



INDONESIA

TECHNICAL ASSISTANCE REPORT—REPORT ON THE SECTORAL ACCOUNTS AND BALANCE SHEETS TECHNICAL ASSISTANCE MISSION

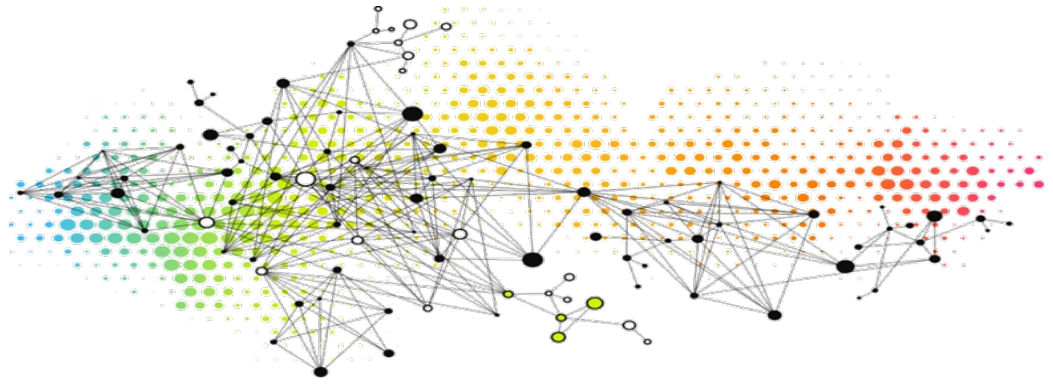
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REPORT ON SECTORAL ACCOUNTS AND BALANCE SHEETS MISSION (JANUARY 8–12, 2018)

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Glossary

<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
BI	Bank Indonesia
BPS	Badan Pusat Statistik
COFC	Consumption of Fixed Capital
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GFS	Government Finance Statistics
IDX	Indonesian Stock Exchange
IIP	International Investment Position
MOF	Ministry of Finance
MOSOE	Ministry of State Owned Enterprises
MOU	Memorandum of Understanding
NFCs	Nonfinancial Corporations
NPISH	Nonprofit Institutions Serving Household
ODTCs	Other Deposit-taking Corporations
OJK	Financial Services Authority
SUT	Supply and Use Tables

SUMMARY OF MISSION OUTCOMES AND PRIORITY RECOMMENDATIONS

- 1. As part of the Switzerland State Secretariat for Economic Affairs (SECO) project, a technical assistance mission visited Jakarta, Indonesia, during January 8–12, 2018, to develop the capacity to compile integrated sectoral accounts and balance sheets data.** The mission reviewed the results of the work undertaken to implement the recommendations of the September 2017 mission.
- 2. Integrated sectoral accounts and balance sheets, using the framework of the *System of National Accounts 2008 (2008 SNA)*, are critical to help detect systemic risks, vulnerabilities, and possible contagion from economic shocks.** As such, sectoral accounts offer the authorities a much deeper knowledge of the economy, the interrelationship between the real sector accounts and the financial accounts, and the vulnerabilities that may reside in particular sectors as sources for spillovers to other sectors. Through the integration of the data and confrontation of different data sources, they also act as a means of improving the overall quality of macroeconomic statistics. Compiling and disseminating these data is Recommendation 8 of the Group of Twenty Data Gaps Initiative, Phase II.
- 3. The setting up of formal inter-agency steering, working and technical groups has now been implemented.** In Indonesia's decentralized system, the sectoral accounts and balance sheets will be a joint output of Badan Pusat Statistik (BPS) and Bank Indonesia (BI). The Financial Services Authority (OJK), the Ministry of Finance (MOF), and the Ministry of State Owned Enterprises (MOSOE) are key suppliers of detailed data. Regular meetings of these groups will help ensure that problems are addressed when they arise and help the project meet its deadlines. Staff show a high degree of professionalism and a strong commitment to compile integrated sectoral accounts and balance sheets data.
- 4. For the most part, the project remains on target.** Progress has been made in assembling data for the annual sectoral accounts from 2010–2015. Quarterly estimates for 2015 are scheduled to be prepared by the end of 2018. These data will serve as the basis for developing quarterly estimates for the subsequent years. However, there has been some slippage in some target dates. A revised action, with revised target dates, was agreed with the authorities. Given the tightness of the project's overall timetable, the mission emphasized that no further slippage is possible without endangering the deliverables—agreed with the authorities at the project initiation in January 2017—when the project concludes in 2019.
- 5. The mission suggested avenues for the development of quarterly data using indicator series where current quarterly data sources are inadequate or nonexistent,** specifically for the nonfinancial corporations, households, and regional governments.

6. **A follow-up mission is scheduled for September 3–7, 2018**, which will review the annual data for the six years 2010–2015, and examine progress in developing data for the quarterly series for which there are currently no adequate sources. The mission will follow up remotely with the authorities to discuss progress and review estimates.

7. **To support progress in the above work areas**, the mission recommended a detailed one-year action plan with the following priority recommendations carrying particular weight to make headway in improving sectoral accounts' reliability, quality, timeliness, and completeness.

Table 1. Priority Recommendations

Target Date	Priority Recommendations	Responsible Institutions
June 2018	Complete the compilation of provisional annual current, capital, and financial accounts sectoral accounts from 2010–2015.	BPS, with input from, and collaboration with, BI, OJK, MOF, MOSOE
July 2018	Complete the compilation of provisional annual financial balance sheet sectoral accounts from 2010–2015.	BPS, with input from, and collaboration with, BI, OJK, MOF, MOSOE
December 2018	Quarterly sectoral current, capital, financial accounts and financial balance sheets for 2015, to serve as basis for developing quarterly sectoral accounts for following years.	BPS, with input from, and collaboration with, BI, OJK, MOF, MOSOE

Further details on the priority recommendations and the related actions/milestones can be found in the action plan under *Detailed Technical Assessment and Recommendations*.

DETAILED TECHNICAL ASSESSMENT AND RECOMMENDATIONS

Objectives

Description	Verifiable Indicators	Assumption/Risk
Develop sectoral accounts and balance sheets.	<ul style="list-style-type: none"> Annual and quarterly current and capital accounts by institutional sectors. Annual and quarterly stocks and transactions of financial assets and liabilities by institutional sectors. 	<ul style="list-style-type: none"> There is ongoing collaboration between the BPS and BI with clearly stated responsibilities of both the agencies in implementing the annual /quarterly sectoral accounts and balance sheets and arrangement for exchange of data / worksheets and other information on regular basis. Collaboration and support from the OJK for providing data from financial corporations, particularly for nonbank financial institutions, money /non-money market funds are necessary for enhancing and developing annual / quarterly stocks and transactions of financial assets and liabilities. Close liaison with the MOF is necessary for obtaining all tax data for developing sectoral accounts and balance sheets. In addition, DGT can only provide some of financial reports from corporation/tax payer. Support and cooperation of the MOF is necessary for collecting quarterly data for general government sector. TA and training will be needed.

Outcomes

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
H	Working group and technical group formalized, under chairmanship of BPS project manager/ coordinator, with regular, scheduled meetings, data requests formalized, clear target dates established, for follow-up actions. The	Working group and technical groups meet regularly, minutes taken, actions identified and followed up on. An ARC is prepared. Informal technical meetings have been held at the technical level between some of the agencies.	November 2017 and ongoing	The setting up of formal inter-agency steering, working and technical groups has now been implemented . In Indonesia's decentralized system, the sectoral accounts and balance sheets will be a joint output of

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
	technical group will also serve as a means for explanations of usage and manipulation by BPS of the other agencies' data and allow the other agencies to provide comments thereon. Advanced release calendar (ARC) prepared.			Badan Pusat Statistik (BPS) and Bank Indonesia (BI). The Financial Services Authority (OJK), the Ministry of Finance (MOF), and the Ministry of State Owned Enterprises (MOSOE) are key suppliers of detailed data.
H	Estimates based on the superior source data for stocks and transactions.	The BPS and BI in collaboration identify and agree the best source data for stocks and transactions. This collaboration should identify and eliminate conflicts between data published by the BPS and BI on items that purport to cover the same series (such as goods and services with the rest of the world, or which agency has responsibility for producing estimates of the financial accounts and financial balance sheets of which sectors), and duplications in the source data collected by between BPS and MOF on some central government transactions.	March 2018 (October 2017)	The original deadline was not met. A new deadline has been set up. It is imperative that this new deadline be met as this is a central element for the construction of the sectoral accounts. If the deadline of March 2018 is not met, the matter should be referred to the Working Group for quick resolution.

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
H	Exchange and agree on detailed sources and methods of nonfinancial accounts, financial flows and stocks for different institutional sectors/subsectors.	The BPS and BI share compilation worksheets and methods for nonfinancial accounts, financial flows and stocks for different institutional sectors/subsectors. Exchange between data compilers of the BPS and BI is recommended (modes of communication could be e-mail and regular informal meetings).	June 2018 <i>(October 2017)</i>	The original deadline was not met. A new deadline has been set up. It is imperative that this new deadline be met as this is a central element for the construction of the sectoral accounts. If the deadline of March 2018 is not met, the matter should be referred to the Working Group for quick resolution.
H	Annual sectoral current, capital and financial accounts, following the conceptual framework of the 2008 SNA to the extent possible using available data sources.	The accounts are available for 2010 to 2015. (see below). BPS and BI will cooperate more intensively and seek to avoid duplication of work in the financial account compilation.	June 2018 <i>(December 2017)</i>	The deadline was not met. A new deadline, to include data for 2015, has been agreed with BPS.
H	Annual sectoral financial balance sheets are compiled, following the conceptual framework of the 2008 SNA, to the extent possible.	Annual data are compiled from 2010–2015. BPS and BI will cooperate more intensively and seek to avoid duplication of work in the financial account compilation.	July 2018 <i>(December 2017)</i>	The original deadline has not been met. A new deadline, July 2018, has been agreed. Reconciliation with the financial account will be undertaken by the revised deadline.
H	Annual sectoral current, capital, financial accounts and financial balance sheets, following the conceptual framework of the 2008 SNA to the extent possible using available data sources.	The accounts are available from 2010 to 2016 (depending on data availability, at least 2016). This target date assumes that OJK will provide BPS data in Excel.	December 2018	

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
H	Quarterly sectoral current, capital, financial accounts, and financial balance sheets, following the conceptual framework of the 2008 SNA, to the extent possible using available data sources.	Quarterly accounts are compiled for 2015. BPS intends to begin a pilot project to compile quarterly data for the current and capital accounts in the fourth quarter of 2017. BPS has compiled and published quarterly and annual financial accounts (annual: 2011–2015 and quarterly: 2013–2016: Q2). BI has already completed preliminary financial accounts for 2015.	December 2018	
H	The BPS sign a memorandum of understanding (MOU) with the Ministry of State Owned Enterprises (MOSOE) and that the MOSOE begins supplying the BPS with quarterly data on public nonfinancial enterprises current, capital, financial account, and balance sheets.	An MOU is signed. Data on public nonfinancial corporations on their quarterly current, capital, financial accounts, and balance sheets are provided by the MOSOE to the BPS. (note: BPS has received MOSOE annual data regularly).	December 2018	
H	Quarterly sectoral current, capital and financial accounts, following the conceptual framework of the 2008 SNA to the extent possible using available data sources.	Quarterly data are compiled for 2016 and 2017. Once the study project above is completed and acceptable data are prepared, BPS plans to begin compiling quarterly data for 2016 and 2017.	June 2019	
H	Annual sectoral current, capital, financial accounts and financial balance	The accounts are available for 2010 to 2018 (depending on data availability, at least	December 2019	BI has compiled estimates of the financial account for the central bank,

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
	sheets, following the conceptual framework of the <i>2008 SNA</i> to the extent possible using available data sources.	2017). Annual sectoral accounts will be used as benchmarks for quarterly sectoral accounts. BPS and BI will cooperate more intensively and seek to avoid duplication of work in the financial account compilation.		deposit-taking corporations, and the rest of the world; BPS compiles these estimates for the remaining sectors. BPS has published annual financial account from 2011–2015 and quarterly 2013–2016: Q2 using the concepts and classification <i>2008 SNA</i> . Data confrontation with the current and capital accounts will commence when these data become available in 2018.
H	Annual sectoral balance sheets, including produced nonfinancial assets are prepared.	Annual data are compiled from 2015–2018. Estimates for some non-produced assets may also be included, notably for subsoil assets and standing timber (depending on the detailed data being available for each sector).	December 2019	
H	Quarterly sectoral current, capital and financial accounts, following the conceptual framework of the <i>2008 SNA</i> to the extent possible using available data sources.	Quarterly data are compiled for 2018 and first quarter of 2019.	December 2019	
H	Clearance meetings of final estimates of nonfinancial accounts, financial flows and stocks for different	Staff and management of BPS and BI discuss and agree the final estimates of nonfinancial accounts, financial flows and	December 2019	

Priority	Outcomes Description	Assumptions/ Verifiable Indicators	Completion Date	Implementation Status
	institutional sectors/ subsectors.	stocks for different institutional sectors/ subsectors for dissemination. Any changes made before dissemination needs to be communicated and agreed between BPS and BI.		
H	Agreement on disseminated data on annual/quarterly nonfinancial accounts, financial flows and stocks.	The BPS and BI agreed on the data to be published jointly on nonfinancial accounts, financial flows and stocks. This will depend on schedule of the Directors of BPS and BI.	January 2020	

Target dates in italics and with a strikethrough are the target dates in the September 2017 mission report.

A. Compilation Methods and Source Data

8. The mission reviewed progress on implementing the recommendations of the previous mission to establish a steering committee, a working group, and a technical group.

9. For the most part, much progress has been achieved. Of particular importance was the establishment of a steering committee to oversee the sector accounts and balance sheets project. This committee includes the Chief Statistician of BPS, the Governor of BI, the Executive Director of OJK, and the Minister of Finance, who has agreed to chair the group. This group met in November 2017. **This high-level group will ensure that the project's goals are met.**

10. In addition to the steering committee, two other groups have been established, the working group, and the technical group. The working group includes managers with direct responsibilities for providing data for the project and its role is to address issues that the technical group cannot resolve. It also provides a forum to these managers to maintain contact and keep the project on schedule. The technical group's role is to ensure that all the agencies are consistent in their approaches to the project and to endeavor to resolve any areas where differences arise. The persons involved in this group are those with the technical knowledge and experience in compiling the data.

11. The mission recommended that BPS hold regular, minuted meetings of the technical group to ensure that all agencies involved in the project are kept informed about progress and that any problems are addressed quickly. In addition, the mission recommended that, should any such problem not be readily resolved at the technical level, the matter be referred to the working group for immediate resolution. Any issues that the working group is unable to resolve will need to be referred to the steering committee.

Recommended Action:

- BPS hold regular, minuted meetings of the technical group to ensure that all agencies involved in the project are kept informed about progress and that problems are addressed quickly, and should any problems not be readily resolved at the technical level the matter be referred to the working group for immediate resolution. Failing resolution at the working group level, the matter should be taken up by the steering committee. (Ongoing)

Nonfinancial Corporations

12. Data for the current, capital, and financial accounts, together with their balance sheets, of nonfinancial corporations (NFCs) are drawn from a variety of sources. For private NFCs, the BPS conducts an annual survey of unlisted enterprises, and the BPS obtains data on listed enterprises from information placed on the Indonesian Stock Exchange (IDX) for annual and quarterly data. For public NFCs owned by the central government, the Ministry of State Owned Enterprises (MOSOE) provides data on these accounts to BPS from annual and quarterly reports it receives from these enterprises, both listed and unlisted. These data are also compared with, and supplemented by, annual and quarterly account information for those public enterprises listed on the IDX.

13. For listed private corporations, the data are comprehensive (both quarterly and annually), but the data drawn from the IDX are only available in PDF format. As a result, BPS has to enter the information manually, making for a very slow, inefficient process, subject to input errors. It would be much more efficient, and much faster, if the data could be provided electronically. The mission recommended that OJK, who obtain these data from the private listed enterprises, provide BPS with the data, on an individual enterprise basis, in a machine-readable format (Excel or another software package) that allows for the data to be easily entered and aggregated much more easily and efficiently.

14. While the annual survey of private NFCs provides BPS with the data required to meet the needs for the annual sector accounts, quarterly data for unlisted private NFCs pose BPS with problems, as there are no direct sources. For the current and capital accounts, the BPS uses ratios between the annual data of listed and unlisted NFCs, but for equity of unlisted NFCs, the BPS has no current data sources. In light of this, the previous mission had recommended that the BPS run a regression between the data for annual equity listed and

unlisted enterprises to determine whether there is a correlation that would allow the latter to serve as an indicator for the former for quarterly data.

15. The BPS had conducted a regression for the years 2011 to 2014 (the only years for which data are available) and found a very high correlation and statistical significance. In light of this, the mission recommended that the BPS conduct another regression analysis of changes in positions in equity of unlisted against changes in equity positions of listed enterprises to determine whether the latter could serve as an indicator for transactions of the former. The mission also suggested that, data permitting, the BPS do the same exercise for “other accounts receivable/payable.” The mission recommended that this regression be conducted before the next mission.

16. For the sector accounts’ needs for quarterly data for public NFCs owned by the central government, the MOSOE obtains data for the 18 largest enterprises, which are then grossed up to the universe estimate. Those 18 enterprises account for a very large proportion of the total, producing high quality estimates. The MOSOE provides BPS with these data on a timely basis.

17. No data are available for public NFCs owned by other levels of government. However, BPS and MOSOE do not consider them significant.

18. The previous mission had proposed that BPS and MOSOE sign a memorandum of understanding (MOU) to ensure that all the data, especially quarterly, that BPS needs to construct the sector accounts (quarterly and annually) are reported on a timely basis. Since that mission, the MOSOE has been providing the data required on a timely basis. Given that, it may not be necessary to sign an MOU. This matter is to be discussed between BPS and the MOSOE over the next few weeks and a decision will be taken whether or not to proceed with an MOU.

Recommended Actions:

- BPS conduct a regression analysis of changes in positions in equity of unlisted against listed enterprises to determine whether the latter could serve as an indicator for quarterly transactions of the former. (June 2018)
- Further, data permitting, BPS do the same exercise for “other accounts receivable/payable.” (June 2018)
- OJK provide BPS with data of private listed enterprises, on an individual enterprise basis, in a machine-readable format (Excel or another software package that allows for the data to be easily entered and aggregated much more easily and efficiently). (March 2018 and ongoing thereafter)

- BPS and the MOSOE sign an MOU, if necessary, for the delivery by the latter to the former of the data needs for the sector accounts and balances on an ongoing basis, both quarterly and annual. (December 2018)

General Government

19. For central government, the data are comprehensive on a monthly basis. The Ministry of Finance (MOF) collects data on the current, capital, and financial accounts monthly and reports these data quarterly to BPS, on the basis of Government Finance Statistics (GFS). These data are largely sufficient to meet BPS' needs in compiling the quarterly sector account for central government. BPS makes some adjustments to the data to reflect general government data for national accounts' requirements. For the balance sheet, the MOF compiles quarterly financial assets and liabilities, using the most recent annual and semi-annual positions data and adding transactions. The MOF adjusts the data, where necessary, for changes in exchange rates but not for price changes. However, because the Government of Indonesia operates on a partial accrual basis, its pensions to its (current and former) employees are treated on a pay-as-you-go basis. Accordingly, the MOF does not recognize the pension liability. There are no current plans to change this treatment. The previous mission had recommended that, as the sector accounts and balance sheets are an experimental dataset, at least for the life of the project, this shortcoming would have to be accepted, without trying to make any ad hoc adjustments.

20. The previous mission had also recommended that a reconciliation table between the two datasets (GFS and national accounts) be prepared, showing where the differences lie in balancing the accounts. This reconciliation table has been constructed.

21. For the provinces and municipalities, data are obtained by the MOF. Annual data are sufficient for the purposes of the sector accounts, but the quarterly data are less detailed and are provided only semi-annually, with a three-month lag. Consequently, the MOF uses the central government's patterns of expenditure, based on the provinces' and municipalities' budgets, to estimate the provinces' and municipalities' outlays, by quarter.

22. The third level of government – villages – is not recognized by the MOF as part of general government. Consequently, no data are reported. The previous mission had suggested that, as a preliminary measure, the cash transfers from central government be used as a proxy for villages' revenue. These transfers make up a major part of villages' revenue (probably in excess of 90 percent). However, these transfers do not show how the funds are spent. Such detail (and any income that the villages obtain from non-government transfers) are only available annually, with a significant (two year) lag. The previous mission recommended using the cash transfers as a basis for deriving current quarterly data, together with the ratios of other income and uses, from the annual data and revising the data when more recent years become available. This work has not yet been started. *The mission recommended that this work be undertaken as soon as possible.*

23. The treatment of a further level of government, the social security fund, is yet to be resolved. This fund was set up in 2014 and all the parties involved have agreed that it should be treated as part of general government. The exact manner of its treatment, however, has not yet been agreed. The previous mission had recommended that the treatment of the fund be taken up by the working and/or technical groups and resolved by the time of the current mission. The mission emphasized that a decision needs to be made soon.

Recommended Actions:

- MOF and BPS begin estimating quarterly revenue and expenditure for villages, using the cash transfers from senior levels of government, together with the ratios of other income and uses from the annual data. (December 2018)
- BPS and MOF, and any other agencies involved, determine the treatment of the social security fund and develop quarterly estimates from the first quarter of 2015 on. (This treatment is to be resolved as soon as possible)

Financial Corporations: The Central Bank and Other Deposit-taking Corporations

24. BI has responsibility for compiling the current, capital and financial accounts, together with their balance sheet data, for the central bank and for the other deposit-taking corporations (ODTCs). These data are obtained monthly and reported, or will be reported, to BPS quarterly. There do not appear to be any major issues with these datasets.

Financial Corporations, Other than the Central Bank and Other Deposit-taking Corporations

25. The current, capital, and financial accounts, together with the balance sheet data, for the other financial corporations not collected by BI are obtained by the Financial Services Authority (OJK) monthly and reported to BPS. The mission found these data to be of high quality but some areas need further development.

26. One such area is the treatment of mutual funds. These funds are currently maintained as segregated funds of securities companies that operate them, and OJK includes them with the securities companies' data. As these funds have full sets of accounts, the mission recommended that they should be separated from their parent companies, and classified either as money market funds or nonmarket funds, depending on the nature of their assets and activities. This change in treatment was agreed to by BPS and OJK.

27. Another area where further work is required is an estimation technique for approximating the market value of equity liability of financial corporations, other than for the central bank and ODTCs. At present, the own funds at book value approach is used but OJK and BPS are planning to explore other possibilities to see whether a better methodology can be developed.

28. OJK's data on mutual funds also indicate some of their shares are held by nonresidents. BI does not currently include these data in the balance of payments or the international investment position (IIP). This issue is discussed further below under **Rest of the World**.

Recommended Actions:

- OJK, working with BPS, treat mutual funds as separate institutional units from their parent securities companies, and classify them either as money market funds or nonmarket funds, depending on the nature of their assets and activities, and provide BPS with quarterly data from the first quarter of 2015 on. (June 2018 and ongoing thereafter)
- OJK and BPS develop an improved methodology for estimating the market value of the equity positions of unlisted financial corporations other than ODTCs. The work should be undertaken in with BI, which will be involved in a similar exercise (with BPS) to improve the methodology for the measurement of nonresident ownership of the equity positions of unlisted enterprises in Indonesia, notably for direct investment enterprises. (June 2018)

Rest of the World

29. BI has the responsibility to compile and publish quarterly Indonesia's balance of payments and IIP. One area of concern with these data is the data on the export and import of goods and services. In principle, exports and imports of goods and services in the balance of payments data should be identical to the same series in the expenditure side of gross domestic product (GDP), published by BPS. *However, these two datasets are not identical, and there have been differences for many years.* BI and BPS have agreed to use the data from the supply and use table (SUT) for 2010 as the final figures for that year. However, as there are no SUTs for the succeeding years, differences between the two datasets remain.

30. This issue highlights one of the important roles of the sector accounts: statistical consistency. Within the sector accounts integrated framework, inconsistent datasets are confronted and need to be resolved. Otherwise, either the matrix will not balance or there are differences with other data that should be the same. In this instance, if there is an inconsistency between the balance of payments and the expenditure side of GDP and the latter estimate is used (to be consistent with GDP, which is what BPS considers ideal to do, and would be explored further by BI), the difference will result in a different external balance of the rest of the world in the sector accounts from the current account balance in the balance of payments. BI and BPS indicated that to prevent this, they wish to make an equal and opposite adjustment to the income account (on reinvested earnings) of direct investors. The mission argued against this course of action: to rectify one error by creating another tends to defeat the point of statistical integration. The mission emphasized the need for complete coherence between the two datasets. BPS and BI recognized the importance of the issue and plan to address the matter very soon. They noted, however, that, because it is a complex issue, it may take some time to resolve. Therefore, more coordinated efforts to improve the coherence of those two datasets should be

pursued. The mission recommended that BPS should compile the SUT annually to avoid a repetition of this issue as well as to provide a benchmark for all goods and services in GDP.

31. As noted, OJK's data show that nonresidents have owned shares in mutual funds for several years, again, highlighting how the sector accounts' integrated framework can highlight data shortcomings. To incorporate these data into the rest of world, and to ensure that the rest of the world's data are consistent with the balance of payments and IIP, BI agreed with the mission that the changes will be made from 2015 onwards.

32. Further work that is required is an estimation technique for approximating the market value of equity liability of unlisted enterprises with nonresident ownership, notably, direct investment enterprises. At present, the own funds at book value approach is used but BI and BPS will explore other possibilities to see whether a better methodology can be developed. Including OJK (involved in a similar exercise (with BPS) for the measurement of the value of equity positions in unlisted financial corporations other than the central banks and ODTCs, would assist the outcome.

Recommended Actions:

- BPS and BI determine the causes of, and eliminate, the differences in goods and services imports and exports between the balance of payments and the expenditure side of GDP from 2011 on. (September 2018)
- Using data from OJK, BI include in the quarterly balance of payments and the IIP nonresident holdings of shares in resident mutual funds, from 2015 on. (June 2018)
- BI and BPS develop an improved methodology for estimating the market value of unlisted corporations' equity positions with nonresident ownership, notably direct investment enterprises. The work should be undertaken in conjunction with OJK (with BPS), which will be undertaking a similar exercise for the valuation of the equity positions of unlisted financial corporations (other than the central bank and ODTCs), as noted above. (June 2018)
- BPS begin compiling the SUT annually. (December 2018)

Households

33. For households, the principal recommendation of the previous mission was to explore how to obtain estimates of quarterly production data. As there are currently no such data, that mission had recommended that BPS run a regression between households', listed and unlisted NFCs' annual production data for those industries – agriculture, manufacturing, and wholesale and retail trade – that account for about three quarters of household production. The purpose of the regression analysis was to see whether there is a correlation between these data

for these three groups that would allow NFCs' production data to serve as an indicator series for households' production.

34. BPS conducted the regression analysis for 2010 to 2015 (the years for which such data are available) and found a high correlation and statistical significance between unlisted NFCs' production data and those for households. However, there are no quarterly production data for unlisted enterprises, which means they cannot serve as an indicator for households' quarterly production. The correlation between households' annual production data and those for listed NFCs has a lower correlation, but still reasonably good for manufacturing and trade (87 percent and 75 percent, respectively) but the data failed the statistical significance test. Even so, given the high correlation and the absence of alternatives, the mission recommended that listed NFCs' production data be used as an indicator for the quarterly distribution of household production for manufacturing and trade. For agriculture, the correlation is weak (45 percent). Even so, as the industry is dominated by household enterprises, the mission recommended that the quarterly data for agricultural production be used. For all other industries, the mission recommended that the average of all NFCs' production data (other than agriculture, manufacturing and trade) be used as the quarterly indicator before the quarterly household survey conducted in 2018.

Recommended Actions:

- BPS estimate the quarterly distribution of household production for manufacturing and trade, using listed NFCs' production data an indicator. (June 2018)
- BPS estimate the quarterly distribution of agricultural production by households from total quarterly data for agricultural production for the whole economy. (June 2018)
- BPS estimate the quarterly distribution of household production for all other industries, using the average of all NFCs' production data (other than agriculture, manufacturing and trade) as the quarterly indicator. (June 2018)

Nonprofit Organizations Serving Households

35. As noted in the previous mission report, data for nonprofit organizations serving households (NPISHs) are reasonably complete, both quarterly and annually. The annual survey of NPISHs indicates that non-market output accounts for virtually all NPISH output (ninety-six percent) and transfers, principally from households, corporations and government, account for ninety-four percent of NPISH revenue. BPS uses the ratio of the breakdown of expenses in the annual survey to apportion these expenses quarterly. Data are cross-checked against other information, such as compensation of employees in the Labor Force Survey, and transfers from regional governments from their latter's budgets.

36. Three areas require further consideration: how to take into account the election cycle, religious holidays, and gross fixed capital formation (GFCF), in the quarterly accounts.

37. In 2018, there are elections at the provincial and municipal level of government, and in 2019, there will be elections for the president and People’s Consultative Assembly. Political parties are classified as NPISHs, so their expenditures can have a significant impact on the overall output of NPISHs in those two years. The mission discussed with BPS staff how to allocate the expenditure by quarter when the information is only available annually. It was agreed that the expenditure should be based on the Boundary of Funding Campaign that the political parties agree with the Electoral Commission before the elections are held, and to which boundary the parties must adhere. The mission recommended that the allocation to quarter should be pro-rated to the number of days the election campaign is conducted in each quarter. Campaigning is usually for sixty days.

38. There are five major religious holidays in Indonesia, one of which has fixed a date (Christmas) and four are not fixed (Ramadhan, Idul Fitri, Idul Adha, and Easter). The quarterly survey provides sufficient detail to identify the religious bodies’ expenditure patterns by quarter, but not the level.

39. There are no sources to estimate NPISH GFCF quarterly. BPS has explored using the residual approach, that is, from the GFCF total for the whole economy deduct those sectors’ GFCF where it can be identified and make certain adjustments where data are not sufficiently robust, to leave the residual for NPISHs. The mission expressed reservations about residual derivation, given that all the errors and omissions in the other datasets would be included in the NPISH estimate. Moreover, as the value of NPISH GFCF is small (usually less than 5percent of the total) negative GFCF could result.¹

40. Therefore, the mission recommended that BPS also explore using the ratio of NPISH annual GFCF to total annual GFCF for the economy and apply that ratio to total GFCF for the economy as a whole to derive an estimate of quarterly NPISH GFCF. The mission noted that, because the most recent year may not necessarily be representative of NPISH GFCF, BPS use the average of the ratio of NPISH GFCF to the total economy’s GFCF for the previous five years. When new annual data are available, the original estimates should be revised. The mission suggested that further work on deriving estimates of GFCF by sector be undertaken in time for discussion with the next mission.² In particular, the comparisons of the two approaches – the residual calculation and the pro-rating for NPISH GFCF – be undertaken before the next mission so that the results can be reviewed then.

¹ While negative GFCF is possible – the result of disposals being larger than acquisitions – for the most part, this is unlikely for NPISHs, where the principal assets are religious buildings, which are rarely sold.

² BPS also indicated that it would review the methodology for the calculation of GFCF of the financial sector.

Recommended Actions:

- BPS prorate political parties' expenditure by quarter, based on the number of days the election campaign is conducted in each quarter. (June 2018)
- BPS explore two approaches to the estimation of quarterly NPISH GFC, that is, residually, and using the ratio of NPISH annual GFCF to the total annual GFCF for the economy and apply that ratio to total GFCF for the economy, and BPS use the average of the ratio of NPISH GFCF to the total economy's GFCF of the previous five years. (June 2018)

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