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## ESS-ESCB

Quality assessment report  
on statistics underlying the  
Macroeconomic Imbalance  
Procedure

eurostat 



EUROPEAN CENTRAL BANK

EUROSYSTEM

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## I. EXECUTIVE SUMMARY

The Macroeconomic Imbalance Procedure (MIP) is part of the European Semester, which provides a framework for the coordination of economic policies across the European Union. The European Statistical System (ESS), composed of Eurostat and the national statistical institutes (NSIs) and other national authorities (ONAs), as well as the European System of Central Banks (ESCB), composed of the European Central Bank and the national central banks (NCBs), contribute to the harmonised production of data used in the context of the MIP: they provide the necessary expertise to guarantee the statistical quality of indicators and their availability, in a continuous effort to reflect economic and social development. It is of the outmost importance that statistics underlying the MIP procedure remain fit for purpose in this highly relevant policy context where imbalances are identified and countries' progress monitored based on the best possible data quality.

European macroeconomic statistics are developed, produced and disseminated within their respective spheres of competence by the ESS and the ESCB. Close cooperation on quality assurance of statistics underlying the MIP is ensured via the implementation of the Memorandum of Understanding (MoU) signed between Eurostat and the ECB DG Statistics in November 2016.<sup>1</sup>

This 9<sup>th</sup> joint annual quality report presents a transparent description and assessment of the quality of the statistics underlying the MIP indicators. This report benefited from comments of the Committee for Monetary, Financial and Balance of Payments statistics<sup>2</sup> (CMFB).

This year's report comes three years after the start of the COVID-19 pandemic and it is mainly focused on the assessment of annual data up to 2021. The COVID-19 pandemic had a significant initial impact on the ability of statistical authorities to collect and process data, as it disrupted many aspects of daily life and caused significant changes to economic and social conditions. However, despite these challenges, the ESS and the ESCB have managed to ensure the continuation of statistical production and dissemination according to schedule and with sufficient quality standards. The report includes observations on the COVID-19 impact on data collection, processing and dissemination in section II.2.

As for statistics up to 2021, this report concludes that the macroeconomic statistics produced by the two systems are of sufficient coverage, comparability across countries, quality and timeliness to ensure an effective macroeconomic surveillance and therefore to support the MIP, whilst describing areas for further improvement in each of these dimensions.

When looking at the quality of the statistics for the current cycle, the following main features are worth highlighting:

In the EU, a regular and comprehensive quality assessment of national **GDP** is in operation in the frame of Gross National Income (GNI) being used for own resources purposes, of which GDP constitutes the most predominant part. In addition, the results of the sixth annual quality reporting exercise under the European System of Accounts (ESA 2010) methodology were published in December 2022.

For the **Balance of payments (BoP) and International investment position (IIP) statistics**, the asymmetries in bilateral flows and stocks remain a concern, as well as the level and the statistical patterns of the national errors and omissions for some countries. Eurostat and the ECB are working in close collaboration with Member States and recommend countries to increase their efforts to reduce asymmetries, including active participation in the FDI network and the FDI Asymmetry Resolution Mechanism. The valuation and recording of Foreign Direct Investment (FDI) transactions, positions and income needs further work to ensure an adequate and

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<sup>1</sup> <https://ec.europa.eu/eurostat/documents/10186/7722897/Final-signed-MoU-ESTAT-ECB.pdf>

<sup>2</sup> Council Decision 2006/856/EC of 13 November 2006 establishing a Committee on monetary, financial and balance of payments statistics. OJ L 332, 30.11.2006, p. 21.

harmonised implementation of the current statistical guidance. Moreover, Eurostat has been hosting an Asymmetries Resolution Mechanism for international trade in services since early 2022<sup>3</sup>.

Additional efforts are required to address the outstanding inconsistencies between BoP/IIP and the “Rest of the World” account. Eurostat and ECB have been presenting their joint reports on Balance of Payments and National Accounts consistency to the CMFB. Furthermore, Eurostat and ECB organised a bilateral workshop related to this issue in February 2023. Also, in the framework of MIP information visits, consistency between BoP and non-financial and financial sector accounts are discussed with the visited Member States.

Concerning **unit labour cost**, breaks in the time series remain for two countries.

In terms of availability of data for **housing price statistics**, one country does not deliver data as required by Commission Regulation (EU) No 2016/792 of the European Parliament and the Council, with Eurostat continuing to use for the MIP exercise an index of apartment prices published by the National Central Bank.

Certain areas for improving the reliability of **financial accounts statistics** have been identified in several countries, including the improved coverage and data sources of the liabilities of other financial institutions (OFIs), financial derivatives, unlisted shares and other equity, elimination of some national inconsistencies between the annual and quarterly datasets, the reconciliation of the “Rest of the World” account (RoW) in financial accounts with the comparable figures in the BoP/IIP domain, the reduction of (vertical) discrepancies with non-financial sector accounts, and improved recording of the distinction between consolidated and non-consolidated data for the non-financial corporations sector.

The quality of the **government finance statistics** is assessed in the context of an enhanced quality assurance mechanism around the Excessive Deficit Procedure (EDP); in case of quality concerns, Eurostat expresses reservations on data reported in official EDP notifications<sup>4</sup>.

The overall accuracy of **labour market statistics** is considered as high, while it may vary across countries due to differences in response rates. These differences, being within the acceptable range, do not jeopardise overall accuracy and comparability. The outbreak of the COVID-19 pandemic during the first quarter of 2020 represented a challenge to the production of data based on surveys on persons or households: the prompt reactions of European NSIs, coordinated by Eurostat, allowed for subsequent accurate data production.

Whenever specific quality issues arise for a particular country, those are brought up in section II of this report.

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<sup>3</sup> Eurostat presented its final report "International trade in services: Potential causes of Intra-EU asymmetries" to the Balance of Payments working group on 25-26 November 2021.

<sup>4</sup> <https://ec.europa.eu/eurostat/web/government-finance-statistics/legislation>

## II. GENERAL CONSIDERATIONS ON THE QUALITY OF THE STATISTICS UNDERLYING THE MIP

### II.1 MACROECONOMIC STATISTICS – AT THE CORE OF MIP INDICATORS

The MIP headline indicators are derived from macroeconomic and financial statistics produced by the European Statistical System (ESS) and the European System of Central Banks (ESCB). They are mostly based on data collected under European Union legislation. The present report finds that these statistics are of sufficient coverage, quality and timeliness to ensure an effective multilateral macroeconomic surveillance and support MIP proceedings.

The ESS, composed of Eurostat and the national statistical institutes (NSIs) and other national authorities (ONAs)<sup>5</sup>, and the ESCB, composed of the ECB and the national central banks (NCBs), operate under separate legal frameworks reflecting their respective governance structures and cooperate closely when designing their respective statistical programmes.

The two systems<sup>6</sup> have been producing macroeconomic and financial statistics for many years within their respective spheres of competence and continuously apply statistical quality assurance mechanisms to ensure that these statistics are in line with international statistical standards and reliable and comparable across EU Member States. Such statistics have been the basis for economic and monetary policy decisions of the Union over many years and are also used by international organisations such as the IMF and the OECD in their surveillance reports.

The purpose of the report is to present in a principle-oriented manner both common and diverse quality issues related to all statistics underlying the MIP. To this end, in this part II of the document, the focus is on information at statistical domain level, while Annex I contains more in-depth information by MIP scoreboard indicator, including the quality criteria most relevant for the MIP process: (i) institutional issues, (ii) the compilation process, and (iii) the quality of the statistical output, focusing on its accuracy, reliability and comparability across countries and across time. Annex II and III list the MIP Scoreboard and auxiliary indicators.

As the indicators for the MIP are derived from available macroeconomic and financial statistics, such as national non-financial and financial accounts, balance of payments statistics, international investment position, and also prices and labour market statistics, this report will focus on the quality of these statistics. Accordingly, the report also outlines areas of the underlying statistics that may need further quality enhancements<sup>7</sup>.

### II.2 COVID-19 IMPACT ON STATISTICS UNDERLYING THE MIP

The spread of COVID-19 across Europe led to the imposition of severe restrictions to the statistical compilers and reporting agents (e.g. premises closed, staff started to work from home) and the measures implemented to contain its spread (such as lockdowns, deferred tax payments, financial support loans, etc.) have an impact on the compilation of statistics. However, official statistics have proven to be well-equipped to deal with the challenges.

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<sup>5</sup> List of National statistical institutes (NSI) and other national authorities, at [https://ec.europa.eu/eurostat/documents/13019146/13574152/20220329\\_List\\_other\\_national\\_statistical\\_authorities\\_IT.pdf/eabd571b-ccb-dbd-7707-bf04c7b633e5?t=1648635591306](https://ec.europa.eu/eurostat/documents/13019146/13574152/20220329_List_other_national_statistical_authorities_IT.pdf/eabd571b-ccb-dbd-7707-bf04c7b633e5?t=1648635591306)

<sup>6</sup> The institutional framework for the production of European statistics is set out in the Treaty of the European Union (TFEU) and in Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics, *OJ L 87, 31.3.2009, p. 164*, and in Council Regulation (EC) No 2533/98 of 23 November 1998 concerning the collection of statistical information by the European Central Bank, *OJ L 318, 27.11.1998, p. 8*.

<sup>7</sup> Within the reporting structure monitoring the quality of statistics underlying the MIP, this ESS-ESCB Quality Assessment Report is accompanied and complemented by domain specific quality reports prepared on a national level by the Member States and on an EU/euro area level by Eurostat and the ECB.

There are several aspects to this impact. In 2020 and 2021, various intermittent lockdown measures implemented in the EU Member States created additional challenges for the collection and compilation of data. When the most severe measures were released, the impact of several waves of pandemic continued to create difficulties and uncertainty. Furthermore, unforeseen side effects, like imbalances in the supply chain, also impacted the level of output and the performance of existing estimation models for extrapolating data due to their dependency on past reference data. In spite of these challenging conditions, the quality of the underlying data to MIP indicators has been maintained, and the subsequent revisions were not excessive.

The regular production of **national accounts** (including financial accounts) was successfully maintained by NSIs, NCBs, Eurostat and the ECB, including GDP and Employment flash estimates. The timeliness and coverage of national accounts (NA) data delivery was respected by the Member States: the timely release of updated annual aggregates facilitated the production of indicators for the Macroeconomic Imbalance Procedure. While all countries have now implemented the benchmark revisions in national accounts, Greece still has to complete its 2020 benchmark revision for the years before 2010.

Starting with 2020, Eurostat collected and published metadata<sup>8</sup> on the timing and severity of the COVID-19 impact on economy, estimation techniques used, as well as on the quality and reliability of the estimates. These metadata were updated for the last time for the third quarter 2022, as the impact of COVID-19 on economies has become more limited afterwards.

For **general government gross debt**, Eurostat developed, in close cooperation with experts from Member States, methodological guidelines on the treatment of the various measures taken by governments to protect health, while supporting the economy and the labour markets, including on national accounts. These guidelines have been especially important to ensure comparability across countries. Since April 2021, the additional supplementary table for the reporting of the measures taken by Member States due to the COVID-19 pandemic has been part of the EDP reporting. The first reporting of the expenditure and other costs of the general government financed by the Recovery and Resilience Facility took place for the October 2021 EDP reporting.

For **housing price statistics (HPI)**, after COVID-19 lockdown measures that had affected the real estate market in many European countries in 2020, the market has been again very dynamic in 2021, with a number of housing transactions even higher than pre-pandemic levels in many countries (although, for other countries, the number of housing transactions returned to pre-COVID-19 levels in 2022 only).

The impact of the pandemic on nominal house prices was more generally towards increase, reaching a peak in the first quarter of 2022, with the highest annual increase in EU since 2006. COVID-19 had no impact on the production and dissemination of quarterly HPI, with the number and magnitude of revisions for country indices not increasing due to the pandemic situation. Countries could produce without major difficulty their indices and transmit them to Eurostat within deadlines.

Concerning the **labour force survey (EU-LFS)**, the spread of COVID-19 across Europe led to field activities being put to a halt in many countries. This negatively impacted the collection of household survey data starting as early as calendar week 5 in 2020 and it remained under pressure until the end of the year. In 2021, the situation gradually improved; however, variants still circulated and led to successive temporary containment measures and partial lockdowns. All this put double pressure on producers of EU-LFS data throughout this period: data collection was impacted by a decrease in the overall volume of attempted interviews, higher non-response and even changes in the shares of interview modes, while at the same time the real impact of the crisis was leading to large shifts in the labour market, with a loss of labour factor both in heads and in working hours. Eurostat reacted fast, by providing data which allowed users to evaluate these shifts, and compare data over time and between countries.

Eurostat produced methodological papers to guide the NSIs' reactions to the COVID-19 crisis in a harmonised way (see III.3.4 for more detail). No significant impact from the COVID-19 pandemic was recorded in the data

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<sup>8</sup> Metadata for [2021Q4](#), [2021Q3](#), [2021Q2](#) and [2021Q1](#) QNA were published on [Eurostat's main aggregates website](#).

collection, processing and dissemination for the other statistics involved in the Macroeconomic Imbalance Procedure.

### II.3 EUROPEAN LAW AND QUALITY ASSURANCE PROCESSES AS DETERMINANTS OF STATISTICAL QUALITY

The assessment presented in this ESS-ESCB Quality Assessment Report reflects essential quantitative and qualitative information from the comprehensive quality assurance frameworks for macroeconomic statistics of the ESS and the ESCB, in particular from domain-specific quality reports.

Securing the quality of macroeconomic and financial statistics is a central contribution of the ESS and the ESCB. The two systems share similar principles referring to the quality of statistical processes and outputs, as well as the institutional environment. These principles are reflected in the European Statistics Code of Practice and the ESCB Public Commitment on European Statistics respectively and are very similar to those established on a global basis by the UN, the IMF and the OECD.

The macroeconomic statistics underlying the MIP indicators are regulated by EU legislation, including in most cases procedures for quality assurance and monitoring. For balance of payments statistics, international investment position, national non-financial and financial accounts, EDP and government finance statistics, prices, and labour market statistics, the statistical legislation in force already provides for regular domain-specific quality reports on the statistical data. Reports often accompany inventories containing a description of the sources and methods applied in the collection of these statistics.

The **quality assurance framework**, developed jointly by the ESS and the ESCB, follows a three-level structure.

The *first level* (level 1, the present document) provides key messages on the quality assurance of MIP statistics, in particular on their reliability and comparability, to the Council and the European Parliament, policy makers and the public at large. This level draws on the information gathered in the next two levels.

The *second level* consists of domain-specific quality reports produced by Eurostat and the ECB summarising the main findings for the euro area and/or the EU Member States. These reports assess the underlying compilation process and its robustness, describe its legal basis and evaluate whether the statistics are in line with international statistical standards. They reflect comprehensive expert assessments on whether the statistics are fit for each of the broader purposes for which they are intended, including their comparability across Member States. The quality assessment is based on, among other sources, the input coming from national, domain-specific quality reports. For national accounts, after the adoption of an implementing act,<sup>9</sup> an annual quality reporting by Member States started in 2017, to be extended progressively by 2021, including data underlying the MIP indicators, too.

On the *third level*, depending on the domain, national quality reports (self-assessments) are produced by the institution compiling the national statistics. Most of these reports are voluntarily published by Member States on the CMFB's website and/or on the website of the national statistics compiler.<sup>10</sup>

By focusing the quality assurance on the underlying macroeconomic and financial statistics that are used for many purposes, rather than for MIP indicators only, the quality of data is ensured independently of possible adjustments in the scoreboard indicators.

#### II.3.1 IMPLEMENTATION OF THE MEMORANDUM OF UNDERSTANDING BETWEEN EUROSTAT AND THE EUROPEAN CENTRAL BANK/DG STATISTICS

On 7<sup>th</sup> November 2016, Eurostat and DG Statistics of the European Central Bank signed a Memorandum of Understanding on the quality assurance of statistics underlying the Macroeconomic Imbalance Procedure<sup>11</sup>.

<sup>9</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1413797867069&uri=CELEX:32014R0724>

<sup>10</sup> <https://www.cmfb.europa.eu/main-topics/mip-quality>

<sup>11</sup> <http://ec.europa.eu/eurostat/documents/10186/7722897/Final-signed-MoU-ESTAT-ECB.pdf>

Within its scope are two statistical datasets where many Member States have designated their National Central Banks for producing the datasets, or major parts of it:

- Balance of payments and International investment position statistics
- Financial accounts

The Memorandum of Understanding establishes a mutual recognition of the respective ESS and ESCB quality assurance frameworks, sets out the steps to be taken during the MIP indicators production process, based on a timetable to be agreed annually by Eurostat and the ECB/DG-Statistics, and establishes that, with the support of NSIs and NCBs, Eurostat and the ECB/DG-Statistics may undertake analysis of the output quality and consistency of the datasets with related statistical domains, including joint visits to Member States.

Eurostat and ECB/DG-Statistics have been fully implementing the MoU since its agreement, including regular comparisons of the relevant data in the Eurostat and ECB databases and their harmonisation, the implementation of the three levels quality reporting system and joint visits by Eurostat and the ECB/DG-Statistics to countries. Country visits started in 2017 with Greece and Belgium, followed by Luxembourg and Poland in 2018. In 2019, Germany, Ireland and Malta were visited, and there was a visit to France in January 2020. Due to the COVID-19 restrictions in place, on site visits were suspended and will resume when possible. A virtual visit to Finland was held in January 2022. Visits are carried out on the basis of a well-established framework and have demonstrated their potential for identifying concrete actions for the improvement of the quality of MIP underlying statistics.

While the respective quality assessment frameworks have been mutually recognised by the MoU and are consistent in terms of concepts and principles, ECB DG-S and Eurostat, with the support of the CMFB, worked with the objective of harmonising the quality reporting on BoP/IIP and financial accounts. In 2017, an agreement was reached on the structure of these reports and on the set of quality indicators used. The full implementation of the alignment of the reports was achieved in the course of 2018 (on reference data for 2017). While - due to the different data coverage and legislation - it is currently not possible to have one common report, its structure, the indicators and the findings included in the Eurostat and the ECB reports are harmonised. ECB DG-S and Eurostat reports assess the quality of the data according to the following dimensions: relevance, accuracy, timeliness/punctuality, accessibility and clarity, comparability and coherence. A special section (box) focuses on the quality assessment of the data used for MIP purposes.

## II.4 HIGH QUALITY AND COST-EFFECTIVE MACROECONOMIC STATISTICS

By striking the right balance between timeliness and detail, the ESS and the ESCB aim to produce fit for purpose macroeconomic and financial statistics in a cost-effective manner. To strike this balance, statisticians, in close liaison with users and reporting agents and prior to developing new statistics or imposing additional reporting requirements, have to undertake a '**merit and cost evaluation**' considering the **trade-offs** between the timeliness, accuracy, reliability, detail and cost of macroeconomic statistics.

The **frequency** of the statistical production, which is in most cases regulated, has also to be taken into account: high-frequency macroeconomic statistics ensure the appropriate timeliness and are generally compiled with less detail not to overburden respondents, while more detailed statistics become available less frequently and with a longer time-lag.

Another usual arbitrage is between the degree of **reliability** and **accuracy** on the one hand, and **timeliness** of publication on the other hand: the shorter the length of time for collecting and controlling the statistical output before publication, the less strong the accuracy and reliability of the statistics will be (all other things being equal). Revisions have to be considered a normal phenomenon to increase progressively the quality of data, in particular its accuracy. Revisions are also regularly analysed in order to improve source data, statistical processes and outputs.

Moreover, the quality is also linked to the compilation methods that are available and used. For example, to compile some monthly balance of payments data, surveys may be confined to reporting agents of a certain

size, and the statistical compilation process combines information collected from reporting agents via statistical surveys, administrative data and necessary estimations with statistical techniques and expert judgment.

Data derived from business accounting or administrative sources, which are closely related to the phenomena under observation, may often lend itself as the most solid primary data for certain purposes, if deviations from statistical standards are appropriately addressed. In other cases, surveys can be appropriate or even unavoidable in certain statistical areas, which are by definition less exhaustive, but the risk of error is mitigated by statistical techniques to the largest extent possible. While a more extensive use of censuses instead of sample surveys may enhance the accuracy and reliability of certain statistics, it would also increase the costs and the reporting burden, in particular for small and medium-sized enterprises. For example, the reporting obligations on cross-border transactions (for balance of payments purposes) may only be imposed for transactions or positions above certain thresholds to limit the reporting burden; this is however expected to affect only marginally the accuracy and reliability of the final output. In addition, the estimate of some variables may only be achieved through modelling, with a more significant role for expert judgment.

The accuracy and reliability of macroeconomic statistics are also influenced by the level of qualified human and financial resources involved in the statistical work. For example, as quality checks typically require contacting the reporting entities in order to verify the provided statistical information, the lack of resources may enable to perform this task only on a limited scale, with a possible impact on the accuracy and reliability of the statistics. Recent experience in some countries points out at the impact of economic globalisation on macroeconomic statistics and the difficulties in collecting data from multinational enterprises. The sharing of information and data between statisticians is a challenging issue and raises legal questions, while the path of globalisation of very large non-financial groups is accelerating.

In short, the quality framework must take account of the wider statistical context in which these data are produced; a context in which timeliness, reliability, accuracy, and other quality parameters must be carefully balanced in the choice of collection and compilation methods. Otherwise, Member States could be obliged to adjust their collection and compilation methods in a manner that can no longer be considered balanced or cost-effective for the wider set of statistics from which the MIP relevant data are derived.

## II.5 MAIN OBSERVATIONS

The majority of the statistics underlying the MIP indicators are based on the ESA 2010 and a European framework rooted in the BPM6. These frameworks are methodologically consistent and guarantee a high level of comparability across EU Member States, which is an important foundation to support multilateral surveillance under the MIP.

National Statistical Institutes and National Central Banks will have to continue deploying the necessary resources to step up efforts for consolidating the compilation of national accounts, balance of payments and international investment position in accordance with the respective statistical standards. More specifically, when looking at the quality of the statistics for the current cycle, some main features are worth highlighting.

As large multinationals move their business around the globe, concerned statistical data producers need to remain vigilant for the potential impacts of this phenomenon, particularly in the MIP context for national accounts and BOP/IIP. In this context, several initiatives are ongoing. In particular, Eurostat is running an early warning system based on a network of national correspondents in cooperation with the Member States, the ECB and the ESCB. Eurostat and the ECB follow an FDI – microdata driven approach: Eurostat hosts an IT platform (FDI network) for national FDI compilers to securely exchange information on major FDI transactions and positions to ensure a homogenous recording of such transactions across countries. Both institutions organize quarterly meetings (Asymmetry Resolution meetings) with national compilers to address the most sizable bilateral and multilateral FDI asymmetries as earlier as possible. In addition, Eurostat set up in 2022 the Asymmetries Resolution Mechanism for international trade in services, and the first trilateral meetings

between Eurostat and the partner countries involved have taken place. Final reports on the GNI reservation on globalisation were due by September 2022, and the verification work is on-going.

### II.5.1 GROSS DOMESTIC PRODUCT

The quality of **GDP statistics** is crucial in this context as many of the MIP indicators are computed in the form of ratios to GDP. The ESA 2010 methodology ensures the consistency of GDP compilation with the international standards for national accounts, hence leading to better comparability between EU countries and on a global basis. In the EU, a regular and comprehensive quality assessment of national GDP data is in operation in the GNI own resources framework, of which GDP constitutes a predominant part.

The results of the sixth annual quality reporting exercise on data transmitted under the ESA 2010 methodology in 2021 were published in December 2022<sup>12</sup>. This analysis includes monitoring of completeness and timeliness, which are generally in line with legal requirements for GDP and its main aggregates. The analysis of consistency between quarterly and annual data generally show only very small temporary inconsistencies for some countries. It also showed that countries achieved consistency when sending GDP according to production, expenditure and income approaches and transmitted breakdowns that fulfilled expected additivity requirements. Cross-domain consistency of data has also become subject to increased scrutiny and is now part of regular quality reporting. Since inconsistencies mainly reflect delays in incorporating EDP or GNI related revisions consistently throughout the entire set of accounts, addressing these issues in a timely and systematic manner will improve the overall quality of national accounts including the accuracy of GDP as their headline figure.

Greece did not complete its 2020 benchmark revision with back data as initially planned: consequently, there is a break in the time series in 2010 which hampers the usage of the data for analysis. In general, the benchmark revisions are carried out at least once every five years to incorporate new data sources and major changes in international statistical methodology, i.e. following the introduction of ESA 2010 methodology with a coordinated benchmark revision in 2014, the majority of Member States implemented benchmark revisions in 2019. The next agreed EU-wide benchmark revision, for which the ESS and the ESCB have started the preparatory work, will be in 2024. These revisions mostly relate to introducing statistical improvements and actions agreed in the context of the verification of GNI and/or EDP data<sup>13</sup>.

### II.5.2 BALANCE OF PAYMENTS (BoP) AND INTERNATIONAL INVESTMENT POSITION (IIP) STATISTICS

The compilation of **Balance of payments (BoP) and International investment position (IIP) statistics** in EU Member States follows the 6<sup>th</sup> edition of the IMF Balance of Payments Manual (BPM6). Since 2017, several actions for the improvement of the quality of BoP/IIP statistics have been jointly undertaken by Eurostat and the ECB, mostly in the context of the implementation of the MoU. This has also further strengthened the close cooperation between the two institutions and between the ESS and the ESCB.

The overall BoP/IIP data comparability across the EU is appropriate, though still affected by asymmetries in bilateral flows and stocks that need to be continuously addressed. In 2021, the ECB and Eurostat are actively working together with Member States to address the asymmetries, examples being: i) encouraging the extensive use of the FDI Network; ii) the ongoing workshops on asymmetries taking place at the Eurostat BoP working group meetings<sup>14</sup>; iii) the Early Warning System set up by Eurostat; iv) the FDI Asymmetry Resolution

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<sup>12</sup> [Quality report on national and regional accounts – 2021 data – 2022 edition - Products Statistical reports - Eurostat \(europa.eu\)](#)

<sup>13</sup> More information is available on Eurostat website: <https://ec.europa.eu/eurostat/web/esa-2010/esa-2010-implementation-and-data-quality>.

<sup>14</sup> Eurostat has been continuing its work in close cooperation with Member States to reduce asymmetries. Eurostat prepared a final report summarising all the work made to identify potential causes of intra-EU asymmetries in trade in services. This analytical work was based on the results of a Eurostat survey launched among Member States in 2021. The results were tested with a regression model applied on Intra-EU bilateral asymmetries. Eurostat prepared recommendations addressed to Member States to reduce the asymmetries both on total services and for each EBOPS category analysed.

Mechanism (ARM) in the context of the quarterly BoP productions; and, v) Asymmetries Resolution Mechanism for international trade in services, vi) the extended exchange of bilateral data. The benefit of these efforts is dependent on the active participation of the countries, in particular of those with the biggest absolute and relative asymmetries. However, confidentiality issues are often recognised as among the main obstacles to achieve more effective progress and initiatives to improve the exchange of data are being discussed with the help of the CMFB. Asymmetries again remained at high level for the current account components, direct and other investment.

The data quality on Special Purpose Entities (SPEs) improved in the last few years in Cyprus (with a better geographical allocation), in Luxembourg (which covers SPEs based on a lower balance sheet threshold) and in the Netherlands, following the efforts undertaken in recent years. Data quality limitations still persist in Malta and the relevant recommendations from the MIP visit in April 2019 need to be addressed.

Net errors and omissions remained stable and comparable to previous years. In cumulative terms, for the years 2019-2021, a substantial negative bias is observed for Finland and Sweden, while a positive bias is observed for Bulgaria. The significant size of errors and omissions should be investigated by Bulgaria, Finland and Sweden.

Overall, BoP/IIP revisions only had a marginal impact on the analytical interpretation of the indicators. As in previous years, the largest revisions in the current account, in terms of GDP, were reported by the Netherlands and Ireland. The largest revisions in the net IIP in terms of GDP were reported by Luxembourg and Sweden. However, in all the cases, the analytical interpretation of the international investment position indicator remains unchanged.

For several countries, BoP/IIP and RoW data show differences in various item categories. For the current account, in terms of GDP, countries with the highest discrepancies are Cyprus and Malta. For financial account positions, discrepancies between IIP and the RoW are significant for Denmark, Ireland, Malta, France (only assets side) and Luxembourg<sup>15</sup>. Further work by the countries should build on the results of the CMFB task force on the consistency between national accounts and balance of payments, as well as on other initiatives of Eurostat and the ECB. In January 2022, the ECB and Eurostat presented for the first time a Joint ECB-Eurostat report on inconsistencies in NA-BOP, concerning quarterly financial and non-financial accounts to the CMFB. The second report was presented to the CMFB in February 2023: this work should further support national compilers' efforts undertaken in this context.

### II.5.3 NOMINAL UNIT LABOUR COST

Data used in the compilation of the **nominal unit labour costs** are seen as being robust and harmonised across the EU, due to the use of a common national accounts framework, in particular at the aggregate economy level. Data coverage is less complete, comparable and accurate with regard to more detailed data on some industries, where measuring output is more complex. Unit labour costs based on gross value added by A10 and A21 industries are also published by Eurostat.

Nevertheless, a few quality issues remain, and both Ireland and Greece flagged a break in the time series. Timeliness of reporting was generally well respected in 2022, with sometimes a minor delay in validation or with retransmission necessary. In some cases, there were slight temporary inconsistencies, e.g. between annual and quarterly accounts.

### II.5.4 HOUSING PRICE STATISTICS

**Housing price statistics** are governed by Regulation (EU) 2016/792 of the European Parliament and the Council, in combination with the Commission's Implementing Regulation (EU) 2020/1148. These regulations provide

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<sup>15</sup> Luxembourg signalled that discrepancies might be high in relation to GDP, sometimes 15%, but they are very small compared to total foreign assets. Luxembourg, in its comparison reports, shows no inconsistencies above 0.05% of total assets. Temporary discrepancies above the percentage may sometimes occur but these anomalies will disappear after revision.

for the transmission of the house price index (HPI) and the assurance of its quality and comparability. All Member States except Greece deliver data and metadata accordingly.

While work for the development of an HPI in Greece is still on-going, efforts need to be reinforced. For the time being, for the MIP exercise, Eurostat continues to use the index of apartment prices published by the Greek Central Bank.

To produce the MIP indicator on housing prices, the HPI is deflated by the household final consumption deflator derived from the national accounts according to ESA 2010. The quality of the MIP indicator is thus also determined by the quality of the deflator.

## II.5.5 FINANCIAL ACCOUNTS STATISTICS

**Financial accounts statistics** are computed by integrating statistical data coming from several sector and instrument-specific sources. A report of the ECB on the quality of quarterly financial accounts data is required by Article 7 of Guideline ECB/2013/24. Since 2018, this quality report includes also assessments of national data from all EU countries as non-euro area countries provide quarterly data to the ECB on voluntary basis. Eurostat's quality assessment for financial accounts is included in the ESA 2010 annual quality report on National and Regional Accounts. The latter quality report covers the quality criteria specified in Regulation (EC) No 223/2009, i.e. completeness, punctuality and timeliness, accuracy and reliability (revision rates for annual financial accounts) and vertical discrepancies between annual financial and non-financial accounts.

Eurostat worked on the update of the ESA 2010 Transmission Programme in the context of mid-term review of ESA2010. The updated version of the Transmission Programme was published on 5 April 2023 in the Official Journal<sup>16</sup>, and will enter into force in September 2024. The mid-term review introduces an early transmission of a sub-set of annual financial accounts data four months after the end of the reference period. The first advanced transmission will take place in April 2025.

Since 2017, several actions for the improvement of the quality of the financial accounts datasets (similar to the BoP/IIP datasets, see II.5.2) have been jointly undertaken by Eurostat and the ECB, mostly in the context of the implementation of the Memorandum of Understanding. This has also further strengthened the close cooperation between the two institutions and the ESS and the ESCB.

Certain areas for improving the reliability of the datasets have been identified, including improving the coverage and data sources of financial sector liabilities, in particular of other financial institutions (OFIs), for financial derivatives, unlisted shares and other equity, the reconciliation of the “Rest of the World” sector in financial accounts with the comparable figures in the BoP/IIP domain (see section II.5.2), the reduction of vertical discrepancies with non-financial sector accounts, the reduction of discrepancies between annual and quarterly financial accounts, and improved recording of the distinction between consolidated and non-consolidated data for the non-financial corporations sector.

While the coverage of OFIs has improved in most countries, Germany, the Netherlands and Poland should improve cross-checking with business registers or use other methods to ensure full coverage of OFIs. In Croatia and Sweden, meanwhile, it is difficult to determine the coverage for particular OFI sub-sectors, groups of entities or instruments on the basis of existing data sources. This may mean that those data are not complete. Neither is it possible to estimate the missing data.

Starting from a joint initiative of the ECB and Eurostat, and in close collaboration with national experts, recommendations to enhance the vertical consistency of the financial and non-financial sector accounts, as well as to increase the comparability of the country data, were approved by the ESS (DMES) and ESCB (Statistics Committee) and published in July 2022.<sup>17</sup> The recommendations include qualitative as well as quantitative

<sup>16</sup> [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L\\_.2023.097.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2023.097.01.0001.01.ENG)

<sup>17</sup> [https://www.ecb.europa.eu/stats/pdf/Recommendations\\_on\\_Vertical\\_consistency.en.pdf](https://www.ecb.europa.eu/stats/pdf/Recommendations_on_Vertical_consistency.en.pdf)  
<https://ec.europa.eu/eurostat/documents/499359/499434/Recommendations+on+Vertical+consistency.pdf>

recommendations.<sup>18</sup> Their implementation is planned by the time of the next benchmark revision in national accounts in autumn 2024. The quantitative recommendations include the ‘*target*’ to keep in each compilation round the four-quarter sum/annual vertical discrepancy for each sector (and sub-sector) below 1% of the four-quarter sum/annual GDP, in addition to a limitation on the use of automated balancing. For 2021 data, very high discrepancies (over 2% of GDP for at least one main sector) were observed for Germany, Estonia, Greece, Croatia, Lithuania, Malta, Poland, Finland, and Sweden.

Several Member States, namely Bulgaria, Czechia, Denmark, Ireland, Italy, Cyprus, Luxembourg, Hungary, Malta, Austria, Slovakia and Sweden, showed some differences between annual and quarterly data when the statistical annex to the Alert Mechanism Report was prepared in October 2022.<sup>19</sup> Several discrepancies were observed for Denmark, Ireland and Slovakia, which had a negative impact on the regular Eurostat dissemination of financial accounts indicators. Eurostat analysed the discrepancies in close cooperation with the countries and the ECB, with the objective of reducing them whenever possible.

In general, revisions to Private sector credit flow and debt are mostly related to non-financial corporation (NFC) loan financing, whereas revisions to household loan financing and NFC debt securities issuance tend to be low. Total financial sector liabilities were revised mostly upwards as countries improve their data sources to increase coverage of OFIs. For a detailed revision analysis see III.3.2.C.

### II.5.6 GOVERNMENT FINANCE STATISTICS

The quality of **government finance statistics**, for which general government gross debt is also used in MIP, is reinforced by an enhanced quality assurance mechanism around the EDP process based on a well-defined legal framework which gives the Commission (Eurostat) the power and possibility for detailed quality checks of the data including on-site visits to the Member States. In its recent annual report to the European Parliament<sup>20</sup>, the Commission confirmed the good overall quality of the reported fiscal data. Eurostat expressed no reservation on the data reported by the Member States in the course of 2022.

### II.5.7 LABOUR MARKET STATISTICS

**Labour market statistics** used in the MIP are based on the EU Labour Force Survey (EU-LFS) data. The overall accuracy of LFS statistics is currently considered as high and data are highly comparable among Member States. The quality of the LFS is constantly monitored by a large set of indicators. In particular, the indicators for 2021 show an improvement in the proxy rate at EU level but a deterioration in the unit-nonresponse rate in most countries, compared with the situation five years earlier. At present, both the unit non-response rate and the proxy rate are within acceptable boundaries.

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<sup>18</sup> For the government sector, the prevalence of sector specific guidance is acknowledged, and reference is made to the Manual on quarterly financial accounts for general government in its current edition (part 1.c, page 34).

<sup>19</sup> Reasons for discrepancies between annual and quarterly financial accounts vary across countries and may include e.g. different revision or balancing policies, or temporary or permanent differences in the classification of individual units.

<sup>20</sup>

<https://ec.europa.eu/eurostat/documents/1015035/2041369/Staff+Working+Document+reporting+on+the+quality+of+fiscal+data+reported+by+MS+in+2021.pdf/06e6e726-b40b-ef97-e2f4-68e515cd79ed?t=1645009369646>

### III. ANNEX I – KEY FEATURES OF THE QUALITY ASSESSMENT OF THE MACROECONOMIC STATISTICS UNDERLYING THE MIP

A quality assessment supporting the MIP exercise should focus on scrutinising the relevant quality criteria for the MIP process. These criteria should be embraced in the three main blocks clustering the quality principles of the European Statistics Code of Practice and the ESCB Public Commitment on European Statistics.

Given that MIP indicators are designed to 'identify imbalances' and to develop 'multilateral policy recommendations', a 'fit-for-purpose' quality assessment for the MIP should give prominence to the criteria assessing:

- the **institutional environment**, such as the *legal basis* supporting the collection of the statistics, the *quality assurance mechanisms* in place and the *policy uses* of the underlying statistics;
- the robustness of the **statistical / compilation process**; analysing whether the important parts of the statistics are supported by comprehensive *collection of raw data* or by sound estimation statistical methods supplemented when necessary by *expert judgement*; and
- the **quality of the statistical output**; focusing on the accuracy and the comparability of the underlying statistical output across countries and across time. **Accuracy and reliability**<sup>21</sup> are relevant because policy makers would need an assessment on whether the reported value portrays the reality by applying the concepts and rules defined in international statistical standards. In particular, reliability needs to be assessed in the sense whether statistics are also consistent over time or if revisions may result in final values of the indicators diverging substantially from the value reported when the policy assessment of imbalances was undertaken. **Comparability** (and coherence)<sup>22</sup> requires judging whether the statistics for all EU Member States *abide by the international statistical standards* or European regulations and identifying major deviations.

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<sup>21</sup> Reliability is defined in principle 12 of the European Statistics Code of Practice and ESCB Public Commitment on European Statistics.

<sup>22</sup> Coherence and comparability are defined in principle 14 of the European Statistics Code of Practice and ESCB Public Commitment on European Statistics.

### III.1 GROSS DOMESTIC PRODUCT

Given that many of the MIP indicators are compiled relative to Gross domestic product (GDP), it is important to assess the quality of GDP statistics to ensure the quality of MIP indicators compiled by relating domain-specific statistics or indicators to GDP.

#### A. INSTITUTIONAL ISSUES

i) *Legal basis*

ii) *European national accounts are compiled according to the harmonised accounting concepts, definitions, classifications, methodology and calculating rules described in Regulation (EU) No 549/2013, which covers the European System of Accounts (hereinafter referred to as “ESA 2010”)<sup>23</sup>. The ESA 2010 also includes the Transmission Programme (Annex B), a set of tables specifying which data, at what detail, should be provided at what timeliness. Quality assurance mechanisms*

As Gross National Income (GNI) under Regulation (EU) No 2019/516 (hereinafter referred to as “GNI Regulation”)<sup>24</sup> is used for administrative purposes, the countries are obliged to give detailed Inventories of the sources and methods (GNI Inventories) used to produce GNI aggregates and their components in accordance with ESA 2010 to the Commission. GDP and the transaction flows in it form a major part of GNI<sup>25</sup> and are therefore included in the GNI Inventories, thus being a source for assessing GDP quality. The verification of GNI Inventories is supplemented by Eurostat information visits to Member States to verify the quality of GNI aggregates and their components and their compliance with ESA 2010. National accounts experts from other EU Member States may attend the GNI information visits as observers. Eurostat's GNI verification activities are checked annually by the European Court of Auditors. The above mentioned administrative and policy uses force both the European Union and the Member States themselves to verify the GDP and GNI calculations. Monitoring of country's compliance with the requirements of the ESA 2010 transmission programme has also been enhanced, and further work on improvement of validation procedures is being taken forward with Member States.

Provisions for quality reporting and assessment of the ESA 2010 data, including GDP, are established by Art. 4, Regulation (EU) No 549/2013. The adoption of the Commission Implementing Regulation (EU) No 2016/2304 of 19 December 2016 on the modalities, structure, periodicity, and assessment indicators of the quality reports on data transmitted pursuant to Regulation (EU) No 549/2013, enabled the introduction of the first quality reporting exercise by Member States in 2017. The annual quality reporting covers all ESS quality criteria. It started on the basis of seven assessment indicators and has reached its fully-fledged scope with the addition of other nine indicators in 2021. Member States provide annual quality reports to Eurostat by the end of May each year, covering the data transmitted during the previous year. Eurostat makes public its own assessment based on the country reports. The results of the sixth report were published in December 2022<sup>26</sup>.

iii) *Policy uses*

As GDP is the key variable to measure economic development, it is also used in policy decision making at the European Commission, ECB, and for budgetary policy purposes in the Member States. Annual GDP and GNI

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<sup>23</sup> Regulation (EU) No 549/2013 of the European Parliament and the Council of 21 May 2013 on the European system of national and regional accounts in the European Union, [OJ L 174, 26.6.2013, p. 1](#).

<sup>24</sup> Regulation (EU) 2019/516 of the European Parliament and of the Council of 19 March 2019 on the harmonisation of gross national income at market prices and repealing Council Directive 89/130/EEC, Euratom and Council Regulation (EC, Euratom) No 1287/2003 (GNI Regulation). <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0516&from=EN>

<sup>25</sup> Since GNI equals GDP minus primary income payable by resident units to non-resident units plus primary income receivable by resident units from the rest of the world (GDP + net primary income received from ROW = GNI), the GNI verification procedures implicitly cover the verification of GDP and all its components.

<sup>26</sup> [Quality report on national and regional accounts – 2021 data – 2022 edition - Products Statistical reports - Eurostat \(europa.eu\)](#)

statistics are used in the European Union for various administrative purposes. GNI forms the basis for the 4<sup>th</sup> resource of the European Union own resources. In addition, Member States' GDP data are also used for administrative purposes in the Excessive Deficit Procedure (EDP) as general government debt and deficit are proportioned to GDP in the EDP criteria. Furthermore, regional GDP per capita is used in the decisions for the funding from the European Union Structural Funds to the regions of the Member States.

## B. COMPILATION PROCESS

GDP is compiled by Member States using an ample and comprehensive set of primary data sources. The national statistical authorities collect themselves the majority of the basic data, the quality of which is defined by national and European regulations, by using both statistical surveys and administrative records (such as taxation records), and bookkeeping data from both governmental bodies and enterprises. Data consistency is enforced at the economy-wide level by the fact that GDP is calculated using the production, expenditure and income approaches which should lead to the same result.

## C. QUALITY ASSESSMENT OF OUTPUT

### i) Accuracy and reliability

There is a comprehensive system for verification of GNI data and the annual reports on the quality of GNI data are available for all countries. This includes the GNI Expert Group to issue annual opinions on the appropriateness of the GNI data submitted by the Member States for own resources purposes.

Article 5(1) of the GNI Regulation provides for the Commission to verify the sources, their uses and the methods in the GNI Inventories based on a verification model drawn up in close cooperation with the GNI Expert Group and based on the principles of peer review and cost-effectiveness and with respect to reliability, comparability and exhaustiveness. A document that includes the transmitted data and reports on quality of GNI data sent each year before 1 October to Eurostat is presented in November to the GNI Expert Group for discussion and examination. The annual GNI data and the opinion of the GNI Expert Group are transmitted to DG BUDG for the purpose of budgetary calculations. The main part of the GNI verification work in 2022 was focused on the follow-up of the identified improvement needs regarding the quality of sources and the methods used by Member States to compile GNI. These improvement needs take the form of GNI reservations. At the end of 2022, there were 74 transversal reservations still open, out of 140 (5 for each MS) and 64 transaction-specific reservations still open, out of 160 (altogether for 23 MS). These reservations relate to GNI used for own resources, i.e. ESA 95 for the years until 2013 and ESA 2010 from 2014 onwards.

Moreover, the practical validation of GDP data puts emphasis on consistency requirements. When quarterly and annual data are submitted to Eurostat, it is important to ensure that these figures are consistent. Small differences may be tolerated, but not major ones. Consistency between annual data and the sum of the data for the four individual quarters for certain key EU aggregates are analysed in the context of the ESA 2010 quality reporting exercise with generally very small inconsistencies limited to vintages or rounding. The consistency of aggregates and breakdowns is also monitored and usually well fulfilled.

### – Revisions

Member States may have routine revisions of GDP data every year when updated surveys or administrative data become available, replacing preliminary estimates. When the final annual source data of the reference year are available and GDP calculations are based on the balanced supply and use tables by the product groups, the revisions in the annual GDPs of the Member States are generally small. For own resources purposes, the GNI figures become time-barred after four years. However, where revisions are likely to have a material effect, the Commission issues reservations which means that GNI data remain open for possible revision. Similarly, EDP related reclassifications and methodological improvements might also lead to GDP revisions. Benchmark revisions are coordinated major European revisions, taking place at least once every five years to incorporate new data sources and major changes in international statistical methodology. Since 2014 all Member States

have now carried out benchmark revisions in national accounts, the latest being in 2020, even though Greece still has to revise its back data for the years before 2010<sup>27</sup>. Eurostat has started the preparatory work for the benchmark revision in 2024.

*ii) Comparability*

Comparability is ensured by the application of common definitions and requirements (ESA 2010). While the aim is to improve the quality of statistics, the level of comparability between Member States however may also depend on the comparability/level of development in the basic data used as input for the GDP compilation, and hence the level of efforts needed to ensure alignment with the ESA 2010 and BPM6 definitions at macro level.

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<sup>27</sup> Country information: [https://ec.europa.eu/eurostat/documents/24987/6624264/Metadata\\_particularities.pdf](https://ec.europa.eu/eurostat/documents/24987/6624264/Metadata_particularities.pdf)  
[https://ec.europa.eu/eurostat/documents/737960/9861115/Benchmark\\_revisions\\_data\\_availability\\_from\\_2020.pdf](https://ec.europa.eu/eurostat/documents/737960/9861115/Benchmark_revisions_data_availability_from_2020.pdf)

## III.2 EXTERNAL IMBALANCES AND COMPETITIVENESS

Macroeconomic imbalances remain a serious concern, requiring decisive, comprehensive and coordinated policy action. For a better analysis of the country's economic external and domestic situation, the MIP indicators for this purpose are grouped into: i) external imbalances and competitiveness, and ii) internal imbalances. The first group covers MIP indicators calculated from the BoP/IIP and other **external statistics** and the indicator **nominal unit labour cost** derived from the national accounts data.

### III.2.1 BALANCE OF PAYMENTS AND OTHER EXTERNAL STATISTICS

There are four headline indicators in the MIP scoreboard derived from balance of payments and other external statistics:

- **Current account balance (CA) as % of GDP, 3 year average**
- **Net international investment position (NIIP) as % of GDP**
- **Real effective exchange rate (REER), 42 trading partners, HICP/CPI deflators, 3 year % change**
- **Export market share (EMS) as % of world exports, 5 year % change**

### III.2.2 BALANCE OF PAYMENTS AND INTERNATIONAL INVESTMENT POSITION INDICATORS

#### A. INSTITUTIONAL ISSUES

##### *i) Legal basis*

BoP/IIP indicators are provided to the ECB on the basis of Guideline ECB/2011/23<sup>28</sup>, as amended<sup>29, 30, 31, 32</sup> (hereinafter “Guideline ECB/2011/23”) and to Eurostat on the basis of Regulation (EC) No 184/2005<sup>33</sup>.

These legal acts do not impose back data requirements in compliance with the BPM6 statistical standard. Therefore, long time series are provided on a voluntary basis by Member States. The length of the time series has improved and in the last MIP Scoreboard the relevant series for the compilation of the indicators were available for all Member States for at least 10 years.

##### *ii) Quality assurance mechanisms*

Since 2017 several actions for the improvement of the quality of the BoP/IIP datasets have been jointly undertaken by Eurostat and ECB, mostly in the context of the implementation of the Memorandum of Understanding (MoU). This has also further strengthened the close cooperation between the two institutions and the ESS and the ESCB.

A biennial report from the Executive Board of the ECB to the Governing Council on the quality of the external statistics data is required by Article 6 of the amending Guideline ECB/2020/52. The report follows the

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<sup>28</sup> Guideline of the ECB of 9 December 2011 on the statistical reporting requirements of the European Central Bank in the field of external statistics (ECB/2011/23), OJ L 65, 3.3.2012, p. 1..

<sup>29</sup> Guideline of the ECB of 30 July 2013 amending Guideline ECB/2011/23 on the statistical reporting requirements of the ECB in the field of external statistics (ECB/2013/25), OJ L 247, 18.9.2013, p. 38.

<sup>30</sup> Guideline (EU) 2016/231 of the ECB of 26 November 2015 amending Guideline ECB/2011/23 on the statistical reporting requirements of the ECB in the field of external statistics (ECB/2015/39), OJ L 41, 18. 2.2016, p. 28.

<sup>31</sup> Guideline (EU) 2018/1151 of the European Central Bank of 2 August 2018 amending Guideline ECB/2011/23 on the statistical reporting requirements of the European Central Bank in the field of external statistics (ECB/2018/19), OJ L 209, 20.8.2018, p. 2.

<sup>32</sup> Guideline (EU) 2020/1554 of the ECB of 14 October 2020 amending Guideline ECB/2011/23 on the statistical reporting requirements of the ECB in the field of external statistics (ECB/2020/52), OJ L 354, 26.10.2020, p. 26-33. The Eurosystem central banks shall comply with this Guideline as from 1 July 2021.

<sup>33</sup> Regulation (EC) No 184/2005 of the European Parliament and of the Council of 12 January 2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment, OJ L 35, 8.2.2005, p. 23.

principles of the “Public commitment on European Statistics by the ESCB”<sup>34</sup> and includes an extensive quantitative assessment of the statistical output. The ECB report is submitted to the WG ES and STC via written procedures and approved by the Executive Board before being submitted to the ECB Governing Council and published on the ECB website.

The European Commission (Eurostat) produces an annual quality report on the basis of Article 4(3) of Regulation (EC) No 184/2005. This report is reviewed with the assistance of the European Statistical System Committee referred to in Article 11 of Regulation 184/2005, amended by Article 4(4) of Regulation (EU) 2016/1013<sup>35</sup>. The quality assessment of this report is conducted in accordance with the principles established by Commission Regulation (EC) No 1055/2008<sup>36</sup> and Commission regulation 1227/2010. It verifies compliance of the BoP data reported by EU Member States with all the quality criteria and the Regulation on European statistics (Article 12(1) of Regulation (EC) No 223/2009). The Eurostat report is a condensed analysis of the results of national quality reports pre-filled by Eurostat and completed by Member States: it is presented to the BoP Working Group, publicly disseminated on Eurostat's website, and sent to the European Parliament and the Council for information.

### *iii) Policy uses*

BoP/IIP data are broadly used for monetary and economic analysis throughout the world, i.e. not only for European policy purposes, but generally by all economic analysts looking into external imbalances/relationships and competitiveness in a context of increasingly mobile financial flows. In particular, these data are used to explain changes in monetary developments, therefore supporting the preparation and explanation of monetary policy decisions. BoP/IIP statistics are also broadly used in the European Systemic Risk Board (ESRB) Risk Dashboard, by the European Commission for various policy purposes, and by the IMF in its work.

## **B. COMPILATION PROCESS**

At national level, the compilation of BoP/IIP is usually a competence of either the NCB or the NSI, sometimes both. The introduction of the BPM6 provided an opportunity for a large group of countries to move into survey-based systems, as an alternative to traditional international transactions reporting systems (“settlement systems”). However, by nature, BoP/IIP statistics are rather eclectic as regards data sources, relying on micro (e.g. the CSDB) and macro data sets, direct reporting and counterpart information, statistical surveys and administrative data sets (e.g. for the general government sector). National compilation systems also seek synergies with worldwide exercises, such as the IMF CPIS and CDIS surveys. Several statistical methods and compilation assumptions are used, including the derivation of transactions from changes of stocks, taking into account price and exchange rate revaluations.

## **C. QUALITY ASSESSMENT OF OUTPUT**

### *i) Accuracy and reliability*

The compilation of BoP/IIP in EU Member States is based on the BPM6. However, there are challenges in the measurement of some components, namely reinvested earnings on foreign direct investment and the valuation of unlisted shares and other equity, which may affect the accuracy and comparability of some details. In particular Member States should review sources and methods used in the compilation of reinvested

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<sup>34</sup> Available on the [ECB's website](#).

<sup>35</sup> [Regulation \(EU\) 2016/1013](#) of the European Parliament and of the Council of 8 June 2016 amending Regulation (EC) No 184/2005 on Community statistics concerning balance of payments, international trade in services and foreign direct investment, OJ L 171, 29.06.2016, p. 144.

<sup>36</sup> [Commission Regulation \(EC\) No 1055/2008](#) of 27 October 2008 implementing Regulation (EC) No 184/2005 of the European Parliament and of the Council, as regards quality criteria and quality reporting for balance of payments statistics, OJ L 283, 28.10.2008, p. 3.

earnings of foreign direct investment and align the estimates to the relevant methodology (and consistent with the ESA 2010).

In addition, few national compilers still struggle to ensure adequate data coverage and quality for SPEs. Revisions affect to different degrees the individual parts of BoP/IIP as mentioned below.

– Revisions

Overall, since the last review period, revisions have not significantly altered the analytical interpretation of the headline indicators. Furthermore, any period of the time series could be subject to revisions during the data transmissions, with practices varying along the different national compilers. For BoP, direct investment income is the series more extensively revised, since data are usually available only annually and revisions in higher frequency data are therefore in practice unavoidable. Other reasons for revision in BoP/IIP include better coverage (for example of SPEs), implementation of new data sources and new data production systems by the national compilers, major economic events affecting BoP/IIP, and revisions in related statistical domains. Furthermore, with the Harmonised Benchmark Revision that took place in 2019, Member States have as much as possible implemented coordination measures to ensure alignment of the revised ESA 2010 data with the Balance of Payments statistics. Eighteen EU Member States and one EFTA country implemented coordinated revisions for balance of payments and national accounts in 2019. Greece carried out revisions of balance of payments only (without corresponding revisions of national accounts).

ii) Comparability

Intra-EU asymmetries continue to be a relevant quality concern and will most likely persist given the increasingly multi-territorial presence of enterprises that require innovative and complex collection and estimation methods. Experience with the European FDI Network shows that data exchange can help to solve asymmetries, but several preconditions must be met. One of them is the willingness of all Member States impacted by a particular asymmetry to use the Network, or in case of other components of the BoP, to get into contact with the main counterparts with regard to bilateral asymmetries and decisively resolve them. The ongoing work on asymmetries in services spearheaded by Eurostat, the Early Warning System and the quarterly Asymmetry Resolution Meetings are concrete contributions in this direction. The impact of all these initiatives on overall EU asymmetries depends on the participation and commitment of countries with the biggest absolute and relative asymmetries. In addition, bilateral contacts with the U.S. Bureau of Economic Analysis (BEA) are also ongoing to tackle the large bilateral US asymmetries with some EU Member States. Finally, asymmetries have been highlighted as an area for BoP statisticians to investigate also in the context of the compilation of multi-country supply, use, input and output tables within projects such as FIGARO (focused on measuring global trade in value added).

The adoption of BPM6 and ESA 2010 ensured conceptual consistency between national accounts and BoP/IIP. However, discrepancies still exist and are primarily due to vintage, revision effects and different data sources, but they are also explained by differences in interpretation and practical implementation of the two manuals. For several countries, the BoP/IIP and NA ROW data still show differences across the various components of the accounts. Hence, it would be important for countries to maintain their efforts and build on the results of the CMFB task force on the consistency between national accounts and balance of payments, as well as on other initiatives of Eurostat and the ECB.

### III.2.3 REAL EFFECTIVE EXCHANGE RATE STATISTICS

#### A. INSTITUTIONAL ISSUES

##### *i) Legal basis*

Real effective exchange rates (REERs) data used in the MIP are compiled by the European Commission on the basis of a widely recognized standard methodology implemented by DG ECFIN: Reports on Price and Cost Competitiveness. REER datasets, together with the underlying nominal effective exchange rates (NEER), are published on the Commission's website<sup>37</sup>. REERs are not directly based on a legal act, but are based on national data (exchange rate fixings, trade data and deflators) that are mostly compiled and collected on the basis of specific legal acts. REERs are derived indicators and therefore their quality is mostly a function of the quality in underlying data sets.

##### *ii) Quality assurance mechanisms*

All data underlying the calculation of REERs are collected from reliable institutional sources, compiled by the ECB, the IMF and Eurostat. Exchange rates, trade data and deflators are subject to quality reporting in their respective domains. DG ECFIN has produced a comprehensive quality report on its REER statistics together with an assessment of how they compare to the REER time series compiled by four international institutions (ECB, OECD, IMF and BIS)<sup>38</sup>.

##### *iii) Policy uses*

Both NEER and REER are widely used measures of price and cost competitiveness. NEERs describe changes in the average overall value of a currency with reference to a given base period and a given group of reference countries. The REERs identify relative evolutions in the prices or production costs of domestically produced goods compared to the prices or production costs of goods produced by competitor countries, when expressed in a common currency.

#### B. COMPILATION PROCESS

Nominal effective exchange rates are calculated as trade-weighted geometric averages of the bilateral exchange rates against the currencies of competing countries. The real effective exchange rates or the “relative price and cost indicators” are calculated as the adjusted NEERs with trade-weighted price or cost deflators.

#### C. QUALITY ASSESSMENT OF OUTPUT

##### *i) Accuracy and reliability*

The quality of the REER indicators depends on the quality of the underlying sources, in particular those used for constructing export weights and deflators.

The REERs used in the MIP are based on a harmonised index of consumer prices (or national CPI where appropriate) relative to a panel of the most important trading partners. The REER used in the MIP exercise is computed against a panel of 42 other countries, having been expanded by five additional countries in 2013 in order to improve representativeness via better coverage of trading partners. The basket of trading partners includes China, Brazil, Russia, South Korea and Hong-Kong in addition to the previously used composition of 37 industrial countries. This allows for a better accounting of the increasing role of some emerging economies when measuring competitiveness. The Commission may consider extending the basket of trading partners further when data of sufficient quality for additional emerging countries become available.

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<sup>37</sup> See e.g. the [European Commission's quarterly reporting on price and cost competitiveness data](#).

<sup>38</sup> See the [Report on quality, sources and methods](#) and the [Comparison of Consumer Price deflated REER](#).

As a general rule, the full dataset is updated on a monthly basis. Changes in methodology are rare but could in the future happen, should new countries be added to the basket of trading partners (when sufficiently reliable data are available for such countries).

*ii) Comparability*

Due to the use of index numbers vis-à-vis a base period, the usual caution must be used for any geographical comparison. The comparability over time of the data can be considered as very high, and methodological changes may occur but have a limited effect on the overall pattern of REER indicators. Each time these occur, recalculations under the new definitions are performed for the whole time series to ensure consistent time series without breaks. The changes are mainly the result of including new trading partners in the trade-weighted index, and/or new countries in the euro area.

### III.2.4 NOMINAL UNIT LABOUR COST

The following headline indicator based on the National Accounts data is included in the MIP scoreboard:

- **Nominal unit labour cost (NULC) index (2015=100), 3 year % change**

#### A. INSTITUTIONAL ISSUES

##### *i) Legal basis*

There is no specific legal basis for the calculation of unit labour costs *per se*, but it is derived from several components which themselves are collected under the overarching framework of the national accounts. According to the Eurostat MIP Scoreboard presentation<sup>39</sup>, “Nominal unit labour cost compares remuneration (compensation per employee) and productivity (GDP in volume per employment) to show how the remuneration of employees is related to the productivity of labour. An increase means that the average compensation per employee grew more than labour productivity. The employment data covers both employees and self-employed, while remuneration covers wages and salaries and employers' social contributions. The unit labour cost indicator is compiled using national accounts data”.

##### *ii) Quality assurance mechanisms*

Quality is assured by the strict application of ESA 2010 concepts and a thorough validation of country data. Data are collected from reliable sources applying high standards to methodology and ensuring high comparability. In addition, Eurostat conducts an annual compliance exercise for all Member States. As stipulated in the Commission Implementing Regulation 2016/2304, Eurostat established regular quality reporting on national and regional accounts, which cover the components of the MIP ULC indicator and generally indicate only a few gaps in completeness and timeliness of regular transmissions.

##### *iii) Policy uses*

Unit labour cost, which is defined as the cost of labour per unit of output, is a common measure of the external competitiveness of a country. Labour being a major input of production, its compensation directly affects the costs and prices of outputs, thus having a bearing on export market share and growth potential. It allows the comparison and analysis of cost competitiveness across countries.

However, specific developments, such as notably an impact of globalisation on GDP figures, due to the relocation of business within multinational enterprises, may have to be taken into account when interpreting productivity figures of certain countries (e.g. for Ireland).

The data are widely used for many purposes and publications, such as the assessment by the Commission of the functioning of the labour market within the Europe 2020 Joint Assessment Framework or the annual Competitiveness report, the ECB's Economic Bulletin, and Annual Report, and by other International Organisations such as the IMF and the OECD (the latter uses ECB data for the publication of whole economy European ULCs). ULCs are mentioned explicitly as “other factors” which need to be analysed in the assessment of Convergence in the EU.

#### B. COMPILATION PROCESS

The Commission and the ECB have agreed on a single calculation method by applying the following formulae:

- $ULC = \text{Compensation per employee} / \text{Labour productivity}$
- $\text{Compensation per employee} = \text{Compensation of employees} / \text{number of employees, domestic concept};$

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<sup>39</sup> See <http://ec.europa.eu/eurostat/web/macro-economic-imbalances-procedure/methodology>.

- Labour productivity = GDP at market prices, chain-linked volumes reference year 2015 / number of people in employment, domestic concept.

## C. QUALITY ASSESSMENT OF OUTPUT

### *i) Accuracy and reliability*

Overall, the underlying data used in the compilation of the ULC are robust and harmonised across the EU, particularly at the whole economy level. Breakdowns by economic activity are also published using available data on gross value added, employment and compensation of employees by industries.

#### – Revisions

Nominal unit labour cost data are usually revised to reflect data changes in its components. Revisions may stem from implementation of new compilation standards (e.g. ESA 2010), periodic benchmarking on population census results, and changes in the labour force survey methodology. GDP can be revised in relation to an improved recording of global business activities, addressing issues raised in the context of the GNI or EDP verification process, as well as other methodological or technical improvements. These methodological and statistical changes may lead to some breaks in the data series if back estimations are not done for all underlying series.

### *ii) Comparability*

Cross-national comparability is very high due to the use of a common national accounts framework and the standardized ULC formulae to derive the statistics, but also owing to continuous efforts to enhance harmonization of the definition, coverage, and methodological treatment of the components comprising this labour cost indicator. The prevalence of this approach has been sought in due consideration of the use of different sources for the primary data of labour input (household surveys, business surveys administrative records, etc.), the importance of adjustments for alignment with national accounts concepts and statistical conversion techniques (e.g., from jobs to persons and to full-time equivalents). Greece in 2021-2022, and Ireland in 2022, flagged a break in their time series.

### III.3 INTERNAL IMBALANCES

The internal imbalances cover MIP indicators derived from price statistics as **% y-o-y change in deflated House prices**, underlying statistics from the national financial accounts (**Private sector credit flow as % of GDP**, consolidated; **Private sector debt as % of GDP**, consolidated; **% y-on-y change in Total financial sector liabilities**, non-consolidated), the indicator from government finance statistics (**General government sector debt as % of GDP**) and the **Unemployment rate** (3 year average) from labour market statistics.

#### III.3.1 HOUSING PRICE STATISTICS

The following headline indicator based on the House price index (HPI) is included in the MIP scoreboard:

- **House price index (HPI) (2015=100), deflated, 1 year % change**

Changes in dwelling prices are measured by Eurostat's (nominal) house price indices (HPIs), which are, for MIP scoreboard purposes, deflated by household final consumption deflators derived from the national accounts (ESA 2010).

#### A. INSTITUTIONAL ISSUES

##### *i) Legal basis*

The legal basis for the compilation of house price indices in the EU is provided by Regulation (EU) 2016/792 of 11 May 2016 on harmonised indices of consumer prices and the house price index<sup>40</sup>. This basic act is implemented by Commission Regulation (EU) 2020/1148 of 31 July 2020<sup>41</sup>.

With the exception of Greece, the nominal HPIs of EU countries are compiled by National Statistical Institutes, applying a harmonised statistical approach in terms of measurement target, coverage and index calculation.

##### *ii) Quality assurance mechanisms*

Eurostat and National Statistical Institutes are working to ensure that the statistical practices used to compile national HPIs are in compliance with methodological requirements and that good practices in the field of house price indices are being followed.

Eurostat has developed together with the EU Member States a framework to assess the quality of the HPIs, where the concepts laid down in the Regulations, the Technical Manual<sup>42</sup> and the Handbook on Residential Property Prices Indices<sup>43</sup> are combined with the European Statistical System (ESS) quality dimensions. The aim is to maintain and, where necessary, improve current practices, taking into account the country-specific conditions.

A key element of the quality assurance framework is the annual submission of inventories containing detailed metadata on sources and methods used, providing Eurostat with the essential information to assess reliability and comparability<sup>44</sup>.

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<sup>40</sup> Regulation (EU) 2016/792 of the European Parliament and of the Council of 11 May 2016 on harmonised indices of consumer prices and the house price index, and repealing Council Regulation (EC) No 2494/95, *OJ L 135, 24.5.2016, p. 11–38*.

<sup>41</sup> Commission Implementing Regulation (EU) 2020/1148 of 31 July 2020 laying down the methodological and technical specifications in accordance with Regulation (EU) 2016/792 of the European Parliament and of the Council as regards harmonised indices of consumer prices and the house price index.

<sup>42</sup> <https://ec.europa.eu/eurostat/documents/7590317/0/Technical-Manual-OOH-HPI-2017/>.

<sup>43</sup> Handbook on Residential Property Prices Indices: <https://ec.europa.eu/eurostat/documents/3859598/5925925/KS-RA-12-022-EN.PDF>.

<sup>44</sup> HPI metadata are available from Eurostat's website: [https://ec.europa.eu/eurostat/cache/metadata/en/prc\\_hpi\\_inx\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/prc_hpi_inx_esms.htm).

### *iii) Policy uses*

HPIs are primarily important for financial-stability related purposes and for macroeconomic analyses and forecasting.

## **B. COMPILATION PROCESS**

The HPI data are compiled at national level by the National Statistical Institutes using data collected from administrative sources on dwelling transactions and from other sources on real estate. Adjustments for differences over time in the characteristics of the transacted dwellings are made according to a common statistical methodology.

Data for Greece are currently taken from the Index of apartment prices produced by the National Central Bank.

## **C. QUALITY ASSESSMENT OF OUTPUT**

### *i) Accuracy and reliability*

On the basis of the above mentioned inventories of sources and methods, it can be concluded that the level of statistical quality of HPIs can be considered fully satisfactory.

The accuracy of source data is monitored by assessing the methodological soundness of price and weight sources and the adherence to the methodological recommendations. There is a variety of data sources both for weights and prices (administrative data, construction companies, real estate agents, etc.).

#### – Revisions

Revisions of the deflated HPI in the MIP scoreboard can be explained by revisions of the HPI or of the deflator (the household final consumption derived from the national accounts).

The published HPI data may be revised to correct mistakes, to incorporate new or improved data sources or improved calculation methods. The HPI data are released quarterly, and they may include provisional data for the latest quarter. These are usually confirmed or revised to the final figures the following quarters. Major revisions are normally released with explanatory notes<sup>45</sup>.

For 2020, the deflator (household final consumption) was significantly updated for Luxembourg in relation to annual national accounts revisions, leading to sizable revisions of the deflated HPI for this country.

### *ii) Comparability*

Comparability is ensured by the application of common definitions and appropriate methodology, as laid down in the legislation.

Eurostat assesses that the current HPIs are sufficiently accurate and comparable across countries. Existing issues are addressed by Eurostat, and, more widely, in ESS working groups or workshops.

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<sup>45</sup> See Country revisions at <https://ec.europa.eu/eurostat/web/housing-price-statistics/methodology>

### III.3.2 FINANCIAL ACCOUNTS STATISTICS

Three of the MIP headline indicators are based on annual financial accounts data:<sup>46</sup>

- **Private sector credit flow (PSCF), consolidated, as % of GDP**
- **Private sector debt (PSD), consolidated, as % of GDP**
- **Total financial sector liabilities (TFSL), non-consolidated, 1 year % change**

Financial accounts are an area of shared responsibility between the ESS and the ESCB.

#### A. INSTITUTIONAL ISSUES

##### i) *Legal basis*

Quarterly financial accounts are mostly compiled by NCBs and transmitted to the ECB based on the ECB Guideline ECB/2013/24 (henceforth the “MUFA Guideline”)<sup>47</sup>, which foresees compliance with the principles and definitions of the ESA 2010 and the information breakdowns necessary to meet the exercise of the ESCB’s tasks.

Annual financial accounts are compiled according to the requirements of ESA 2010, in terms of principles and definitions, as well as information detail. Annual financial accounts data are transmitted to Eurostat in the framework of the ESA transmission programme (Annex B of ESA 2010). As from September 2024, an updated version of the transmission programme will enter into force, which includes the transmission of a sub-set of annual financial accounts four months after the end of the reference period.

##### ii) *Quality assurance mechanisms*

Since 2017, several actions for the improvement of the quality of the financial accounts datasets have been jointly undertaken by Eurostat and ECB, mostly in the context of the implementation of the Memorandum of Understanding (MoU). This has also further strengthened the close cooperation between the two institutions and the ESS and the ESCB.

A quality report on the quarterly financial accounts is required by Article 7 of the MUFA Guideline<sup>48</sup>. It follows the principles of the ECB Statistics Quality Framework (SQF)<sup>49</sup>. It assesses the quality of the data according to the following dimensions: relevance, accuracy, timeliness punctuality, accessibility and clarity, comparability and coherence. Furthermore, a special section (box) focuses on the quality assessment of the data used for MIP purposes. The ECB report is made available to the public on the ECB sector accounts webpage.<sup>50</sup>

The ESA 2010 sets the requirement that each Member State has to provide a report on the quality of the transmitted data (Article 4(2)), including annual financial accounts (ESA tables 6 and 7). The first report was produced in 2017, comprising a limited set of quality indicators (completeness and timeliness), and is annually updated. Since 2019, the quantitative indicators on quality of financial accounts were extended to include coherence between non-financial and financial accounts and revision rates in financial accounts<sup>51</sup>.

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<sup>46</sup> In addition, the auxiliary indicator Household debt, consolidated (including NPISH) as % of GDP is also based on annual financial accounts.

<sup>47</sup> Guideline ECB/2013/24 of 25 July 2013, as amended by Guidelines ECB/2020/51 of 14 October 2020 and ECB/2021/20 of 29 April 2021: [consolidated version](#).

<sup>48</sup> From 2021 onwards, the report is produced every two years. The next report will be published in April/May 2023.

<sup>49</sup> <http://www.ecb.europa.eu/pub/pdf/other/ecbstatisticsqualityframework200804en.pdf>

<sup>50</sup> [https://www.ecb.europa.eu/stats/macroeconomic\\_and\\_sectoral/sector\\_accounts/html/index.en.html](https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/sector_accounts/html/index.en.html)

<sup>51</sup> [https://ec.europa.eu/eurostat/web/products-statistical-reports/product/-/asset\\_publisher/GsOCybiuKvl/content/ks-ft-20-008?com\\_liferay\\_asset\\_publisher\\_web\\_portlet\\_AssetPublisherPortlet\\_INSTANCE\\_GsOCybiuKvl\\_assetEntryId=12102471&com\\_liferay\\_asset\\_publisher\\_web\\_portlet\\_AssetPublisherPortlet\\_INSTANCE\\_GsOCybiuKvl](https://ec.europa.eu/eurostat/web/products-statistical-reports/product/-/asset_publisher/GsOCybiuKvl/content/ks-ft-20-008?com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_GsOCybiuKvl_assetEntryId=12102471&com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_GsOCybiuKvl)

The quality reporting framework for financial accounts is further complemented by the national level 3 quality or ‘self-assessment’ reports that provide metadata on national financial accounts, including descriptions on the compilation practices, sources and methods. The reports of all EU countries are available on the dedicated section of the CMFB website.<sup>52</sup>

The quarterly national financial accounts data transmissions are regularly checked for completeness, internal consistency, as well as for external consistency with related statistics (e.g. non-financial sector accounts, money and banking statistics, investment funds statistics, insurance corporation statistics and balance of payments statistics).

Validation of annual financial accounts transmissions by Eurostat involves a wide range of internal consistency checks, as well as checks on consolidation, negative values, implausible zeroes and comparability with other datasets. Checks on revisions and outliers are also undertaken, as well as monitoring for compliance with the ESA transmission programme.

### *iii) Policy uses*

Private debt indicators allow for an assessment of the private sector vulnerability to changes in the business cycle, inflation and the interest rate. Large credit fluctuations are often associated with potential banking system vulnerabilities, boom and bust cycles in asset markets, house price bubbles, and current account imbalances. Practice suggests that high credit flow is one of the best indicators to predict a crisis incidence early on. It is widely used by the Commission in the economic analysis of the EU Member States.

Quarterly financial accounts are used to supplement the monetary policy analysis of the ECB, because, in particular for households and non-financial corporations, no alternative comprehensive and timely data sources exist. Data availability was substantially increased with the publication of quarterly financial accounts for other financial institutions (OFIs) by ESA subsectors in October 2022. The role of OFIs was recognised in the ECB’s 2020-21 monetary policy strategy review.<sup>53,54</sup> In addition, the quarterly financial accounts are used for financial stability and macro-prudential analysis of individual Member States, and comprehensive debt measures, similar to those of the MIP, are included in the European Systemic Risk Board (ESRB). These indicators can be published on a quarterly basis as all euro area countries and other EU countries have made the core set of quarterly national financial accounts available for publication.

Annual financial accounts are most appropriate for structural analyses, for example of trends in lending and borrowing, in equity participation, in the build-up of asset price bubbles, and in longer term changes in debt positions. They are therefore suitable for the type of structural analysis needed in the MIP, where a long-term perspective is required.

Further demands are part of the G-20 Data Gaps Initiative (in particular Recommendation 8 of the second phase of the initiative) and the G-20 Mutual Assessment Process (MAP).

## **B. COMPILATION PROCESS**

The compilation of financial accounts in EU Member States is based on the ESA 2010. Financial accounts data for a large part of the financial corporations (e.g. MFIs, Investment Funds, Insurance Corporations, Pension Funds and Financial Vehicle Corporations engaged in securitisation) are based on statistical Regulations<sup>55</sup>

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<sup>52</sup> <https://www.cmfb.europa.eu/main-topics/mip-quality>

<sup>53</sup> The importance of the analysis of OFIs was emphasised in “[Non-bank financial intermediation in the euro area: implications for monetary policy transmission and key vulnerabilities](#)”, *Occasional Paper Series*, No 270, ECB, revised December 2021.

<sup>54</sup> For further details see, “[Other financial institutions explained](#)”.

<sup>55</sup> CB Regulations impose statistical reporting obligation on MFIs, Investment funds, Financial vehicle corporations engaged in the securitisation of assets (FVCs) and Insurance corporations and Pension funds resident in the euro area:

directly addressed to the reporting agents: therefore, they use direct statistical sources, which produce high quality and largely harmonized data within the EU. Financial accounts data for the non-financial corporation and household sectors (referred to as “private” sectors as in the context of the MIP scoreboard indicators), and part of the financial corporations sector related to OFIs, rely less on raw data directly collected from these sectors but on information available to the compiler from their (financial) counterpart sectors and from financial market information. However, information on securities issues and holdings for all sectors, including for non-financial corporations, are also collected by means of statistical legal acts, including regulations addressed directly to custodians and end-investors, and therefore provide high quality information for these entries in the financial accounts statistics.

There is a close alignment of quarterly requirements (ECB Guideline on quarterly financial accounts) and annual requirements (from the ESA 2010 Transmission Programme) in terms of financial instrument and sector detail, although consolidated tables remain more complete for annual data. The reporting time lag for annual data remains officially 9 months (although some countries report much earlier and more frequently than once a year), and 97 days for complete quarterly national data. From 2025 the timeliness for a sub-set of annual financial accounts will be advanced to 4 months after the end of the reference year, which will allow for early compilation of MIP indicators based on annual financial accounts.

The compilation of financial accounts data differs substantially between the sectors for which source data are generally directly available – that is the government and large part of the financial corporation sectors, on the one hand – and, on the other hand, the sectors for which more limited and less timely direct source data are available – the household (and NPISH) and the non-financial corporation sectors. For the latter sectors, timely data are generally available from (financial) counterpart sector information and from financial market information (e.g. security issuance). Compilation of the data for the MIP headline indicators on consolidated Private sector credit flow (PSCF), and debt (PSD), as well as the auxiliary indicator on consolidated Household debt, is largely based on these harmonised data sources on loans granted (or held) by the financial counterpart sectors and security issues statistics.

An area where the compilation of the financial accounts data underlying the MIP indicators is affected by limited data sources is the coverage of financial sector liabilities (particularly captive financial institutions and OFIs in general, for which source data are not normally comprehensive and timely).

There is an increasing collaboration between the NCBs and NSIs, to integrate the quarterly and the annual financial accounts with the non-financial sector accounts. National compilers are encouraged to improve vertical consistency by implementing the recommendations of the “Report on developing a common approach to improve vertical consistency” in their compilation systems. More substantial, structural changes may be implemented with the benchmark revision in 2024. As part of quality assurance, Eurostat and the ECB are monitoring the coherence between these datasets closely.

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Regulation (EU) No 1071/2013 of the ECB of 24 September 2013 concerning the balance sheet of the monetary financial institutions sector (recast) (ECB/2013/33), OJ L 297, 7.11.2013, p. 1.

Regulation (EU) no 1073/2013 of the ECB of 18 October 2013 concerning statistics on the assets and liabilities of investment funds (recast) (ECB/2013/38), OJ L 297, 7.11.2013, p. 73.

Regulation (EU) no 1075/2013 of the ECB of 18 October 2013 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions (recast) (ECB/2013/40), OJ L 297, 7.11.2013, p. 107.

Regulation (EU) No 1374/2014 of the ECB of 28 November 2014 on statistical reporting requirements for insurance corporations (ECB/2014/50), OJ L 366, 20.12.2014, p. 36.

Regulation (EU) No 2018/231 of the ECB of 26 January 2018 on statistical reporting requirements for pension funds (ECB/2018/2), OJ L 45, 17.2.2018, p. 3.

## C. QUALITY ASSESSMENT OF OUTPUT

### *i) Relevance and data availability, timeliness and punctuality*

In annual financial accounts, completeness rates remained very high, above 98% for all Member States. Concerning timeliness, annual financial accounts were transmitted by 26 Member States on time 9 months after the end of the reference year, or else in advance. In several cases, countries provided a quarterly update of the annual accounts.

#### ▪ Data sources

Germany, the Netherlands and Poland should improve cross-checking with business registers or use other methods to ensure full coverage of OFIs. In Croatia and Sweden it is difficult to determine the coverage for particular OFI sub-sectors, groups of entities or instruments on the basis of existing data sources. This may mean that those data are not complete; neither is it possible to estimate the missing data.

Several countries do not have fully comprehensive direct data sources for NFCs, or access to business registers facilitating the grossing-up procedures that are needed to achieve full coverage of intra-NFC loans and other transactions/positions that are not covered by counterpart sector information. Cyprus and Poland should improve cross-checking with business registers or use other methods to ensure full coverage. Furthermore, Cyprus, Malta, Bulgaria, the Czech Republic, Denmark, Croatia and Romania are all encouraged to improve their timely direct data sources, which will reduce revisions when comprehensive data become available

### *ii) Accuracy and reliability*

#### Revisions

Financial accounts are compiled by integrating statistical data from several sources. While BoP/IIP should also follow the Harmonised European Revision Policy (HERP), availability and revision practices of other data sources may be different in some cases. The incorporation of revisions from these data sources and the implementation of back data-related amendments to compilation methods must be in line with HERP as well. Particular attention is needed to avoid any discontinuity in the time series when doing so.

In general, revisions to Private sector credit flow and debt are mostly related to non-financial corporation (NFC) loan financing, whereas revisions to household loan financing and NFC debt securities issuance tend to be lower. For Total financial sector liabilities, revisions are often associated with improved data for OFIs. For Total financial sector liabilities, large revisions were observed for Cyprus in the reference year 2020. For consolidated Private sector debt, revisions were particularly high as a percentage of GDP for Belgium, Cyprus and Luxembourg. For consolidated private sector credit flow, in the same reference year, high revisions were observed for Belgium, Malta and Sweden.

### *iii) Comparability and coherence*

The national financial accounts are generally consistent with the requirements and conceptual framework of the ESA 2010. However, the financial account statistics are derived statistics that rely on a wide range of data sources. A significant part of data sources is covered by harmonised ESCB statistics for financial sub-sectors and securities. For parts of the accounts which are not covered by these statistics sources are not necessarily complete or fully sufficient in terms of conceptual requirements. In such cases source data are supplemented with estimations or residual calculations in order to ensure the completeness of the accounts. One area where the compilation of the financial accounts data underlying the MIP indicators is particularly affected by limited data sources is the coverage of 'Other financial institutions' (OFIs), for which there are generally no timely and comprehensive source statistics in place. Assessing and, where necessary, improving the quality of data related to OFIs is a priority for the work on financial accounts (For more information on consistency between national accounts and BoP/IIP see III.2.2).

Some Member States (namely Germany, Croatia, Ireland, Luxembourg and Romania) compile consolidated data for the total economy sector by simply summing up the data for the various sectors. However, by doing this, the flows in the total economy are not eliminated. This creates comparability issues across countries for the total economy sector.

- Internal consistency

During 2022, Eurostat enhanced the validation policy by removing the percentage threshold for internal inconsistencies in the data, and by adding additional detailed checks, especially on the treatment of missing series. This was introduced in late 2022 and impacted only partially the data received in 2022, with better improvements expected in 2023.

- Vertical discrepancies

In several EU countries, work to ensure a good alignment of financial and non-financial accounts is being carried out, in line with the above-mentioned recommendations published in 2022, targeting the upcoming national accounts benchmark revisions. At European level, this issue is being addressed in the relevant working fora (the Working Group on Financial Accounts and Government Finance Statistics, the Expert Group on Sector Accounts and the Task Force on Annual Financial Accounts). Moreover, Eurostat is providing financial support (in the form of grants) for countries to work on the implementation of the recommendations to reduce vertical discrepancies in sector accounts.

Vertical discrepancies, for 2021, are assessed based on quarterly financial accounts and sector accounts for countries where these are available<sup>56</sup>. The absolute values of vertical discrepancies were above 5% of GDP in Greece for households and NPISHs (S.14+S.15), and in Ireland for financial corporations (S.12).

The absolute values of vertical discrepancies based on annual data, for 2021, were analysed in November 2022<sup>57</sup>. Nine countries have higher B9>B9F for sector S1 and six where B9<B9F with main contributing sectors S11 and S1M. Vertical discrepancies were over 10% of GDP for Lithuania (S.11, S.1M), over 5% of GDP for Estonia (S.11), Croatia (S.11, S.1M), Malta (S.11), and over 2% of GDP for Germany (S.11), Greece (S.11, S.1M), Poland (S.11, S.1M), Finland (S.12, S.1M) and Sweden (S.11, S.1M). A more detailed analysis, covering the reference periods from 2016 to 2020, is reported in the *Eurostat Quality report on national and regional accounts*<sup>58</sup>.

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<sup>56</sup> The assessment of the quarterly data is based on four-quarter cumulated transactions for 2021, as transmitted in October 2022; it is thus comparable with the assessment of the annual data. For the countries mentioned (with observed discrepancies larger than 5% of GDP) differences between quarterly and annual data are small or zero.

<sup>57</sup> Non-financial sector accounts data were not available for 2021 Bulgaria and Romania; for Malta, financial corporation and household sectors relevant data were missing.

<sup>58</sup> <https://ec.europa.eu/eurostat/documents/7870049/13975013/KS-FT-21-009-EN-N.pdf/1ccae9fe-0f96-650e-1255-c5c17f773ff1?t=1639746753979>

### III.3.3 GOVERNMENT FINANCE STATISTICS

The following headline indicator based on government finance statistics is included in the MIP:

- **General government gross debt (GGGD) as % of GDP.**

#### A. INSTITUTIONAL ISSUES

##### i) *Legal basis*

For the purpose of the Excessive Deficit Procedure (EDP) in the Economic and monetary union (EMU), as well as for the Growth and Stability Pact, Protocol 12, annexed to the Treaty on the Functioning of the European Union, provides a definition of government debt: "Debt means total gross debt at nominal value outstanding at the end of the year and consolidated between and within the sub-sectors of general government". This definition is supplemented by Council Regulation (EC) No 479/2009<sup>59</sup> specifying the components of government debt with reference to the definitions of financial liabilities in ESA 2010 and that the nominal value corresponds to the face value of liabilities.

In this context, the stock of government debt in the Excessive Deficit Procedure (EDP debt) is equal to the consolidated sum of liabilities at face value, at the end of year N, of all units classified within the general government sector (S.13) in the following categories: AF.2 (currency and deposits) + AF.3 (debt securities) + AF.4 (loans).

The Council Regulation requires all EU countries to report EDP data twice a year (before 1 April and 1 October) to Eurostat. The Council Regulation also requires that Member States transmit to Eurostat inventories to describe the sources and methods used for compiling the reported data<sup>60</sup>.

##### ii) *Quality assurance mechanisms*

Council Regulation (EC) 479/2009 stipulates that the "*Commission (Eurostat) shall regularly assess the quality both of actual data reported by Member States and of the underlying government sector accounts compiled according to ESA 2010*" and that the "*Commission (Eurostat) shall report regularly to the European Parliament and to the Council on the quality of the actual data reported by Member States. The report shall address the overall assessment of the actual data reported by Member States as regards to the compliance with accounting rules, completeness, reliability, timeliness, and consistency of the data.*"

EDP data is thoroughly verified by Eurostat. This assessment concerns factors that explain the general government deficit / surplus and changes in general government debt. Member States notify EDP data to Eurostat twice a year, by transmitting "EDP notification tables" as well as supplementary information included in the "Questionnaire related to the EDP notification" and the "Supplementary tables for reporting government interventions to support financial institutions". The notification is followed by a period of bilateral clarification between Eurostat and Member States. In addition to that, Eurostat maintains an overview of EDP relevant issues in Member States through regular "EDP dialogue visits".

##### iii) *Policy uses*

The general government debt plays an important role in the framework of the Stability and Growth Pact (SGP). The SGP contains two arms – the preventive arm and the corrective arm. The preventive arm seeks to ensure that fiscal policy is conducted in a sustainable manner over the cycle. The corrective arm sets out the framework for countries to take corrective action in the case of an excessive deficit.

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<sup>59</sup> Council Regulation (EC) No 479/2009 of 25 May 2009 on the application of the Protocol on the excessive deficit procedure annexed to the Treaty establishing the European Community, *OJ L 145, 10.6.2009, p. 1.*

<sup>60</sup> The so-called EDP inventories are available on the [Eurostat website](#).

The corrective arm is made operational by the Excessive Deficit Procedure (EDP), a procedure to correct excessive deficits that occur when one or both of the rules - that the deficit must not exceed 3% of GDP and public debt must not exceed 60% of GDP (or, if exceeded, decrease sufficiently towards 60%) as defined in the Treaty on the Functioning of the EU - are breached. Non-compliance with either the preventive or corrective arm of the Pact can lead to the imposition of sanctions for euro area countries. In the case of the corrective arm, this can involve annual fines for euro area Member States and, for all countries, possible suspension of Cohesion Fund financing until the excessive deficit is corrected.

## B. COMPILATION PROCESS

The data are mainly compiled from public accounts, other administrative data and questionnaires. A limited amount of indirect data is also used for the compilation of financial accounts, but generally not for the compilation of general government gross debt at face value. The detailed sources and methods for each Member State can be found on the Eurostat website within the published EDP inventories.

## C. QUALITY ASSESSMENT OF OUTPUT

### (i) Accuracy and reliability

In recent reports sent to the European Parliament on the fiscal data reported by Member States, Eurostat noted the good overall quality of the reporting of fiscal data. Improvement is still expected with respect to the coverage and quality information on trade credits and in the consistency with the quarterly financial accounts for general government as well as for the work to update the EDP inventories. In general, consistency with the underlying general government sector data (GFS data reported in ESA tables 2, 25, 27, 28) remained very high, including for quarterly government debt.

#### – Revisions

In general, EDP statistics take on board updated, more detailed and more accurate data sources without delay. Methodological improvements and correction of errors should similarly not be delayed.

### ii) Comparability

In general, Member States continuously provide good quality information, both in EDP notification tables and in other relevant statistical returns. Moreover, Eurostat is closely monitoring the system for the reporting by autonomous regions, the recording of government interventions to support financial institutions (bank recapitalisations) and the recording of policy measures taken in the context of the Covid-19 pandemic as well as the recording of the Recovery and Resilience Facility. Additionally, extensive guidance on the recording of policy measures to combat the effects of the Covid-19 pandemic was developed and a specific reporting template aided in maintaining the accuracy of data reported.

### III.3.4 LABOUR MARKET STATISTICS

The MIP scoreboard includes the following indicators:

- Unemployment rate (UR), 3 year average
- Activity rate (AR), % of population aged 15-64 years, 3 year change in pp
- Long-term unemployment rate (LTUR), % of active population aged 15-74, 3 year change in pp
- Youth unemployment rate (YUR), % of active population aged 15-24, 3 year change in pp

#### A. INSTITUTIONAL ISSUES

##### i) Legal basis

The EU-LFS is based on European legislation since 1973. The principal legal acts, currently in force, are the [Regulation \(EU\) 2019/1700](#) establishing a common framework for European social statistics relating to persons and households, based on data at individual level collected from samples, and the Commission Implementing [Regulation \(EU\) 2019/2240](#) that specifies the implementation rules, technical items and contents of the EU-LFS.

The [Regulation \(EU\) 2019/2240](#) entered into force in 2021. It introduces major changes in the EU-LFS. Their impact vary among the countries depending on the distance of the previous national situation from the criteria stated in the new legislation. The goal is to achieve a better harmonization among country results. To achieve this, some aspects of the survey have been regulated more strongly than before. While referring to the regulations for a complete description, some important examples are listed:

- Target population: all persons usually residing in private households in the territory of the Member State. Age limits to be eligible for an interview (according to the different variables) are now the same for all countries. Conscripts are excluded.
- Temporal references: the reference week and the distribution of the sample over the reference weeks are now the same for all countries, including countries with a monthly sample design.
- Data collection modes: Interviews shall be conducted by computer-assisted interviewing methods, except in duly justified cases. Use of administrative data is allowed except for core variables.
- Definition for Employment, Unemployment, and Outside the labour force, in view of two goals: a) the adoption of the 19<sup>th</sup> International Conference of Labour Statisticians (ICLS) resolution concerning statistics of work, employment and labour underutilization, and b) the EU - Input and survey harmonisation. To achieve an enhanced harmonization, the operational definitions have been agreed upon two main principia: objective criteria preferred against self-perception, and actual features against legal situation, in order to keep the measurement of the phenomena independent of the peculiarities of each country and to measure the same phenomenon all over the EU.

Possible source of differences (depending on the country) with the regulation in force before 2021:

- exclusion of production of agricultural goods intended mainly for self-consumption from employment
- focus on three criteria to be considered at work: to have worked for at least one hour, for pay or profit, in the reference week
- more attention on the inclusion of small jobs
- more objective (and cross-country identical) criteria for absence from work, based only on the reception of a job-related income or benefit, or on the total expected duration of the absence (especially for parental leave and seasonal workers)
- more precise list of active job research methods to be classified as unemployed

Moreover, several countries have introduced further methodological changes, at the same time of the entry into force of the new regulation in 2021.

The overall effect of all these changes are impossible to estimate (even the direction of the changes cannot be evaluated) and vary across countries. The new regulation included also the obligation to provide break-free series in order to allow the continuity of the analysis and the possibility to calculate LFS-related MIP indicators

in a consistent way. As a consequence, the figures for past years can be different from those previously published. However, series are consistent over time and multiannual indicators are calculated on consistent figures.

All indicators are based on the definitions stated in the Resolution of the 13<sup>th</sup> International Conference of Labour Statisticians (ICLS), convened in 1982 by the International Labour Organisation (ILO), and their amendments as decided in the following ICLS occurrences: the labour force is defined as the total number of people employed or unemployed. The employed persons comprise persons aged 15 to 89 who either worked, for at least one hour, in the reference week for pay or profit, including unpaid contributing family workers, or had a work from which they were temporarily absent. Unemployed persons comprise persons aged 15 to 74 who meet the following three criteria: were not employed during the reference week, are available to start work within the two weeks following the reference week and have been actively seeking work in the four weeks ending with the reference week, or had already found a job to start within the next three months and are available to start work within the two weeks following the reference week.

From these three concepts, the following indicators are derived: the unemployment rate is the number of unemployed persons as a percentage of the labour force; the long-term unemployment rate is limited to the persons unemployed from 12 months or more; the youth unemployment rate has the same definition of the unemployment rate but calculated only for the 15-24 age class both for the unemployed and for the labour force; and finally the activity rate is the total labour force as percentage of the population for the 15-64 age class.

The data used to calculate the triannual averages of the unemployment rate are the Unemployment-LFS adjusted series. These series form a collection of monthly, quarterly and annual series that are benchmarked on the quarterly results of the EU Labour Force Survey (EU-LFS) and, where necessary, adjusted for breaks in the series. The unemployment rate scoreboard indicator is a three-year backward moving average, i.e. the data for year t is the arithmetic average of the indicator at year t, t-1 and t-2. The other three indicators, activity rate, long-term unemployment rate, and youth unemployment rate, are calculated as the three years change in percentage points, i.e. the simple difference of the indicators at year t and t-3.

#### ii) *Quality assurance mechanisms*

The Labour Force Survey legislation requires that a regular report on its implementation is prepared every three years, by the Commission for the European Parliament and the EU Council. To monitor the quality of the EU-LFS, the following reports are drafted: a) Description of the characteristics of national surveys (annual), b) Quality report (annual) and c) Commission report to the Council and the Parliament (triennial)<sup>61</sup>. Reports are public and available on Eurostat website. Those quality reports can be considered as high level, covering the inventory of methodologies, analysis of quality and data comparability.

#### iii) *Policy uses*

The EU-LFS is the most important source of official statistics on labour markets in the European Union. Some key EU policy initiatives rely on EU-LFS data to monitor progress. For example, [the European Pillar of Social Rights Action Plan](#) sets as one of its targets for 2030 to reach a 78 % employment rate in the EU. The LFS-based monthly unemployment rate is an important short-term economic indicator.

## B. COMPILATION PROCESS

The EU-LFS is a quarterly survey used to produce the annual figures underlying MIP headline indicators.

Annual averages of quarterly data, in levels, are produced as simple averages of the quarterly levels. Rates are then calculated from the averaged levels according to their formula.

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<sup>61</sup> All these reports are available at <https://ec.europa.eu/eurostat/web/lfs/quality>

## C. QUALITY ASSESSMENT OF OUTPUT

### i) Accuracy and reliability

The overall accuracy of EU-LFS is high. The LFS covers persons in private households to ensure comparable coverage for all countries. The sampling designs in the LFS are chosen on a country by country basis, however, according to the regulation governing the EU-LFS, specific precision requirements must be followed by all countries. Regardless of the sampling method, the data records at Eurostat represent the entire resident population in private households.

The results are based on a sample of the population and they are subject to the usual types of errors associated with sampling techniques and interviews. Sampling and non-sampling errors are calculated for each country and documented in the Quality Report of the European Union Labour Force Survey.

In 2020, starting already in the first quarter for some countries, the spread of COVID-19 across Europe led to the imposition of severe restrictions in the movement of people and the shut-down of economic activities. This caused double pressure on the producers of EU-LFS data: on one side, data collection was impacted by decreases in the overall volume of attempted interviews, higher non-response and changes in the shares of interview modes, while at the same time the impact of the crisis led to large shifts in the labour market.

Eurostat promptly published a series of guidelines<sup>62</sup> to harmonise the reactions in order to continue to produce consistent data across countries and over time. These guidelines included the analysis of the most common problems associated with the disruption of regular LFS data collection, recommendations for the data collection and treatment, and recommendations on statistical standards. The approach to the latter is to keep definitions and classifications unchanged during the crises, even if the usual standards seem not to apply to the crisis situation. This allowed for time and cross-sectional comparative analysis. The new and statistically relevant phenomena arising with the crisis are to be collected by new variables, to take into account their insurgence within a harmonised framework.

The main followed principles are to not adapt definitions and standards to the new situation (in order to give continuity to the analysis), and to collect additional information to evaluate the impact of the pandemic both on the measured phenomena and on data production. Clarifications on how to classify new situations created by the governmental measures in support of the labour market were also provided. The effort of the NSIs, coordinated by Eurostat, kept the reliability of the 2020 and 2021 LFS data high.

Two of the most important indicators for the assessment of non-sampling error of the LFS are unit non-response rate and the proxy rate. For the first one, the lower the unit non-response rate is, the more accurate the survey, as the indicator shows the level of the missing information through the ratio of the number of units for which data for no variable have been collected to the total number of units designated for data collection. In particular, the unit non-response rate in 2021 varied among countries from less than 15 % in Romania, Cyprus and Austria, to 50 % or more in Ireland, Sweden, Slovenia and the Netherlands, reaching 64.8 % in Ireland. The median country was Hungary with 28.6 %. One cause of such a difference may be that the EU-LFS is not a compulsory survey in all countries, which means that in several countries there is not a legal obligation for the citizens to answer the survey, so in general countries in which the survey is not compulsory have higher unit non-response rates. Compared with the situation in 2017, most countries saw an increase in the unit non-response rate in 2021.

As for the proxy rate, it is defined as the percentage of proxy interviews among all interviews, where a proxy interview is an interview with someone (e.g. one member of the household) other than the person from whom information is being sought, so a lower proxy rate means the survey is more accurate because more information is directly collected from the concerned person. During the five years before 2021, the proxy rate

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<sup>62</sup> In particular see the 'Guidance on the EU-Labour Force Survey data collection' and 'EU Labour Force Survey reaction to the COVID-19 crisis under Regulation 2019/1700' available at: [COVID-19: support for statisticians - Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1).

for the EU as a whole improved, although slightly, as it showed a decrease from 32.8 % in 2017 to 31.6 % in 2021. By country, the proxy rate in 2021 varied from 10 % or less in Finland, Denmark and Sweden, to 50 % or more in Slovakia, Croatia, Portugal and Slovenia, reaching 56.4 % in Slovakia. In this case, the large difference might be due to the sample unit of the survey: in countries in which the sample unit is the individual person the proxy rate is much lower, while in countries in which the sample unit is the entire household, the proxy rate is higher, since a person can answer to the questions for the other members of the same household. Countries which have individual person sample units are: Denmark, Estonia, Luxembourg, Finland and Sweden. In general, the pandemic has only slightly affected the evolution of the proxy rate.

LFS figures fulfil the Eurostat requirements concerning reliability.

#### – Revisions

The complete time series are re-calculated with every data transmission. There are 12 transmissions per year for monthly data and 4 for quarterly and annual data. Previously released data can be revised at each release. Every month new figures from the public employment offices, administrative registers, or from the EU-LFS are added into the process and new estimates are calculated. This might cause a slight revision to the past figures due to the re-execution of the seasonal adjustment procedure. Occasional revisions may be caused by methodological changes in the production.

The new Framework Regulation for the production of European statistics relating to persons and households<sup>63</sup>, covering also the LFS, was approved during 2019 and NSIs worked, during 2020, on its implementation which was completed at the start of 2021. All needed changes in the survey, required or not by the new regulation, were introduced simultaneously in the first quarter of the 2021, in order to avoid multiple consecutive breaks (with the exception of Germany where the newly designed microcensus, which integrates the LFS and SILC as subsamples, started at the beginning of 2020, including some requirements under the new Regulation). Regarding the LFS, a new rotation scheme and a full multi-mode-design were implemented along with a completely new and complex IT-tool for survey management and data collection. The first year of implementation of the microcensus led to some problems; technical issues during system changeover have restricted the data collection in addition to problems linked to the pandemic. Since the LFS is conducted in Germany with a legal obligation of disclosure, the sample design only allows for a small percentage of unit non-response. As a consequence, the limitations due to technical issues and the COVID pandemic had large impacts on the German LFS: this limits the use of the data collected in the German LFS subsample to such a degree that alternatives had to be considered. The full sample of the whole microcensus contains information on a number of LFS variables. By using this data, it was possible to produce results for these variables but at an aggregated level. The level of aggregation allows, anyway, the production of the MIP indicators.

#### ii) Comparability – over time

Regulation (EU) 2019/1700 came into force on 1 January 2021 and induced a break in the EU-LFS time series for several EU Member States. To monitor the evolution of inter alia employment and unemployment despite of the break in the time series, Member States assessed the impact of the break in their country and computed impact factors or break-corrected data for a set of indicators. Thereby, break-corrected data are available for the EU-LFS main indicators, including those used for MIP.

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<sup>63</sup> Regulation (EU) 2019/1700 of the European Parliament and of the Council of 10 October 2019 establishing a common framework for European statistics relating to persons and households, based on data at individual level collected from samples, amending Regulations (EC) No 808/2004, (EC) No 452/2008 and (EC) No 1338/2008 of the European Parliament and of the Council, and repealing Regulation (EC) No 1177/2003 of the European Parliament and of the Council and Council Regulation (EC) No 577/98.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.LI.2019.261.01.0001.01.ENG>

*iii) Comparability – geographical*

Comparability of the EU-LFS across countries is considered as high and is achieved through various regulations ensuring harmonisation of concepts, definitions and methodologies. Regulation (EU) 2019/1700 and its Commission Implementing Regulation (EU) 2019/2240 further enhance the comparability between countries, with namely the input harmonisation of employment and unemployment.

A high level of comparability across the EU-LFS participating countries is explicitly ensured by:

- (a) Use of the same definitions for all countries;
- (b) Transmission to Eurostat of the same list of variables with the same coding;
- (c) Same flow for questions determining the labour status (in line with the recommendations of the International Labour Organisation);
- (d) Provision (by Eurostat) of model questions to be applied as closely as possible by countries in their national questionnaire;
- (e) Use of common classifications (e.g. NACE for economic activity);
- (f) Central processing of data, done by Eurostat.

## IV. ANNEX II – MIP SCOREBOARD INDICATORS

Indicator	Statistical domain
Current account balance as % of GDP, 3 year average	BoP-IIP / NA
Net international investment position as % of GDP	BoP-IIP / NA
Real effective exchange rate, 42 trading partners, HICP/CPI deflator, 3 year % change	
Export market share as % of world exports, 5 year % change	BoP-IIP
Nominal unit labour cost (2015=100), 3 year % change	NA
House prices index (2015=100), deflated, 1 year % change	Housing price statistics-NA
Private sector credit flow as % of GDP, consolidated	FA / NA
Private sector debt as % of GDP, consolidated	FA / NA
General government gross debt (EDP) as % of GDP	EDP / GFS
Unemployment rate, 3 year average	LFS
Total financial sector liabilities, non-consolidated, 1 year % change	FA
Activity Rate, % of total population aged 15-64 years, 3 years change in pp	LFS
Long-term Unemployment rate, % of active population aged 15-74, 3 years change in pp	LFS
Youth Unemployment Rate, % of active population aged 15-24, 3 years change in pp	LFS

Note: **NA**: National accounts; **BoP**: Balance of payments; **IIP**: International investment position; **FA**: Financial accounts; **EDP / GFS**: Excessive deficit procedure / Government finance statistics; **LFS**: Labour Force Survey / Labour market survey.

## V. ANNEX III – MIP AUXILIARY INDICATORS<sup>64</sup>

- Real GDP as 1 year % change
- Gross fixed capital formation as % of GDP
- Gross domestic expenditure on R&D as % of GDP
- Current plus capital account (Net Lending/Borrowing) as % of GDP
- Net international investment position excluding non-defaultable instruments as % of GDP
- Foreign direct investment in the reporting economy - flows as % of GDP
- Foreign direct investment in the reporting economy - stocks as % of GDP
- Net trade balance of energy products as % of GDP
- Real effective exchange rates – euro area trading partners as 3 year % change
- Export performance against advanced economies as 5 year % change
- Terms of trade as 5 year % change
- Export market share in volume as 1 year % change
- Labour productivity as 1 year % change
- Gross non-performing loans of domestic and foreign entities as % of gross loans<sup>65</sup>
- Unit labour cost performance related to EA as 10 year % change
- House price index (2015 = 100) - nominal as 3 year % change
- Residential construction as % of GDP
- Household debt, consolidated (including NPISH) as % of GDP
- Consolidated banking leverage, domestic and foreign entities as total assets/total equity<sup>66</sup>
- Employment as 1 year % change
- Activity rate as % of total population aged 15-64
- Long term unemployment rate as % of active population aged 15-74
- Youth unemployment rate as % of active population aged 15-24
- Young people neither in employment nor in education and training as % of total population aged 15-24
- People at risk of poverty or social exclusion as % of total population
- People at risk of poverty after social transfers as % of total population
- Severely materially deprived people as % of total population
- People living in households with very low work intensity as % of population aged 0-64

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<sup>64</sup> The list of auxiliary indicators has changed in 2018, see the 2019 Statistical Annex for more information about the changes: [https://ec.europa.eu/eurostat/documents/16624/0/2019\\_Statistical\\_Annex](https://ec.europa.eu/eurostat/documents/16624/0/2019_Statistical_Annex)

<sup>65</sup> Source: European Central Bank (ECB)

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## VI. LIST OF ABBREVIATIONS

BIS	Bank of International Settlements
BoP	Balance of Payments
BPM6	IMF Balance of Payments and International Investment Position Manual 6th Edition
CDIS	IMF Coordinated Direct Investment Survey
CPI	Consumer Price Index
CPIS	IMF Coordinated Portfolio Investment Survey
CSDB	Centralised Securities Database
EC	European Commission
ECB	European Central Bank
EDP	Excessive Deficit Procedure
EICP	European Index of Consumer Prices
EMU	Economic and Monetary Union
ESA 2010	European System of National and Regional Accounts 2010
ESA2010 TP	Transmission Programme under the ESA 2010
ESCB	European System of Central Banks
ESRB	European Systemic Risk Board
ESS	European Statistical System
EU	European Union
FIGARO	Full International and Global Accounts for Research in Input-Output Analysis
FVC	Financial Vehicle Corporations engaged in securitisation transactions
GDP	Gross Domestic Product
GNI	Gross National Income
HICP	Harmonised Index of Consumer Prices
HPI	Housing Price Indices
IIP	International Investment Position
ILO	International Labour Organization
LFS	Labour Force Survey
MFI	Monetary Financial Institution
MIP	Macroeconomic Imbalance Procedure
MUFA	Monetary Union Financial Accounts
MUICP	Monetary Union Index of Consumer Prices
NCB	National Central Bank
NPISH	Non-Profit Institutions Serving Households
NSI	National Statistical Institute
OECD	Organisation for Economic Cooperation and Development
OJ	Official Journal (of the European Union)
REER	Real Effective Exchange Rate
SNA 2008	System of National Accounts 2008
SPE	Special Purpose Entity
ULC	Unit Labour Cost