

Inter-Secretariat Working Group on National Accounts

IMF's Committee on Balance of Payments

Globalization Task Team¹

Support Document to the Draft Guidance Note

Valuation of imports and exports of goods in the international standards

(CIF to FOB adjustment)

SNA/BPM6 Update

¹ The GZTT consists of both national accounts and balance of payments compilers, from a diverse group of countries. The regional distribution includes Africa (represented by COMESA, that comprehends 21 African States), Asia and Pacific (Australia, China, Japan, and Malaysia), Europe (Ireland, Germany, Luxembourg, Norway, Russia, and United Kingdom), Middle East and Central Asia (Morocco), and Western Hemisphere (Brazil, Canada, United States, and Uruguay). International organizations, ECB, Eurostat, IMF, OECD, UNECE, and UNSD are also represented.

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Task Force on the SNA Research Agenda – Globalization Task Team (GZTT)

Valuation of imports and exports of goods in the international standards (CIF to FOB adjustment)

Supporting Document to the Guidance Note²

Introduction

1. **The *System of National Accounts 2008 (2008 SNA)* recommends recording of imports and exports of goods at free-on-board (FOB) values.** This recommendation is consistent with the valuation principles in the *Balance of Payments and International Investment Position Manual*, 6th edition (*BPM6*). However, it is not fully reconciled with the principle of output valuation at basic prices used for domestic transactions in the *2008 SNA*, as noted in the conclusions of the 2013 Advisory Expert Group (AEG) on national accounts meeting. In later years, different authors suggested the use of transaction values³ for the valuation of imports and exports in national accounts and balance of payments statistics. The Globalization Task Team (GZTT)⁴, among its research topics, has been assigned to address the internal consistency regarding valuation of trade in goods within the SNA recommendations and its harmonization with the Balance of Payments Manual (BPM) and International Merchandise Trade Statistics (IMTS).
2. **This document supports all materials related to the discussion that has been raised on the topic within the GZTT.** This compendium of resources forms the basis of the Guidance Note on CIF-FOB valuation of imports and exports. The GZTT, during its mandate, has conducted a series of consultation within the task team members and has brought in the discussion the balance of payments perspective through consultation with the Current Account Task Team (CATT), created under the aegis of the IMF's Committee on Balance of Payments Statistics (BOPCOM). The document has several parts, which support the research, the discussion and the consultations on the topic.
3. **This document is organized in four Sections.** Section 1 starts the discussion with the draft issue note and the GZTT consultation that followed, from a conceptual standpoint; the main conceptual considerations from the balance of payments perspective are also included in Section 1 Section 2 includes the results from the follow-up GZTT consultation focused on more practical considerations, a survey of country practices, and a comparison of the several consultations made; the main practical considerations from the balance of payments perspective are also included in Section 2. Section 3 summarizes the ongoing discussion on the topic that has taken place since the last SNA and BPM update, and reviews the current recommendations in the international standards, *2008 SNA* and *BPM6* on the topic. Section 4 identifies the *2008 SNA* paragraphs to be updated according to the recommendations of the GZTT

² This document has been prepared by Ms. Margarida Martins (primary drafter), and reviewed by Ms. Padma Hurree-Gobin, and Ms. Jennifer Ribarsky (all, IMF secretariat – GZTT), and the co-chairs. The document draws largely on inputs provided by GZTT members, related available materials on the topic, and includes the consultation exercise from the Balance of Payments perspective.

³ Some papers use the concept of invoice values and other use transaction values. This guidance note uses them interchangeably. The two terms are meant to represent the same concept.

⁴ The GZTT, as all the task teams created under the aegis of the AEG, was expected to provide in-depth analysis one of the priority areas of research, namely Globalisation. The task team was co-chaired by Michael Connolly (Central Statistics Office Ireland) and Paul Roberts (Australian Bureau of Statistics) and was supported by an IMF secretariat. The members of the GZTT is listed in Annex 1.

1. Conceptual considerations on valuation of imports and exports of goods

4. **To start the discussion on the topic of ‘CIF-FOB valuation of imports and exports’, as identified in the Terms of Reference, the co-chairs of the GZTT tasked Saturo Hagino, Fukuyama University, Japan, member of the GZTT, to put up an initial draft of an issue paper.** The issue paper, included in Section 1.1, covered (i) introduction to the issue; (ii) existing material on issue; and (iii) options that could remedy the issue, with advantages and disadvantages considered; and (iv) points for discussion.

5. **The members of the GZTT were requested to review the issue note along the guidelines provided.** The members were asked to reflect on the (i) substance of the issue note; (ii) options under consideration; and (iii) related data sources and country/regional practices. A summary of the feedback of this consultation exercise is presented in Section 1.2.

6. **The CATT secretariat provided input on the use of transaction values for the valuation of imports and exports of goods and related services, from the balance of payments perspective.** To complement the discussion, the conceptual considerations are included in Section 1.3 and the practical aspects are included in Section 2.4 of this document.

1.1. Issue note on CIF-FOB valuation of imports and exports⁵

A Introduction to the issue

7. The guidance on how to value international transactions in goods and treat related transportation and insurance services differs between the national accounts and balance of payments. Within the national accounts, a variety of different bases are acceptable, depending on agreements reached between individual buyers and sellers, whereas in the Balance of Payments, FOB is the uniform valuation basis and the CIF to FOB adjustment is recommended.

8. This issue cropped up in 1996 in the context of European Union (EU) trade asymmetries and a technical group was established within the EU to propose a uniform method for estimating merchandise transport. The first report presented in 1999 proposed an invoice approach, i.e. a valuation method based on actually observed transaction values for international transactions of goods and related transportation services. However, this approach was not further pursued due to the inconsistency with the *BPM5* recommendations. Recently, Haan and Hiemstra (2018), Dutch national accountants, as well as Walter (2018), German Balance of Payments compiler took up this approach in various fora, including the AEG in 2017 and the Organisation for Economic Co-operation and Development (OECD) Working Parties in 2018, insisting that the current CIF-FOB recording of merchandise imports and exports in the Balance of Payments contrasts economic reality and causes trade asymmetries.

9. Anne Harrison, editor of *2008 SNA*, raised this issue at the 2012 IMF BOPCOM meeting held in 2013. At that time, IMF Statistics Department did not favor introducing any changes to *BPM6* to address this apparent inconsistency for the reason that the treatment in the balance of payments is long-established. Thus, this issue remains to be thoroughly discussed by the Committee members.

⁵ The issue note was drafted by Saturo Hagino, Fukuyama University, Japan, member of the GZTT.

10. Nevertheless, the analysis of Anne Harrison revealed two remarkable points. First, the ratios of freight debits to imports FOB are quite stable, which suggests that the CIF to FOB adjustment is based on long-established proportions. Second, the ratio of recorded freight debits to freight credits averages about 140 percent a year over the 17 years and the 40 percent excess represents about one percent of imports FOB. Thus, by eliminating this excess, asymmetries between world exports and imports would be reduced from one to two percent to one percent or less.

B Existing materials

11. According to the *2008 SNA*, the question of whether the value of goods covers the cost of transportation or not depends on whether the exporter or importer is responsible for transport (*2008 SNA* 14.68). This means that cross-border trade in goods should be recorded at amounts specified between the buyers and sellers. The SNA has revised the treatment of transport costs in the revision of 1993. Before the *1993 SNA*, the cost of transporting goods from a supplier to a purchaser was always separately identified and formed part of the difference between the basic price and purchaser's price. *1993 SNA* revised this treatment by not recognizing transport cost if the price agreed between the supplier and the purchaser included the cost of delivery to a place of the purchaser's choice. The rationale for this decision is that the point when change of ownership occurs is different under the different scenarios (*2008 SNA* 14.60).

12. In contrast, the principle for valuation of general merchandise in *BPM6* is the market value of goods at the point of uniform valuation and that is the customs frontier of the economy from which the goods are first exported, that is, FOB (*BPM6* 10.30). This means that imports and exports of goods are to be valued FOB, even if transaction prices agreed between exporters and importers include varying amounts of distribution costs, including none, some, or all of wholesaling, transport, insurance, and taxes (*BPM6* 10.31).

13. SNA recognized that the use of customs declarations is not necessarily ideal for use in the national accounts or BOP (*2008 SNA* 14.69). It can be said that *BPM6*'s requirement of a uniform valuation of imports and exports at the border of the exporting country is a deviation from the true transaction or actually observed price as a general valuation principle in *2008 SNA*.

14. It is to be mentioned that, in the Balance of Payments, merchanting entries are valued at transaction prices as agreed by the parties, not FOB (*BPM6* 10.44). To clarify this recommendation, *The treatment of Freight and Insurance Associated to Merchanting and the Geographical Allocation of Net Merchanting* stipulates that, depending on the agreed delivery terms, the freight and insurance costs shall be embedded in the sale value of the good or accounted for separately.

15. As to the treatment of transportation services, *2008 SNA* describes cases of identifying non-resident carriers from resident carriers (*2008 SNA* 14.72). If it is the importer that contracts the delivery and if the carrier is not co-resident with the importer, an import of services takes place and, ideally, for the SNA it would be desirable to separate the CIF value into the value of the good only and the value of the transport service. If the importer undertakes delivery itself or contracts with a unit resident in the same economy, there is, in fact, no import of services even though it will appear there when imports of goods are recorded CIF. To counteract this, a fictional export of the same amount of services must be shown to leave the current balance of goods and services correct.

16. Based on the examples given in Box 10.3 of *BPM6*, Haan and Hiemstra (2018), as well as Walter (2018), argue that the constructed CIF-FOB values for exports and imports of goods are not consistent with the data collected for the international trade in transport services. They conclude that without information on the residency of the carrier, proper imputations cannot be made and the CIF to FOB adjustment diverging from the actual transaction value will easily lead to mistakes in the trade balance.

17. Finally, against the background of the development of the global value chain and the containerization, current business practices of the transport industry may be quite different from those established when BPM first recommended the CIF to FOB adjustment as a uniform valuation method. For example, by using containers, most merchandise is sent from exporters to importers seamlessly. It appears that BPM has not regarded the seamless transport as the major practice, but rather assumed that most goods are unloaded at the border of an exporting country and loaded on non-resident cargos. This assumption may have become obsolete.

18. Anne Harrison put forward four options in improving the consistency between BPM and SNA in the area of the treatment of freight transport (and insurance costs) and the valuation of traded goods.

Option 1. The SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 revision. Under the past treatment, transportation is always treated as a service and never integrated with the value of the good.

Option 2. The SNA recommendation could, if necessary, be changed to be strictly consistent with *BPM6* when transactions with non-residents were concerned.

Option 3. The SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table showing how imports CIF are converted to imports FOB. Such a table should explain how much of the difference is rerouting and how much is a reclassification from goods to services.

Option 4. It can be considered to amend the BPM guidelines and adopt the valuation on a true transaction or actually observed price basis.

C Points for discussion

- *What are your views on the 4 options put forward by Anne Harrison?*
- *Do you support the valuation of goods on a true transaction or actually observed price basis for international trade?*
- *Should we investigate the practical aspects of the true transaction or actually observed price approach such as the availability of source data?*

D References

Anne Harrison (2013), "*FOB/CIF Issue in Merchandise Trade/Transport of Goods in BPM6 and the 2008 SNA*" 25th meeting of the IMF Committee on Balance of Payments statistics.

Mark de Haan and Leo Hiemstra (2018), "*CIF-FOB recording of imports and exports in the national accounts and the balance of payments*," OECD Joint Meeting of the Working Party on Financial Statistics and the Working Party on National Accounts

Jens Walter (2018) “*Measuring merchanting and international freight transportation costs in the Balance of Payments (BOP)*,” OECD Working Party on International Trade in Goods and Trade in Services Statistics

1.2. GZTT consultation on the issue note on the CIF-FOB valuation of imports and exports

19. **A consultation of the GZTT sought the members’ views on the issue paper.** The views of the members were requested on the (i) substance of the issue note, (ii) options put forward for consideration – their preferred option as well as reasons for rejecting the others, including any other option that might have been missed in the paper, and (iii) related data sources and country/regional practices (the questionnaire is included in Appendix 1.1). The four options put forward for improving the consistency between BPM and SNA in the area of the treatment of freight transport (and insurance costs) and the valuation of traded goods, for consideration, were:

Option 1: *The SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 revision. Under the past treatment, transportation is always treated as a service and never integrated with the value of the good.*

Option 2: *The SNA recommendation could, if necessary, be changed to be strictly consistent with BPM6 when transactions with non-residents were concerned.*

Option 3: *The SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table showing how imports CIF are converted to imports FOB. Such a table should explain how much of the difference is rerouting and how much is a reclassification from goods to services.*

Option 4: *It can be considered to amend the BPM guidelines and adopt the valuation on a true transaction or actually observed price basis.*

20. **In total, 15 out of the 17 GZTT members (excluding the international organizations) provided feedback to the consultation.** Additionally, two international organizations have provided feedback. A summary of the consultation feedback is presented in this Section. Appendix 1.2 provides the detailed outcome.

A Preferred option for the valuation of traded goods

21. **Most respondents (9 in a total of 15 answers from countries) selected Option 4** (*It can be considered to amend the BPM guidelines and adopt the valuation on a true transaction or actually observed price basis*) – currently the most preferred option. Table 1 summarizes the results for the four different options.

22. **Option 4, based on the respondents’ feedback, is generally considered as conceptually sound,** and would avoid the effort of compiling the CIF to FOB adjustment, many times based on assumptions, which could introduce measurement errors due to lacking source data. Additionally, the respondents consider that this approach would reduce asymmetries in data, as it would entail a unified assessment of transactions value between importers and exporters, and would facilitate the compilation of Supply and Use Tables (SUT). The respondents note that both BPM and SNA guidelines should be amended and harmonized based on the transaction cost, and that an impact is expected on balance of payments data.

Table 1. Option selected by countries for the valuation of traded goods

Most preferred option by countries		No. of answers
Option 1	The SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 revision. Under the past treatment, transportation is always treated as a service and never integrated with the value of the good.	1
Option 2	The SNA recommendation could, if necessary, be changed to be strictly consistent with <i>BPM6</i> when transactions with non-residents were concerned.	1
Option 3	The SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table showing how imports CIF are converted to imports FOB. Such a table should explain how much of the difference is rerouting and how much is a reclassification from goods to services.	1
Option 4	It can be considered to amend the BPM guidelines and adopt the valuation on a true transaction or actually observed price basis.	9
NA⁶	-	3

23. **In general, respondents (including those in favor of this option) also refer to the need for further consultations regarding practical considerations related to Option 4**, related to (i) the need for new data sources, (ii) the difficulty in obtaining accurate transaction values even when the data sources are available, and (iii) the need for harmonizing with other statistical manuals (namely, with international merchandise trade statistics and the recommendations from WTO). One respondent considers that this solution would be more relevant in the context of the EU, and other recommends a pilot study for non-EU member countries. Another respondent refers to the difficulty in implementing this solution, especially when the discrepancies between the contract and customs value of the transaction are significant, due to taxation.

24. **One respondent (in a total of 15 answers from countries) selected Option 1** (*The SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 revision. Under the past treatment, transportation is always treated as a service and never integrated with the value of the good*).

25. **In general, Option 1, for those who did not favor it, was considered as not solving the current problems with CIF-FOB valuation** and the inconsistency between *BPM* and *SNA*, and would imply the need to estimate transport services without available information, leading to data imputations.

26. **One respondent (in a total of 15 answers from countries) selected Option 2** (*The SNA recommendation could, if necessary, be changed to be strictly consistent with BPM6 when transactions with non-residents were concerned*). In this view, transport should be considered as a service and measured separately.

⁶ The secretariat has requested for more precision on their responses.

27. **In general, Option 2 was not favored, as it does not solve the problems raised with the CIF to FOB adjustment**, leading to the need for imputations and not being practical to implement.

Additionally, one respondent considers that BPM concepts might also need to be updated.

28. **One respondent (in a total of 15 answers from countries) selected Option 3** (*The SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table showing how imports CIF are converted to imports FOB. Such a table should explain how much of the difference is rerouting and how much is a reclassification from goods to services*), as this is viewed as a more pragmatic approach. Additionally, the respondent considers that due to the increasing use of containers, it might be difficult to collect invoice data with detail by products.

29. **In general, Option 3 was not favored because though considered useful to explain the difference between accounting frameworks**, it could not solve the current problems in compiling CIF to FOB adjustment, continuing to create asymmetries, and possibly increasing the work burden for compilers. Two respondents responded that Option 3 could be a medium-term solution.

30. **Two international organizations provided feedback on the consultation.** Although both considered Option 4 as preferred, for one of the agencies Option 1 could also be a solution. Both agencies highlight the need for harmonization, and the importance of taking into account practical considerations in the decision. Table 2 presents the distribution of results by country and agency.

Table 2. Option selected for the valuation of traded goods (by country and agency)

Country	Agency	Most preferred option
Australia	ABS	4
Brazil	-	1
Canada	STATCAN	2
China	State Administration of Foreign Exchange (SAFE)	4
Germany	Deutsche Bundesbank	4
Ireland	Central Statistics Office	4
Japan	Fukuyama University	NA
Luxembourg	Central Bank of Luxembourg	NA
Malaysia	Central Bank of Malaysia	NA
Morocco	Haut-Commissariat au Plan	3
Netherlands	Statistics Netherlands	4
Norway	Statistics Norway	4
Russia	ROSSTAT	4
United States	BEA	4
Uruguay	-	4
ECB	-	1 or 4
Eurostat	-	4

B Comments on the use of the valuation of goods on a true transaction or actually observed price basis for international trade

31. **In general, most respondents are inclined to support the concept the valuation of goods on a true transaction or actually observed price basis.** However, the respondents refer to the need for further investigation of the practical aspects of adopting the guidance, to assess the extent that countries outside of the EU have the necessary source data. This approach would reduce the existing asymmetries, and more aligned with *BPM6* requirements.

32. **This approach is considered feasible in the EU,** where some data are already available (intra-EU transactions). On the other hand, the fact that transactions data are particular to the EU, and the guidance should reflect all regions, is also mentioned by respondents.

C Comments on the need to further investigate the practical aspects of the true transaction of actually observed price approach, such as the availability of source data

33. **The respondents support the further investigation of the practical aspects of the approach of true transaction values,** concerning mainly the availability of data sources. The respondents also refer to the importance of this investigation in the case of developing economies and countries with lower statistical capacity.

D Other relevant comments on the issue paper

34. **One respondent stated that, while CIF to FOB adjustment can be an important source of asymmetries, it is not the most relevant source of asymmetries, that are largely due to transshipments.** Another respondent mentions that, in general, the differences in concepts is not the most relevant issue. The difficulties to obtain the correct CIF- and FOB-values and the lacking information to make the proper CIF to FOB adjustment is a more relevant problem leading to imbalances within the National Accounts system and trade asymmetries between countries.

35. On the issue paper, a respondent mentioned that it should include more clearly that the SNA also records imports and exports of goods at FOB values, or for practical reasons, CIF for imports at detailed product breakdowns (*2008 SNA*, paragraph 3.149). This means that a change to transactions values would require amendments to SNA as well as BPM. The practical aspects of a change could also be discussed, both for compilation of current data and for the backwards revision of time series.

1.3. Balance of Payments perspective on the valuation of imports and exports of goods and related services: conceptual considerations

36. **BPM recommendations regarding the recording of imports and exports of goods are largely driven by pragmatic considerations,** fact reiterated by the recent investigations undertaken by

the joint IMF-OECD initiative in 2019⁷. The application of concepts such as the change of ownership, market price valuation, and time of recording were fashioned around the use of customs records as the underlying source data, given its widespread availability.

A Need for the current review

37. The use of FOB-type values provides a uniform valuation basis for merchandise goods at the exporting country's border and has been a long-established practice in the compilation of balance of payments and national accounts statistics at the aggregate level since the 1950s.

Customs records have been the major source for compiling international merchandise trade statistics (IMTS), as well as related trade aggregates in the balance of payments and national accounts. At the same time, some unresolved differences in guidance between the SNA and BPM, which were raised by both communities in the recent years (as described in Section 3.1 of this document), have raised the discussion over a revision of the recommendations for the valuation of the exports and imports. Other factors triggered this discussion for revision, inter alia, are : (i) an increasing use of non-customs data sources, particularly in countries that are members of a customs union, such as the EU; (ii) practical challenges to bridging the conceptual differences when adjusting the IMTS (following cross border registration principles) to the FOB concept (change in ownership principle), resulting in persistent sizable asymmetries in trade data ; (iii) the need for additional clarifications and more details in regard to some of the existing concepts, brought in particular by the globalization and transactions involving bundled goods and services components; and (iv) the continuous evolution of user needs, including increased demand for more detailed and timely data . However, the aspects not directly related to the valuation of imports and exports of goods are not addressed in the Guidance Note or in this supporting document.

B Conclusions of the recent investigations by the 2019 joint IMF-OECD initiative

38. In early 2019, around 65 countries participated in a joint IMF-OECD Working Party on International Trade in Goods Statistics (WPTGS) Stocktaking Questionnaire that included a module with questions on the use of invoice values in the balance of payments. Initial views from the balance of payments compilers community showed little global support to using invoice values and voiced concerns about its practical implementation. The arguments presented converged towards maintaining the current FOB valuation of exports and imports, while supporting an open collaboration between the balance of payments and national accounts communities in resolving the existing conceptual differences.

39. Many respondents questioned the assumption that the CIF to FOB adjustment really causes large asymmetries. This may be true for intra-EU trade, where the invoice values are directly available (albeit to some degrees, as declared by some EU countries), while for the extra-EU trade, the compilers would encounter the same issues in getting access to detailed commodity breakdown as in other countries. On the other hand, many respondents expressed that other factors also contribute

⁷ Working Party on Trade in Goods and Services (WPTGS). The results are presented in the 2019 BOPCOM 19/15 paper: *Asymmetries Arising from the CIF-FOB Adjustments in Recording International Trade in BPM6 and 2008 SNA, Ongoing Investigations, Including the Use of Invoice Values.*

substantially to asymmetries, including for example recording imports by country of consignment rather than by country of origin, merchandise not crossing borders, or shuttle trade and illegal activities.

40. **While recognizing the conceptual merits of the proposal, the hurdles of the practical implementation appear discouraging to most respondents.** First, it would be challenging to consider moving away from the rich, frequent, and timely data source offered by Customs, or at least not on a short to medium-term. One major reason would be the difficulty of finding a reliable replacement source providing a good proxy for such transactions, given the large amounts of transactions involved in trade. Any alternative source data would come at a higher cost on both the compiling agencies and reporters alike. Second, the use of different source data by partner countries could potentially lead to larger asymmetries and questionable data quality. Third, the legal, organizational, and institutional aspects would have to be carefully factored in.

41. **In support of this view, the overall feedback from the reconciliation exercises undertaken by the IMF-OECD among voluntary pilot countries showed small differences between the use of FOB and invoice values.** The alignment of the results with the estimated CIF to FOB ratios from the IMF-OECD databases suggests that the invoice values may not necessarily depart significantly from the corresponding FOB values.

C Conceptual implications for balance of payments compilation of the adoption of transaction values

42. **The mixed composition of goods (merchandise) and services (freight, insurance) in the values of imports and exports due to the lack of a uniform price valuation would imply redefining the borders between goods and services.** The time series for merchandise and transport costs would fluctuate from one period to the other with the distribution of delivery terms. For instance, a possible case is that an import CIF in year t that becomes an import FOB of the same amount in year $t+1$ induces a change in the time series for merchandise transport between t and $t+1$, all else equal. The risk in this case would be that the time series for merchandise transport would be largely assimilated with the goods. Alternatively, it could be considered to discard the distinction between goods and merchandise transport, collapsing them into a single aggregate.

43. **The residence of freight/insurance providers may not be known (from Customs records).** Either exceptions to the concept of the carriers' residence would have to be introduced for trade statistics, or additional information be collected both from domestic transport-providers (carriers) and from domestic manufacturers (i.e., a sample survey collecting sales of domestic carriers to foreign counterparts, with a breakdown by their country of residence), which may lead to larger bilateral asymmetries.

44. **Merchandise and freight data would be measuring different risks and costs depending on the terms of delivery.** The use of the point of uniform valuation concept would no longer apply, and the valuation would have to be redefined around this new concept for merchandise trade (and related transportation costs). As a result of moving the merchandise trade to a different valuation basis, the need of estimations would not disappear, since the services costs (freight, insurance) would still have to be estimated. This may create an additional practical need to provide uniform guidance on freight and insurance rates to all countries centrally to reduce foreseeable asymmetries.

45. **In many countries, there is no standard invoice format across corporations, and standard format would have to be imposed to allow for a more efficient collection of invoice data.** Moreover, the value recorded in the corporation's invoice and that recorded by the Customs may diverge dramatically for various reasons, including underestimation in Customs declarations to avoid taxes, transfer prices, incomplete information, and various other inaccuracies (e.g., when a corporation receives a replacement part still under warranty from a supplier at a zero invoice cost but the part still has a very high customs value). In addition, in many countries, no quality control has been performed for this Customs variable.

46. **Moving away from a long-established system would necessarily entail changes in other statistical domains to ensure consistency.** Consistency would have to be ensured at different levels; on the one hand, consistency between the business statistics (corporations records) and the related trade statistics (IMTS/balance of payments/national accounts), and on the other hand, consistency among the latter group. Better interagency cooperation in data collection, sharing, and validation of related trade estimates could avoid duplication of efforts, minimization of costs, and improved quality of trade estimates. Some countries suggest a bottom-up approach, starting the change with the source of trade statistics (Customs records and IMTS). If balance of payments and national accounts move to using the invoice values and the IMTS continue to use CIF and FOB values, then it is likely that the same issues (and structural asymmetry too) will be perpetuated; with the CIF to FOB adjustment being replaced by another type of adjustment. If this change is to be successful, it would need to be applied consistently to IMTS also.

Appendix 1.1 GZTT consultation on the issue note on CIF-FOB valuation of imports and exports: questionnaire

When reviewing the issue note, GZTT members were asked to consider the following recommendations:

- Provide comments on the substance and content of the issue note.
- Do not provide edits to the text. The issue note will serve as input into a draft guidance note that will describe the issue and consider data sources and country practices. The draft guidance note will reflect the opinions of the Task Team. The secretariat and co-chairs will conduct the editorial revision of the draft guidance note at a later stage.
- Bring your perspective as either National Accounts or Balance of Payments compilers. We would like to take into consideration both communities since the issue cuts across both domains.
- Consider the following when evaluating the four options put forward under the “Points of discussion section”:
 - Provide your opinion on the most preferred option specifying the reasons why.
 - Provide your opinion on why the other options should not be considered.
 - Describe other options that are missing from the note but in your opinion should be considered.
 - Distinguish between what in your opinion is conceptually correct versus what is feasible to implement. If these two considerations do not coincide (i.e., what you think is conceptually correct but not feasible to implement), then is there a second-best solution?

Appendix 1.2 GZTT consultation on the issue note on the CIF-FOB valuation of imports and exports: detailed responses

Evaluation of the four options put forward under the “Points of discussion” section

Table 3. Most preferred option

Agency and name	Most preferred option	Reasons for most preferred option
AUSTRALIA Mr. Paul Roberts (ABS)	4	<ul style="list-style-type: none"> We would support work on this (Option 4) as our preference.
BRAZIL Mr. Roberto Ramos (IBGE, Retired)	1	<ul style="list-style-type: none"> As a national accounts compiler, I am for the suggestion 1 to keep the value of the services identified without their incorporation into exports or imports, keeping the idea of basic prices. However, Anne Harrison's arguments about changing the rules of the game could bring reactions that must be considered. I think this suggestion should be forwarded with a medium-term implementation vision. After all, 2008 brought several changes that were not appreciated but maintained and implemented. If there is not a clear definition in the comments of the other group members, I would be sympathetic to a transition recommendation until a definition is reached. That way, I would support Option 3 with supplementary tables.
CANADA Ms. Jennifer Withington (STATCAN)	2	<ul style="list-style-type: none"> The transport should be considered a service and measured separately. It is a separate service and should be treated as such. We have estimates in place for freight and while they are based on assumptions and not perfect, they are better than including it entirely in the cost of the good. This should be done in both the SNA and BOP for consistency. In fact, these estimates could be provided to the SNA for consistency. In the Canadian example, customs documents are used which are (for both exports and imports) mainly showing FOB values. There is no data related to freight beyond borders on our export documents. Our exports are valued FOB place of exit; On the import Customs form, importers have to report the Value for duty which is supposed to be the value of the product at the time it is shipped to Canada (that's close to FOB point of exit).
CHINA Ms. Yang Can (State Administration of Foreign Exchange, SAFE)	4	<ul style="list-style-type: none"> Using invoice value for recording merchandise trade has many advantages, especially in reducing the data asymmetry and saving compilers' estimation efforts from CIF to FOB. I agree most of the arguments made by Mr. Walter. But from a pragmatic perspective, this change in the price basis may have some expected impacts on the treatment of transportation service account in BOP.
GERMANY Mr. Jens Walter (Deutsche Bundesbank)	4	<ul style="list-style-type: none"> The reasons given by Anne Harrison in her paper why not following the first three options are still valid. The methods used will continue to create bilateral asymmetries. Therefore, I support the last option to overcome the current problems in regard to the CIF-FOB conversion and to align BOP with the SNA concepts i.e. I support the valuation of goods on a true transaction or actually observed price basis for international trade.
IRELAND	4	<ul style="list-style-type: none"> Recent papers by Walter and by de Haan and Hiemstra and the AEG issue paper have highlighted inconsistencies in the current universal valuation (FOB) used in the balance of payments and possible data issues with the CIF to FOB adjustment

Agency and name	Most preferred option	Reasons for most preferred option
Mr. Michael Connolly (Central Statistics Office)		<p>that is made by BOP compilers which is one of the steps needed to convert foreign trade statistics (FTS) on imports to Merchandise Trade on a balance of payments basis.</p> <ul style="list-style-type: none"> Option 4: we agree with this proposal.
LUXEMBOURG Mr. Paul Feuvrier (Central Bank of Luxemburg)	NA	<ul style="list-style-type: none"> Neutral concerning CIF-FOB valuation of imports/exports.
MALAYSIA Ms. Norhayati Razi (Central Bank of Malaysia)	NA	<ul style="list-style-type: none"> Option 2: There's a valid point highlighted by Walter in his study, but whether the issue of borderless nations is only unique for the EU countries or it's a common problem globally. Probably the same study should be carried out for non-EU countries to proof the current BPM6 approach is no longer practical. Option 3: Can be considered but it is an additional reconciliation exercise which could be a burden to the compilers. Option 4: Recommended a pilot study to be carried out under different scenario, for non-EU countries.
MOROCCO Ms. Lamia Laabar (Haut-Commissariat au Plan)	3	<ul style="list-style-type: none"> Among the four options offered by Anne Harrison, the one that appears the most pragmatic is Option 3 for the following reasons: <ul style="list-style-type: none"> conceptually, the 2008 SNA integrates the imports CIF but requires the adjustment of the values to make them FOB which is totally coherent with the BPM6. <p>It must be admitted that the CIF to FOB adjustment requires costly operations, but if Option 1 is taken, the problem will arise even for the compilation of the national accounts. This situation is due to the fact that it depends on the contract between the producer and the buyer and, in this case, it is necessary to have more developed data sources to separate the transport service from the purchase of the good at the national level while the operators, in most cases of separately unbilled transport service, cannot evaluate the separate transport service.</p> it may be suggested to put in place a more advanced statistical system at the post-border level that goes beyond administrative or fiscal concerns. However, one can think of an invoice declaration system that informs both the different operators involved in the transaction and also states the details of the products transported. Currently with the system of sending in containers, the customs officer finds many difficulties to inventory products and can give erroneous aggregations and far from reality.
NETHERLANDS Mr. Mark de Haan (Statistics Netherlands)	4	<ul style="list-style-type: none"> This is in our opinion the best option. Not only BPM guidelines should be amended but also the SNA guidelines, that allow cif and fob-valuation (see SNA 14.69 and further).
NORWAY Ms. Ann Lisbet Brathaug (Statistics Norway)	4	<ul style="list-style-type: none"> We prefer Option 4 using "invoiced values". Avoiding asymmetries and too many weak assumptions/methods when adjusting CIF values to FOB values, are important arguments. I can mention that our Large Case Unit (LCU) has observed asymmetries between export/import in trade statistics and in business accounts, this causing imbalances between supply and use in our annual national accounts.

Agency and name	Most preferred option	Reasons for most preferred option
RUSSIA Mr. Andrey Tatarinov (ROSSTAT)	4	<ul style="list-style-type: none"> The most acceptable option is to switch to valuation on a true transaction or actually observed price basis (Option 4). The "invoice based" approach, as it is described in the attached paper by Jens Walter, implies recording "imports and exports with their invoice values", and recording "transport services if a market transaction between a resident and a non-resident rendering the transport takes place". The advantage of this approach is a unified assessment of the transaction value between the exporter and importer, which, in particular, will make estimates of exports and imports closer at the international level. The price actually paid by the importer, in principle, corresponds to the purchases' price. And if this is a market price, the issue of assessing exports and imports can be resolved in terms of the cost of freight included in this price. Difficulty in implementing this approach, in my opinion, may arise, for example, in cases of significant discrepancies between the price of the contract and the customs value of the transaction, since customs duties are paid on the basis of this assessment. For national accounts, reconciliation of the taxable and assessed values of imports and exports can be of significant importance.
UNITED STATES Mr. Dylan Rassier (BEA)	4	<ul style="list-style-type: none"> We view Option 4 as the best solution because the current SNA recommendations on valuation and change in ownership are conceptually sound and we think consistent valuation between the SNA and BPM is important. Our opinion at this point is contingent on further consultation with the U.S. Census Bureau for practical considerations with respect to what information customs records contain on invoice prices.
URUGUAY Ms. Lourdes Erro (Central Bank of Uruguay, Retired)	4	<ul style="list-style-type: none"> I agree to propose the amendment of BPM guidelines to adopt the valuation based on invoice values both for merchandises and freight transport (Option 4). This treatment seems desirable from a conceptual point of view, as it leaves the estimates of exports and imports of goods and services coherent with similar transactions within the economy. Both macro statistics systems (BPM and SNA) would remain actually based on the change of ownership criterion in international transactions, and for the SNA this would turn international transactions valuation consistent with domestic ones. From a practical point of view, this would also allow to overcome the difficulties that are often faced when, in national accounts, within the framework of the Supply and Use Tables, it is sought to validate the data on sales abroad and production of exporting companies, whether data obtained through surveys or based on financial statements, with customs data valued FOB. A similar example may be found in the case of Customs imports data and companies' imports data. As CIF-FOB valued Customs data are those which are used to calculate imports and exports in the Balance of Payments, the coherence between the latter and the National Accounts has a source of discrepancy in these inconsistencies. It is expected that the estimates of exports or imports valued according to the invoice value declared to Customs coincide more with the accounting records of the companies. As for the availability of data I understand it is reduced to having access to Customs data where the invoice value is registered. If the invoice value is subject to tax secrecy, it will be necessary to make agreements with Customs for its use for statistical purposes and ensure confidentiality.
ECB Mr. Celestino Giron	1 or 4	<ul style="list-style-type: none"> Ideally, the way forward should ensure full consistency within the overall system. This line of reasoning would reduce the options to 1 and 4, i.e., to either amending SNA to be consistent with BPM, or amending BPM to align it with SNA.

Agency and name	Most preferred option	Reasons for most preferred option
EUROSTAT Mr. Steinar Todsen	4	<ul style="list-style-type: none"> • Transaction prices are conceptually correct, in line with the general SNA 2008 valuation principles. • Using transaction prices avoids the CIF to FOB adjustments that may introduce measurement errors because of weak or missing source data. • Comment: Not only the BPM but also SNA would need to be amended in order to adopt transaction prices rather than border values (SNA 3.149) for imports and exports of goods.

Table 4. Why other options should not be considered

Agency and name	Most preferred option	Why other options should not be considered
AUSTRALIA Mr. Paul Roberts (ABS)		<ul style="list-style-type: none"> • Option 1: Transport should be treated separately from the good and not integrated into the goods basic price. However, this causes measurement issues as the market operates in many ways and our experiences show it is difficult to get a good measurement, as separately invoiced transport services are not universal. For a country like Australia transport margins can be quite large and should be the output of transport industries. Incorporating them in the price of the good can provide a misleading picture of the industry etc. Australia produces an alternative view of the Input-Output Tables has been produced to support the needs of users who apply the data in large and sophisticated models. The variation relates to the treatment of imports data, where the treatment of freight and insurance services provided on imports by residents is offset. These are already part of domestic output and should not be treated as imports, therefore in the main tables imports of freight and insurance services are adjusted downwards at an aggregated level. While conceptually correct and in line with international standards, this adjustment can generate negative values for imports of transport services for certain industry groups which, being an accounting entry, have no economic meaning. These adjustments were included in previous Input-Output tables, but depending on data for individual years, imported services of water and air transport may more than compensate for the negative adjustment for a particular industry group, thus avoiding negatives. In the alternative view these negatives have been removed by adding the value of freight and insurance on imports provided by residents back into imports and, to maintain the balance on the current account, adding a similar value to exports. • Option 2: We don't believe that the SNA treatment should change, irrespective of the balance of payments requirements. Is the purpose of uniform valuation as some sort of international cross check for the balance of payment? Further, was there anything when importers had to pay high tariffs as to what landed price the tariff would be levied. From memory everyone wanted fob, so in Australia I think we constructed "value for duty", which in most circumstances was fob? Just a suggestion. I wonder what US customs officials are applying to goods with the recent increase in tariffs? • Option 3: Could support Option 3 as an interim while work on Option 4 is undertaken.
GERMANY	4	<ul style="list-style-type: none"> • The reasons given by Anne Harrison in her paper why not following the first three options are still valid.

Agency and name	Most preferred option	Why other options should not be considered
Mr. Jens Walter (Deutsche Bundesbank)		<ul style="list-style-type: none"> Option 3: the provision of a conversation table may explain the difference between the accounting frameworks but could not solve the problems of BOP compilers described in my paper to convert the cif values to fob on a sound and comparable basis. The methods used will continue to create bilateral asymmetries.
IRELAND Mr. Michael Connolly (Central Statistics Office)	4	<ul style="list-style-type: none"> We do not consider Option 1 as viable in an Irish context. Option 2 doesn't really resolve the problem – elements of the transport charge are potentially domestic and other elements cross border. Almost impossible to make this distinction in practice. Option 3 could be a useful addition but again doesn't resolve the inconsistency and mismeasurement.
NETHERLANDS Mr. Mark de Haan (Statistics Netherlands)	4	<ul style="list-style-type: none"> Option 1: This option does not provide a solution for the problems we are facing at the moment. Treating transportation costs always as a separate service, regardless of the terms of the contract means that in some cases the value of these services have to be estimated without proper information. Option 2: This would imply a strict fob/fob registration in SNA for imports/exports, with a CIF-FOB registration in the SUTs for practical reasons (the need to specify product groups) and a CIF to FOB adjustment. In practice, this is already the case at the moment, because the International trade in goods statistic, which is valued CIF-FOB, is the main source for national accounts. Inconsistencies between SNA and BPM may be eliminated in this way, but the problems with the cif- and fob-valuation and CIF-FOB -adjustment as described in our AEG paper of 2018 would remain. Option 3: Like Option 2, showing the inconsistencies between SNA and BPM will also not solve the problems finding the correct CIF- and FOB values and calculate the CIF-FOB -adjustment.
NORWAY Ms. Ann Lisbet Braathaug (Statistics Norway)	4	<ul style="list-style-type: none"> Option 1: no, partly because we will have to do too many imputations to the source data and partly because this will not harmonize with how we treat domestic trade of goods. Option 2: No and this is also related to the fact that this creates imputations (based on scarce information). In addition, it will not be in line with how we value sales/output from companies in the annual national accounts. Option 3: no but can live with it (in the way I have described above). I do not think this is the best solution, but know from WTO-negotiations that there is concerns about valuation and that they prefer to split the transport from the "pure" value of the good. However, this can be taken care of anyway, ref how we do it in Norway.
UNITED STATES Mr. Dylan Rassier (BEA)	4	<ul style="list-style-type: none"> Option 1: We view Option 1 as a second-best solution because it is consistent with SNA treatment of domestic flows of goods and the difference between basic and purchaser prices. However, it doesn't seem to completely satisfy the change in ownership principle as intended by CIF valuation. Option 2: We do not view Option 2 as a reasonable solution because the current SNA recommendations on valuation are conceptually sound, and we don't think we should defer to current BPM recommendations just because they're long-standing. As Walter and Hagino each point out, the current BPM recommendations may be based on obsolete assumptions that no longer reflect the economic reality of cross-border merchandise transport. Option 3: We do not view Option 3 as a reasonable solution because it does not resolve the valuation differences and may actually impose more burden on compilers.
ECB Mr. Celestino Giron	1 or 4	<ul style="list-style-type: none"> Ideally, the way forward should ensure full consistency within the overall system. Solution 3 does not meet this requirement as it allows for discrepancies, albeit explained via a supplementary table, between sector accounts and balance of payments.

Agency and name	Most preferred option	Why other options should not be considered
		Similarly, Option 2 would introduce differences in the accounting treatment in sector accounts between domestic transactions and cross-border transactions.
EUROSTAT Mr. Steinar Todsen	4	<ul style="list-style-type: none"> The other options all involve adjustments to the transactions' prices, based on weak source data.

Table 5. Do you support the valuation of goods on a true transaction or actually observed price basis for international trade?

Agency and name	Do you support the valuation of goods on a true transaction or actually observed price basis for international trade?
AUSTRALIA Mr. Paul Roberts (ABS)	<ul style="list-style-type: none"> We would support work on this. One consideration is that this comes down to concepts of basic price and purchaser's price, and how we think about transport margins and output of the transport industry. Even without the international trade angle, many goods are shipped from wholesaler to retailer, with the final price faced by the consumer having transport and other distribution costs included.
BRAZIL Mr. Roberto Ramos (IBGE, Retired)	<ul style="list-style-type: none"> Support transaction price as a valuation recommendation. At this point I have questions and still need help to understand better. I always think that the difference between an established transaction price and the price actually paid (if there is such alternative) for different contractual reasons could be a gain or loss. I am not sure how this type of transaction works.
CANADA Ms. Jennifer Withington (STATCAN)	<ul style="list-style-type: none"> The use of invoices seems to be particular to EU and would not be relevant to Canada. The international standards should be reflective of all regions rather than the practices of a specific region.
CHINA Ms. Yang Can (State Administration of Foreign Exchange, SAFE)	<ul style="list-style-type: none"> Using invoice value for recording merchandise trade has many advantages, especially in reducing the data asymmetry and saving compilers' estimation efforts from CIF to FOB. I agree most of the arguments made by Mr. Walter. But from a pragmatic perspective, this change in the price basis may have some expected impacts on the treatment of transportation service account in balance of payments. 1. New data source may be needed to record transportation service if BPM7 adopts invoice approach. Taking China as an example, our current ITRS shows the scale of transportation service expenditure is quite low, not consistent with the large scale of China's goods imports. So we use estimation for debit in transportation service in current account, which is mainly based on the information from the Custom declearance form, with differential rates for different products/means of transportation/destination country. If using invoice approach, all the estimations would be in obsolete, and we need to find new data source to record transportation service. 2. Invoice value for freight costs may be hard to obtain. Even invoice value of the goods can be obtained by the Customs and shared with balance of payments compilers, the invoice value of the transportation service cannot be easily obtained, in particular the debit side for transportation service. The favorable situation might be the resident importer/exporters report directly the invoice value for using non-resident services to balance of payments compilers. However, this practice might not be practical in China as there are millions of them. While sample survey may be another option, still whether data quality is better than our

Agency and name	Do you support the valuation of goods on a true transaction or actually observed price basis for international trade?
	<p>previous estimated one is hard to tell. Therefore, even we adopt invoice value for merchandise trade, the estimation from CIF to FOB may still remain for calculating transportation service.</p> <ul style="list-style-type: none"> 3. The harmonization among different statistical manuals. Another issue in my mind is the harmonization among different statistical manuals. If <i>BMP7</i> brings invoice approach, should the FTS and other related statistical field also follow the change? In conclusion, I quite support the invoice approach brought by Mr. Walter, but from a balance of payments compiler's practical perspective, many pragmatic issues are still worth to be fully discussed.
<p>IRELAND Mr. Michael Connolly (Central Statistics Office)</p>	<ul style="list-style-type: none"> The CSO is in favour of the proposal to record merchandise trade at transaction value. For the extra-EU Trade the CSO believes access to transaction value from customs-based data is feasible; and for intra-EU trade access is already available. The transition to transaction value would be therefore be possible. Furthermore, based on the intra-EU data only we do not expect a very large disruption to the overall trade time series as a result of adopting the proposal.
<p>MALAYSIA Ms. Norhayati Razi (Central Bank of Malaysia)</p>	<ul style="list-style-type: none"> Guided by the balance of payments treatment on merchenting entries which are valued at transaction prices as agreed by the parties and not FOB, actually observed price basis for international trade is more aligned with <i>BPM6</i>.
<p>MOROCCO Ms. Lamia Laabar (Haut-Commisariat au Plan)</p>	<ul style="list-style-type: none"> Rather, actually observed price basis. That is, what the importer actually has to declare in return for the importation of the product on one side and the transport service on the other side.
<p>NETHERLANDS Mr. Mark de Haan (Statistics Netherlands)</p>	<ul style="list-style-type: none"> Yes, as we argued in our paper.
<p>RUSSIA Mr. Andrey Tatarinov (ROSSTAT)</p>	<ul style="list-style-type: none"> I consider the development of an approach based on the use of actual prices of invoices to be a step forward and support this option.
<p>UNITED STATES Mr. Dylan Rassier (BEA)</p>	<ul style="list-style-type: none"> We are inclined to support in concept the valuation of goods on a true transaction or actually observed price basis contingent on an investigation of the practical aspects of adopting the guidance to see the extent that countries outside of Germany have the necessary source data.
<p>ECB Mr. Celestino Giron</p>	<ul style="list-style-type: none"> I believe that the decision on a consistent treatment should be mainly based on practical considerations. From a pure methodological point of view I have a preference for the current treatment in SNA: the product sold/ purchased is not only the good itself, but the "good delivered in the point agreed by contract", transport costs being intermediate consumption for the production of such "good delivered in the agreed point"; this is consistent with the change in ownership principle.

Table 6. Should the practical aspects of the true transaction of actually observed price approach, such as the availability of source data, be investigated?

Agency and name of Reviewer	Should we investigate the practical aspects of the true transaction of actually observed price approach such as the availability of source data?
AUSTRALIA Mr. Paul Roberts (ABS)	<ul style="list-style-type: none"> We would support work on this. While there may be practical aspects of it, is there consideration to work with the World Customs Organisation to consider alternative approaches.
BRAZIL Mr. Roberto Ramos (IBGE, Retired)	<ul style="list-style-type: none"> I would like to emphasize the importance of continuing to investigate practical aspects.
GERMANY Mr. Jens Walter (Deutsche Bundesbank)	<ul style="list-style-type: none"> In view of the results of the OECD and IMF stocktaking questionnaire on the use of invoice values in the BOP I think further investigations on practical aspects such as the availability of source data is recommendable.
IRELAND Mr. Michael Connolly (Central Statistics Office)	<ul style="list-style-type: none"> Yes, this could be particularly important for Developing economies
MALAYSIA Ms. Norhayati Razi (Central Bank of Malaysia)	<ul style="list-style-type: none"> Fully supported to further investigate the practical aspects, particularly on the data sources and assessment on effort required in comparison to the significance of the outcome.
MOROCCO Ms. Lamia Laabar (Haut-Commisariat au Plan)	<ul style="list-style-type: none"> Indeed, in my opinion, the availability of data sources is the main obstacle and pushes systems to opt for flexibility in proposed treatments such as unbilled transport separately.
NETHERLANDS Mr. Mark de Haan (Statistics Netherlands)	<ul style="list-style-type: none"> Yes, that is very advisable in our opinion. Statistics Netherlands will carry out a study using transaction values (in the framework of a Eurostat IGA Grant, duration till December 2020).
UNITED STATES Mr. Dylan Rassier (BEA)	<ul style="list-style-type: none"> Yes, this would be the prudent approach before a final decision is made.
ECB Mr. Celestino Giron	<ul style="list-style-type: none"> As stated above, this investigation is needed as practical aspects should guide the decision. Note at the same time that should Option 1 be adopted (change SNA back to the pre-1993 treatment), such adoption should also take into account the practical implications for the recording of domestic transactions.

Table 7. Comments on the substance and content of the issue note, and other comments

Agency and name	Comments
<p>BRAZIL (Mr. Roberto Ramos, IBGE Retired)</p>	<ul style="list-style-type: none"> • There are two issues that should always be considered. The formal structure of the phenomenon we want to observe (in this case the freight on imports and exports) and, on the wild side, the data sources effectively available to let us get the desired detail. • In Brazilian statistics we cannot directly identify freight to X from resident units or non-resident units. What we do is use data from the annual survey in services to account for differences with transport X / M. For this is important a SUT.
<p>CANADA Ms. Jennifer Withington (STATCAN)</p>	<ul style="list-style-type: none"> • Asymmetries: In the Canadian experience, while FOB/CIF can be an important source of asymmetries it is by no means the primary or sole source of asymmetries. Transshipments are by far the largest source of asymmetries. Take our recent reconciliation of asymmetries with China that was conducted in 2018. While asymmetries are much more serious for eastbound trade, the questions of trade valuation (CIF-FOB) accounts for little more than a third of the importance of transshipments.
<p>GERMANY Mr. Jens Walter (Deutsche Bundesbank)</p>	<ul style="list-style-type: none"> • As a general comment, I think the substance and content of the issue note are satisfactory; it is easily readable and very clear.
<p>NETHERLANDS Mr. Mark de Haan (Statistics Netherlands)</p>	<ul style="list-style-type: none"> • In general, we would like to remark that the differences in concepts is in our opinion not the biggest problem here. The difficulties to obtain the correct CIF- and FOB-values and the lacking information to make the proper CIF to FOB adjustment is a much bigger problem leading to imbalances within the National Accounts system and trade asymmetries between countries.
<p>NORWAY Ms. Ann Lisbet Braithaug (Statistics Norway)</p>	<ul style="list-style-type: none"> • Fully support the proposal in the German paper. This is more or less in line with how we do it in Norway today. When we publish Balance of Payments domestically we use the SNA methodology/concepts. However, in international reporting we show the data adjusted for CIF-FOB (<i>BPM6</i> concepts). In the domestic publication this adjustment is shown as a memorandum item. I should underline that Balance of Payments is an integrated part of the national accounts (and influences of course our publication policy) • Option 1 is both correct and feasible. At least this option will be consistent with how we calculate output from business accounts. If we say this is the value of what is sold, then the buyer should face the same value.
<p>RUSSIA Mr. Andrey Tatarinov (ROSSTAT)</p>	<ul style="list-style-type: none"> • The need for discussion on revising the methodology of valuation of exports and imports is due to the asymmetry between the estimates of the value of exports and imports in the balance of payments manual (<i>BPM6</i>) and the <i>2008 SNA</i>. The main reason for the discrepancies is the method of accounting for transportation costs. • From the point of view of compilers of national accounts, there is an urgent need to harmonize valuation methods between the SNA and the balance of payments. In Russia, for example, when assessing GDP with the final uses approach, estimates of the value of exports and imports are taken from the balance of payments data.
<p>URUGUAY Ms. Lourdes Erro (Central Bank of Uruguay, Retired)</p>	<ul style="list-style-type: none"> • If this decision is adopted (Option 4), an inconsistency would still remain between the valuation of international transactions of goods in international merchandise trade statistics and national accounts-balance of payments, as the International Merchandise Trade Statistics Manual (UN, 2010) recommends that countries adopt the WTO Customs Valuation Agreement as a basis for valuation of their international merchandise trade for statistical purposes, and countries following this agreement almost universally apply FOB type values for customs valuation for exports, and mostly CIF type values for imports.
<p>EUROSTAT Mr. Steinar Todsen</p>	<ul style="list-style-type: none"> • The paper should mention more clearly that the SNA also records imports and exports of goods at FOB values, or for practical reasons, CIF for imports at detailed product breakdowns (<i>2008 SNA</i> 3.149). This means that a change to transactions values would require amendments to SNA as well as BPM.

Agency and name	Comments
	<ul style="list-style-type: none"><li data-bbox="407 240 1864 293">• The practical aspects of a change could also be discussed, both for compilation of current data and for the backwards revision of time series.

2. Practical considerations on valuation of imports and exports of goods

47. **In the light of the joint 2019 IMF-OECD survey results, which revealed little global support for the use of invoice values, and the outcome of the 2019 BOPCOM discussion⁸, the GZTT co-chairs and secretariat started to further investigate if this option would be implementable in member countries.** Some BOPCOM members also stressed the conceptual importance of having services (transportation and insurance) distinctively separated from value of goods, in support to the current standards. They pointed to the advantage of having these services recorded separately from the value of the good.

48. **Initial results from the IMF-OECD reconciliation exercise suggest that differences between invoice values and FOB valuation are small.** In that respect, there was need to investigate the impact of implementing the use of transaction values for the valuation of imports and exports of goods in national accounts compilation. Additionally, Harrison's 2012 paper suggests that the CIF to FOB adjustment is generally based on long established ratios, and it would be useful to make recommendations on how to improve this adjustment if the use of transaction values is not adopted.

49. **A follow-up GZTT consultation was undertaken, to further investigate the practical considerations related to the use of transaction values.** The members of the GZTT were invited to reply to a short follow-up questionnaire, and their views were sought on (i) the access to invoice data; (ii) the quality of invoice data; and (iii) the impact of the use of invoice data. The summary of results is presented in Section 2.1.

50. **A review of country practices and source data used for national accounts and SUT compilation concerning the valuation of imports and exports of goods was made by the GZTT.** Section 2.2 presents a summary of existing materials on country practices concerning the valuation of international trade data and the compilation of CIF to FOB adjustments. Section 2.3 presents a comparison of survey results to provide a cleared view on the topic and the way forward. To complement the discussion, Section 2.4 includes the practical aspects of the use of transaction values for the valuation of imports and exports of goods and related services, from the balance of payments perspective, as provided by the CATT secretariat.

2.1. Second GZTT consultation: summary outcome

51. **A total of 22 respondents from national agencies and 2 international organizations have provided feedback to the second consultation of GZTT members on the valuation of imports and exports.** A summary of the feedback to the consultation is presented below. Appendix 2.2 includes the questionnaire used and Appendix 2.3 provides the detailed outcome.

A Access to invoice data

52. **Most respondents (17 in a total of 22 answers from countries) reported that the actual transaction (invoice) values for international merchandise trade statistics are available from**

⁸ The 2019 IMF-OECD survey results and the outcome of the 2019 BOPCOM discussion are further described in Sections 2.2 and 3.1 of this document, respectively.

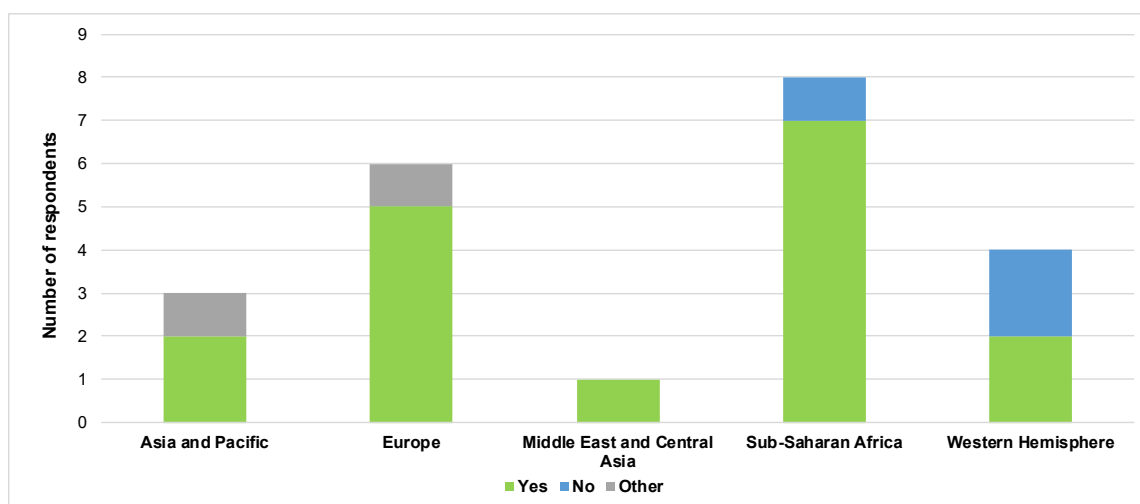
custom's documents (Table 8). Three countries report that the actual transaction values are not available from custom's documents. Additionally, the respondents refer that in the case of EU member countries, the invoice values are available for Intra-EU trade, but the availability for Extra-EU trade may be different by country. For Latin American countries, in some cases the customs data are not used for national accounts or balance of payments estimates. One respondent refers that the invoice values are available for imports, but not for exports.

Table 8. Summary of answers from countries on access to invoice values

Questions		Number of answers		
		Yes	No	Other
Question 1	Are actual transaction (invoice) values for international merchandise trade statistics available on custom documents in your country?	17	3	2
Question 2	Does the National Statistics Office, Central Bank, or other agency compiling national accounts or balance of payments statistics, have access to the transaction (invoice) values?	13	7	2
Question 3	Are these data available from any other data source?	3	17	2

53. **Concerning the geographical disaggregation of the answers, respondents from all the regions reported the availability of transaction values from custom's documents (Graph 1).**

Graph 1. Availability of actual transaction (invoice) values for international merchandise trade statistics on custom documents



54. **Thirteen respondents (in a total of 22 respondents from countries) confirm that the National Statistics Office, Central Bank, or other agency compiling national accounts or balance of payments statistics have access to the transaction (invoice) values.** However, two respondents refer that the access is limited to aggregates to be used in national accounts and balance of payments compilation (in one case the access to microdata is restricted by law); and another respondent refers

states that within the agency the access is restricted to the units responsible for these estimates. One respondent emphasizes that for EU member countries only the data regarding Extra-EU trade is obtained from custom's documentation.

55. **Seven respondents refer that these compiling agencies do not have access to the transaction (invoice) values, and two provide an undefined answer.** The reasons provided by the respondents are diverse: the customs' declarations include this field, but in most cases the information is not reported, is not considered accurate, or is confidential, the IT system is not prepared to process these data, or the availability is different for imports and exports; the information is received consolidated by the compiling agencies, or a small subset of the data are available; or the invoice data are only collected on a case-by-case basis, given concerns with the response burden of firms, the lack of a standard invoice form, and the difference between customs and invoice values.

56. **In general (17 in a total of 22 respondents from countries), the respondents note that transaction data are not available from any other data source.** Nevertheless, two of these respondents refer the availability of data at a very aggregated level from business surveys. Three respondents state that data are available from other sources, including business surveys and data collected by the revenue authority.

B Quality of invoice data

57. **Most respondents (16 in a total of 22 respondents from countries) consider that the data on transaction values available in the country is accurate (Table 9).** However, for one European country this is considered unknown for Extra-EU trade. Two other respondents consider that this question needs further analysis, as these data are currently not used in the compilation of national accounts or balance of payments statistics.

Table 9. Summary of answers from countries on quality of invoice data

Questions		Number of answers		
		Yes	No	Other
Question 4	Are the data on transaction values available in your country considered accurate?	16	3	3

58. **Three respondents reported that the invoice data are not considered accurate,** referring that invoice and customs values are not consistent, the main objective of customs is not to obtain detailed data, and the data received need to be corrected after detailed analysis. Other respondents refer that this topic has not been studied in detail.

C Impact of the use of invoice data

59. **Most respondents (16 in a total of 22 answers from countries) consider that the adoption of transaction values for the valuation of international trade is likely to reduce asymmetries in international trade data (Table 10).** The respondents refer that in principle the use of harmonized valuation across countries would contribute to reducing asymmetries, as often the CIF and FOB values are not available and have to be estimated based on uncertain information, with different assumptions being used by countries to compile these estimates; in some countries, this information would be

available directly from business financial statements. However, the respondents note that in practice other measurement challenges remain, such as, the difficulty of imposing a harmonized valuation for corporations, the different trade regimes, timing of reporting (due to transport time), classification, confidentiality and regulation differences, and different dissemination and revisions policies among the agencies producing the statistics. Additionally, the respondents consider that the asymmetries would not be solved in the balance of payments statistics that use a 'point of uniform valuation' principle, and the impact on trade asymmetries might not be significant.

60. **Four respondents refer that the use of invoice data is not likely to reduce the asymmetries.** The arguments provided include the fact that other inconsistencies would remain or even be created (for example, in the estimates of freight transport in trade service statistics) and the need to further analyze the relevance of the asymmetries.

61. **Twelve respondents (in a total of 22 answers from countries) consider that the adoption of transaction data for the valuation of international trade would significantly improve the accuracy of national accounts estimates.** The respondents refer the possibility of extracting the information directly from business financial statements, or to improve the consistency of customs' data with information provided by corporations in other sources, and would facilitate the balance between supply and demand in the compilation of Supply and Use Tables (SUT) at a detailed product level, as well as the consistency with balance of payments, as the adjustments made in the SUT compilation would decrease.

Table 10. Summary of answers from countries on the impact of the use of invoice data

Questions		Number of answers		
		Yes	No	Other
Question 5	Would the adoption of transaction values for the valuation of international trade flows reduce asymmetries in international trade data?	16	4	2
Question 6	Would the adoption of transaction values significantly improve the accuracy of national accounts? Consider, for example, the compilation of balances at product level using data from international merchandise trade statistics, usually based on customs data, and data reported by firms.	12	7	3
Question 7	Has your agency analyzed/quantified the difference between invoice value and CIF-FOB valuation?	7	15	-

62. **On the contrary, seven respondents consider that the accuracy of national accounts would not improve significantly with the adoption of transaction values.** In this case, the respondents refer that the access by the compiling agencies to the data collected by customs would not change, the identification problems concerning the transports services would remain, the inconsistencies in the data obtained from difference sources might not result from changes in valuation, invoice values would have to be collected for all trade (which is not the case in some countries), and additional studies would have to be conducted on the relevance of the improvement.

63. **Most respondents (15 in a total of 22 answers from countries) refer that a study was not conducted on the difference between invoice value and CIF-FOB valuation.** The causes mentioned by the respondents include the lack of access to detailed data, the presence of other priorities for improvements in the national accounts compilation, and the lack of resources available (for example, to replace a data source).

64. **Seven respondents have reported that their agency has conducted a study on the difference between invoice value and CIF-FOB valuation.** Only one respondent reports on the size of the difference, that for overall exports was around 2 percent in 2018. Other countries report that the studies are still to be finalized.

2.2. Selected surveys of country practices

A 2016 UNSD Decennial National Compilation and Dissemination Practices Survey on IMTS

65. **The results of the 2016 decennial National Compilation and Dissemination Practices survey on IMTS⁹, conducted by the UNSD, point to the availability of invoice values.** The results of this survey show that most of the respondent economies (68 in 102 economies) maintained the invoice price as one of the valuations in basic merchandise trade statistics. Some EU member countries mentioned that this was only maintained for intra-EU trade, and other countries noted that these data were not disseminated.

B 2019 Joint IMF-OECD WPTGS Stocktaking Questionnaire

66. **In early 2019, around 65 countries participated in a joint IMF-OECD WPTGS Stocktaking Questionnaire that included a module with questions on the use of invoice values in the balance of payments.** This exercise IMF-OECD questionnaire took a broad view on the use of invoice values and asked country positions, on a conceptual and practical basis, with respect to not only the use of invoice values for goods but also for transportation services. Furthermore, the proposal included whether countries considered that the move to invoice values would reduce trade asymmetries. The results show that around 50 percent of respondents were unfavorable to the proposal, 20 percent were favorable to the proposal, and 30 percent were unsure¹⁰. Further details on the results of this survey are presented in the next Sections.

67. **The 2019 BOPCOM Summary of Discussion noted that guidance on how to measure international trade in goods shows some inconsistencies between the national and international accounts.** While *BPM6* uses FOB for goods, regardless of delivery terms; the *2008 SNA* uses actually observed (contractual) price, allowing for a variety of recording bases. The initial country views expressed in the results of the joint IMF-OECD stocktaking survey and pilot exercise in 2019 show little global support to using invoice values and concerns about its practical implementation. The proposed way

⁹ The results are available at <https://comtrade.un.org/survey/Reports/byQuestion>.

¹⁰ These results are presented in the BOPCOM 19/15 paper: *Asymmetries Arising from the CIF-FOB Adjustments in Recording International Trade in BPM6 and 2008 SNA, Ongoing Investigations, Including the Use of Invoice Values*, available here: <https://www.imf.org/external/pubs/ft/bop/2019/pdf/19-15.pdf>

forward was to maintain FOB valuation and encourage countries to re-examine their methodology to estimate trade and associated transportation costs to reach BPM/SNA consistency on measuring international trade; improve inter-alia inter-agency collaboration (between NA/balance of payments compilers); investigate bilateral discrepancies with main cross-border trade partners; and adopt the unique consignment reference for customs purposes recommended by the World Customs Organization (WCO), which allows to uniquely identify data related to individual international trade transactions between a supplier and a customer at both the national and international level.

68. **The 2019 BOPCOM, recognizing that the proposal to use invoice values entails both conceptual changes (e.g., on the very concept of freight services) and practical data collection challenges, agreed that further research was needed before deciding on moving away from FOB valuation.** The Committee also agreed on the usefulness to gather further information from additional countries about the feasibility of using invoice values to assist compilation of imports/exports in balance of payments and national accounts statistics. It was also noted that inconsistencies arising from the use of different data sources are more difficult to solve than those arising from different methodologies. The Committee supported the need of reaching full consistency between BPM and SNA in measuring the international trade in goods, the active engagement of international organizations in recommending countries to re-examine their methodologies of measuring trade, and to conduct bilateral reconciliation exercises to reduce trade asymmetries with the possible involvement of the WCO.

C 2017 UNECE Workshop on Consistency between National Accounts and Balance of Payments Statistics: Analysis of national practices – Albania and Norway

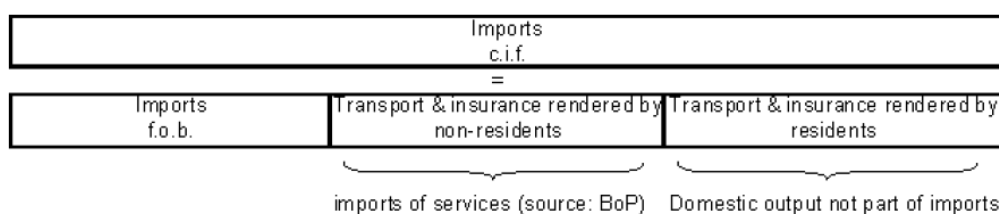
69. **Albania and Norway presented national practices regarding the methods for estimating the CIF to FOB adjustment in the 2017 UNECE Workshop on *Consistency between National Accounts and Balance of Payments Statistics*.** The report of this event¹¹ notes that both countries use detailed data from several data sources (e.g., customs declarations on value of imported goods, information on the transportation cost, and nationality of the transporters) to calculate average coefficients by product group and compensate for missing values and errors. Although the national circumstances and customs documents may differ, it is very useful to exchange information on questionnaires, methods for compiling the adjustments, and software used between countries. The complexity of the adjustments (i.e., multiple carriers, different split between national and international transporters, and implicit adjustment for errors or non-observed economy) raises the question of international coordination and how to arrive at coefficients that are consistent and do not lead to asymmetries with partner countries. Additionally, Box 1 presents an alternative view of Input-Output Tables (IOT), by the Australian Bureau of Statistics (ABS).

¹¹ Available at <https://www.unece.org/index.php?id=43930>.

Box 1. Alternative view of Input-Output Tables (IOTs)

IOTs are an analytical tool compiled using the balanced SUTs as a starting point. IOTs can deviate from the 2008 SNA recommendations to some extent, in order to serve particular analytical purposes. In Australia, the two main deviations are the 1968 SNA transport margin adjustment, and the CIF to FOB adjustment.

Each imported good in the IOTs is valued CIF since this is the equivalent valuation to the basic price of the same domestic product. However, total imports are valued FOB in accordance with BPM and SNA recommendations. Transport and insurance services on imported goods may be performed by residents and non-residents. If the latter is a genuine import of services, the former is domestic output and should not be treated as imports. Two operations are therefore necessary: firstly, to reconcile detailed CIF values with total imports FOB, and secondly, to avoid the double counting of resident services.



The total adjustment corresponding to the transport and insurance services rendered by residents is, by construction, negative:

$$\begin{aligned} & \textit{Transport and insurance services rendered by residents} = \\ & = (\textit{imports FOB} - \textit{imports CIF}) + (\textit{transport and insurance rendered by non-residents}) \end{aligned}$$

The UN *Handbook of input-output table compilation and analysis* recommends the presentation of the CIF to FOB adjustment as a separate item in the IOTs. This presentation has not been adopted by the ABS, and in the IOTs the adjustment is added to the transport and insurance services rendered by non-residents. These two items are allocated to non-margin water transport and non-margin air freight products. The sum of these two components is, by construction, negative.

A negative value in imports is conceptually correct, and complies with the UN *Handbook of input-output table compilation and analysis*. However, because negative values are incompatible with some analytical models, the ABS also compiles a different view of the tables by re-allocating this negative adjustment on imports to a positive adjustment on exports. The consequence is an increase by the same amount of both imports and exports. The *Australian National Accounts: Input-Output Tables (alternate view) (cat. no. 5209.0.55.001)* are available on request only. The tables mirror what is published in the main IOTs, with the exception of a different treatment of the CIF to FOB adjustment to better suit the needs of economic modelers.

Source: ABS, 2015, *Australian System of National Accounts, Concepts, Sources and Methods*, [https://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/C5ACA29422243B56CA257F7D00177D09/\\$File/52160_2015_.pdf](https://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/C5ACA29422243B56CA257F7D00177D09/$File/52160_2015_.pdf)

D 2019 Joint IMF-OECD WPTGS Stocktaking: reconciliation exercise

70. **As part of the IMF-OECD joint initiative, a reconciliation exercise was undertaken with the agreed participation of eighteen countries, to compare the current international trade and invoice data.** The results for five countries as described on the 2019 BOPCOM paper¹², are summarized below:

(i) **Albania:** for 2016-18, the annual average ratios of invoice values to BOP trade were estimated between 5.5 and 5.9 percent.

(ii) **Belgium:** regarding intra-EU trade in 2015, the invoice value to CIF adjustment was 0.04 and 0.16 percent of total trade, for imports and exports, respectively, while the CIF to FOB adjustment was -1.67 percent of total trade for imports.

(iii) **Indonesia:** for 2014-18, the comparison of FOB exports from customs data and bank records of exports proceeds revealed a difference of 13 to 14 percent, due partly to administrative fees, discounts, or subcontracting processing.

(iv) **Kosovo:** for 2018, the comparison of customs data to data from a survey of main trade corporations revealed small differences in general, but for some specific cases the customs data may not provide reliable estimates, including for freight and insurance.

(v) **Moldova:** for the first quarter of 2019, the average ratios of invoice values to BOP trade were estimated around 5 percent, although showing significant fluctuations between different groups of trade partners.

E 2017 Asian Development Bank Compendium of Supply and Use Tables for Selected Economies in Asia and the Pacific

71. **The 2017 Asian Development Bank *Compendium of Supply and Use Tables for Selected Economies in Asia and the Pacific* describes a diversity of practices regarding the compilation of the CIF to FOB adjustment and the data sources used to estimate trade margins.** Some economies refer that imports of goods are available using an FOB valuation (e.g., Bangladesh and Bhutan) and no CIF to FOB adjustment is needed, while others refer the use of ratios to compile the CIF to FOB adjustments (e.g., 8 percent for Cambodia, 5 percent for PR China and India, or 27 percent for Mongolia). Some economies refer the use of specific data sources for the estimates of transport margins, at least for the benchmark SUT, as data from Business Census, SUT surveys, or freight and insurance surveys.

F 2020 UNECE Meeting of the Group of Experts on National Accounts

72. **The updated method to compile the CIF to FOB adjustment in Serbia was to be presented at the 2020 UNECE Meeting of the Group of Experts on National Accounts¹³, developed based on**

¹² These results are presented in the BOPCOM 19/15 paper: *Asymmetries Arising from the CIF-FOB Adjustments in Recording International Trade in BPM6 and 2008 SNA, Ongoing Investigations, Including the Use of Invoice Values*, available here: <https://www.imf.org/external/pubs/ft/bop/2019/pdf/19-15.pdf>.

¹³ Available at <https://www.unece.org/statistics/meetings-and-events/national-accounts/2020/meeting-of-the-group-of-experts-on-national-accounts/group-of-experts-on-national-accounts.html>.

the approach followed by Statistics Norway. The previous method was based on a 3.1 percent fixed ratio, with the disadvantages of using the same coefficient for all modes of transport, commodity groups, and distance; not reflecting the real costs of transportation and insurance (that depend on external factors as fuel prices); and using a fixed ratio for resident and non-resident carriers. The new method, that is based on customs declarations data and required substantial IT support, is briefly described in the steps below.

(i) Imports

- Split by delivery terms: for FOB-type transactions, freight and insurance information are almost always filled with suitable quality, while for CIF-type transactions this information is generally missing. Missing CIF-type items for freight and insurance are replaced by FOB-type freights and insurance, by assuming that this information is the same in case of transactions with the same characteristics. The first option uses transactions with the same mode of transport, commodity group, and country of consignment (distance), and if the data are not available, less strict replacements are used (transport mode and commodity group; commodity group; and mode of transport).

- Test on extremes ensure that the estimates are not affected by the presence of outliers.

- Final adjustments are made concerning neighbor countries, special commodities (e.g., oil and electricity), and the use of declarations representing the imports of a single good.

(ii) **Exports:** the estimates of freight and insurance costs for merchandise exports are compiled in a similar way to imports but using the CIF-type forms.

(iii) **Data processing:** with the new method, data on freight and insurance costs are obtained by resident and non-resident service providers, and separately for transport and insurance; data on transport costs by residents and non-residents are detailed by mode of transport; and data processing is made according to terms of delivery.

G OECD Statistics Working Papers

73. **The results of the 2017 OECD study on the OECD Dataset on International Transport and Insurance Costs on merchandise trade¹⁴ show that costs of transport and insurance are not insignificant.** Using a gravity-type model that based on explicit data on transportation and insurance costs, the bilateral CIF to FOB trade weighted margin was around 6 percent for the period 1995-2004. For countries where explicit data were available, the study points to relevant variation across countries (i.e., distance and geographical barriers) and products.

2.3. Comparison of survey results (GZTT consultation, IMF-OECD WPTGS stocktaking questionnaire, and UNSD decennial survey on IMTS metadata)

74. **The objective of this section is to compare the results obtained from different surveys, to have a more comprehensive view on the topic that may guide the proposed way forward.** The

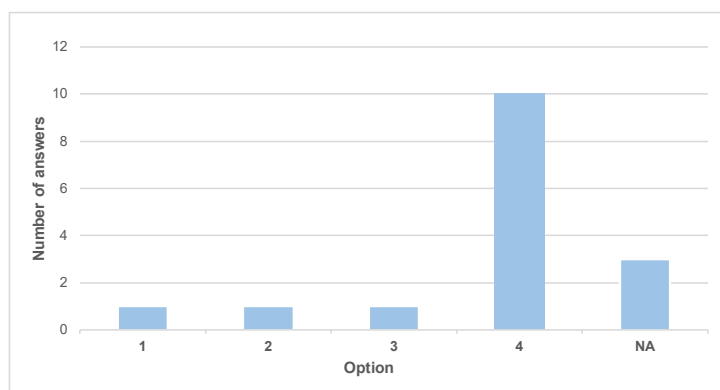
¹⁴ Miao and Fortanier, 2017, Estimating Transport and Insurance Costs on International Trade, OECD Statistics Working Papers, 2017/04.

GZTT consultation results were compared to the joint IMF-OECD questionnaire in light of BOPCOM's work on the related subject, and to the 2016 National Compilation and Dissemination Practices survey, run by UNSD on IMTS.

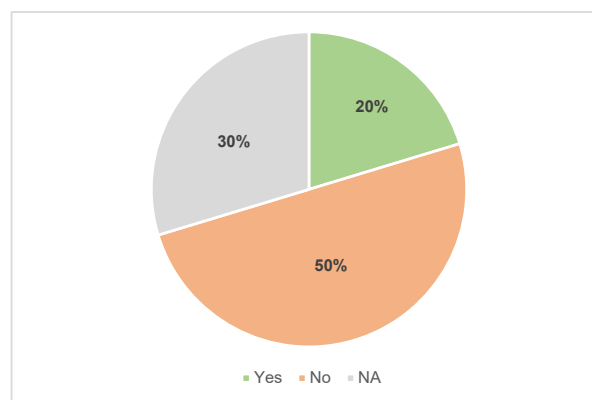
A Comparison of survey results: views on the use of invoice/ transaction values

75. In November 2019, members of the GZTT provided written consultation on the issue note on CIF-FOB valuation of imports and exports (as described in Section 1.2). Among the four options put forward¹⁵, most respondents (10 in 16 answers from countries) selected Option 4 (*It can be considered to amend the SNA and BPM guidelines and adopt the valuation on a true transaction or actually observed price basis*). Based on feedback obtained, this approach is generally considered as conceptually sound, avoiding the effort of compiling the CIF to FOB adjustment, and reducing asymmetries in data. The respondents noted that this approach would require changes in both the 2008 SNA and the BPM6, to keep the standards consistent. Graph 2 illustrates the results obtained.

Graph 2. GZTT: option¹⁶ selected for the valuation of traded goods



Graph 3. IMF-OECD survey: initial views on the use of invoice values as a principle of recording trade transactions in the balance of payments



76. However, respondents of the GZTT suggested further consultations regarding the practical considerations related to the option chosen. The concerns expressed were (i) the need for

¹⁵ The four options were initially put forward by Anne Harrison in the framework of BOPCOM, for improving the consistency between BPM and SNA in the area of the treatment of freight transport (and insurance costs) and the valuation of traded goods.

¹⁶ The options considered were put forward in the 2012 Harrison's paper (*Option 1: the SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 revision. Under the past treatment, transportation is always treated as a service and never integrated with the value of the good. Option 2: the SNA recommendation could, if necessary, be changed to be strictly consistent with BPM6 when transactions with non-residents were concerned. Option 3: the SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table showing how imports CIF are converted to imports FOB. Such a table should explain how much of the difference is rerouting and how much is a reclassification from goods to services. Option 4: it can be considered to amend the SNA and BPM guidelines and adopt the valuation on a true transaction or actually observed price basis.*)

new data sources, (ii) the difficulty in obtaining accurate transaction values even when the data sources are available, and (iii) the need for harmonizing with other statistical manuals (namely, with IMTS).

77. **In a separate exercise, in early 2019, around 65 countries participated in a joint IMF-OECD WPTGS Stocktaking Questionnaire that included a module with questions on the use of invoice values in the balance of payments.** The IMF-OECD questionnaire took a broader view on the use of invoice values and asked country positions— both on a conceptual and practical basis— with respect to not only the use of invoice values for goods but also for transportation services. Furthermore, the proposal included whether countries considered that the move to invoice values would reduce trade asymmetries. With the caveat that the questions on the two surveys were not exactly the same, there is an apparent divergence in position: around 50 percent of respondents were unfavorable to the proposal, 20 percent are favorable to the proposal, and 30 percent are unsure¹⁷. Graph 3 illustrates the results obtained.

Table 11. Countries in GZTT: views on the use of transaction/invoice values for valuation of international trade

Economy	GZTT consultation		IMF-OECD Survey
	Option selected for the valuation of traded goods	Support further investigation on practical aspects	Initial view on proposal (accept?)
Australia	4	Yes	No
Brazil	1	Yes	No
Canada	2	NA	No
China	4	NA	No
COMESA	4	Yes	
Germany	4	Yes	Yes
Ireland	4	Yes	Yes
Japan	NA	NA	NA
Luxembourg	NA	NA	NA
Malaysia	NA	Yes	No
Morocco	3	Yes	
Netherlands	4	Yes	Yes
Norway	4	NA	NA
Russian Federation	4	NA	No
Uruguay	4	NA	
USA	4	Yes	No

78. **Responses from the IMF-OECD survey listed advantages and disadvantages of the use of invoice values as a principle of recording trade transactions in the balance of payments.** The advantages of the proposal referred by the respondents include the use of a valuation closer to true market values, the elimination of the need to estimate the CIF to FOB adjustment, and the reduction of

¹⁷ These results are presented in the BOPCOM 19/15 paper: *Asymmetries Arising from the CIF-FOB Adjustments in Recording International Trade in BPM6 and 2008 SNA, Ongoing Investigations, Including the Use of Invoice Values*, available at: <https://www.imf.org/external/pubs/ft/bop/2019/pdf/19-15.pdf>.

asymmetries. The disadvantages referred include the lack of access to invoice values or to corporations' records (or to the detailed data in these sources), the need of data to estimate freight transport and insurance services (i.e., direct surveys might be needed to collect data to estimate these activities if invoice values were used), the difficulties in the classification of goods and services and in establishing the residence or the corporations, and the increase in the work or respondent burden.

79. **Comparing the results of the IMF-OECD with the consultation for members of the GZTT, four countries presented different responses.** While they supported Option 4 in the GZTT consultation, they did not favor the use of transaction values in IMF-OECD survey (Table 11). Although the answers might reflect a more conceptual view in the first case, and a more practical view in the second, a follow-up consultation with the respondents from these countries would be useful (Australia, China, Russian Federation, and United States).

B Comparison of survey results: availability of invoice/transaction values

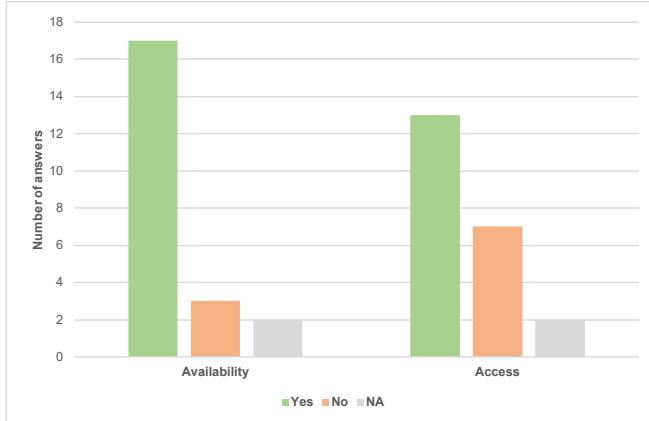
80. **To further investigate on the practical considerations related to the use of transaction values, the members of the GZTT were further consulted with a short follow-up questionnaire** (as described in Section 2.1). For this second round, most respondents (17 in a total of 22 answers from countries) reported that the actual transaction (invoice) values for IMTS are available from customs documents (Graph 4).

81. **Additionally, thirteen respondents (in a total of 22 respondents from countries) confirmed that the National Statistics Office, Central Bank, or other agency compiling national accounts or balance of payments statistics have access to the transaction (invoice) values in customs declarations.** However, in some cases the access is limited to aggregates to be used in national accounts and balance of payments compilation (in one case the access to microdata is restricted by law); or the access within the agency is restricted.

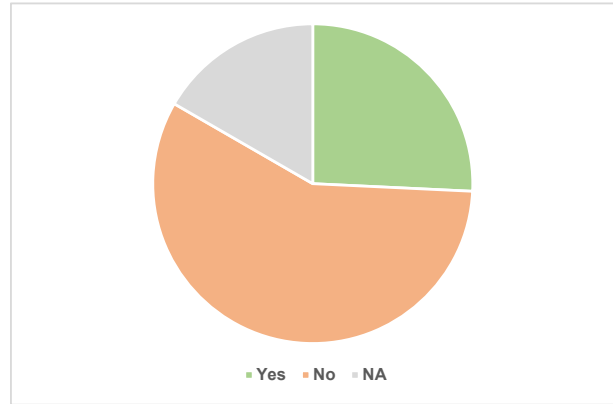
82. **However, according to the IMF-OECD survey results most respondents considered that it is not practically feasible to develop balance of payments statistics for trade in goods and freight transactions using invoice values** (Graph 5). This solution was not deemed feasible in the medium term due to several reasons, of which (i) the lack of complete and accurate available data; (ii) the impossibility of using data from corporations' records; (iii) the need of collaboration between the Central Bank, National Statistics Office, and Customs Authority to include this requirement in customs documents or to provide access to balance of payments compilers; or (iv) the lack of detailed data on transport services.

83. **To have a more holistic view, the results of the 2016 National Compilation and Dissemination Practices survey on IMTS (where the main source data are customs declarations), conducted by the UNSD were consulted.** In that case, most of the respondent countries (68 in 102 countries) maintained the invoice price as one of the valuations in basic merchandise trade statistics (Graph 6). Some EU member countries mentioned that this was only maintained for intra-EU trade, and other countries noted that these data were not disseminated.

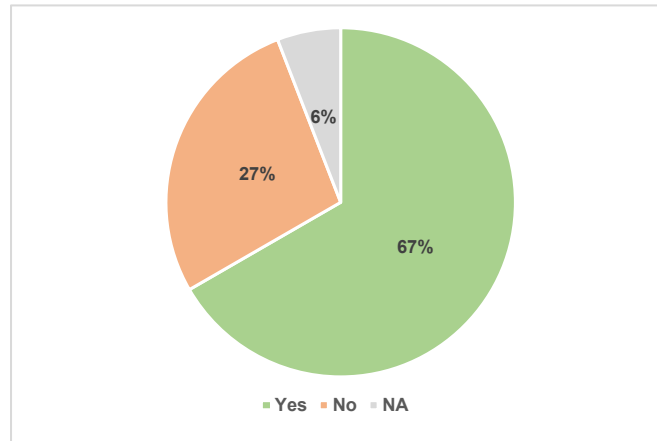
Graph 4. GZTT consultation: availability and access to invoice values



Graph 5. IMF-OECD survey: practical feasibility of developing balance of payments statistics for trade in goods and for freight transactions using invoice values



Graph 6. UNSD National Compilation and Dissemination Practices survey on IMTS: maintenance of invoice price in basic merchandise trade statistics, as one of the valuations



84. **The comparison of the three distinct consultation exercises on a country basis is somewhat intriguing.** Most countries which stated the availability of invoice values in the consultation of the GZTT, provided similar answers to the UNSD IMTS Survey (Table 12).

Table 12. Countries in GZTT: availability of transaction/invoice values for valuation of international trade

Economy	GZTT Consultation		IMF-OECD Survey ¹⁸	UNSD IMTS Survey
	Availability of invoice values in customs documents	Access by NSO or other agency	Feasibility of using invoice values	Invoice price maintained in IMTS
Australia	Yes (imports); No (exports)	Yes (imports); No (exports)		Yes
Brazil	Yes	Yes	No	Yes
Canada	No	No		Yes
China	Yes	Yes	No	No
Germany	Yes	Yes		Yes
Ireland	Yes	Yes/No		Yes
Kenya	Yes	No		
Kingdom of Eswatini	Yes	Yes		
Madagascar	Yes	Yes		Yes
Malawi	No	No		Yes
Malaysia	Yes	Yes	NA	Yes
Mauritius	Yes	No	Yes	Yes
Morocco	Yes	No		No
Netherlands	Yes	Yes		Yes
Norway	Yes	Yes		Yes
Russian Federation	Yes	No	No	
Rwanda	Yes	Yes		No
United Kingdom	Yes/No	Yes		Yes
Uruguay	Yes	Yes		
USA	No	No		No
Zambia	Yes	Yes		
Zimbabwe	Yes	Yes		

C Comparison of survey results: interest in conducting a pilot study

85. **Most responses to the GZTT (15 in a total of 22 answers from countries) referred that a study was not conducted on the difference between invoice value and CIF-FOB valuation.** This was mostly because of the lack of access to detailed data, other priorities for improvements in the national accounts compilation, or the lack of available resources. Seven respondents have reported that their agency has conducted a study on the difference between invoice value and CIF-FOB valuation, but only one reported on the size of the difference (Norway reported a difference of around 2 percent for overall exports in 2018, although with significant fluctuations for different products).

¹⁸ Detailed data are not available for all countries.

86. **As part of the IMF-OECD joint initiative, a reconciliation exercise was undertaken with the agreed participation of eighteen countries, to compare the current international trade and invoice data.** The results for five countries as described on the BOPCOM paper, are summarized below:

- **Albania:** for 2016-18, the annual average ratios of invoice values to BOP trade were estimated between 5.5 and 5.9 percent.
- **Belgium:** regarding intra-EU trade in 2015, the invoice value to CIF adjustment was 0.04 and 0.16 percent of total trade, for imports and exports, respectively, while the CIF to FOB adjustment was -1.67 percent of total trade for imports.
- **Indonesia:** for 2014-18, the comparison of FOB exports from customs data and bank records of exports proceeds revealed a difference of 13 to 14 percent, due partly to administrative fees, discounts, or subcontracting processing.
- **Kosovo:** for 2018, the comparison of customs data to data from a survey of main trade corporations revealed small differences in general, but for some specific cases the customs data may not provide reliable estimates, including for freight and insurance.
- **Moldova:** for the first quarter of 2019, the average ratios of invoice values to BOP trade were estimated around 5 percent, although showing significant fluctuations between different groups of trade partners.

87. **For intra-EU trade in 2016, a summary presented by Eurostat¹⁹** shows that the ratio of the total statistical (FOB valuation for exports and CIF valuation for imports) to the total invoice value is below or equal to 1.2 percent in absolute values, for both imports and exports, based on data transmitted by the countries.

88. Table 13 shows the availability or interest in conducting studies to analyze the impact on the use of invoice values, by country.

¹⁹ Available at <https://ec.europa.eu/eurostat/documents/7870049/9568307/KS-FT-19-002-EN-N.pdf/856f28e5-e9f6-4669-8be0-2a7aa5b1ee67>, Table 12.

Table 13. Countries in GZTT: availability/ interest in developing pilot study on the use of transaction values

Economy	GZTT consultation	IMF-OECD Survey
	Study by the agency to analyze/quantify the difference between invoice value and CIF-FOB valuation	Interest in developing a pilot study to test the implications of the use of transaction values
Australia	No	
Brazil	No	No
Canada	No	
China	No	Yes/ No
Germany	Yes	Yes
Ireland	Yes	Yes
Kenya	No	
Kingdom of Eswatini	Yes	
Madagascar	No	
Malawi	No	
Malaysia	No	Yes
Mauritius	Yes	Yes
Morocco	No	
Netherlands	Yes	
Norway	Yes	
Russian Federation	No	No
Rwanda	Yes	
United Kingdom	No	
Uruguay	No	
USA	No	
Zambia	No	
Zimbabwe	No	

2.4. Balance of Payments perspective on the valuation of imports and exports of goods and related services: practical considerations

89. The change in the valuation principle of imports and exports of goods from a uniform valuation using FOB values to transaction values would have implications for the compiling agencies, as well as for the respondents, and data users. This Section includes a discussion of the main issues that would need to be addressed.

A Compiling agencies

90. **Need of an overhauled data collection for both merchandise and transport costs would have resource implications.** The main concern for balance of payments compilation would be the potential unavailability of invoice values, hence asymmetric recordings of imports and exports (corporation versus customs records), notably in some large trading countries. Thus, new surveys among manufacturers and transport (and insurance) corporations may need to be introduced, or existing ones adapted or extended to collect invoice values and freight and insurance services data, to cover in particular the debit side. This would have significant cost implications, which in most cases would be strongly resented by policy makers. In addition, the surveys' characteristics must be carefully weighed in when considering the quality of such important aggregates in a country's balance of payments. The main issues include: (i) surveying a sample versus a census (customs records); (ii) access to invoice data (questions related to invoice values are considered to be more sensitive by the respondents); (iii) a likely high non-response rate with resulting biases; and (iv) delays in reporting affecting the timeliness of production. Regarding services, given the complexity of global arrangements in many countries, there is a risk that data collection for freight and insurance services may introduce larger errors, such as, an overvaluation of the freight amount due to large number of intermediaries involved with the commercial transactions, or an undervaluation because of shifting values to the merchandise goods.

91. **New legal requirements and regulatory support to data collection from private corporations would be needed,** in particular for non-financial corporations. In regional unions (such as in EU), legal acts governing the external trade of goods would have to be updated accordingly together with national regulations.

92. **Such changes would take time to implement and require an update of the IT systems in place,** in a very demanding business setting. Many countries would not have the capacity to modernize their systems to build adequate alternative data sources for foreign trade statistics (e.g., using business financial statements). In other cases, where invoice values are available from Customs records, the change would only require minor adjustments to the compilation system.

93. **Organizational and institutional arrangements would have to be enhanced to ensure** better interagency cooperation (i.e., between compiling agencies and with Customs) to secure access to more detail. For example, in many European countries, access to the invoice values for Extra EU exports (customs declarations) is given at aggregated levels (e.g. for the entire delivery) or the information is missing. In some countries, customs data are shared with national statistical office only, hence the collaboration of the balance of payments compiling agency should be strengthened to ensure access to invoice values.

B Reporting units

94. **The need for additional information would increase the response burden, especially for merchandise trading and transport and insurance corporations:** Considering the large amount of transactions in a month, this would be a time-consuming operation involving a significant amount of resources.

C Data Users

95. **The data users would have costs to adapt to the new data.** From a practical perspective, retrospective estimations are highly unlikely, leading thus to breaks in series. Currently, invoice values

may not be collected in the customs declarations. Even if such collection becomes mandatory, foreign trade figures based on invoice values cannot be calculated retroactively, implying breaks in series.

Appendix 2.1 Second GZTT consultation: questionnaire

To follow-up on the consultation on the issue paper on “CIF-FOB valuation of imports/exports” and in order to investigate the feasibility of the practical implementation of the use of transaction values, the members of the GZTT are asked to respond to the follow-up questions presented below.

A Access to invoice data

Q1. Are actual transaction (invoice) values for international merchandise trade statistics available on custom documents in your country? (Please mark the chosen option YES/NO with X)

Q2. Does the National Statistics Office (NSO), Central Bank, or other agency compiling national accounts or balance of payments statistics, have access to the transaction (invoice) values?

Q2.1 If your answer is no, please describe why.

Q3. Are these data available from any other data source?

Q3.1 If yes, please describe.

B Quality of invoice data

Q4. Are the data on transaction values available in your country considered accurate?

Q4.1 If not, please describe the main shortcomings of these data.

C Impact of the use of invoice data

Q5. Would the adoption of transaction values for the valuation of international trade flows reduce asymmetries in international trade data?

Q5.1 Please describe.

Q6. Would the adoption of transaction values significantly improve the accuracy of national accounts? Consider, for example, the compilation of balances at product level using data from international merchandise trade statistics, usually based on customs data, and data reported by firms.

Q6.1 Please describe.

Q7. Has your agency analyzed/quantified the difference between invoice value and CIF-FOB valuation?

Q7.1 Please describe.

Appendix 2.2: Second GZTT consultation: detailed responses

Table 14 Question 1: Are actual transaction (invoice) values for international merchandise trade statistics available on custom documents in your country?

Country	Agency	Answer	Comment
Australia	ABS	Yes for imports; No for exports	<p>Imports</p> <p>The 'actual transaction (invoice) value' is available for Imports into Australia but not for exports.</p> <p>For imports over \$1000, the import declaration collects the Customs Value, the 'Free on board' (FOB) value and the 'Cost of Insurance and Freight' (CIF) value. For each consignment, these are broken down into the following items: invoice total, overseas freights, overseas insurance, packaging costs, foreign inland freight, landing charges and transport and insurance. The CIF and FOB values are collected for the whole consignment.</p> <p>The Customs Value is conceptually owned by the Department of Home Affairs. The Customs Value is the price actually paid (transaction value) to the supplier. Each declaration includes the customs value at the total as well as for each commodity. Imports statistics are based on the Customs Value. The ABS processing systems model the CIF and FOB per commodity using the ratio between the customs, FOB and CIF value for the entire consignment.</p> <p>Exports</p> <p>Exports declarations require a 'Free on Board' or FOB value. This is broken down by the commodity, and is the aggregate of the transaction value of the goods, the value of outside packaging (excluding shipping containers etc), and related distribution services used up to and including loading the goods onto the carrier at the customs frontier of the exporting country.</p> <p>Exports statistics are published on a 'Free on board' (FOB) basis.</p>
Brazil	-	Yes	
Canada	STATCAN	No	
China	State Administration of Foreign Exchange (SAFE)	Yes	
Germany	Deutsche Bundesbank	Yes	
Ireland	Central Statistics Office	Yes	Comment by CSO: Article 70 of REGULATION (EU) No 952/2013 states, "The primary basis for the customs value of goods shall be the transaction value, that is the price actually paid"

Kenya	Answer obtained through COMESA	Yes	
Kingdom of Eswatini	Answer obtained through COMESA	Yes	
Madagascar	Answer obtained through COMESA	Yes	
Malawi	Answer obtained through COMESA	No	
Malaysia	Central Bank of Malaysia	Yes	
Mauritius	Answer obtained through COMESA	Yes	
Morocco	Haut-Commisariat au Plan	Yes	
Netherlands	Statistics Netherlands	Yes	
Norway	Statistics Norway	Yes	
Russia	ROSSTAT	Yes	
Rwanda	Answer obtained through COMESA	Yes	
United Kingdom	Office for National Statistics	YES/NO	<p>For Intrastat and EU trade, we do collect invoice values. However, on Customs Declarations and non-EU trade, unfortunately the quick answer is not exactly. There is Box 42 'Item price customs value'. However, it is not that simple. In this section, you have to enter in the currency identified in 'invoice currency' (so this could be in any global currency) either:</p> <ul style="list-style-type: none"> the invoice price (or the adjusted invoice price when valuation methods 1 or 6 are used); or the customs value of the goods. <p>The statistical value is in GBPs, that makes the data usable on a consistent basis, whereas the invoice value is based on a very wide-range of currencies. So, we will not have a consistent or standard/simple 'invoice price' declared or in a consistent currency.</p> <p>Thus, considerable work, finances and time would be required covering resources, methods, data collection changes, systems developments, etc. for our trade data collection department. In addition, there would also be significant changes for businesses covering the questions, notes and guidance.</p> <p>The benefit of such a change would need further research to ensure it would be worthwhile. The cost / benefit does not appear to be of any significance.</p>

Uruguay	-	Yes	In the case of LAC region, there are some countries, as Brasil, that do not use customs data for BoP estimates nor for NA, but instead they use the administrative information from the international transaction reporting system (ITRS). The availability of transaction (invoice) values in those countries should be explored.
United States	BEA	No	
Zambia	Answer obtained through COMESA	Yes	
Zimbabwe	Answer obtained through COMESA	Yes	
ECB	-	Yes	The availability of invoice value would not be (is not) a problem for euro area countries
Eurostat	-	Yes	Comment on 1 and 2: For the EU countries, invoice values are available for intra-EU trade. For extra-EU trade the availability may differ by country.

Table 15 Question 2: Does the NSO, Central Bank, or other agency compiling national accounts or balance of payments statistics, have access to the transaction (invoice) values?

Country	Agency	Answer	Comment
Australia	ABS	"Yes for imports; No for exports	As above – the ABS, as Australia’s NSO, has access to the following information through the provisions of the Customs Declarations dataset to the International Trade Statistics Section. <ul style="list-style-type: none"> • Customs Value, CIF and FOB values at the consignment level for imports; and the FOB for exports. • The Customs value for imports provides the transaction value for each commodity within the consignment.
Brazil	-	-	The answer is “partial yes”. However, it must be understood. In Brazil the M and X data are recorded by the Federal Revenue Secretariat (Secretaria da Receita Federal - SRF). The National Statistics Institute (IBGE) and Brazilian Central Bank (BCB) receive data restricted to the needs of System of National Accounts (IBGE) and Balance of Payments (BCB), SNA and BoP are compiled in different institutions in Brazil. There are two different systems related to external trade one for goods and one for services both controlled by SRF. For legal issues there are impediments that these institutions have access to micro-data or even more detailed data. they are considered fiscal data and protected by the fiscal secret. Nowadays, in brazil, there are an attempted to change the access to fiscal data. I have no hopes to see this change in short term.

Canada	STATCAN	Yes	They are only available for a small subset of transactions for data confrontation purposes
China	State Administration of Foreign Exchange (SAFE)	No	
Germany	Deutsche Bundesbank	Yes	
Ireland	Central Statistics Office	Yes	The CSO has access to transaction values on intra-EU Trade. We understand that the Customs authorities have the invoice value. Currently our IT systems are not set up to receive this item.
Kenya	Answer obtained through COMESA	Yes/No	For international trade we use custom value as taxation is based on it and therefore considered more accurate value.
Kingdom of Eswatini	Answer obtained through COMESA	No	
Madagascar	Answer obtained through COMESA	Yes	
Malawi	Answer obtained through COMESA	Yes	TRANSACTIONS ARE CONSOLIDATED BY DATA PROVIDERS LIKE RESERVE BANK OR MINISTRY OF FINANCE AND SHARED WITH NSO CONSOLIDATED
Malaysia	Central Bank of Malaysia	No	Only NSO, the compiler of trade statistics and Goods Account of BOP have access to Customs records as well as the transaction values.
Mauritius	Answer obtained through COMESA	No	The data are confidential which is dealt by the Customs Department
Morocco	Haut-Commisariat au Plan	Yes	The Single Goods declarations are established in order to provide information on the transaction (invoice) values. However, in most cases, the information is not reported.
Netherlands	Statistics Netherlands	No	My answer is 'yes', but I still need to make a comment here. Actual transaction values are indeed available on custom documents, but a large part of international trade is intra-EU trade, for which no custom documents are available. We use survey results for that part. Only CIF-FOB values are available for this part at the moment.
Norway	Statistics Norway	Yes	
Russia	ROSSTAT	Yes	Federal Customs Service provides aggregated data to the Bank of Russia in accordance with the Agreement on Informational Interaction. Access to the detailed customs declarations' database is not available.
Rwanda	Answer obtained through COMESA	No	
United Kingdom	Office for National Statistics	Yes	
Uruguay	-	Yes	

United States	BEA	Yes	The U.S. Census Bureau only collects invoice data on a case-by-case basis for a very limited number of trades in special circumstances. Census does not have the legal authority to compel firms to provide these data and concerns about respondent burden would likely outweigh the potential benefits. There is no standard invoice format across firms and one would have to be imposed to allow for collection of these data. Also, invoice and customs values may diverge dramatically, as when a firm receives a replacement part still under warranty from a supplier at a zero invoice cost but the part still has a very high customs value. In Census' experience, customs, invoice, and shipping manifest data values often diverge.
Zambia	Answer obtained through COMESA	No	NSO has access to invoice values, as for the Central Bank, there is some aggregation involved by the time they receive data from NSO
Zimbabwe	Answer obtained through COMESA	Yes	
ECB	-	Yes	
Eurostat	-		Comment on 1 and 2: For the EU countries, invoice values are available for intra-EU trade. For extra-EU trade the availability may differ by country.

Table 16 Question 3: Are these data available from any other data source?

Country	Agency	Answer	Comment
Australia	ABS	No	
Brazil	-	No	Despite the NO. We have imports and exports data from the annual surveys. This data has only a very small disaggregation. As well as for medium and small enterprises the survey is a sample. There isn't specific surveys M and X.
Canada	STATCAN	No	
China	State Administration of Foreign Exchange (SAFE)		
Germany	Deutsche Bundesbank	No	
Ireland	Central Statistics Office	No	Only total imports and exports are available from enterprise surveys i.e. no geographical breakdown.
Kenya	Answer obtained through COMESA	No	
Kingdom of Eswatini	Answer obtained through COMESA	No	

Madagascar	Answer obtained through COMESA	No	
Malawi	Answer obtained through COMESA	Yes	MALAWI REVENUE AUTHORITY BY REQUEST
Malaysia	Central Bank of Malaysia	No	
Mauritius	Answer obtained through COMESA	No	
Morocco	Haut-Commissariat au Plan	Yes	In part, we try through business surveys to request details of imported purchases and separate transportation costs. However, at this level as well, taking into account extrapolation methods, the total declared by customs officers is not obtained.
Netherlands	Statistics Netherlands	No	
Norway	Statistics Norway	No	
Russia	ROSSTAT	No	
Rwanda	Answer obtained through COMESA	No	
United Kingdom	Office for National Statistics	No	
Uruguay	-	Yes	A survey carried out by the National Institute of Statistics to non-financial companies (excluding the agricultural and construction sector) asks about foreign sales and sales to the domestic market
United States	BEA	No	
Zambia	Answer obtained through COMESA	No	
Zimbabwe	Answer obtained through COMESA		
ECB	-		
Eurostat	-	No	

Table 17 Question 4: Are the data on transaction values available in your country considered accurate?

Country	Agency	Answer	Comment
Australia	ABS	Yes	
Brazil	-	Yes	
Canada	STATCAN	Yes	

China	State Administration of Foreign Exchange (SAFE)	Yes	
Germany	Deutsche Bundesbank	Yes	
Ireland	Central Statistics Office	Yes	The Intra-EU invoice value would be considered accurate. For extra-EU Trade, this is unknown
Kenya	Answer obtained through COMESA	No	In some instances Invoices values are not consistent with Custom values.
Kingdom of Eswatini	Answer obtained through COMESA	Yes	
Madagascar	Answer obtained through COMESA	Yes	
Malawi	Answer obtained through COMESA	No	NOT ALL THE TRANSACTIONS VALUES ARE ACCURATE BECAUSE IN MOST CASES WE GET BACK TO MRA TO CORRECT ERRORS.
Malaysia	Central Bank of Malaysia	-	No study to reconcile data between the two sources, thus taking the Customs data as good.
Mauritius	Answer obtained through COMESA	Yes	
Morocco	Haut-Commisariat au Plan	No	The interest for customs is the total cost and not the details of the declaration. generally, even when details are available, the invoice value of the goods is not declared and is deducted from the difference between the total and the CIF
Netherlands	Statistics Netherlands	-	We are still investigating this. In the paper we wrote for the AEG meeting in December 2017 we showed that there are inexplicable differences between the cif values and the transaction values of imports. This means that either the cif-values or the transaction values are not accurate (or both). We think that the cif values are not very accurate, but we have to investigate this further. We are currently conducting a study on this subject as part of a Eurostat Grant.
Norway	Statistics Norway		As the data are currently not used for compilation of trade statistics, they are not routinely checked for plausible errors or otherwise analyzed. It is thus difficult to assess the quality. However, we know that in many cases an invoice is the basis for filling out the customs declaration, and the transaction value for the entire transaction should be accurate – but not necessarily at the detailed level of tariff code in case of multi-good shipments.
Russia	ROSSTAT	Yes	-
Rwanda	Answer obtained through COMESA	Yes	

United Kingdom	Office for National Statistics	Yes	The focus is on the statistical value for use in the BoP requirements. The invoice data is of good quality and used by other users. More work would be required to establish an assessment against relevant quality criteria
Uruguay	-	Yes	The good quality of transaction values data is a conjecture, since no research has been done in this regard so far and these data are not currently used in the estimates. However, they are likely to be adequate data, since they are controlled by the tax collection agency.
United States	BEA	Yes	-
Zambia	Answer obtained through COMESA	Yes	
Zimbabwe	Answer obtained through COMESA	Yes	
ECB	-	-	-
Eurostat	-		This is difficult to say for the EU as a whole.

Table 18 Question 5: Would the adoption of transaction values for the valuation of international trade flows reduce asymmetries in international trade data?

Country	Agency	Answer	Comment
Australia	ABS	Yes	<p>There are currently many factors that play into the asymmetry of trade data, the disparity of valuation information between declarations is only one of these factors. While the adoption of consistent and detailed valuation of goods would possible alleviate some of the asymmetries (see below, indented), specifically regarding individual transactions, it would not alleviate the issue all together.</p> <ul style="list-style-type: none"> Both CIF and FOB values currently contain costs incurred domestically in addition to the value of the goods, such as the transport, packaging and loading. If these costs were excluded from the value of the good itself, in theory transactions could be directly compared and the transport/packaging/loading costs could be counted separately to align with National Accounts treatment. <p>Other factors contributing to the current asymmetry of trade data include, but are not limited to:</p> <ul style="list-style-type: none"> Timing – time taken to transport and process goods often means that goods exported from one country in one month will not arrive in the destination country in the same month / year. Classification differences and accuracy of reporting classifications

			<ul style="list-style-type: none"> Confidentiality differences – The data published by the ABS is subject to legislated confidentiality restrictions, which can lead to the restriction of certain data items. The ABS restricts/suppresses statistics to abide by confidentiality rules which can result in variances between raw and published data. The suppression of this confidential statistic can also lead to asymmetries at the product or industry level. It is less of an issue at the total goods and services level as generally there is no single organisation which dominates at such high level of aggregation. Policy / legislative / regulation differences Release of publications and revision windows
Brazil	-	No	Maybe reduce, but not much. This decision could simplify the compilation of the SNA avoiding the issue of the CIF / FOB partition. However, there would still be problems with databases in many countries and the options for compilation would be different on a case-by-case basis.
Canada	STATCAN	No	The large majority of our trade is with the United States, we already have a data sharing agreement in place.
China	State Administration of Foreign Exchange (SAFE)	Yes	
Germany	Deutsche Bundesbank	Yes	Theoretically, this should be the case, as the information can be directly extracted from the accounting of the respondents.
Ireland	Central Statistics Office	Yes	From a practical point of view this is true as there is a structural asymmetry in the IMTS data when the exporter values goods FOB and the importer values the same goods c.i.f. However, asymmetries do not get resolved in the balance of payments that uses a 'universal valuation'. We do not think that using transaction values would make a significant improvement on the trade asymmetries in the Irish data.
Kenya	Answer obtained through COMESA	No	More work is required to study the inconsistencies and accuracy of the invoice especially where an Item has multiple entries
Kingdom of Eswatini	Answer obtained through COMESA	Yes	Valid traders would be registered by each customs administration hence invoices could be validated for accuracy and authenticity.
Madagascar	Answer obtained through COMESA		
Malawi	Answer obtained through COMESA	Yes	AVAILABILITY OF INVOICE VALUES WILL REALLY ASSIST THE OFFICE IN REDUCING THE ASSYMETRIES IN TRADE AND ALSO HELP ME REDUCING THE VISITS TO MRA OFFICES TO MAKE CORRECTIONS
Malaysia	Central Bank of Malaysia	Yes	Yes in principal. Nevertheless, it's important to know how significant the different between the two approaches.

Mauritius	Answer obtained through COMESA	Yes	The application of the transaction value would be a fair, uniform and neutral system for valuation of goods. Mauritius is party to the WCO GATT Valuation Agreement and is implementing the Agreement for the determination of value for customs purposes.
Morocco	Haut-Commissariat au Plan	Yes	Indeed, it will reduce asymmetries at least at the import level in the case of FOB contracts. But in the case of CIF contracts, the problem will persist with the registration of transport services by the various parties
Netherlands	Statistics Netherlands	Yes	We think so. If both the exporting and the importing country use the actual transaction values, the asymmetries should be lower. Often the cif or fob values are not available (if the actual delivery conditions agreed between both parties deviate from cif or fob). In those cases each country uses its own method to estimate these values which will inevitably lead to asymmetries.
Norway	Statistics Norway	Yes	In principle, yes. In practice, many other data and measurement challenges are sure to affect the observed asymmetries.
Russia	ROSSTAT	No	Vice versa, such an approach will increase the asymmetry in mirror data, making incomparable price indices, distorting trade in services statistics in the part of freight transport and leading to distortions of geographical breakdown of trade flows.
Rwanda	Answer obtained through COMESA	Yes	
United Kingdom	Office for National Statistics	YES/NO	C.I.F. / FOB valuation method for imports and exports respectively does create a methodological asymmetry when comparing one country's imports against another country's exports. However, so does the use of general and special trade systems and the same applies to use of country of origin against country of dispatch as the partner country basis. In addition, exchange rate changes, timing differences, warehousing, misclassification, poor completion of declarations, fraud (under valuation), etc. There are many factors that influence asymmetries. If countries could value imports on the required c.i.f. basis but also statistically convert to a FOB basis, this could aid comparison between other countries exports. This may be a sensible option to analytically study IF there are any potential benefits. I would not be under the illusion that this will 'solve' asymmetries but generate a different suite of differences.
Uruguay	-	Yes	This is likely to be the case, as far as it would eliminate the need to estimate CIF or FOB values, as it is frequently the case nowadays. As the criterion of estimates may be different from one (counterpart) country to another discrepancies may arise

United States	BEA	Yes	The use of a harmonized valuation across countries is likely to reduce asymmetries. The key is implementing a harmonized valuation, which as described above is not easy to do across firms, and thus, probably not easy to do across countries.
Zambia	Answer obtained through COMESA	Yes	Because CIF to FOB adjustments introduce asymmetries as they freight and insurance values are often estimates
Zimbabwe	Answer obtained through COMESA	Yes	The value recorded for each transaction is the same in either country
ECB	-		On questions 5 (asymmetries) and 6 (accuracy) I would refer to my input to previous discussions: transaction values is the way to follow to improve all related quality aspects.
Eurostat	-	Yes	It would avoid CIF-FOB estimates based on uncertain information and different assumptions in the countries involved.

Table 19 Question 6: Would the adoption of transaction values significantly improve the accuracy of national accounts? Consider, for example, the compilation of balances at product level using data from international merchandise trade statistics, usually based on customs data, and data reported by firms.

Country	Agency	Answer	Comment
Australia	ABS	Yes	Unified assessment of transactions value between importers and exporters would reduce asymmetry and therefore improve the accuracy of national accounts.
Brazil	-	No	<p>"significantly improve", no.</p> <p>The first question is whether countries have databases that allow the choice for one alternative.</p> <p>In the Brazilian case, the data are those recorded directly by the firms in the exchange contracts system (online) detailed by operation and product with weight, taxes, dollar value of the transaction. The data is controlled by the SRF. There are more details not accessible for SNA or BoP. The proposed change would not change the availability or quality of data for the SUT.</p> <p>As in all the texts that discuss this change, it was not detailed exactly what would be the change in the compilation of the SUT, for example, problems of identification of who carries out the transport remain, a transport registered in the imports and carried out by a resident can also be registered in the production of this resident. It is also necessary understand better the impact on the SUT. And the country opinion.</p>
Canada	STATCAN	No	Our balance of payments are currently based on customs data currently and aggregated from the product level. Since both the customs data and Balance of Payments data are published in the same place.

China	State Administration of Foreign Exchange (SAFE)		Not sure
Germany	Deutsche Bundesbank	Yes	Theoretically, this should be the case, as the information can be directly extracted from the accounting of the respondents.
Ireland	Central Statistics Office	No	Not a <u>significant</u> improvement. For large companies the CSO balances IMTS data with data reported by firms. We do not think that the differences in these sources are usually explained by valuation.
Kenya	Answer obtained through COMESA	No	Studies required in this area
Kingdom of Eswatini	Answer obtained through COMESA	Yes	They would help improve the updates to the Business Register
Madagascar	Answer obtained through COMESA		
Malawi	Answer obtained through COMESA	Yes	BALANCED SUPPLY AND USE TABLES ARE DEPENDENT ON AVAILABILITY OF MORE DETAILED DATA WHICH IN THIS CASE IS AS GOOD AS TRANSACTION VALUES
Malaysia	Central Bank of Malaysia	Yes	Yes in principal.
Mauritius	Answer obtained through COMESA	Yes	Compilation at product level (more disaggregated data) means more accurate estimates.
Morocco	Haut-Commissariat au Plan	Yes	Indeed, at the level of national accounts, the effect will be considerable, especially in terms of consistency of business declarations and customs declarations. Indeed, the transport services declared by the imported companies and for which they supported the cost will also be registered at the customs level as imported transport services. The problem would be when the exporter uses several transport intermediaries or when the goods are received in bulk in containers and the customs officers are unable to register each goods separately.
Netherlands	Statistics Netherlands	Yes	See also 5.1. Yes we think there will be less supply-demand differences in the SUT and the connection between international trade in goods and international trade in services will improve.
Norway	Statistics Norway		Comparisons between trade data and data reported found in companies annual reports, indicate that using transactions data will improve quality/accuracy
Russia	ROSSTAT	No	Vice versa, such an approach will increase the asymmetry in mirror data, making incomparable price indices, distorting trade in services statistics in the part of freight transport and leading to distortions of geographical breakdown of trade flows.

Rwanda	Answer obtained through COMESA	Yes	
United Kingdom	Office for National Statistics	No	Possibly. This would not be necessary for all periods and for all products as the invoice value is not collected for all trade, etc. – see 5.1.
Uruguay	-	Yes	<p>It is expected that the adoption of transaction values would contribute to overcome the difficulties that are often faced in NA, when within the framework of the Supply and Use Tables (at product detail level), it is sought to validate the data on sales abroad and production of exporting companies, whether data obtained through surveys or based on financial statements, with customs data valued FOB. A similar example may be found in the case of validating Customs imports data (CIF) and companies' imports data (transaction values). It is expected that the estimates of exports or imports valued according to the invoice value declared to Customs coincide more with the accounting records of the companies, and so, figures from both sources will be closer if not the same. Besides, as CIF-FOB valued customs data are those which are used to calculate imports and exports in the Balance of Payments, the coherence between the latter and the National Accounts has currently a source of discrepancy in the adjustments NA compilers make in the context of SUT elaboration . The recommendation to use transactions values in both macro-statistics systems would then also contribute to improve harmonization between BoP and NA in practice.</p> <p>In 2017-2018 LAC countries carried out a research work in the region on the causes of non-harmonization between BoP and NA. In a survey conducted in this context, 9 countries (in a total of 15 countries that responded to the survey) indicated they make adjustments to the BoP Goods and Services Account within the framework of the SUT.</p>
United States	BEA	Yes	Consistent with SNA recommendations, transaction values are preferred because they are conceptually sound, and thus, improve the accuracy of national accounts. However, the subgroup has seemed to agree that the recommendation should consider practical considerations.
Zambia	Answer obtained through COMESA	Yes	If misclassifications are reduced
Zimbabwe	Answer obtained through COMESA	No	THE IMPACT ON NATIONAL ACCOUNTS IS NOT CLEAR AND OBVIOUS
ECB	-		On questions 5 (asymmetries) and 6 (accuracy) I would refer to my input to previous discussions: transaction values is the way to follow to improve all related quality aspects.
Eurostat	-	Yes	E.g. better consistency between the value of output (transaction value at point of delivery) and exports. (How significant the improvement will be remains to be seen.)

Table 20 Question 7: Has your agency analyzed/quantified the difference between invoice value and CIF-FOB valuation?

Country	Agency	Answer	Comment
Australia	ABS	No	-
Brazil	-	No	Up to now no analysis was done. For studies about the changes in contractual prices and transaction it would be necessary an agreement with SRF. Remembering, for many countries the amount of troubles they have in the development or improvement of SNA are worse than CIF-FOB issues.
Canada	STATCAN	No	Since we only have a small subset of invoice data available to us this exercise is not possible.
China	State Administration of Foreign Exchange (SAFE)	No	It requires lots of work on our compilation system as to replace a major data source
Germany	Deutsche Bundesbank	Yes	We are planning to present first results of our analysis at the OECD WP ITS meeting in March and at the UNECE NA Expert Group meeting in April.
Ireland	Central Statistics Office	Yes	The CSO is currently updating its c.i.f. to FOB adjustment. Our approach is to analyse differences between the invoice value and statistical value (c.i.f. and FOB) where these exist. Only intra-EU trade is examined. From these data we are making new estimates of the adjustment. The approach is not entirely satisfactory: Much of the data does not have different invoice and statistical value. An exploration of the incoterms for imports and exports does not always display the differences from the statistical value that might be expected.
Kenya	Answer obtained through COMESA	No	
Kingdom of Eswatini	Answer obtained through COMESA	Yes	We have real-time data exchange with SARS which mirrors transactions on both customs systems
Madagascar	Answer obtained through COMESA	No	
Malawi	Answer obtained through COMESA	No	SINCE WE DO NOT HAVE INVOICE VALUES IT IS DIFFICULT FOR THE OFFICE TO DO SUCH KIND OF ANALYSIS
Malaysia	Central Bank of Malaysia	No	Not at the moment, but have conveyed the message to NSO on the need to conduct the study.
Mauritius	Answer obtained through COMESA	Yes	Real time access to CIF-FOB values is available for analysis.
Morocco	Haut-Commisariat au Plan	No	we don't have the necessary detail.

Netherlands	Statistics Netherlands	Yes	Partly, see 4.1. We are conducting a study (see 5.1) on these topics (end date December 2020)
Norway	Statistics Norway	Yes	We have analyzed this for exports, related to observed imbalances between companies' reported income from abroad and exports. For fish (CPA 03), the difference is around 6 per cent. For crude oil and natural gas it is 15 per cent. For other product groups we observe smaller differences, and in a few cases also a small negative difference. For overall merchandise exports, the difference was 2.4 per cent in 2018.
Russia	ROSSTAT	No	Access to the detailed customs declarations' database is not available.
Rwanda	Answer obtained through COMESA	Yes	Since Rwanda joined the EAC Customs Union, the CIF value recorded in the Asycuda System reflects the CIF value at the first point of entry within the EAC. Since, in most cases, the first points of entry of Rwandan imports are Mombasa and Dar es Salaam, NISR conducts a survey aimed at adjusting the CIF from the first point of entry in EAC to Rwanda. This survey is very important to get the real CIF value
United Kingdom	Office for National Statistics	No	Regular reviews are produced on asymmetries but not the difference between invoice value and c.i.f. / FOB valuation. Eurostat publish some material for EU Member States comparing invoice value and statistical value such as the percentage difference of the annual estimate of total arrivals. See link below: https://ec.europa.eu/eurostat/documents/7870049/9568307/KS-FT-19-002-EN-N.pdf/856f28e5-e9f6-4669-8be0-2a7aa5b1ee67 Table 11 and 12 on Page 31 covering data for the year 2016 – difference between statistical and invoice value for EU countries.
Uruguay	-	No	So far there have been no research on the differences between invoice and CIF-FOB values.
United States	BEA	No	The United States does not face the same challenges with measuring freight services as other OECD countries and therefore this is not a major priority for the United States. U.S. merchandise trade exports and imports are derived from customs documents, which value exports at free-alongside-ship (FAS) value and imports at customs value, both FOB-type valuations. Therefore, BEA does not derive a CIF to FOB adjustment. Instead, BEA measures freight exports using information on the tonnage and value of goods traded, freight rates, and air freight revenues derived from BEA surveys of ocean and air carriers, and other sources, and measures freight imports using information on freight and insurance charges received by foreign-operated ocean and air carriers, with an estimate of insurance payments removed.
Zambia	Answer obtained through COMESA	No	Due to the valuation methods recommended by IMTS 2010 there has not been interest on invoice value analysis,

			Though on exports the invoice value and FOB are likely to be the same, except on imports if valuation is on FOB basis.
Zimbabwe	Answer obtained through COMESA	No	
ECB	-		
Eurostat	-	No	

3. Existing materials

3.1. Ongoing discussion since the last update of SNA and BPM: a summary

96. **At the end of 2011, Anne Harrison, Editor of the 2008 SNA brought to the attention inconsistencies in guidance on how to record freight and insurance costs between national and international economic accounts.** This issue, directly related to the valuation of imports and exports of goods, was first discussed in a 2012 BOPCOM paper. At that time, IMF Statistics Department did not favor introducing any changes to *BPM6* to address this apparent inconsistency, in part because the balance of payments treatment is long-established.

97. **The discussion on valuation of imports and exports of goods was then deferred for clarification by the *Intersecretariat Working Group on National Accounts (ISWGNA)* and the AEG.** The conclusions of the 2013 AEG meeting recognized that, while both *2008 SNA* and *BPM6* recommend recording the imports and exports of goods at FOB values, the *2008 SNA* does not fully reconcile the FOB valuation principle with the principle of output valuation at basic prices. The AEG conclusions recommended that in the longer term, the agreed change of ownership principle should be applied consistently across the SNA, BPM, and IMTS.

98. **The discussion on the valuation of imports and exports of goods has recently appeared in various fora, in particular on the proposal to use transaction values by Statistics Netherlands and Germany's Bundesbank.** Haan and Hiemstra, Statistics Netherlands, presented a paper at the 2017 AEG. The conclusions of the 2017 AEG meeting, recognized that the use of transaction values for the valuation of exports and imports of goods is not consistent with the current SNA guidance, but recommended an assessment of country experiences in CIF-FOB recording by the ISWGNA and to develop a guidance note as part of the research agenda on globalization.

A Twenty-Fifth BOPCOM Meeting (2013)

99. **The discrepancy concerning the treatment of transport costs between the supplier and the purchaser of goods in the 2008 SNA and BPM6 was first addressed by Anne Harrison in a 2012 BOPCOM paper²⁰.** This paper notes that *BPM6* uses the concept of uniform valuation, determined by pragmatic considerations given that the main data source is customs documentation, and draws attention for special cases that would be better addressed with further guidance, mainly referring to transport of goods for processing and merchant goods. Concerning the national accounts, the paper refers that in the 1993 revision of the SNA the transport cost was integrated in the value of the goods being supplied, unless the purchaser paid an explicit cost for delivery (basic price). Chapter 14 of the *2008 SNA* recommends that the transportation is recorded as a service if separately invoiced, and is treated as an import or export as appropriate only when a non-resident unit is involved. Three questions need to be answered to determine how the flows are recorded: (i) where is the unit providing the transport services resident?; (ii) where is the unit requesting the transport services resident?; and (iii) is the provider of the goods being transported charging the purchaser explicitly for transport?

²⁰ Harrison, Anne, "FOB/CIF Issue in Merchandise Trade/Transport of Goods in BPM6 and the 2008 SNA", paper presented at 2012 BOPCOM <http://www.imf.org/external/pubs/ft/bop/2012/12-30.pdf>. (BOPCOM 12/30), rescheduled in January 2013.

100. **Anne Harrison's paper presents four options to bring the SNA and BPM into strict consistency.** The four options are transcribed below.

*(i) **The SNA could change its recommendation on the treatment of domestic transportation back to what it was before the 1993 edition, that is to always treat it as a service and never integrated with the value of the good.** Given that the new system has been in place for more than a decade, it is unlikely that SNA compilers would be enthusiastic about this. Further, ESA95 is based on the 1993 SNA and has the force of law within Europe. EU countries could not change back without a change to the appropriate legislation. This option therefore hardly seems worth pursuing. While moving away from the option discussed in chapter 28 would not require a change in legislation, it would run counter to practice common in a number of countries.*

*(ii) **The SNA recommendation could, if necessary, be changed to be strictly consistent with BPM6 when transactions with non-residents were concerned.** This would require some clarification of BPM6 first on items such as goods for processing and merchant goods. However, it would introduce consistency between the SNA and BPM at the price of inconsistency of treatment within the SNA on domestic transactions in goods as compared with international transactions in goods and a move away from transactions prices as the general basis for valuation in an important set of instances. This too would be likely to meet with considerable opposition from national accountants.*

*(iii) **The SNA and BPM could stay as they are but with the inconsistencies are explained by a supplementary table** showing how imports CIF are converted to imports FOB by showing how much of the difference is a rerouting and how much is a reclassification from goods to services. The extra clarification on goods for processing and merchant goods would still be necessary as input to this calculation.*

*(iv) **The last option would be to consider amending the BPM guidelines.** It would be possible to say that the recordings suggested in table 14.3A are conceptually correct, but because of the difficulties of answering the three questions listed above in description of that table, by convention, all imports of goods are treated as falling into one of the 2a, 2b or 2c classes. However, there are two possible reasons to explore whether this convention should continue to be applied universally. The first of these has to do with the global imbalances reported in BOPSY. The second is a consideration about how the nature and cost of transporting goods has changed with the advent of containerisation.*

101. **Anne Harrison's paper further discusses that the process of adjusting CIF to FOB valuation might need re-examination.** According to the author, in many countries the CIF to FOB adjustment is based on long established proportions with an uncertain basis, that are out of date, and the adjustment might have become even more inaccurate with the advent of containerization and the effects on the freight and insurance costs.

102. **The 2012 BOPCOM Summary of Discussion noted that FOB valuation was included in several previous BPM and with the implementation of BPM6 this was not the suitable moment to introduce changes in valuation of goods.** This issue would be discussed in the next AEG Meeting (2013).

B Eighth AEG Meeting (2013)

103. **A paper²¹ presented to the 2013 AEG recognized that the 2008 SNA and BPM6 are in alignment concerning the FOB valuation of international transactions in goods.** However, this paper notes that the recording of international transactions in goods in the 2008 SNA is an exception from the change of ownership accrual principle used elsewhere in the system. In the case of survey based data, the change of ownership accrual is broadly the basis of the source data (e.g., Intrastat used in the EU, as explained in Appendix 3.2); thought, if the main data source is based on customs records, the recording and valuation are set at border crossing.

104. **This paper suggested that there is a need for clarifying the guidance in the 2008 SNA concerning the valuation of international goods transactions, regarding the recommendations provided in Chapters 3 and 26 on one hand, and Chapter 14 on the other.** While Chapters 3 and 26 state that the recording standard for goods in international trade is FOB, Chapter 14 can give the impression that transactions for goods in international trade are to be valued and recognized at transaction prices when the change of ownership takes place. The paper provides additional arguments for applying the change of ownership accrual principle regardless the residency of the transactors, including the continued evolution of the international trade agreements, with an increasing number of customs unions where customs declarations are no longer available; the increased complexity of supply chains, where transport and insurance arrangements are an important component; and the use of basic prices to value output in the SNA, including for transport and insurance that are not separately invoiced.

105. **The conclusions of the 2013 AEG noted that both the 2008 SNA and BPM6 recommend recording imports and exports of goods at FOB value and recognized that the 2008 SNA does not fully reconcile the FOB principle for the valuation of exports with the principle of output valuation at basic prices.** Additionally, the 2013 AEG agreed that, in the longer term, the change of ownership principle should be applied across the SNA, BPM, and Foreign Trade Statistics with the full involvement of all these partners.

C Eleventh AEG Meeting (2017)

106. **A paper presented to the 2017 AEG proposed the recording of imports and exports of goods in the national accounts and SUTs based on the actually observed transaction values, due to data limitations.** In this paper²², Hiemstra and de Haan argue that the information obtained from the merchandise trade statistics to convert the invoice values to FOB values and to estimate the CIF to FOB adjustment is in general of low quality or unavailable, and illustrate that the valuation principle of FOB (exports) and CIF (imports) may lead to inaccuracy of the trade balances and asymmetries, and is not consistent with the SNA principle of recording on ownership transfer basis. Additionally, the authors note that information on the residency of the carrier involved and on the terms of delivery is needed to estimate the corresponding adjustment in the trade of services, and may not be readily available. The recording of goods valued at transaction values is expected to prevent inconsistencies in the recording of trade flows of goods and services.

²¹ 2013, *The treatment of freight and insurance in international trade*, paper presented to the 2013 AEG. <https://unstats.un.org/unsd/nationalaccount/aeg/2013/M8b-8.pdf>

²² Hiemstra and de Haan, 2017, *CIF-FOB recording of imports and exports in the national accounts and the balance of payments*, paper presented to the 2017 AEG. https://unstats.un.org/unsd/nationalaccount/aeg/2017/M11_9_2_CIF_FOB_Recording.pdf

107. **This paper recommends the adoption of transaction values for recording exports and imports in the national accounts and balance of payments statistics.** This treatment would imply not having a uniform valuation principle for recording international trade in goods, but in practice would avoid detailed data modifications that can easily lead to lower quality results and disturbances in the trade data.

108. **The conclusions of the 2017 AEG recognized that the use of transaction prices for exports and imports of goods is not consistent with the current SNA recommendations,** but recommended an assessment of country experiences in CIF to FOB recording by the ISWGNA to develop a guidance note as part of the research agenda on globalization.

D OECD WPTGS 2018 Meeting

109. **A 2018 paper presented by Walter²³ to the OECD WPTGS argues that the valuation concept for exports and imports and the related transportation services need to be updated to better incorporate current transportation procedures.** The author argues that the concepts currently in use were designed when goods moved between countries under strict customs controls and goods were reloaded from one mean of transport to other at the borders. Currently, the goods move around with reduced customs controls and in containers, making the separation of transportation costs into three parts (i.e., up to the border of the exporting country, between the borders of partner countries, and inside the importing country) less natural, and the use of CIF and FOB-type valuations less common.

110. **The current valuation principles force compilers to set up resource and cost intensive methods to calculate the CIF to FOB adjustment.** In a first stage, transaction values are adjusted to CIF or FOB valuation. Then, CIF valued imports are adjusted to FOB, using a diversity of methods based on information on the type of good, disaggregated quantities, partner countries, modes of transport and freight rates, obtained from several sources (e.g., IMTS, transport statistics, specialized publications, surveys). In a second stage, the calculated total amount of transportation services between the border of the exporting and importing country is split into services rendered by residents and by non-residents, based on information that can be obtained in surveys. According to the author, this adjustment is in general based on estimated information and requires assumptions on transactions between non-residents without readily available information. As different estimation methods are used by countries, this procedure might result in asymmetries.

111. **According to this paper, an approach based on invoice values would avoid many of the current problems related to the valuation of international trade and would reduce overall asymmetries.** Using this approach, imports and exports would be recorded using their invoice values, and transport services would be recorded if a market transaction between a resident and a non-resident rendering the transport took place. According to the author, the advantages of this approach include: (i) no estimates are needed, avoiding asymmetries caused by the current estimations; (ii) the data can be extracted directly from the company's accounts; (iii) the data requirements for compilers are reduced, since no additional information is needed for estimates; (iv) the compilation of freight transportation would be disconnected from IMTS, as weights and terms of delivery would no longer be needed; (v) the problem

²³ Walters, 2018, *Measuring merchandise and international freight transportation costs in the Balance of Payments*, paper presented to the OECD Working Party on International Trade in Goods and Trade in Services Statistics (WPTGS) [https://one.oecd.org/document/STD/CSSP/WPTGS\(2018\)8/en/pdf](https://one.oecd.org/document/STD/CSSP/WPTGS(2018)8/en/pdf).

of geographical allocation of transport in cases where direct observations in the compiling country is not possible is avoidable; (vi) data on freight could be easily combined with merchandise data following the country of origin and/or the country of consignment concept; (vii) the invoice concept would better fit in with other components which are relevant in case of trade or international transportation, like processing and merchanting; (viii) the invoice approach would be in line with current recommendations of the 2008 SNA regarding the valuation of goods and related transportation services inside the economic territory; (ix) the invoice approach would be in line with the 2008 SNA recommendations provided in Chapter 14 concerning the cases in which customs data are not available; (x) the invoice approach would foster consistency between the SNA and BPM; and (xi) the invoice approach would be an advantage to users, as it would reflect more closely the economic reality. The breaks in the time series resulting from the adoption of this approach would be one of the main disadvantages.

E Thirty-second BOPCOM Meeting (2019)

112. **The results of the 2019 IMF-OECD Stocktaking Survey were presented to the 2019 BOPCOM**²⁴. This paper summarizes the discussion related to the valuation of imports and exports of goods and outlines the emerging views from recent research into trade-related issues. It focuses on the proposals by Statistics Netherlands and Germany's Bundesbank to use invoice values, and the joint investigations by IMF and OECD via a stocktaking survey and follow-up reconciliation exercise (both in 2019), to gauge countries views on the merits of the proposal. It also brings complementary information on the CIF to FOB adjustments from the IMF-OECD databases, as well as trade-related World Customs Organization's (WCO) recommendations.

113. **The results of the joint IMF-OECD survey show that the majority of respondents expressed reluctance in supporting the change to using transaction values, owing mainly to practical considerations** (these results are described in more detail in Section 2.2). The subsequent reconciliation exercise found that the difference between FOB and transaction values not significant in the pilot countries. The paper recommends analyzing and improve the method currently used to compile CIF to FOB adjustment, and to foster inter-agency and country cooperation, as well as adopt the Unique Consignment Reference to reduce trade asymmetries.

3.2. Valuation of imports and exports of goods in the National Accounts

114. **The next paragraphs present the recommendations of the 2008 SNA on the valuation of imports and exports of goods**, concerning both the sequence of accounts and the SUT framework. The general recommendations on time of recording, valuation, and valuation methods are addressed as background information.

A 2008 SNA recommendations – sequence of accounts

²⁴ BOPCOM 19/15 paper: Asymmetries Arising from the CIF-FOB Adjustments in Recording International Trade in BPM6 and 2008 SNA, Ongoing Investigations, Including the Use of Invoice Values, available here: <https://www.imf.org/external/pubs/ft/bop/2019/pdf/19-15.pdf>

Time of recording and general valuation principle

115. **In the 2008 SNA, the recommended time of recording of acquisitions of goods is the moment when the economic ownership of the goods changes.** Imports and exports of goods should be recorded in the national accounts when change of ownership occurs. In the case of absence of data sources specifying the date of change in ownership, it is assumed that the goods will cross the frontiers of the exporting and importing countries close to that moment. Trade statistics based on customs documents reflecting the physical movement of goods across the national or customs frontier may therefore be used as an approximation. Services are recorded in the national accounts when they are provided. (2008 SNA, paragraphs 3.169-3.170).

116. **Market prices are the basic reference for valuation in the SNA.** Market prices are the amounts of money that willing buyers pay to acquire products from willing sellers, in exchanges between independent parties, based on commercial considerations, after taking into account any rebates, refunds, or adjustments from the seller. In the absence of market transactions, valuation in the SNA framework is made according to costs incurred or by reference to market prices of analogous goods and services. Transactions are therefore valued at the prices agreed by the economic units. (2008 SNA, paragraphs 2.59 and 3.119-3.121).

117. **The 2008 SNA recommends recording the output of products at basic prices (if not feasible, at producers' prices) and the use of products at purchasers' prices.** As producers and users perceive the value of a product differently due to the existence of taxes and subsidies on products, transport costs, and trade margins, the SNA records all uses at purchasers' prices including these elements, but excludes them from the output value, to keep the recorded transactions as close as possible to the views of the units involved. Concerning transport costs, the basic and producer' price exclude any transport charges invoiced separately by the producer, while the purchaser' price includes any transport charges paid separately by the purchaser. (2008 SNA, paragraphs 3.145-3.148).

Valuation of imports and exports of goods

118. **Imports and exports are recorded in the national accounts at the border values, and valued FOB (at the exporter's custom frontier).** The 2008 SNA recognizes that it may not be possible to obtain FOB values for detailed product breakdowns, and so the imports of goods may be recorded at CIF values (at the importer's custom frontier), supplemented with global adjustments to FOB values (i.e., insurance and freight charges incurred between the exporter' and importer's frontier). The 2008 SNA further recognizes that the invoice value may differ from both of these. (2008 SNA, paragraph 3.149).

119. **The 2008 SNA recommends output to be measured at basic prices and imports and exports of goods to be valued at FOB.** In this sense, the recommendations concerning valuation of domestic and international transactions are not fully reconciled. While the valuation at basic prices implies that freight and insurance services costs are included or excluded depending on the specific agreement of units involved in the transaction (i.e., if the services are separately invoiced by the producer), the FOB valuation of imports and exports of goods implies the use of an uniform valuation point (i.e., value at the customs frontier of the exporting economy).

The Rest of the World accounts

120. **The 2008 SNA states that valuation principles are the same in the SNA and the international accounts, using market values in both cases (or nominal values if market values are**

not observable). In the international accounts, the valuation of exports and imports of goods is a special case where a uniform valuation point is used (i.e., the value at the customs frontier of the exporting economy, the FOB-type valuation). This treatment brings consistent valuation between exporter and importer, and provides for a consistent basis for measurement when the parties may have a wide range of different contractual arrangements. Time of recording and ownership principles are the same in the SNA and the international accounts. In practice, the change of economic ownership of goods is often taken to be when the goods are recorded in customs data. (2008 SNA, paragraphs 26.19-26.20).

121. **The main data source for exports and imports of goods are IMTS data.** While IMTS use a CIF-type valuation for imports, *BPM6* recommends an FOB-type valuation for both imports and exports. Therefore, it is necessary to exclude freight and insurance costs incurred between the customs frontier of the exporter and the customs frontier of the importer, and because of variations between the FOB-type valuation and actual contractual arrangements, some freight and insurance costs need to be rerouted. Adjustments to IMTS data may be needed, to account for different concepts concerning the time of reporting in IMTS and balance of payments statistics (e.g., goods sent on consignment, merchanting, nonmonetary gold, goods entering or leaving the territory illegally, goods procured in ports by carriers, or goods moving physically but where there has been no change of ownership). (2008 SNA, paragraphs 26.49-26.57).

B 2008 SNA recommendations –Supply and Use Tables (SUT) framework

Valuation of imports and exports of goods in the SUT framework

122. **The SUT framework is based on the principle that the amount of a product available for use within the economy in an accounting period must have been supplied either by domestic production or by imports.** The same amount of the product entering an economy must be used for intermediate consumption, final consumption, capital formation (including changes in inventories), or exports. Supply tables and use tables are usually compiled in pairs using a common level of detail and valuation (in general purchasers' prices). Because the uses of products are valued at purchasers' prices and production is valued at basic prices, it is necessary to estimate trade and transport margins, and taxes less subsidies on products, so that both supply and use sides are expressed in purchasers' prices to balance total supply and total use.

123. **The data sources used in SUT compilation use different valuations.** In many countries, (i) production and output are valued at basic prices; (ii) intermediate consumption and final uses are valued at purchaser's prices; (iii) detailed imports are valued CIF; and (iv) exports are valued FOB. In this case, the valuation of imports will require special consideration, as total imports of goods are valued FOB, while imports of goods detailed by product groups to be used in SUT compilation are usually available using CIF valuation (Box 2 explains the difference between FOB and CIF valuation).

Transport margins

124. **In the SUT framework, total supply and total use are usually balanced raising total supply to purchasers' prices.** To arrive at a common valuation at purchasers' prices, trade margins, transport margins, and taxes less subsidies on products must be considered. For this purpose, valuation matrices are compiled to bridge the difference between basic and purchaser's prices. This note addresses

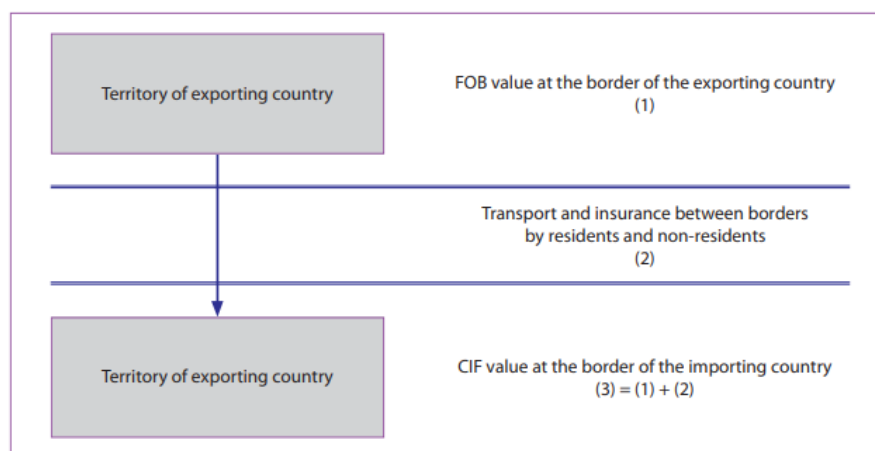
transport margins in more detail. To better understand international transport margins, it is useful to start by analyzing the case of domestic transport charges (2008 SNA, paragraphs 14.44-14.53).

Box 2. Valuation of imports

FOB prices consist of:

- the value of the goods at basic prices;
- plus the related transport and distributive services up to that point of the border, including the cost of loading onto a carrier for onward transportation (where appropriate);
- plus any taxes minus subsidies on the goods exported.

The difference to CIF valuation is explained in the figure below.



Source: information taken from Eurostat, *Manual of Supply, Use and Input-Output Tables*, 2008

125. **The treatment of domestic transport charges in SUTs is different according to the transportation arrangements.** If the producer agrees to deliver the product to the purchaser without explicit charge, the cost of delivery is included in the basic price. Only if the purchaser explicitly invoices for the delivery there is a specific transportation margin that is part of the purchaser's price. As exemplified in Box 3A, the entries in the use table will be different according to the transportation arrangements, depending on the point when change of ownership occurs under the different options. If the producer provides transport to the purchaser, even for a charge, then change of ownership takes place when the product is delivered to the purchaser. If the purchaser arranges for the delivery, then the change of ownership takes place when the product leaves the producer's factory. In the case of domestic transport charges, the information needed for allocating the costs is usually obtained from surveys to domestic establishments. (2008 SNA, paragraphs 14.54-14.60).

126. **In the case of international transport charges, the information needed to allocate the transport costs is usually not readily available from surveys (as in the case of domestic transport charges) as some of the units will be non-resident.** In most cases, customs data are the primary data source, but there is an increasing number of products that circulate without being covered by customs records, including (i) goods circulating in a single customs area that includes several economies (as in the case of the EU, described in Appendix 3.2); (ii) goods delivered to offshore establishments; (iii) certain types of goods with high value and small volume that might be carried by people; and (iv) ships and

aircrafts. The *2008 SNA* distinguishes between products covered and not covered by customs documentation. (*2008 SNA*, paragraphs 14.61-14.62).

Box 3A. Example of the impact on prices of transport charges

Considering the situation where unit A sells a product to unit B, different prices result from the alternative means of moving the product from A to B.

If B collects the product from A, the price charged is 200. The cost of transport is 10. Both A and B can transfer the product from A to B or may use a third party, C, to make the transfer. Ten per cent tax (not Value Added Tax, VAT) is payable on both the cost of the product and the transport costs.

Delivery method	Basic price	Tax	Producer's price	Transport margin +tax on transport	Purchaser's price	Comment
A charges B an all-inclusive price and uses own delivery fleet	210	21	231		231	Transport is an ancillary activity of A
A charges B for delivery but uses own delivery fleet	200	20	220	11	231	Transport is an secondary activity of A
A charges B an all-inclusive price but uses C for delivery	210	21	231		231	C's production is intermediate consumption of A
A charges B for delivery but uses C to deliver	200	20	220	11	231	C's production is intermediate consumption of A
B collects the product from A using own delivery fleet	200	20	220		220	Transport is an ancillary activity of B
B uses C to collect the product from A and deliver to B	200	20	220		220	B buys 2 products; one from A for 220 and one from C for 11
	10	1	11		11	

Source: this example is taken from *2008 SNA*, Table 14.3 and paragraphs 14.55-14.60.

127. **In the case of international transport charges of products not covered by customs documentation, information is obtained from surveys and other sources, and is typically recorded at the prices at which the transactions are actually undertaken.** In this case, the treatment used for domestic transactions in the *2008 SNA* is likely to apply to international transport: if the exporter is responsible for the transport, the exports from the producing economy (and the imports to the purchasing economy) include transport costs; and if the importer is responsible for the transport, the exports from the producing economy (and the imports to the purchasing economy) exclude transport costs. The value of the goods is identical to the exporter and importer, independently of the side that is responsible for the transport. If a third party is hired to transport the goods, its residence is important to determine the value of total imports and exports (as described in Box 3B). As in the case of domestic transport charges, the questions of whether the value of goods covers or not the transport costs depends on whether the importer or exporter is responsible for the transport of the goods (equivalent to change in ownership occurring before or after the transportation). (*2008 SNA*, paragraphs 14.63-14.68).

128. **In most countries, a significant share of information on imports and exports is obtained in customs declarations, due to their general availability and consistency in valuation.** Customs declarations are designed and collected for administrative and taxation purposes, and not necessarily ideal to be used for the compilation of national accounts and balance of payments statistics. (*2008 SNA*, paragraph 14.69).

129. **In customs declarations, imports are usually valued CIF, at the point of entry of the importing economy, and exports are valued FOB, at the point of exit from the exporting economy.** The CIF valuation of imports includes cost, insurance, and freight, and excludes the cost of transport from the border of the importer economy to the premises of the importer. The FOB valuation of exports

includes the cost of transport from the exporter's premises to the border of the exporter economy. If the exporter contracts the delivery, the transport cost is included in the value of the imported goods (and describing this as CIF valuation is not helpful, as it is a part of the cost of the imported goods); the transport is registered as an import of services to the exporter's economy if the contractor is not co-resident. If the importer contracts the delivery and the contractor is not co-resident, an import of services takes place, and it would be desirable to separate the CIF value into the value of the goods and the value of the transport service. If the importer does the delivery or contracts a co-resident, there is no import of services, although it is registered if imports are recorded CIF. To balance this, a fictional export of services of the same amount must be registered. The special cases of merchant goods and goods sent abroad for processing is described in Appendix 3.1. (2008 SNA, paragraphs 14.70-14.72).

Box 3B. Example of the impact on prices of transport charges (other than customs declarations)

Considering the example in Box 3A,

- **If C is co-resident with A and provides a service to A:** this is a domestic transaction and the exports of goods from A's economy will cover the cost of services bought from C.

- **If C is co-resident with A and provides a service to B:** the transport service is registered as exports of services to B's economy.

- **If C is co-resident with B and provides a service to A:** the transport cost is registered as imports of services from B to A's economy which are included in the value of exports from A to B's economy.

- **If C is co-resident with B and provides a service to B:** this is a domestic transaction.

- **If C is not a co-resident with A or B and provides a service to A:** the transport cost constitutes exports of services from C to A's economy, and the value of the goods exported from A to B's economy cover this cost.

- **If C is not a co-resident with A or B and provides a service to B:** the transport cost constitutes exports of services from C to B's economy.

Source: 2008 SNA, paragraphs 14.64-14.67

130. **The 2008 SNA states that imports of goods should be recorded in the supply table at basic prices with taxes and margins added subsequently.** As a generally appropriate valuation of imports of goods at basic prices is not available, the 2008 SNA provides recommendations:

(i) If the data source is not customs documentation, it should be assumed that actual transaction prices are used, and it should be clear whether transport services are separately invoiced or not. If they are, the basic price of goods excludes the value of transport; if not, the basic price value of goods includes transport costs. The purchaser's price will differ from the basic price only because of any taxes payable by the purchaser.

(ii) If the data source is customs documentation and the exporter of the goods is responsible for meeting the transportation costs, the value of the goods at basic prices should include the transport costs. In this case a CIF valuation will approximate the basic price (approximate unless a domestic carrier assumes responsibility for transport from the border of the importing country). The purchaser's price will differ from the basic price only because of any taxes and subsidies payable by the purchaser.

(iii) If the data source is customs documentation and the importer of the goods is responsible for meeting the transportation costs, the value of the goods at basic prices should exclude the transport costs. In this case an FOB valuation will approximate the basic price (approximate because the value of transport from the place of origin to the border of the exporting economy is included in the FOB valuation). The purchaser's price will differ from the basic price because of the transport costs incurred plus any taxes and subsidies payable by the purchaser.

(iv) It may not be possible to determine from customs declarations which unit is responsible for the transport costs, or the resources available may make this process unfeasible in practice. In this case, the CIF value of imports may be the only source with disaggregation by type of good. If the disaggregated CIF figures are used for imports of goods, though, that part of the transport costs and insurance also included in imports of services would be double counted. In order to avoid this, therefore, an adjustment column is inserted into the supply table. The adjustment column consists of a deduction from the services items for transport and insurance equal to the CIF to FOB adjustment for these items with an offsetting global adjustment made to imports of goods. (2008 SNA, paragraphs 14.76-14.77).

131. **The valuation of exports in the use table does not pose such challenges, since exports are uniformly valued FOB in trade statistics.** This valuation is not ideal according to the SNA, since the point of valuation is at the border, and not necessarily when the change of ownership takes place. However, the assumption of change of ownership at the border might be the only practical solution given the available data sources. (2008 SNA, paragraph 14.114).

Flexibility in the SUT

132. **In summary, the parallel between basic and purchaser's prices does not carry forward simply to a distinction between CIF and FOB type valuations when considering the treatment of international transport charges in the SUT framework.** The distinction depends on the unit responsible for the transport costs. In practice, it may not be feasible to determine which unit is responsible for the transport costs, and even if it is possible, the data or resources to separate the transport costs from the value of the good may not be available. In this case, the CIF value of imports may be the only source available with disaggregation by type of good, as needed for SUT compilation (2008 SNA, paragraphs 28.9-28.10).

133. **The CIF to FOB adjustment is further explained in the 2008 SNA, and some flexibility in the compilation method is described.**

(i) The CIF to FOB adjustment shows the reallocation of service margins from the industries where they are produced to an adjustment row for the CIF to FOB adjustment. In the column for goods, the values industry by industry include an element of service margins, that is deducted on the CIF to FOB adjustment row to leave the total equal to the total of imports FOB.

(ii) A simpler procedure (though not strictly consistent with *BPM6* recommendations), is to ignore the balance of payments division between goods and services and adjust the figures for imports of services by the amount of services provided by non-residents that are included in the detailed figures for imports of goods. This ensures that the total of imports of goods and services agrees with the total in the balance of payments but will not agree with the total of imports of goods FOB and of services shown there. This makes compiling the SUTs simpler but means that it is not possible to use imports of goods on an FOB basis to match exports of those goods from other countries. Even in this simpler version, however, the

amount of freight and insurance on imports provided by residents must be shown as an export of services. (2008 SNA, paragraphs 28.10-28.12).

Step-by-step guidance on SUT compilation

134. **The United Nations Handbook on Supply, Use and Input-Output Tables with Extensions and Applications, 2018 (referred here as UN SUT Handbook), provides step-by-step guidance on the SUT compilation.** The handbook refers IMTS as the main data source for imports of goods and either the balance of payments or other specialized statistics on international trade (e.g., business surveys) as the main data sources for imports of services. As there are some differences between the concepts used in IMTS and the 2008 SNA and BPM6, some adjustments are needed to the data to be used in SUT. The main differences include valuation (CIF or FOB valuation of imports), time of recording (especially in the case for items with large values or goods sent on consignment, or other, as merchanting, non-monetary gold, goods entering or leaving the country illegally, goods procured in ports by carriers, and goods moving physically without change in economic ownership), and other special cases as goods sent abroad for processing and direct purchases abroad by residents. (*UN SUT Handbook*, paragraphs 5.59-5.72).

135. **The use of IMTS data in SUT compilation requires adjustments to reconcile the different valuation used for total imports of goods, and for the import data disaggregated by products.** The *UN SUT Handbook* notes that the exposition of the CIF to FOB adjustment in the 2008 SNA is unclear because it starts out from the assumption that the SUTs have been balanced using inconsistent data, namely imports of goods valued CIF, and services as defined as in the BPM6 based on imports being valued FOB. In practice, two types of adjustments are described on the *UN SUT Handbook*: data adjustments prior to enter this data source in the SUT system, and the CIF to FOB adjustment (these are described in more detail in Appendix 3.1). (*UN SUT Handbook*, paragraphs 5.73-5.87).

136. **The main data sources used for compiling exports in the SUT framework are IMTS for goods and balance of payments data for services.** According to the *UN SUT Handbook*, the main challenges in the case of exports are the conversion between the classifications used in IMTS and SUT, adjustments to IMTS in line with BPM6 recommendations (i.e., change in economic ownership and the difference crossing the border), or corporations with exports below the threshold that do not report distribution by products in the case of survey data (the data need to be grossed-up to obtain total coverage). (*UN SUT Handbook*, paragraphs 6.150-6.157).

137. **Several challenges exist in the compilation of transport margins in the SUTs.** According to the *UN SUT Handbook*, obtaining data on transport margins may be complex. For example, the data should cover transport margins according to the SNA definition; a significant part of the transportation activity takes place as ancillary activity in non-transport industries and is not identified in the system; and it is not possible to assess the importance of transport margins relative to the total transport activity in the economy. Data on transport margins can be obtained by special surveys of the purchasers, but the data require a level of detail that represents a burden to the respondents and is not widely available. Four options are considered in the case of unavailability of source data: (i) consider that transport margins are insignificant and are not estimated; (ii) concentrate on products where important transport services are involved (e.g., agricultural and forestry products, energy products, iron and steel products, or construction products); (iii) establish a full matrix of transport margins based on general assumptions about total transport margins and their distribution by products and uses; and (iv) rerouting transport margins by

product and by use, based on the estimates for wholesale trade (this can be done by estimating for each type of transport output the share being transport margins, and record this as input into wholesale trade; output of wholesale trade should be increased by the same amount). (*UN SUT Handbook*, paragraphs 7.89-7.117).

3.3. Valuation of imports and exports of goods in Balance of Payments Statistics

A *BPM6* recommendations on the valuation of imports and exports of goods

Time of recording and general valuation principle

138. **Transactions in goods should be recorded at the time that the change of economic ownership takes place, according to *BPM6* recommendations.** Goods are considered to change ownership when the parties (buyer and seller) enter the goods in their books as a real asset and make the corresponding change to the financial assets and liabilities. However, it is recognized in *BPM6* that the time of recording used in IMTS generally follows customs procedures that record the movements across borders, and the time at which the goods cross borders are only an approximation to the time change in ownership occurs. Therefore, it is further noted that timing adjustments to IMTS might be necessary, when practices in customs data lead to distortions. In fact, there may be lags between the time of export and import of a good, due to transport or transit, and adjustments might be needed to remove recorded movements that do not correspond to a change in ownership or add movements that corresponded in changes in ownership that were not recorded. (*BPM6*, paragraphs 3.44-3.45, 3.61-3.66, 10.26-10.27).

139. **Market prices are the basis for valuation in the international accounts recommended by *BPM6*.** The market price is defined as the amount of money that a willing buyer pays to acquire something from a willing seller, after taking into account any rebates, refunds, adjustments, and so on from the seller. Imports and exports of general merchandise are recorded in *BPM6* at FOB values, which take into account any export taxes payable or any tax rebates receivable. (*BPM6*, paragraphs 3.67-3.69).

Valuation of imports and exports of goods

140. **The principle for valuation of general merchandise in *BPM6* is the market value of goods, at the point of uniform valuation.** The point of uniform valuation is at the customs frontier of the economy from which the goods are first exported, that is FOB. Buyers and sellers are responsible for the terms of delivery of goods, that may vary under each contract, including different arrangements concerning transport and insurance costs and taxes. (*BPM6*, paragraphs 10.30-10.31).

141. **The statistical value used in IMTS is an FOB-type valuation for exports and a CIF-type for imports.** FOB-type valuations include: (i) FOB at port on the frontier of the exporting country (sea or inland waterway transport); (ii) free carrier (FCA) at terminal on the frontier of the exporting country (for means of transport to which FOB is not applicable); and (iii) delivered at frontier of the exporting country (for means of transport to which FOB and FCA are not applicable). In cases where the application of FOB-type values is problematic (e.g., goods under merchanting), a transaction value is used. CIF-type valuations include: (i) cost, insurance, and freight (CIF) at the border of the importing country; and (ii) carriage and insurance paid to the border of the importing country. (*BPM6*, paragraphs 10.32-10.33).

142. **To convert imports from CIF to FOB valuation, the value of freight and insurance premiums incurred from the frontier of the exporting country to the border of the importing country should be deducted.** *BPM6* recommends the CIF to FOB adjustment to be obtained at a detailed level, as the relation of FOB to CIF prices depends on the type of good, weight, scale, special needs, mode of transport, and distance traveled. Additionally, it should be considered that CIF to FOB ratios change over time (e.g., due to fuel prices, competition and technology in transport industry, change in the proportion of types of goods, and changes in the source economy). (*BPM6*, paragraph 10.34).

B *BPM6* recommendations on the treatment of freight and insurance services

143. **The treatment of freight services²⁵ in *BPM6* is a consequence of adopting FOB as the uniform valuation principle for goods.** FOB valuation is considered at the customs frontier of the exporting economy, therefore (i) all freight costs up to the customs frontier are recorded as incurred by the exporter, and (ii) all freight costs beyond the customs frontier are recorded as incurred by the importer. When the arrangements for the payment of freight costs are different from FOB terms of delivery, *BPM6* recommends the rerouting of freight services, which may imply that transactions that are actually between two residents are treated as between residents and nonresidents, and vice versa (examples are included in Appendix 3.1). Additionally, the timing of the provision of freight services may differ from the timing of the change of ownership. In principle, freight services should be recorded in the period they are rendered but are attributed to the importer in the period when the goods are purchased. In practice, due to the aggregated nature of recording of freight services and the lack of information on individual freight movements, timing adjustments in this case may not be feasible, material, or appropriate. (*BPM6*, paragraph 10.78-10.79).

144. **Freight insurance premiums payable on international traded goods before reaching the customs frontier of the exporters' economy are included in the FOB price of the good, and subsequently are treated as payable by the importer.** When the parties have arranged the payment of insurance premiums in a different way from the described, partitioning and rerouting are needed, and these adjustments are of the same nature as those discussed in *BPM6* for freight services. (*BPM6*, paragraph 10.116).

145. **Several methods to estimate freight and insurance premiums on imports to adjust imports of goods from a CIF to a FOB valuation are described in the IMF *Balance of Payments and International Investment Position Compilation Guide* (here referred as *BPM6 Compilation Guide*)** These methods include: (i) use of IMTS data when both CIF and FOB values of imports are recorded, or a sample survey of customs records when both valuations are not recorded; (ii) enterprise survey to collect data from importers on freight and insurance premiums paid on imports; (iii) enterprise survey to collect data on freight from branch offices and agents of nonresident operators; (iv) analyze trade flows, freight, and insurance rates by commodity, mode of transport, and economy with data derived from IMTS and apply freight and insurance premium rates; (v) use an arbitrary ratio approach, for example assuming freight and insurance costs as percentages of the value of imports (method to be avoided); and (vi) extrapolate from resident's experiences collected through enterprise surveys. The *BPM6 Compilation Guide* recognizes that many of these methods are data intensive and may not be feasible on a regular

²⁵ According to *BPM6* (paragraph 10.78), freight services cover the transport of objects other than people.

and timely basis. Therefore, the compiler might need to estimate freight and insurance premiums on imports by (i) calculating ratios of freight and insurance premiums to total imports (or groups of imported commodities) from a detailed analysis, and (ii) extrapolating ratios for more recent periods. This method should consider factors such as changes in freight and insurance rates, capacity, type of transport, and the commodity composition of imports. (*BPM6 Compilation Guide*, paragraphs 12.44-12.46 and table 12.2).

146. **In summary, the valuation, time of recording, and ownership principles are consistent between the 2008 SNA and the BPM6.** In the case of the valuation of imports and exports, a uniform valuation point is used (FOB, at the customs frontier of the exporting economy). This treatment implies a consistent valuation between exporter and importer and provides for a consistent basis for measurement in a situation where the parties may have different contractual arrangements.

3.4. Valuation of imports and exports of goods in International Merchandise Trade Statistics

147. **IMTS 2010 recommends the valuation of exports of goods using FOB-type values, and the valuation of imports of goods using CIF-type values.** A summary of the recommendations *IMTS 2010* concerning valuation of imports and exports of goods is provided in Appendix 3.2.

Appendix 3.1 Valuation methods for imports and exports of goods in national accounts and balance of payments

A Valuation methods in the 2008 SNA

The different sets of prices defined in the 2008 SNA reflect the effects of taxes and subsidies on products and transport charges on the valuation of transactions of goods and services. Basic prices, producers' prices, and purchasers' prices are defined in the 2008 SNA as:

- (i) the basic price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale; it excludes any transport charges invoiced separately by the producer;
- (ii) the producer's price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any VAT, or similar deductible tax, invoiced to the purchaser; it excludes any transport charges invoiced separately by the producer;
- (iii) the purchaser's price is the amount paid by the purchaser, excluding any VAT or similar tax deductible by the purchaser, in order to take delivery of a unit of a good or service at the time and place required by the purchaser; it includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

The basic price reflects the amount received by the producer, and therefore excludes any taxes on products that are received and passed to the government, and includes any subsidies received and used to lower the price charged. The producer price is the amount that the producer invoices to the purchaser, excluding VAT but including taxes on products, and excluding subsidies on products. Transport charges that are separately invoiced are excluded from basic and producer prices. The purchaser price is the amount paid by the purchaser, excluding VAT or other tax deductible by the purchaser. The transport charges paid separately by the purchaser are included in the purchaser price. Additionally, it must be considered that the purchaser might buy the goods directly from the producer or from a wholesaler or retailer, and in the latter case trade margins should also be added to the purchaser price. The example in Box A.1 illustrates the differences among the several sets of prices. (2008 SNA, paragraphs 2.62 and 6.51-6.68).

B The SUT framework

International transport charges in the SUT framework – special cases (2008 SNA, paragraphs 14.73-14.75)

Transport of merchanted goods

Merchanting is a process in which a unit in economy X purchases goods from economy Y to sale in economy Z: the goods legally change ownership but do not enter the economy where the owner is resident.

The acquisition of the goods intended for resale is registered as negative exports, and when the goods are sold are registered as (positive) exports.

- If the acquisition and sale take place in the same accounting period, the difference shows an addition in exports.

- If the sale does not take place in the same period as the acquisition, the negative exports are offset by an increase in inventories of goods for resale. When the goods are sold, the exports are offset by a withdrawal from inventories, valued at the date of the withdrawal (the change in price is a holding gain or loss).

The services provided to transport the goods should be recorded consistently with the recommendations described in the previous paragraphs.

Box A.1. Example of different sets of prices

Imagine the following situation:

An enterprise produces cigarettes. The value of the total production costs and the enterprise profit for a packet of cigarettes is 200 units. The enterprise must pay an excise duty, which is 20% applied to the value of each packet. The packet of cigarettes is sold to a retail trader. The transport cost is valued at 10 units and the trade margin is 20 units. In the country, the VAT is 20%.

The final consumer of the packet of cigarettes pays 324 units.

Evaluation at **basic price** = 200 units.

Evaluation at **producer's price** = production at basic price + taxes on products = $200 + (20\% \times 200) = 200 + 40 = 240$ units.

Evaluation at **purchaser's price** = production at producer's price + transport cost + trade margin + VAT = $240 + 10 + 20 + [(240 + 10 + 20) \times 20\%] = 324$ units.

Source: this example is taken from Eurostat, *Essential SNA: Building the basics*, 2014.

Transport of goods sent abroad for processing

Goods sent abroad for processing refer to goods sent from economy X to economy Y for processing without changing ownership, after which they are returned to economy X.

The goods sent abroad for processing are not registered as exports of goods from X to Y or subsequently from Y to X, and only the processing fee is registered as an export of services from Y to X. However, there are transportation costs in both movements, that must be registered as transportation services.

- If X is responsible for transport in either movement, the cost is an import of X's economy, unless it is carried out by X or a co-resident.

- If Y is responsible for the transport in either movement, the cost is an import of Y's economy, unless it is carried out by Y or a co-resident. In the cases Y is responsible for transport, the costs are covered by the processing fee and included in the value of exports of services from Y to X.

Use of IMTS data in SUT compilation (UN SUT Handbook, paragraphs 5.73-5.87)

The use of IMTS data in SUT compilation requires adjustments to reconcile the different valuation used for total imports of goods, and for the import data disaggregated by products. The *UN SUT Handbook* notes that the exposition of the CIF to FOB adjustment in the *2008 SNA* is unclear because it starts out from the assumption that the SUTs have been balanced using inconsistent data, namely imports of goods valued CIF, and services as defined as in the *BPM6* based on imports being valued FOB. In practice, two types of adjustments are described on the *UN SUT Handbook*:

(i) Data adjustment

This adjustment is made to the balance of payments data prior to entering this data source in the SUTs system and is necessary to start from a consistent set of data for imports and exports of goods and services that can be balanced across the SUTs. This adjustment is made at the product level, and the starting point is the rest of the world account, with imports of goods valued FOB. The adjustment consists of the values of the services that are linked to the difference between the FOB and CIF values and includes costs of transportation, insurance, and other expenditures between the point of exit of the exporter's economy and the point of entry into the importers' economy.

These services can be delivered by resident or non-resident producers. If non-resident producers are involved, the imports of services must be reduced with their services to avoid double counting, as these services are included in the CIF value of the imported goods. Adjustment for the services delivered by resident producers is more complex, as a service that according to the *BPM6* definition is a domestic transaction should appear as an import of services included in the CIF value of imported goods. As this import originates from resident producers, it is necessary to introduce a balancing service export of the same value. The balance of the adjustment items is zero.

The composition by specific services making up the CIF and FOB difference will usually be available from the working tables of the balance of payments compilers, as the starting point for the FOB recording of imports will usually have been imports of goods from the external trade statistics valued at CIF. Regular surveys may also have been conducted to inform about the CIF and FOB difference and the related service structure.

(ii) The CIF and FOB adjustment row

The CIF to FOB adjustment is an *ex post* adjustment made to the totals for exports and imports of goods and services to derive the corresponding totals found in the SNA (the goods and services account and the rest of the world account). The purpose of this adjustment is to demonstrate that the data in SUTs are consistent with the sequence of accounts data and to avoid double-counting of CIF type services provided by residents. These adjustments mirror those that were made as data adjustments at a detailed level.

C The *BPM6* approach on the valuation of imports and exports of goods.

Examples of Treatment of Freight Services (BPM6, Box 10.3. Numerical Examples of the Treatment of Freight Services)

Below are transcribed the examples of treatment of freight services included in Box 10.3 of *BPM6*.

A piece of equipment costs 10,000 units at the factory at which it was produced in Economy A. It costs 200 to transport it to the customs frontier of Economy A, 300 to transport it from the customs frontier of Economy A to the customs frontier of Economy B, where a customs duty of 50 is levied, and it costs 100 to deliver it from the customs frontier to the customer. (For simplicity, insurance of the equipment during transport is not covered in the example.) Under all contractual arrangements between the parties, the FOB value is 10,200 and the CIF value is 10,500. However, how the services are recorded depends on the arrangements for paying the transport costs and the residence of the transport provider. A few of the possible arrangements are discussed below:

Example 1:

The parties contract on an FOB basis (i.e., the invoice price is 10,200; the exporter is responsible for costs up to the frontier of A and the importer is responsible for subsequent costs). In this case, no rerouting needed. All freight is shown as being provided by the actual provider and payable by the actual invoiced party.

Example 2:

The parties contract on an “ex works” basis (i.e., the invoice price is 10,000; the buyer pays for transport from the seller’s premises).

- The freight from the factory to the customs frontier of Economy A is provided by a resident of Economy A. The 200 payable, which is actually a service provided by a resident of Economy A and payable by a resident of Economy B, must be rerouted to be shown as a resident-to-resident transaction within A, as all costs up to the frontier of the exporting economy are treated as being payable by the exporter and included in the price of the goods.

- The freight from the factory to the customs frontier of Economy A is provided by a resident of Economy B. The 200 payable, which is actually a domestic service transaction within Economy B, must be rerouted as being a service provided from B to A, as all costs up to the frontier of the exporting economy are treated as being payable by the exporter.

Example 3:

The parties contract on a CIF basis (i.e., the invoice price is 10,500). The 300 payable for freight from the customs frontier of Economy A to that of Economy B is rerouted, because the contract makes it payable by the exporter, but it is treated as payable by the importer in balance of payments statistics (i.e., following FOB valuation). As a result, if the freight provider is a resident of A, a domestic transaction within A is treated as being a balance of payments transaction. Conversely, if the freight provider is a resident of B, an international transaction is treated as being a domestic transaction within B. It is not normally possible to study every contract, so general patterns of freight cost arrangements need to be identified. When contract terms other than FOB are used, actual payment arrangements for freight may need adjustments to meet the FOB valuation convention.

In all cases where apparently domestic transactions are rerouted to be recorded as international transactions, or vice versa, goods trade must be recorded on a consistent basis, so that the financial payment from B to A equals the sum of its goods and services imports, both before and after re-routing adjustments. (If the goods are recorded at FOB values, the adjustments to freight bring them into consistency with goods; if the goods are recorded at transaction values, the goods values need

corresponding adjustments.) Rentals, charters, or operating leases of vessels, aircraft, freight cars, or other commercial vehicles with crews for the carriage of freight are included in freight services. Also included are towing and services related to the transport of oil platforms, floating cranes, and dredges. Financial leases of transport equipment are excluded from transport services (see paragraphs 5.56– 5.59 and 10.17(f)).

Appendix 3.2 IMTS valuation. Data collection in the European Union (EU).

A statistical value should be recorded for all goods covered in IMTS, according to the *IMTS 2010*.

The main source of information for establishing the statistical value is the customs value, placed on goods by customs administrations according to national and other relevant regulation. It is recommended that countries adopt the WTO Agreement on Customs Valuation as the basis for valuation of their international merchandise trade for statistical purposes. This Agreement adopts the transaction value (the price actually paid or payable for goods, including some adjustments) as the customs value of imported goods, provided that certain conditions for a fair, uniform and neutral valuation are met. Additionally, this Agreement allows countries to include or exclude from the customs value (in whole or in part) components as (i) the cost of transport of the imported goods to the port or place of importation; (ii) loading, unloading and handling charges associated with the transport of the imported goods to the port or place of importation; and (iii) the cost of insurance. Therefore, the transaction value can be defined differently depending on the country customs practices, and cover partially or completely the cost of services performed to deliver the goods. (*IMTS 2010*, paragraphs 4.1-4.5; *IMTS 2010-CM*, paragraphs 14.6-14.7).

Under the WTO Agreement on Customs Valuation, countries can choose two approaches to the valuation of goods: FOB-type or CIF-type valuation. FOB-type values include the transaction value of the goods and the value of services performed to deliver goods to the border of the exporting country. CIF-type values include the transaction value of the goods, the value of services performed to deliver goods to the border of the exporting country, and the value of the services performed to deliver the goods from the border of the exporting country to the border of the importing country. *IMTS 2010* recommends (i) the statistical value of exported goods to be an FOB-type value; (b) the statistical value of imported goods to be a CIF-type value. Additionally, it encourages countries to compile FOB-type value of imported goods as supplementary information. (*IMTS 2010*, paragraphs 4.6 and 4.8).

In general, countries use FOB-type²⁶ values for the valuation of exports and CIF-type²⁷ values for the valuation of imports. FOB-type values provide a uniform basis for goods valuation (i.e., single point of valuation for exports and imports, the border of the exporting country's statistical territory). The FOB-type values of imports are more difficult to compile and are systematically applied by a limited number of countries. Countries that compile only CIF-type values for imported goods are encouraged to compile separate data for freight and insurance, at the most detailed commodity and partner level possible. However, it is recognized in *IMTS 2010* that the compilation of imports on the FOB-type basis and the separate compilation of data for freight and insurance may entail a significant additional burden for

²⁶ The delivery term FOB applies only when goods are dispatched from the exporting country by sea or inland waterway. When other means of transport are used for exports and FOB is not applicable, the term "free carrier" (FCA) at port of export can substitute for it; if neither FOB nor FCA is applicable (e.g., exports by railroad or pipeline), the term "Delivered at frontier" (DAF) of the exporting country may be used. Since the invoice prices of the goods delivered under the FOB, FCA and DAF terms reflect the costs of delivery of goods to the border of the exporting country, they are similar and are referred to as FOB-type values. (*IMTS 2010*, paragraph 4.10).

²⁷ The delivery term CIF applies only when goods are delivered by sea or inland waterway to the port of importation. If, in the case of imports, CIF is not applicable, the goods can be delivered on the basis of "carriage and insurance paid to" (CIP) at port of importation. Since the invoice prices of the goods delivered under the CIF and CIP terms reflect the costs, including freight and insurance, of goods delivery to the border of the importing country, they are similar and are referred to as CIF-type values. (*IMTS 2010*, paragraph 4.10).

respondents and compilers and should be undertaken based on national situations and needs. Countries are encouraged to explore additional methods which can facilitate the compilation of FOB-type values of imports. (*IMTS 2010*, paragraphs 4.7 and 4.9).

Statistical value and invoice price are two different concepts. The invoice price represents an expected direct monetary payment to the seller and may not take account of other payments which should be included or excluded from the transaction value. Therefore, the invoice price is usually only a starting point for the derivation of the customs and statistical values and is adjusted as needed. Further, the invoice value depends on the terms of delivery of the goods and may include various service components. Therefore, when estimating the statistical value, IMTS compilers should have information about the delivery terms, so that the specific items and their costs included or not included in the invoice price can be identified and the recommended statistical value can be obtained. (*IMTS 2010-CM*, paragraph 14.8-4.9).

Compilers make appropriate adjustments to the invoice price to obtain CIF or FOB-type values of goods when these are not available from customs or other sources. The terms of delivery are an agreement between the seller and the buyer, determining who is responsible for the cost and risk of delivering the goods to the agreed place, and types of terms of delivery used in international commerce, including FOB and CIF, are defined by the International Chamber of Commerce. In general, customs administrations require FOB or CIF-type values be reported on the customs declarations by traders or, if necessary, customs calculate those values based on the various documents submitted by traders. These supporting documents may include the contract of sale, that normally contains the terms of delivery of goods and the price of the goods, and the invoice issued by the seller of the goods to the buyer. The price of the goods negotiated between traders and reflected in the invoice (also referred to as invoice price) depends on the terms of delivery. If terms of delivery other than CIF or FOB-type values are used (e.g., “ex works”, or “free alongside ship”), other sources of data need to be used to establish the FOB-type or CIF-type value by adding to or subtracting certain cost items from the invoice price. (*IMTS 2010*, paragraphs 4.10-4.11).

IMTS data are the main data source on trade in goods for the balance of payments and national accounts. However, there are conceptual differences concerning the coverage, time of recording, valuation and classification of goods transactions between IMTS and the balance of payments that require adjustments to IMTS data. The main conceptual difference is that IMTS are based on the general principle to record all goods that add to or subtract from the stock of material resources of a country by entering (imports) or leaving (exports) its economic territory, while the recording of transactions in the balance of payments is based on the principle of change of ownership between residents and non-residents. Concerning time of recording, in practice, for *BPM6*, the timing of the change of ownership is usually assumed to be approximately the same as the time of customs recording. Regarding valuation, for IMTS, it is recommended that the statistical value of exported goods be an FOB-type value and the statistical value of imported goods be a CIF-type value. *BPM6* requires that imports and exports be valued at a point of uniform valuation, which is at the customs frontier of the economy from which the goods are first exported. Hence, while IMTS recommends CIF-type valuation for imports, balance of payments and national accounts require an FOB-type valuation for imports. (*IMTS 2010*, paragraphs F.1-F.16).

The *International Merchandise Trade Statistics Compilers Manual (IMTS 2010-CM)* refers customs declarations as the main source of trade data in most countries. Customs declarations may exist in

different forms, including printed documents or electronic form (e.g., using the Automated System for Customs Data, ASYCUDA). The data requirements of customs may not always fulfill all statistical needs, and simplified declarations may be used for certain goods that are not strictly controlled and are declared in less detail or made exempt from reporting requirements, or in the case of values or quantities below a certain customs-defined or statistical threshold.

To ensure full coverage of IMTS, several non-customs data sources are used to complement customs-based data, especially in the case of economies with more advanced statistical systems or that have abolished customs controls. The alternative data sources include: (i) parcel post and letter port records; (ii) aircraft and ships registers; (iii) enterprise surveys; (iv) foreign shipping manifests; (v) currency exchange records and records of monetary authorities; (vi) reports of commodity boards; (vii) administrative records associated with taxation; (viii) data exchanges between countries. (*IMTS 2010-CM*, paragraphs 3.1-3.28).

A IMTS valuation: compilation of the statistical value

Statistical value of imported goods (IMTS 2010-CM, paragraphs 14.10-14.22)

As discussed in the main text, the customs value of imported goods may include or not the value of the services required for inclusion in the statistical value of imported goods (i.e., insurance and freight). If all the required costs are included in the customs value, then the customs value is the statistical value. Otherwise, compilers need to add (and estimate) these costs to the customs value to obtain the statistical value. The customs value for imports should be accepted as the statistical value if: (i) the customs value was established in accordance with articles 1-8 of the WTO Agreement; (ii) the terms of goods delivery are CIF or CIP, and none of the exclusions from the customs value allowed in article 8 (2) were made. If the terms of goods delivery are not CIF or CIP, the customs value should be accepted as the statistical value, provided that the appropriate adjustments to the invoice price were made by customs or the trader.

Customs are responsible to ensure the calculation of the customs value. In many countries, customs require the importer to complete a special form (declaration of the customs value), that identifies the cost components that are included in the customs value, depending on the terms of delivery. If the customs value deviates from the WTO Agreement requirements or if there is no customs value available, IMTS compilers should derive or estimate the statistical value following the principles of the WTO Agreement.

In general, customs administrations require the FOB or CIF-type value to be placed on the customs declarations by traders or calculate those values based on the documents submitted by traders. The supporting documents submitted by traders may include the contract of sale, that normally contain the terms of delivery and the price of the goods, and the invoice issued to the buyer by the seller of the goods. The price of the goods negotiated between traders and reflected in the invoice (i.e., the invoice price) depends on the terms of delivery (i.e., agreement between the seller and the buyer on who is responsible for the cost and risk of delivering the goods to the agreed place). Terms of delivery used in international commerce include the FOB and CIF-types, and IMTS compilers have to make appropriate adjustments to the invoice price to obtain CIF or FOB-type values of goods if such values are not available from customs or other sources. The required adjustments to the invoice price by terms of delivery to CIF-type are outlined and explained in *IMTS 2010-CM*.

For countries that compile imports of goods using an FOB-type valuation, the adjustments to invoice value are described in *IMTS 2010-CM*. If FOB-type values are not available from the main data source, they can be estimated using actual or estimated freight and insurance costs for transactions that are provided by traders on declarations, supplemented by information on freight and insurance rates from providers of those services. Alternatively, CIF to FOB adjustment factors can be obtained for a sample of imports through supplementary surveys of importers, selected from the imports' declarations. Another possibility is to obtain information on the exported value in cooperation with authorities in the exporting countries, if processing systems and confidentiality rules allow declarations to be accessed.

Adjustment factors can be derived if it is not possible to calculate the FOB value of imports directly. These adjustment factors should be derived in some detail by country, product, and mode of transport, as freight and insurance costs vary with factors such as the commodities involved, mode of transport, size of consignment, and distance between ports, and should be updated frequently as costs vary over time and with the mix of products. If the adjustment factors are derived using samples, the degree of detail is likely to be less than with complete coverage from customs declarations. Adjustment factors are usually expressed as percentages of trade values and are an approximation. The insurance companies that insure goods when they leave a country are possible sources of information on insurance costs.

Statistical value of exported goods (IMTS 2010-CM, paragraphs 14.24-14.28)

IMTS 2010 recommends that an FOB-type value be used as the statistical value of exported goods. Customs administrations enjoy freedom of interpretation in determining the customs value of exported goods. In general, customs require that actual prices paid for the goods and costs of delivery to the border are declared, and an FOB-type customs value can be established. In the absence of price information, customs might require certain substitutes such as the prices of identical or similar goods. In many countries the customs valuation of exported goods is less regulated than valuation of imported goods, and so it is a good practice to make special efforts to assess the compatibility of customs practices of valuation of exported goods with statistical requirements.

The customs value for exports should be accepted as the statistical value, if the transaction value was established in accordance with articles 1 - 8 of the WTO Agreement and the terms of delivery were FOB or FCA. Otherwise, appropriate adjustments should be made to the invoice value. The required adjustments to the invoice price by terms of delivery to FOB-type are outlined and explained in *IMTS 2010-CM*.

B IMTS data collection in the EU

Single administrative document (SAD)

The single administrative document (SAD) is a form used for customs declarations in the EU, Switzerland, Norway, Iceland, Turkey, the Republic of North Macedonia and Serbia. The use of a single document reduces the administrative burden and increases the standardisation and harmonisation of data collected on trade. This form is composed of a set of eight copies with different functions, and a representation of the first copy is included in Box A.2.

https://ec.europa.eu/taxation_customs/business/customs-procedures/general-overview/single-administrative-document-sad_en)

Data collection (IMTS 2010-CM, paragraphs 10.1-10.26)

As customs unions abolish customs controls between the members, customs records become unavailable and new data sources are needed for IMTS compilation. Alternative data sources include administrative records available from taxation (VAT or sales tax) and surveys of exporters and importers. According to *IMTS 2010-CM*, in general, most exports are conducted by medium or large enterprises, that might be a limited number and relatively easily surveyed. The imports of certain goods might be equally concentrated. However, an increasing proportion of imports resulting from direct transactions between consumers and Internet retailers, makes data collection more difficult and costly.

The establishment of the single market in the EU in 1993, raised the need for new data sources for IMTS. The abolishment of customs and customs records in the single market, led to the creation of Intrastat, a specific data collection system for intra-EU trade statistics. The main characteristics of this system are: (i) direct collection of information from consignees and consignors of goods, in form of a monthly summary statement of transactions; (ii) a close link with the VAT system relating to intra-EU trade; and (iii) the reduction of the workload of businesses through a system of exemption or simplification thresholds. Only a minor part of trade (in terms of value) is not collected by Intrastat, as the exemption threshold is set so that each Member State has to guarantee that at least 97 percent of the total value of the dispatches and 95 percent of the total value of its arrivals (which are measured based on VAT declarations) is directly collected.

For the transactions above the threshold, the EU companies are obliged to provide information on intra-EU goods transactions for statistical purposes. The merchandise must be specified according to a commodity classification (Combined Nomenclature), and for each goods item the value and quantity information have to be provided. A major concern for the Intrastat system is the asymmetries in partner reporting. Additionally, the compilation system should consider the data requirements, availability of data sources, and respondent burden. Other challenge for Intrastat is the centralized customs clearance that allows enterprises to declare goods in only one country, while the physical clearance takes place in any country of the customs union. This requires the exchange of information among countries to obtain complete data for trade with countries outside the customs union.

Box A.2 Single administrative document (SAD)

EUROPEAN COMMUNITY					A OFFICE OF DISPATCH/EXPORT						
Copy for the country of dispatch/export	1	2 Consignor/Exporter No			1 DECLARATION						
					3 Forms	4 Loading lists					
					5 Items	6 Total packages	7 Reference number				
		8 Consignee No			9 Person responsible for financial settlement No						
					10 Country first destin.	11 Trading country	13 C.A.P.				
		14 Declarant/Representative No			15 Country of dispatch/export		16 Country of origin		15 C. disp./exp. Code	17 Country destin. Code	
					18 Identity and nationality of means of transport at departure		19 Ctr.	20 Delivery terms			
					21 Identity and nationality of active means of transport crossing the border		22 Currency and total amount invoiced		23 Exchange rate	24 Nature of transaction	
		25 Mode of transport at the border	26 Inland mode of transport	27 Place of loading		28 Financial and banking data					
	1	29 Office of exit		30 Location of goods							
31 Packages and description of goods	Marks and numbers - Container No(s) - Number and kind				32 Item No	33 Commodity Code					
					34 Country origin Code a, b,		35 Gross mass (kg)				
					37 PROCEDURE		38 Net mass (kg)		39 Quota		
					40 Summary declaration/Previous document						
					41 Supplementary units						
44 Additional information: Documents produced, Certificates and authorizations					A.I. Code						
					46 Statistical value						
47 Calculation of taxes	Type	Tax base	Rate	Amount	MP	48 Deferred payment		49 Identification of warehouse			
						B ACCOUNTING DETAILS					
	50 Principal No			Signature:		C OFFICE OF DEPARTURE					
51 Intended offices of transit (and country)	represented by			Place and date:							
52 Guarantee not valid for					Code	53 Office of destination (and country)					
D CONTROL BY OFFICE OF DEPARTURE					Stamp:		54 Place and date:				
Result:							Signature and name of declarant/representative:				
Seals affixed: Number:											
identity:											
Time limit (date):											
Signature:											

Source: this picture is taken from United Nations, *IMTS 2010-CM*.

4. Changes required to the 2008 SNA and other statistical domains

148. **Section 4 identifies the 2008 SNA paragraphs to be updated according to the recommendations of the GZTT.** This section also references the *BPM6* and *IMTS 2010* recommendations which would need to be updated to introduce or retain consistency. This section will be finalized after consideration of all the advantages and disadvantages of the options described, from both a conceptual and practical viewpoint. The input and feedback from CATT and the global consultation are considered essential to reach a solution that aligns the SNA and BPM recommendations. Even if the AEG and BOPCOM consultation reveal the preference to not change the current recommendations on the valuation of imports and exports of goods, additional clarifications on the SNA and BPM would be useful to compilers.

149. **The general valuation principles in the national accounts are addressed in Chapter 3 of the 2008 SNA (Stocks, flows and accounting rules).** Paragraphs 3.149 and 3.150 provide recommendations on the valuation of imports and exports of goods (paragraph 3.149) and services (paragraph 3.150) in the SNA. To reflect the recommendations of the GZTT these paragraph should refer that (i) the recommended valuation for imports and exports of goods should be as close as possible to the valuation of output at basic prices; (ii) the use of transaction values is the closest valuation to the basic price concept; (iii) the FOB valuation is an alternative valuation in case transaction values are not available; (iv) practical considerations concerning the availability of data sources and country-specific situations should determine the valuation used for imports and exports of goods; and (v) the valuation principles used for the imports and exports of goods should be carefully explained in the national metadata notes, along with the adjustments needed for the data.

150. **The SUT compilation is addressed in Chapter 14 of the 2008 SNA (The supply and use tables and goods and services account).** Paragraphs 14.44 to 14.80 provide recommendations on the valuation of imports in the supply table, including on transport margins (paragraphs 14.53-14.77), and the specific cases of international transport margins (paragraphs 14.61- 14.75) and recording of transport margins in the SUTs (paragraphs 14.76-14.77). To reflect the recommendations of the GZTT, paragraphs 14.61 to 14.75, on the treatment of international transport margins, should (i) start by recognizing that the data sources available to integrate imports of goods at a detailed product level in the SUTs may be collected using different valuation concepts, that is transaction values, FOB-type, or CIF-type valuation; (ii) in each case, explain the impact and adjustments needed in the transportation charges, as currently done with the numerical example; and (iii) include any updated recommendations on transport of merchant goods (paragraphs 14.73-14.74) and transport on goods sent abroad for processing (paragraph 14.75).

151. **The treatment of transport margins in the SUT (paragraphs 14.76-14.77) should provide a clearer explanation of the adjustments needed to the source data by type of source data used.** This would include recommendations on adjustments needed to basic data, and the CIF to FOB adjustment (if the AEG and BOPCOM decision implies retaining this adjustment), as described in the 2018 United Nations *Handbook on Supply, Use and Input-Output Tables with Extensions and Applications*. The reference to the CIF to FOB adjustment should take note of the treatment recommended in BPM, and consider that it should be obtained at the detailed level (at least for the national accounts benchmark year), as the relation of FOB to CIF prices depends on the type of good, weight, scale, special needs, mode of transport, and distance traveled, and that CIF to FOB ratios change

over time (e.g., due to fuel prices, competition and technology in transport industry, change in the proportion of types of goods, and changes in the source economy). Alternative compilation methods and data sources should be explained as currently done in the *BPM Compilation Guide*.

152. **The treatment of exports in the use table is described in paragraph 14.114 of the 2008 SNA.** To reflect the recommendations of the GZTT, this paragraph should be updated referring that exports are valued at transaction prices or FOB, depending on the available data sources.

153. **The relationship between the rest of the world sector in the SNA and the international accounts as described in BPM6 is treated in Chapter 26 of the 2008 SNA (*The rest of the world accounts and links to the balance of payments*).** The valuation of imports and exports is addressed in paragraph 26.19. The update of this paragraph should take into consideration the *BPM6* update concerning the valuation of imports and exports. The relation of the SNA with the goods and services account is included in paragraphs 26.49-26.57. In particular, paragraph 26.52 could be updated to refer to alternative data sources with different valuation methods.

154. **The compilation of Input-Output Tables is described in Chapter 28 of the 2008 SNA (*Input-output and other matrix-based analyses*).** Paragraphs 28.9-28.12 address the treatment of margins on imports and should be updated according to the updated recommendations on Chapter 14.

155. **The general accounting principles are for balance of payments statistics are described in Chapter 3 of BPM6 (*Accounting Principles*).** The recommendations concerning the valuation of transactions, addressed in paragraphs 3.68- 3.80, should be updated as a result of the work of the GZTT, after consultation with the BPTT.

156. **The Goods and Services Account is described in Chapter 10 of BPM6 (*Goods and Services Account*).** The recommendations concerning the valuation of goods are included in paragraphs 10.30-10.40, the treatment of freight services in paragraphs 10.78-10.79, and the treatment of freight insurance services in paragraph 10.116. The recommendations included in these paragraphs will be updated as a result of the work of the GZTT, after consultation with the BPTT.

157. **The valuation of imports and exports of goods is address in Chapter IV of IMTS 2010 (*Valuation*).** As one of the main data sources used for the compilation of imports and exports in balance of payments and national accounts, additional data requirements may result from the changes proposed to the *BPM6* and *2008 SNA*, especially concerning the added requirement for transaction values data. Therefore, after consultation with the BPTT, the GZTT will provide guidelines for the *IMTS 2010* update concerning data needs for balance of payments and national accounts.

Annex List of GZTT Members

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Mr. Paul Roberts, (ABS, Australia), until July 2020

Secretariat: Ms. Jennifer Ribarsky (IMF)

Ms. Margarida Martins (IMF)

Ms. Padma Sandhya Hurree Gobin (IMF)

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