiality" is a principle according to which statistical information shall be developed, produced and disseminated neutrally and all users shall be treated equally.

"Objectivity" is a principle according to which statistical information shall be developed, produced and disseminated in a systematic, reliable and unbiased way. This entails use of professional and ethical standards as well as pursuit of policies and practices that are transparent to users and respondents of surveys.

The whole document can be found at:

[http://www.nsi.bg/sites/default/files/files/pages/StatisticsAct\\_en.pdf](http://www.nsi.bg/sites/default/files/files/pages/StatisticsAct_en.pdf)

The legal basis for the professional independence of the Bulgarian National Bank (BNB) is the Law on the Bulgarian National Bank.

According to the Article 10, the management of the Bulgarian National Bank shall be carried out by the Governing Council, the Governor and the three Deputy Governors elected to directly manage the basic departments referred to in Article 19.

According to the Article 12 (1) the Governor of the Bulgarian National Bank shall be elected by the National Assembly.

As a member of the ESCB at European level the legal basis for production and dissemination of the BNB's statistics is the Regulation (EC) No 2533/98 concerning the collection of statistical information by the ECB (ECB/2008/9), as amended.

#### **A.1.2 Statistics work programme:**

[Statistical programme 2021 – 2027](#)

[2017 ESCB Statistics Work Programme](#)

At national level the work programme for annual financial accounts as part of the national accounts dataset is determined by the annual National Statistics Programme of BNSI. The NSP is elaborated in accordance with Chapter Three of the Law on Statistics and includes Plan for activity of National Statistical Institute (BNSI) and the Plans for statistical activities of the Bodies of Statistics. The development of methodology, production and dissemination of

statistical information in the National Statistical System of the Republic of Bulgaria is realized in accordance with adopted uniform European standards and harmonized methods.

The National Statistics Programme for 2022 can be found at:

<https://www.nsi.bg/en/content/20766/basic-page/national-statistical-programme-2023>

The quarterly financial accounts are compiled and submitted to the ECB by the BNB under Article 42 of the Law on the BNB, Ordinance No.17 of the BNB on the Monetary and Interest Rate Statistics and Financial Accounts Statistics and Article 5 of the Statute of the ESCB and the ECB. It follows the 2017 ESCB statistics work programme and respective annual programmes of the ECB Statistics Committee and the Working Group on Financial Accounts and Government Finance Statistics.

## **A.2 CoP2 Mandate for data collection/PC2 Mandate for data collection**

### **A.2.1 Allocation of responsibilities:**

Annual financial accounts – developed, compiled and disseminated by the National Statistical Institute (BNSI).

Quarterly financial accounts – developed, compiled and disseminated by the Bulgarian National Bank (BNB).

### **A.2.2 Legal basis:**

The relevant legal document for the compilation of annual financial accounts is the Statistics act, Article 7 (link to the whole document provided above).

European level: Regulation (EU) No 549/2013 of the European Parliament and of the Council of 21 May 2013 on the European system of national and regional accounts in the European Union and Commission implementing Regulation (EU) No 724/2014 of 26 June 2014 on the interchange standard for the transmission of data required under Regulation (EU) No 549/2013 of the European Parliament and of the Council on the European system of national and regional accounts in the European Union.

In December 2023 an Agreement on cooperation and exchange of information between the NSI and the BNB was signed, focusing on the areas in which the two institutions have mutual interests including exchange of data for the compilation of financial national accounts. The scope of this Agreement does not include government finance statistics which is subject to a separate agreement in the *Memorandum of cooperation between the National Statistical Institute, the Bulgarian National Bank and the Ministry of Finance in developing, producing and disseminating data in the field of government finance statistics* which was signed in March 2024.

The Agreement includes statistical activities, including exchange of data, in the areas which the BNB and the NSI have mutual interests in and/or shared responsibility; statistical

principles and quality criteria which shall be followed; types of statistics developed, compiled and disseminated by each of the two institutions; exchange of individual data; cooperation in participation in ECB and Eurostat committees and working groups; the granularity, structure, format, time limits and revision policy for providing the data; dispute resolving procedure; coordinators and etc.

The legal basis for the compilation of the quarterly financial accounts by the BNB is the Regulation (EC) No 2533/98, the Law on the Bulgarian National Bank and Ordinance No.17 of the BNB on the Monetary and Interest Rate Statistics and Financial Accounts Statistics. According to the Article 42 of the Law on the Bulgarian National Bank, *the Bulgarian National Bank shall draw up the balance of payments and shall keep monetary and interest rate statistics, as well as Bulgaria's financial accounts statistics. For this purpose all state and municipal bodies and legal and natural persons shall be obliged to submit data to the Bulgarian National Bank according to a procedure established by an ordinance of the BNB.*

### **A.3 CoP6 Impartiality and objectivity/PC7 Sound methodology**

#### **A.3.1 Advance release calendar:**

The guidelines for releasing information are established in the Rules for Dissemination of Statistical Products and Services of BNSI which are available on the BNSI web page:

<https://www.nsi.bg/en/content/564/basic-page/rules-dissemination-statistical-products-and-services>

The date of publishing of the statistical data is shown in the Release Calendar presenting the results of the statistical surveys carried out by the Bulgarian National Statistical Institute. The data for stocks and transactions and net lending / net borrowing by institutional sectors are presented to Eurostat and published in the Website of BNSI.

The calendar for 2024 is available on the BNSI website:

<https://www.nsi.bg/en/content/44/basic-page/release-calendar>

In the context of quarterly financial accounts the BNB strictly follows the requirements of the *Guideline of the ECB of 25 July 2013 on the statistical reporting requirements of the ECB in the field of quarterly financial accounts (recast) (ECB/2013/24)*, as amended concerning the timetable for the compilation and submission of the data to the ECB.

The advance release calendar for quarterly financial accounts statistics could be found on:

<https://www.bnb.bg/AboutUs/PressOffice/POCalendar/index.htm?searchBy=1&r=Statistics&toLang= EN>

### **A.3.2 Revision policy:**

The revision policy regarding the annual financial accounts follows closely the requirements of Eurostat regarding main revisions and current revisions. Planned revisions are done annually when compiling the new current year encompassing 1 to 3 past years. A main revision of the whole time series was done in 2014 regarding the switch from ESA 95 to ESA 2010 framework. Unplanned revisions are done only when errors are detected after the data is initially sent to Eurostat but not later than the date Eurostat officially publishes all data. Full time series revisions are performed only together with GDP, EDP and other main macroeconomic data when required.

In the process of the compilation of the quarterly financial accounts the revisions of the data for previous periods in the statistical sources are in principal incorporated into the current vintage of the accounts as and when they occur or are reported. For the time being the CMFB recommendation on the revision policy is not strictly followed. Taking into account that the Eurostat performs regular comparisons of quarterly financial accounts data for S.13 with EDP data in order both data sets to be consistent, the revisions of quarterly financial accounts data should be in line with revisions of EDP data. In this regard the main revisions occur in April and October transmissions.

## **B. STATISTICAL PROCESSES**

### **B.1 CoP7 Sound methodology/PC7 Sound methodology**

#### **B.1.1 General remarks:**

The financial accounts (annual and quarterly) are compiled in accordance and are consistent with the principles and methodological requirements of the European System of National and Regional Accounts (ESA 2010).

A short version of the methodology of financial accounts can be found on the BNSI and BNB websites here:

Annual financial accounts:

[http://www.nsi.bg/sites/default/files/files/metadata/FS\\_1\\_Methodology\\_en.pdf](http://www.nsi.bg/sites/default/files/files/metadata/FS_1_Methodology_en.pdf)

Quarterly financial accounts:

[http://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_download/st\\_m\\_instr\\_qfagg\\_en.pdf](http://www.bnb.bg/bnbweb/groups/public/documents/bnb_download/st_m_instr_qfagg_en.pdf)

An updated full methodology and inventory for the production of annual financial accounts has been developed by BNSI as part of Eurostat Grant, titled: Grant Supporting Quality Measures for Statistics used in the context of the Macroeconomic Imbalance Procedure (MIP).

For time series whose reporting is mandatory, deviations and coverage gaps from the following principles with material impact should be identified (mentioning derogations from ESA 2010 where material).

#### **B.1.2 Residency and territory:**

In accordance with the definitions and requirements of ESA 2010.

#### **B.1.3 Institutional unit definition:**

In accordance with the definitions and requirements of ESA 2010.

#### **B.1.4 Sectorisation and sector delimitation:**

In accordance with the definitions and requirements of ESA 2010. The statistical entities' split between S.11 and S.12, namely concerning Non-financial and Financial Head offices and Holding companies is regularly conducted by the BNSI on the grounds of a) the entities' principal economic classification in accordance with NACE 2008 and b) the metadata (about entities, main economic activity and groupings) included in the notes to the annual statistical reports to the BNSI. In addition BNSI does not delimitate between S.125, S.126 and S.127 for annual financial accounts as this delimitation is on a voluntary basis in ESA 2010 annual transmission tables 6 and 7; BNSI compiles an aggregated S.120 (S.125+S.126+S.127) sector.

As of October 2022 the BNB introduced regular publication of quarterly financial accounts with expanded granularity by institutional sectors and instruments. More details on the amendments can be found in the published note on the BNB's page:

[https://www.bnb.bg/bnbweb/groups/public/documents/bnb\\_download/st\\_m\\_instr\\_qfagg\\_n\\_en.pdf](https://www.bnb.bg/bnbweb/groups/public/documents/bnb_download/st_m_instr_qfagg_n_en.pdf)

#### **B.1.5 Instrument identification:**

When compiling the financial accounts the statistical sources data on the corresponding financial indicators (mainly included in their balance sheets and notes to them) are classified into their appropriate financial instrument in accordance with the principles and recommendations of ESA 2010 and having in mind the particular economic content of the input information. In this context, concerning corporate balance sheet data from the non-financial enterprises, a number of transformations and aggregations of the input data are regularly exercised.

#### **B.1.6 Valuation, including derivation of transactions and other flows:**

Generally in both annual and quarterly financial accounts all stocks of financial instruments and all financial transactions are recorded on an accrual basis using market valuation, or, in some cases – its substitutes: fair and book (assets side) values. There are only a few exclusions where a book value from liability side (which, in the case of Bulgaria equals face value) is incorporated in the quarterly financial accounts. These exclusions refer to the

financial instrument F.512, unlisted shares in the liability side of the sectors S.11, S.12 (excluding S.121, S.124 and S.129 for which all data are market valued) and S.15. Stock positions are always valued as of the end of the reference period.

Concerning the debt securities (F.3) market values of the securities issued are taken mainly from creditors' side – employing data from Security holdings statistics, International investment position, Monetary financial statistics and Government financial statistics.

Concerning listed shares (F.511) the sources of information are almost the same as in the case of F.3, while when compiling the data for F.512 and F.519 the input data are a base for additional estimations, using the market prices of the listed shares (by corresponding groups of statistical entities), as well as estimations, based on the information for the components of own funds.

For all sectors and for all instruments transactions are calculated as a difference between two consecutive stocks values, corrected for price and currency exchange movements and other changes in volume, if such information is available.

#### **B.1.7 Time of recording (accrual accounting):**

Regarding both the annual and quarterly financial accounts the time of recording is generally in accordance with the definitions and requirements of ESA 2010.

Concerning quarterly financial accounts, for loans and debt securities the accrued but still not paid out interests during the quarter are added to the principal amount which results in transactions estimations in market values. All input data for revaluations and other changes in volume in principle are recorded and reported on an accrual basis.

For annual and quarterly financial accounts interest accrued is recorded with the instrument value.

#### **B.1.8 Coverage:**

In both annual and quarterly financial accounts the figures for F.21 Currency held by S.14 Households (both for domestic and foreign currency) are estimates as we still don't have more accurate means to measure this instrument for this particular sector. In addition some examples of difficult areas are the following:

Concerning the equity of the NFCs it has to be noted that input information from their aggregated balances include direct data on all components of the own funds at book value, which, as was mentioned earlier, is used for the necessary additional estimations to reach market value.

Concerning the inter-company loans between resident NFCs it has to be noted, that input information includes also direct data on them under items “loans granted to enterprises in the group” and “loans granted to associated and mixed enterprises”. In this case the previous investigations showed that this kind of relationships covers mainly NFCs. For the quarters of previous years, for which there is annual information, interpolations of the missing values are

applied, using straight line formula, while for the latest quarters the last available annual values are included in the accounts. The timelines of the preliminary annual NFC data is within t+9 months. The newly obtained annual figures are incorporated into the quarterly financial accounts in the compilation process for Q2 (revision of the latest quarters).

Concerning the data for the Other financial corporations (OFC) (S.123 – S.129) in most of the cases the BNB receives direct information on the corresponding groups of enterprises' capital split by sub-instrument (F.511, F.512, F.519 and F.52). As it was explained above, part of this information is directly incorporated in the accounts (namely concerning resident non-financial creditors), whilst the data on financial sector and Rest of the World holdings is obtained via SHS and IIP.

Concerning OFC sector liabilities in F.7 (excluding S.128 and S.129 from which we have direct data) the quarterly financial accounts rely on the counterpart data on corresponding assets of the S.122, S.13, S.128, S.129 and S.2.

Regarding both annual and quarterly financial accounts the quality goals for Other Financial Intermediaries, except Insurance corporations and Pension funds (OFIs) (S.125+S.126+S.127) are attained as follows:

#### *1. Identification of the complete population*

The complete OFIs population is identified from the statistical business registers by using both annual and quarterly sources. The Ordinance No.17 of the BNB on the Monetary and Interest Rate Statistics and Financial Accounts Statistics specifies the types of entities which should provide information on a quarterly basis. Regarding OFIs sector the BNB collects information from the Financial Corporations involved in Lending (part of S.125) and the Pension Insurance Companies (part of S.126).

For the purposes of the quarterly financial accounts the following types of entities are identified by the BNSI on an annual basis:

- The Financial Vehicle Corporations and Securities and Derivatives Dealers, classified in sector S.125;
- Enterprises, classified in NACE Classes 66.1, 66.2 and 66.3, and Financial head offices, based on the groups of enterprises, classified in NACE Classes 64.20 and 70.10, which relate to sector S.126;
- Financial and non-financial holding companies, based on the groups of enterprises, classified in NACE Classes 64.20 and 70.10, which relate to sector S.127.

Bulgarian Financial Supervision Commission (BFSC) provides annually full lists of the investment intermediaries with a full license (classified in sector S.125) and the investment intermediaries with a partial license (classified in sector S.126). Changes during the year are provided to the BNB on a monthly basis.

#### *2. Quarterly data sources*

Full coverage on a quarterly basis is assured for Financial Corporations involved in Lending (part of S.125) and Pension Insurance Companies (part of S.126). In terms of total population of OFIs sector quarterly direct sources account for about 35%.

### 3. *Grossing-up procedures*

Concerning quarterly financial accounts and procedures to achieve full representation of the population of OFIs sector on a quarterly basis, annual data are interpolated using straight line formula.

### 4. *Methods for a timely coverage of new entrants*

In line with Art. 3a of the Law on Credit Institutions (LCI) the BNB maintains the Register of Financial Institutions which contains data for registered companies operating on the territory of Bulgaria. The information in the Register is updated through a single automated system based on the information of the latest data reported by the financial institutions. New entities are required to register before commencement of an activity. According to the Art.15 of the Ordinance No. 26 of the BNB on the Financial Institutions, *each financial institution shall prepare and submit to the BNB quarterly and annual financial statements in a form and content set by the Bulgarian National Bank by the 20<sup>th</sup> day of the month following the reporting period.*

Following the *Guideline (EU) 2021/827 of the European Central Bank of 29 April 2021 amending Guideline ECB/2013/24 on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts (ECB/2021/20)*, from October 2022 the BNB started to publish separately data for sectors S.125, S.126, S.127.

Concerning the data for the Households (S.14) it should be mentioned that there is no direct data from them and all data used in the process of compiling the accounts for this sector are counterparts ones. It means that in practice the S.14 data are consolidated within the sector.

## **B.1.9 Non-consolidation/Consolidation at sectoral level – As required under the ESA 2010 Transmission programme (Tables 6 and 7):**

All four annual financial accounts tables (balance sheet, transactions, revaluation, other changes in volume) are compiled and reported both on a consolidated and non-consolidated level. Consolidation is performed at the final balancing stage by removing the “sector-to-same-sector” positions from each individual sector/subsector matrices of the balancing workfiles.

## **B.1.10 Specific issues for instruments covered by MIP indicators:**

There are no specific issues regarding consolidation of data from both annual and quarterly financial accounts related to MIP indicators. Concerning quarterly financial accounts both stocks and flows are recorded on a non-consolidated basis. Two exclusions concern the sub-sectors of the General government and Households, which accounts are consolidated, as they are based on counterpart information only. Compiling all accounts on fully non-consolidated

basis (with the exclusion mentioned) gives the opportunity to easily recompile consolidated accounts for all sectors or groupings of sectors.

As it was noted in part B.1.4, the correct classification of the head offices and holding companies assures proper delineation between non-financial and financial sectors and hence - proper consolidation of the data.

Concerning sector S.11 NFCs, when compiling quarterly financial accounts, the most of the counterpart data are obtained from other sectors (mainly S.12K and S.2). Only for intra-NFC and NFC-Households positions annual data sources are used. On that base for sector (S.11) both non-consolidated and consolidated data have reliable sources.

In 2018 the BNB and the BNSI examined the different statistical sources, which were used by the two institutions for compilation of the quarterly and annual financial accounts. As it shown in the “Data source map for financial accounts” tables (separate pages as reference to the point B.2.1) the BNSI currently provides BNB with business statistics data and then uses the aggregate quarterly data from the BNB for the compilation of the annual financial accounts. This ensures consistency between annual and quarterly financial accounts.

#### **B.1.11 Other major deviations not listed above:**

There are no major deviations not listed above.

## **B.2 CoP8 Appropriate Statistical procedures/PC8 Appropriate Statistical procedures**

Annual financial accounts are elaborated by the BNSI on the basis of different sources. One can distinguish between data drawn from standardized questionnaires operated by the BNSI and data received from partner institutions.

Since 2008 BNSI uses an internal integrated digital information system for data collection called Information System Business Statistics (ISBS). Its purpose is to automatize the process of compilation, validation and submission of annual reports of enterprises. Standardized questionnaires containing a wide range of information necessary for the compilation of the financial accounts are available in ISBS for enterprises and non-profit institutions in both the public and the private sector. These questionnaires include: Balance Sheet (BS), Report on Receivables and Payables by Institutional Sector (RRP), Report on securities (RS), Income Statement (IS). The coverage is full – all enterprises are obliged to report their set of standardized questionnaires to BNSI annually.

National Statistical Business Registers (NSBR) cover variables linked to legal units, enterprise groups, enterprises and local units. The NSBR variables are broken down into detailed variables (e.g. for identification: identity number, name, address, etc.). Subsets of these NSBR variables are related to legal units, enterprise groups and enterprises belonging to Multinational Enterprise Groups (MNEs). These are the identification variables, the demographic variables, the economic/stratification variables, information on control and

ownership. In annual financial accounts production the information from NSBR is used to: determine ownership percentage of government controlled enterprises by institutional sectors; to determine minority ownership by government in enterprises; to calculate asset side distribution of F.519 by institutional sector.

There is a Memorandum for cooperation between the National Statistical Institute (NSI), the Ministry of Finance (MoF) and the Bulgarian National Bank (BNB) and an Agreement on cooperation and exchange of information between the NSI and the BNB as mentioned in A.2.2. These documents give BNSI a position of independence on the reporting of data and for the proper classification of institutional units in compliance with the EU legislation and methodological requirements thus taking the responsibility for their implementation. Special working groups exist with members from all three institutions which review borderline, unique and difficult cases and assure they are treated in the same way in all three institutional frameworks. These documents also give BNSI the option to require additional data for analysis from other institutions.

The Ministry of Finance provides most of the data for sector General Government (S.13): the Consolidated fiscal program (budget) report is updated and provided on a monthly basis. The balances and trial balances are collected on a quarterly basis.

In relation with the action points from Upstream Dialogue Visit of Eurostat concerning the BNSI's direct access in real time to the primary source data collected by the MoF in order to ensure control of the data of first level spending units (cash execution of the budget, balances and trial balances of the units), in January 2014 an Agreement was signed between the BNSI and the MoF for direct access of BNSI's experts to individual data from the Information system of the MoF.

The Central Depository provides statistical data for all registered shares and securities (both stocks and transactions), broken down by type of holder and issuer. The Bulgarian Stock Exchange provides annual data on listed shares, broken down by emission, issuer, market price, number of shares and market capitalization. The procedure for the valuation of the non-quoted shares (in accordance with the requirements of ESA 2010) also relies to some extent on data received from the Central Depository but also features detailed information for listed shares from the Bulgarian Stock Exchange.

### **B.2.1 Data source map:**

Maps of main data sources of quarterly and annual financial accounts can be found in the Annex 1 and Annex 2 (p. 19 – 20).

### **B.2.2 Description of procedures and methods:**

There are two ways to input information in the ISBS - in real time on-line by an employee of the enterprises where there are multiple elaborated internal consistency checks; and also paper reports, submitted in BNSI are uploaded into the system manually by BNSI personnel.

ISBS is created as a centralized public web-based system installed and serviced by the BNSI. It functions throughout the year and allows access to external users (respondents) 24 hours a day. The data collected are stored in a secured centralized database server in the BNSI main building. The system allows access to individual reports and queries on different criteria for various statistical processes, including the compilation of annual financial accounts. The information system is created with built-in algorithms with each indicator having its own unique code. No scanned documents or interview answers are used. Data are submitted directly into the system with internal consistency checks by various criteria. The system would not allow for the input procedure to finish until there is a final accurate result. Connections are built-in with classifications and nomenclatures to full assure accurate, actual and quality data input. The system itself ensures data validation by internal algorithms and execution of logical and arithmetic control over individual data. Analysis is performed on the data output and when necessary corrections are made after additional considerations.

The working files for annual financial accounts have a system of built-in consistency checks which assure internal consistency within the files – sum of subsectors is always equal to sum of sector, the difference between initial and final stock for a given year is always equal to the sum of flows. The compilation process follows procedures and rules that are intended to ensure clarity and methodological reliability of the results, as much as possible under the existing data limitations. Consistency checks are performed using different data sources providing, in most cases, different figure for one and the same data entry.

When data sources give conflicting information for particular items, additional enquiries are made in order to clarify the potential causes of the difference. In cases where data conflicts could not be resolved through additional contacts with data providers, the most methodologically reliable source is chosen to supply data for the respective entry. When necessary, an expert estimate is obtained.

The input data from ISBS output is validated on submission into the system. After that it is analysed by experts and when necessary individual units are reviewed and, if required, reclassified into a different sector or removed from the total data.

Data from the Central Depository and the Bulgarian Stock Exchange are checked against one another, the BSE generally considered more reliable regarding the market capitalization of listed shares.

The structure and form of all input data from administrative sources is predetermined to ensure unification.

Quarterly financial accounts are compiled in accordance with the ESA 2010, ECB Guideline on financial accounts and other documents. The input data are subject to statistical analyses of their main economic characteristics. On this base, a priority structure of the statistical sources is established. This structure determines the compiler's choice on which statistical source data to be included into accounts. The priority of sources is established by financial instrument for each institutional sector. In some cases, when different statistics have complementary institutional coverage, their data are combined to reach a full institutional coverage. This

mostly concerns the treatment of non-bank financial institutions (for S.125 and S.126, the source for S.127 is only annual data). The institutional coverage of the annual data (collected by the BNSI) of the sectors S.125 and S.126 is wider than the coverage of the quarterly statistics collected by the BNB. For example, for S.125 BNB collects and compiles quarterly data only for Financial corporations involved in lending. The other subdivisions of this sector (Financial vehicle corporations, Security and derivative dealers etc.) are included in the quarterly financial accounts from the annual OFI statistics. In the case of missing data for some quarter, or in the case of using annual data, math-stat procedures (interpolation or extrapolation) are employed.

The estimation of some instrument stocks for S.11, S.15 and partially for S.125 and S.126 is compound as an aggregation of current quarter figures from the BNB's quarterly statistics and last obtained annual figures from the BNSI's statistics. It mainly refers to F.21 and F.51. These data are regularly updated backwards. The intra-annual estimations for previous quarters are based again on simple interpolation procedure, using the straight line formulae.

All input data are aggregated and presented in data-series format, so the compiler may analyse the relative levels and dynamics of all input data concerning all consecutive quarters.

Automatically this information is transformed into full "who-to-whom" data set in accordance with the ESA 2010 principles and ECB Guideline requirements. At this stage completeness and consistency checks are executed and, if needed some corrections are made. These corrections could be based on additional metadata, or by eliminating the outliers.

The realization of the priority structure and principal compilation procedure, mentioned above, assures the overall methodological reconciliation between quarterly financial accounts, quarterly financial accounts for General Government and International Investment Position.

### **B.2.3 Estimation of missing data:**

Regarding annual financial accounts in certain cases, data imputations are made and data is compiled using estimates. This is done when quality or detailed information is missing or impossible to collect. In such cases estimates are done strictly following the statistical rules for example by using structural data distributions or data trend analysis.

Regarding quarterly financial accounts in some statistical sources data on their assets/liabilities concerning some financial instruments are not split by counterparts, that is to say, there is no full "who-to-whom" information.

Non-full "who-to-whom" information is being transformed by counterpart using additional information from other (non-prioritized) sources, as Central Depository data, or imputation of structures of the corresponding data concerning other institutional sectors. For example, it is assumed, that the structure of the pension funds' assets in debt securities could be used to split the corresponding overall data of NFCs. In this case the follow of a common economic logic underlines the assumption.

In other cases, a similar proximity between the economic behaviour of the different entities and sectors could not be noted and explained. In these case the missing data are not compiled and not reported to the ECB (for example, missing data on loans, granted to non-residents' sub-groupings by S.11, S.125, S.126 and S.14).

#### **B.2.4 Balancing procedures (horizontal and vertical):**

Regarding annual financial accounts after collecting information from all sources (internal and external) data are reviewed and analysed by BNSI experts and some additional calculations are performed for some indicators. All data are compiled into totalled files for financial accounts – balances (starting and final), transactions, revaluations and other changes in volume; all grouped by institutional sectors. Those files are interconnected and have built-in consistency checks in several regards: asset=liability; starting balance + transaction + revaluation + other changes in volume = final balance. Annual financial accounts cover all ESA 2010 requirements for financial instruments and institutional sectors.

When compiling quarterly financial accounts, the horizontal balancing is included in all stages of the process. From one side, the quarterly financial accounts scheme in most of the cases requires direct recording of who-to-whom data (obligatory in the liabilities side of the sector accounts matrixes, which are automatically reflected in the corresponding assets side matrixes). To avoid a need of explicit balancing in next stages of the work, strongly defined statistical source priorities and input data positions preferences, mentioned above under point B.2.2, are constantly employed. On the other hand some “benchmarks” are set up (e.g. total value for the most of the IIP assets and liabilities positions, as well as the most of the MBS ones), which are a base for “residual estimations”, mainly concerning non-financial sectors. As a result, a full assets/liabilities horizontal consistency by instrument is obtained.

Regarding vertical consistency in accordance with the ESA 2010 Transmission Programme (Table 801, Note (1)), the BNSI is not obliged and does not compile quarterly sectoral non-financial accounts except for the General government and the Rest of the World. Concerning General government sector regular analyses and alignments are performed, but it's not following specific balancing policy in quarterly financial accounts. For S.2 only ad hoc comparisons have been done. However, in general no vertical balancing policy is followed at this time.

#### **B.2.5 Methods to align quarterly and annual data:**

In 2018 BNB started to provide BNSI with who-to-whom tables for quarterly financial accounts broken down by stocks/flows, institutional sector, counterpart sector and financial instrument. The quarterly accounts are used as reconciliation in the compilation of all sub-sectors. This has allowed the two institutions to achieve full consistency between annual and quarterly financial accounts for all ESA 2010 institutional sectors and all financial instruments.

## **C. STATISTICAL OUTPUT**

### **C.1 CoP11 Relevance/PC11 Relevance**

At international level financial accounts are part of the ‘Special Data Dissemination Standard Plus’ of the IMF and are used for IMF ‘Article IV consultations’ of the EU Member States. In the EU they are part of the ‘scoreboard’ of the macroeconomic imbalances procedure (MIP), and support the assessment of vulnerabilities and interconnectedness for financial stability purposes by the European Systemic Risk Board. Various international private analyst units are also frequent users of national financial account data.

Both annual and quarterly financial accounts are available to the general public as they are published by the BNSI and BNB, respectively. At national institutional level among the main users of the data are the Economic Research and Forecasting Directorate and the Banking Supervision Department of the Bulgarian National Bank as well as the Economic and Financial Policy Directorate of the Ministry of Finance.

Other users include private analysts and academic economics researchers and educators.

### **C.2 CoP12 Accuracy and reliability/PC12 Accuracy and reliability (including stability)**

#### **C.2.1 Accuracy and reliability:**

Annual financial accounts data are submitted directly into ISBS with internal consistency checks by various criteria. ISBS output data are validated on submission into the annual financial accounts balancing system. After that it is analysed by experts and when necessary individual units are reviewed and, if required, reclassified into a different sector or removed from the total data. Data from the Central Depository and the Bulgarian Stock Exchange are checked against one another, the BSE generally considered more reliable regarding the market capitalization of quoted shares.

The validation of outputs is performed on several levels: securing all sources of information (internal and external); output scope control; additional queries for input data control; strict following of methodological recommendations; analysis and expert decisions on specific issues. Control against other data, for example financial account data is checked against the data from EDP reporting in the segment of General Government. Internal consistency checks are performed on output data: whether the accumulation of stocks equals the sum of flows; also reconciliation between the sum of Total economy (S.1) and Rest of the World (S.2).

The quarterly financial accounts are subject to systematic internal automated checks. The checks required by the ECB are performed prior to each data transmission. The existing checks non-compliances refer to the partially missing input data on S.2 geographical breakdown (tables 4-9).

### **C.2.2 Internal consistency:**

The work files for annual financial accounts have a system of built-in consistency checks which assure internal consistency within the files – sum of subsectors is always equal to sum of sector, the difference between initial and final stock for a given year is always equal to the sum of flows. Furthermore, only figures for liabilities can be input into the system with the asset side automatically derived from the corresponding liability items; this removes any chance of discrepancy between assets and liabilities.

The compilation process followed procedures and rules that intended to ensure clarity and methodological reliability of the results, as much as possible under the existing data limitations. Consistency checks are performed using different data sources providing, in most cases, different figure for one and the same data entry. When data sources give conflicting information for particular items, additional enquiries are made in order to clarify the potential causes of the difference. In cases where data conflicts cannot be resolved through additional contacts with data providers, the most methodologically reliable source is chosen to supply data for the respective entry. When necessary, an expert estimate is obtained.

In the process of the compilation of the quarterly financial accounts the internal consistency is monitored and resolved in three stages as follows:

- a) input data from all statistical sources are examined for economic logic and correspondence with previously reported figures;
- b) the preliminary output matrix data for all reported quarters are internally checked and adjusted applying the systematic IT checks;
- c) the data in the form of time-series are checked using standard ECB checks.

### **C.3 CoP13 Timeliness and punctuality/PC13 Timeliness (including punctuality)**

#### **C.3.1 National requirements:**

Annual financial accounts are due for publication on the BNSI website by October 31 of each year (t+10 months after last reference year).

There is no national requirement to publish revised annual financial accounts data during the year. Revised past year/time series data is only published when the current year data is published.

The calendar for October 2024 can be found here for reference:

<https://www.nsi.bg/en/content/11917/basic-page/calendar-presenting-results-statistical-surveys-carried-out-national-statistical-institute-october-2024>

Quarterly financial accounts data for stocks and transactions are published on the BNB's website with timeliness of t+120 days after last reference quarter. The corresponding tables can be attained here:

<http://www.bnb.bg/Statistics/StFinancialAccounts/StQFAStocks/index.htm?toLang= EN>

<http://www.bnb.bg/Statistics/StFinancialAccounts/StQFATransactions/index.htm?toLang= EN>

### **C.3.2 International requirements:**

In the EU, the ESA 2010 transmission programme requires reporting of annual data at T+9 months for annual financial accounts.

Regarding the quarterly financial accounts the BNB transmits the data according to the requirements of the ECB *Guideline on the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts (ECB/2013/24)* at T+97 days.

## **C.4 CoP14 Coherence and comparability/PC14 Consistency and comparability**

### **C.4.1 External consistency:**

In theory the net lending/net borrowing of the annual non-financial sector accounts (B.9) should be equal to the net lending/net borrowing of the annual financial accounts (B.9F) but in the actual practice discrepancies are observed. Because of the strict rules for compiling government accounts data, the discrepancies are small, almost negligible for S.13 General Government; however for other sectors like S.14 Households and S.11 Non-financial corporations discrepancies can be rather large or even with an opposite sign.

These discrepancies arise from the fact that the annual financial accounts methodology uses different data templates and practices in compiling the data than the non-financial accounts methodology. There exists no global reconciliation strategy to balance the discrepancies between the annual financial and non-financial accounts for the different resident institutional sectors, however the two BNSI divisions responsible for the respective sets of accounts constantly work on the problem and some small improvements have been made in recent years.

The comparability between BoP/IIP and financial accounts has been improved considerably due to the introduction of the updated methodological requirements of the ESA 2010 and BPM6, which have, to a large extent, common definitions. However, differences will still exist, as not all figures for the financial accounts of S.2 Rest of the world are compiled from the BoP/IIP data only.

In principle, the quarterly financial accounts S.2 estimates are broadly consistent with the IIP values. Some differences (especially concerning S.11, S.125 and S.126) occur, which are due to time vintages. Concerning General government sector regular analyses and alignments are

performed. For S.2 only ad hoc comparisons have been done. It has to be noted that, in accordance with the ESA 2010 Transmission Programme (Table 801, Note (1)), the BNSI is not obliged and does not compile quarterly sectoral non-financial accounts except for the General government and the Rest of the World. Therefore for other sectors comparisons are not performed.

#### **C.4.2 “Time” and back data consistency:**

There are no breaks in the time series of annual financial accounts. Annual back data are available from 1995 for stocks and 1996 for transactions.

Under the ECB Guideline requirements, the BNB compiles and transmits to the ECB quarterly financial accounts for the period Q4 2006 – current quarter.

#### **C.4.3 Consistency across frequencies:**

As it was noted in part B.2.5., a full alignment between quarterly and annual financial accounts is currently achieved for all ESA 2010 institutional sectors and for all financial instruments.

### **C.5 CoP15 Accessibility and Clarity/CoP15 Accessibility and Clarity**

#### **C.5.1 Data:**

The annual financial accounts are available on the BNSI website on the following link under the tab “Data”:

<https://www.nsi.bg/en/content/2340/financial-national-accounts>

Also they could be found on:

Eurostat: <http://ec.europa.eu/eurostat/data/database>

The quarterly financial accounts (stocks and transactions) are available on the BNB’s website on the following link:

[http://www.bnb.bg/Statistics/index.htm?toLang=\\_EN](http://www.bnb.bg/Statistics/index.htm?toLang=_EN)

Also they could be found on:

ECB: <http://sdw.ecb.europa.eu/browse.do?node=9691132>

#### **C.5.2 Metadata:**

The metadata for annual financial accounts are available on the BNSI website on the following link, under the tab “Metadata and methodology”:

<https://www.nsi.bg/en/content/2340/financial-national-accounts>

Methodological notes on the quarterly financial accounts are available on the following link:

[http://www.bnb.bg/Statistics/StMethodologicalInstructions/index.htm?toLang=\\_EN](http://www.bnb.bg/Statistics/StMethodologicalInstructions/index.htm?toLang=_EN)

### **C.5.3 Contact:**

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# Annex 1: Map of main data sources for quarterly financial accounts

## Annex to CoP8/PC8 Appropriate Statistical procedures

Map of main data sources for quarterly financial accounts

Country	Bulgaria
Name of institution	Bulgarian National Bank
Year	2024

		Assets										Liabilities									
		S11 NFCs	S12K MFIs	S124 IFs	S12O OFIs	S128 IC	S129 PF	S13 GG	S14+S15 HH+NPISH	S2 RoW	S11 NFCs	S12K MFIs	S124 IFs	S12O OFIs	S128 IC	S129 PF	S13 GG	S14+S15 HH+NPISH	S2 RoW		
F11	Monetary gold	na	MFI	na	na	na	na	na	na	0	na	na	na	na	na	na	na	na	MFI		
F12	SDRs	na	MFI	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	MFI		
F21	Currency	** e <sup>1</sup> BoP	MFI BoP	IF	OFI BoP	IC	PF	QFAGG	NPISH e <sup>1</sup> BoP	0	na	MFI QFAGG	na	na	na	na	na	na	BoP		
F22	Deposits, transferable	MFI	MFI	IF	MFI	MFI BoP	MFI	QFAGG	MFI	BoP	na	MFI QFAGG	na	na	na	na	na	na	BoP		
F29	Deposits, other	MFI	MFI	IF	MFI	MFI BoP	MFI	QFAGG	MFI	BoP	na	MFI QFAGG	na	na	na	na	na	na	BoP		
F3	Debt securities	SHS BoP QFAGG	SHS BoP QFAGG	SHS BoP QFAGG	SHS BoP QFAGG	SHS BoP QFAGG	SHS BoP QFAGG	QFAGG	SHS BoP QFAGG	BoP QFAGG	SHS BoP	SHS BoP	0	SHS BoP	0	na	QFAGG	0	BoP		
F4	Loans	NFC BoP MFI	MFI	na	OFI BoP	IC	na	QFAGG	0	BoP QFAGG	NFC BoP MFI OFI	MFI BoP	na	BoP MFI OFI	IC BoP	na	QFAGG	NFC MFI OFI BoP	BoP IC QFAGG		
F511	Listed shares	SHS OFI MFI BoP	SHS BoP	SHS BoP	SHS BoP	SHS BoP	SHS BoP	QFAGG	SHS MFI OFI BoP	BoP	SHS BoP	MFI BoP	na	SHS BoP	SHS BoP	na	0	0	BoP		
F512	Unlisted shares	OFI MFI BoP	SHS BoP	SHS BoP	SHS BoP	SHS BoP	SHS BoP	QFAGG	MFI OFI BoP	BoP	OFI SHS BoP	MFI QFAGG BoP	0	SHS BoP	SHS BoP	na	0	0	BoP QFAGG		
F519	Other equity	NFC OFI BoP	MFI BoP	na	SHS OFI BoP	BoP	na	QFAGG	NFC NPISH	BoP	NFC BoP	QFAGG	na	OFI MFI BoP	BoP	na	0	NPISH	BoP		
F52	Investment fund shares/units	MFI IF BoP	MFI BoP	IF	MFI BoP	MFI BoP	MFI BoP	0	MFI IF BoP	BoP	na	MFI BoP	IF BoP	na	na	na	na	na	BoP		
F61	Non-life ITR	IC	IC	IC	IC	IC	IC	QFAGG	IC	BoP	na	na	na	na	IC BoP QFAGG	na	na	na	na		
F62	Life insurance and annuities	na	na	na	na	na	na	na	IC	0	na	na	na	na	IC	na	na	na	na		
F63-65	Pension entitlements	na	na	na	na	na	na	na	PF	0	na	na	na	na	PF	na	na	na	na		
F66	Standardised guaranties	0	0	0	0	0	0	0	0	0	na	na	na	na	na	na	na	na	na		
F7	Financial derivatives	NFC MFI QFAGG	MFI BoP	0	0	0	0	QFAGG	MFI QFAGG	BoP	NFC MFI	MFI BoP	0	0	0	0	QFAGG	0	BoP		
F81	Trade credits and advances	NFC OFI QFAGG BoP	MFI	0	OFI BoP	IC BoP	PF	QFAGG	NFC OFI	BoP QFAGG	NFC OFI QFAGG BoP	MFI BoP	0	OFI BoP	OFI	0	QFAGG	NFC MFI OFI	BoP QFAGG		
F89	Other accounts excl. F81	NFC OFI QFAGG BoP	MFI BoP	0	OFI BoP	IC BoP	PF	QFAGG	NPISH MFI QFAGG	BoP QFAGG	NFC OFI QFAGG BoP	MFI QFAGG BoP	IF	OFI BoP	IC OFI BoP	PF	QFAGG	NFC OFI IC QFAGG	BoP QFAGG		

### Additional sign conventions explanations:

SHS	SHS elaborated and compiled by the BNB.
QFAGG	Quarterly financial accounts for general government
BoP	Balance of payments and international investment position
MFI	MFI balance sheet statistics
IC	Insurance corporations statistics
OFI	Other financial institution statistics
PF	Pension fund statistics
IF	Non-money-market investment funds
NFC	S.11 annual statistics, compiled by the BNSI.
NPISH	S.15 annual statistics, compiled by the BNSI.
**	Pure residual calculation as no source data for a meaningful plausibility check is available.
e <sup>1</sup>	The initial residual calculations are additionally reestimated to split data between S.11 and S.14.
0	known to be zero or occasionally less than 10 MIO BGN.
na	not meaningful/not applicable

### Footnote:

The data sources concerning S.2 RoW give only part of the information, required in the tables 4 to 9.

## Annex 2: Map of main data sources for annual financial accounts

Map of main data sources										
Country:		Bulgaria								
Name of institution:		National Statistical Institute								
Year:		2024								
<i>Note: this Data Source Map is for Annual Financial Accounts only. The map for quarterly financial accounts is provided additionally by the Bulgarian National Bank.</i>										
Assets		S11 NFCs	S12K MFIs	S124 IFs	S12O OFIs	S128 IC	S129 PF	S13 Gov	S14+S15 HH+NPI/SH	S2 RoW
F11	Monetary gold		BNB							
F12	SDRs		BNB							
F21	Currency	BNB	BNB	BNB	BNB	BNB	BNB	MF	BNB	
F22	Deposits, transferable	BNB	BNB	BNB	BNB	BNB	BNB	MF	BNB	BNB
F29	Deposits, other	BNB	BNB	BNB	BNB	BNB	BNB	MF	BNB	BNB
F3	Debt securities	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F4	Loans	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F511	Listed shares	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F512	Unlisted shares	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F519	Other equity	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F52	Investment fund shares/units	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F61	Non-life insurance techn. res.	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F62	Life insurance and annuities								BNB	
F63-F65	Pension entitlements								ISBS	
F66	Standardised guarantees									
F7	Financial derivatives	BNB	BNB	BNB	BNB	BNB	BNB		BNB	BNB
F81	Trade credits and advances	BNB	BNB	BNB	BNB	BNB	BNB	MF/ISBS	BNB	BNB
F89	Other accounts excl. F81	BNB	BNB	BNB	BNB	BNB	BNB	MF/ISBS	BNB	BNB
Liabilities		S11 NFCs	S12K MFIs	S124 IFs	S12O OFIs	S128 IC	S129 PF	S13 Gov	S14+S15 HH+NPI/SH	S2 RoW
F11	Monetary gold									
F12	SDRs									BNB
F21	Currency		BNB							BNB
F22	Deposits, transferable		BNB							BNB
F29	Deposits, other		BNB							BNB
F3	Debt securities	BNB	BNB	BNB	BNB	BNB	BNB	MF	BNB	BNB
F4	Loans	BNB	BNB	BNB	BNB	BNB	BNB	MF	BNB	BNB
F511	Listed shares	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB	BNB
F512	Unlisted shares	BNB	BNB	BNB	BNB	BNB	BNB	ISBS	BNB	BNB
F519	Other equity	BNB			BNB	BNB	BNB	ISBS	BNB	BNB
F52	Investment fund shares/units			BNB						BNB
F61	Non-life insurance techn. res.					BNB				
F62	Life insurance and annuities					BNB				
F63-F65	Pension entitlements						ISBS/FSC			
F66	Standardised guarantees									
F7	Financial derivatives	BNB	BNB	BNB	BNB	BNB	BNB	CD	BNB	BNB
F81	Trade credits and advances	BNB	BNB	BNB	BNB	BNB	BNB	MF/ISBS	BNB	BNB
F89	Other accounts excl. F81	BNB	BNB	BNB	BNB	BNB	BNB	MF/ISBS	BNB	BNB
Key for data sources:										
ISBS	BNSI Internal Information System Business Statistics									
BNB	Bulgarian National Bank Quarterly Financial Accounts data									
MF	Ministry of Finance (includes Debt Statistics, Consolidated Fiscal Program, Government Trial Balances, EU Flows statistics)									
FSC	Financial Supervision Commission									
CD	Central Depository									