
Task Force on Portfolio Investment Collection Systems

Final Report

Prepared by the European Central Bank

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Following is the executive summary and table VI.2 of the final report of the ECB's Task Force on Portfolio Investment Collection Systems. The complete report may be found on the ECB website at www.ecb.int.

TASK FORCE ON
PORTFOLIO INVESTMENT
COLLECTION SYSTEMS

FINAL REPORT

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EXECUTIVE SUMMARY

Introduction

Summary of the mandate

1. The Task Force on Portfolio Investment Collection Systems (TF-PICS) was set up by the Working Group on Balance of Payments and External Reserves Statistics (WG-BP&ER) to investigate the need for and the characteristics of harmonised systems for the collection of data on portfolio investment for the balance of payments (b.o.p.) and the international investment position (i.i.p.). More specifically, its mandate covered the investigation of different data collection models (DCMs) and their assessment on the basis of a qualitative cost-benefit analysis. The aim was to define each DCM in terms of the reporting population, the content of the reports and a corresponding reporting calendar.

Review of output requirements and quality criteria

2. Under the mandate, each DCM was to be assessed in terms of its ability to provide data in accordance with envisaged output requirements subject to transparent quality criteria for the euro area aggregates. The envisaged output requirements for assets and liabilities were reviewed by the TF-PICS and placed in order according to the increasing demands for output classifications by instrument, by sector of the security holder/issuer and by debtor/creditor country. The output requirements considered were: (i) a monetary presentation; (ii) geographical detail (for assets); and (iii) data needed for Monetary Union Financial Accounts (MUFAs).

3. For the quality criteria, the TF-PICS decided to use the theoretical framework developed by the WG-BP&ER and approved by the Statistics Committee (STC) for monitoring quality in the compilation of b.o.p. and i.i.p. statistics.¹

Current national practices and consequences for the euro area aggregates

Features of present collection systems and most common problems

4. In most European Union (EU) countries, the collection systems for cross-border portfolio flows are at present embedded in the general b.o.p. DCMs. Only in a few cases are portfolio investment flows collected by means of tailored models adapted to the specific requirements and features of this special type of information.

5. However, it is worth noting that the collection of information on a security-by-security basis is already a widespread practice among EU countries, for both stock and flow statistics. Nine countries

¹ See “Assessing the quality of the euro area b.o.p./i.i.p. statistics”, ST/STC/BP/QUALIMP3.DOC, 30 April 2001.

collect (or plan to collect in due course) portfolio investment figures incorporating the ISIN² (or any equivalent unique code) that permits the identification of the individual securities exchanged in portfolio investment transactions.

6. Among the most substantial problems of collection systems identified by the TF-PICS are: (i) challenges stemming from the international integration of markets; (ii) correct recording of portfolio liabilities; (iii) limited coverage of holdings with foreign custodians; (iv) reporting by respondents outside the financial sector; (v) correct identification of the issuer (vital for a correct distinction between EMU and non-EMU securities); (vi) the identification of repo-type transactions; (vii) consistency between stock and flow data; (viii) the lack of flexibility to produce new breakdowns; (ix) the ability to cover new forms of trading (e.g. over the internet); and (x) the recording of income on an accruals basis.

7. Most of the common problems of national b.o.p. collection systems directly affect the supranational aggregates on the output side. However, in the special case of portfolio investment, there are additional problems that indirectly endanger the quality of euro area statistics. This is particularly true for the special algorithm applied for the compilation of the euro area/EU portfolio investment liabilities side.

8. The experience of the ECB with the compilation of (monthly) euro area portfolio investment statistics revealed the following (non-exhaustive) list of asymmetries that distort the final results: (i) erroneous intra/extra-euro area split of assets; (ii) incorrect instrument classification; (iii) application of divergent valuation criteria; and (iv) non-application of the accruals principle or its application on the basis of dissimilar principles (e.g. debtor/acquisition/creditor). Moreover, for the time being a breakdown by issuing sector of euro area securities is not possible, which prevents the production of a complete monetary presentation. This problem has become particularly acute in the light of additional requirements seeking to enable the analytical use of b.o.p. statistics, for instance, in monetary analysis.

9. Substantial experience on the collection of stocks has been gathered through the “Co-ordinated Portfolio Investment Survey” (CPIS). It is expected that the future exchange of data between CPIS compilers will enable further improvements in quality, e.g. through bilateral comparisons of data on assets and liabilities.

Potential benefits of harmonising collection systems in the field of portfolio investment

10. From the **supranational perspective** (e.g. euro area aggregates), the harmonisation of inputs would allow an improvement in several dimensions of the quality of the statistics, among them *stability* and *transparency*, but most of all *accuracy*. However, since the inaccuracies in the supranational aggregates stem from problems at the national level, improving the quality of those supranational aggregates would entail benefits at the **national level** too.

² International Securities Identification Number.

11. Efforts to improve the quality of portfolio investment statistics should, in the opinion of the TF-PICS, be a joint initiative between all Member States. The benefits from such a joint strategy would be found in the spread of “best practices”, cost savings from common investments (such as the CSDB, the ECB Centralised Securities Database), improvements in the coverage of national statistics via some type of multilateral exchange of data (such as in a third-party reporting (TPR) approach) and the creation of a more level playing-field for reporting agents and compilers within the EU/euro area.

Cross-border trade in securities

12. The first sections and the last section of Chapter III of the full report provide a profile of cross-border securities trading and investment and of the market for repurchase agreements (repos) respectively. Since this is provided as background information only, it is not included in this summary.

Global custodians as a potential source of information

13. In order to gain an insight into the value of global custodians and custodians in general as providers of information on the investments of their clients, TF-PICS participants conducted an investigation in collaboration with six major global custodians.

14. The investigation of global custodians concentrated on the possibility of them delivering information for the production of portfolio investment statistics. The results of this investigation showed that global custodians were able to identify the country of residence of the account holder and that they could report transactions and stocks (at market value) for their clients. On the subject of provision of accrued interest data on holdings, the findings ranged from mixed to negative. Furthermore, only one global custodian could distinguish between direct investment and portfolio investment transactions/holdings. In general, they were also unable to correctly identify clients’ repo transactions, especially when these were executed through agents other than themselves. Reporting on a security-by-security basis was considered easier than aggregated reporting. Detailed information on the institutional class of the account holder was generally unavailable.

15. The identification of the account holder does not, however, guarantee identification of the beneficial owner. This problem stems from the fact that custodians use omnibus or nominee accounts for securities held with other custodians and, therefore, the beneficial owner cannot be identified. Consequently, when the account holder is another custodian, a geographical and/or sectoral misallocation or even a distortion of the aggregate (resulting, for example, from double-counting) could result.

16. In summary, the use of information from global custodians is limited owing to the existence of custody chains. It should also be added that, so far, there is no legal obligation for any institution outside a national jurisdiction or outside the EU/euro area to deliver regular reports on securities holdings/transactions. As many global custodians are located outside the EU, data provided by them could only be used to produce supplementary information.

Selected issues related to the statistical reporting of portfolio investment

Collecting and compiling data for portfolio investment liabilities

17. Three different approaches were considered for the collection of data on portfolio liabilities. The first two approaches (residual and mixed) can be used side-by-side for the various instruments. The third one (the register approach) is specifically aimed at the collection of data on equity.

18. In the residual approach, national portfolio investment liabilities are calculated as the difference between the total amounts outstanding of all securities issued by residents and the holdings of such securities by residents. Data for the residual approach can be collected both directly from issuers and end-investors and indirectly from custodians or asset managers, the size of the reporting population depending on the choice between the direct and indirect approaches. The residual approach can deliver data for both portfolio investment liabilities and for domestic financial accounts (as it also covers resident holdings of domestic securities). It can provide a very high level of consistency and very useful quality checks if the data are collected and processed on a security-by security basis (e.g. the resident end-investors' holdings of a certain security cannot exceed the total amount issued).

19. When using the mixed approach, portfolio investment liabilities are calculated as the net balance of all cross-border custody holdings between issuers, central securities depositories (CSDs), custodians and resident end-investors. The use of this approach relies heavily on a detailed knowledge of the custody industry. The mixed approach requires a more limited size of the reporting population, which is achieved by mainly depending on indirect reporting.

20. Some countries may be able to use the (share) register approach for tracing holdings of equity and debt by virtue of the legal obligation to record the legal ownership of a company's securities in those countries. While there are clear advantages to using securities registers, there are also limitations owing to the existence of bearer instruments and the use of nominee accounts, especially for debt instruments.

21. Misclassification or double-counting of direct investment are risks in all approaches, except the share register approach for equity. It is not possible to determine a geographical or sectoral breakdown of portfolio investment liabilities by creditor under any of the approaches, except for the share register approach for equity.

Third-party reporting

22. A classical challenge, or even a "blind spot", of national b.o.p. data collection systems is represented by holdings (transactions) by residents in (or using) accounts held abroad. In particular, systems based on indirect reporting through banks or other intermediaries on behalf of their clients face this challenge. The traditional solution has been to introduce supplementary direct reporting. However, the direct collection of this information involves special problems, among them the fact that non-institutional investors and households are especially difficult and costly to cover with direct

reporting tools. Consequently, the idea is to collect this information via third parties (i.e. non-resident compilers) and exchange it on a reciprocal basis.

23. The biggest hurdle for the introduction of a TPR scheme is the difficulty of correctly identifying the actual end-investor among the non-resident clients or even their institutional sector by the reporting intermediaries. In addition, any TPR scheme focusing on the EU/euro area would suffer from a lack of information on holdings outside the EU/euro area (called the Rest of the World (RoW) gap).

24. Thus, on the basis of the findings of the present investigations, which are inconclusive as to the potential costs and benefits, the TF-PICS concluded that it was not yet feasible to use a comprehensive TPR scheme for the collection of data on portfolio investment.

25. It might, however, be worth considering a “minimum” approach for securities holdings of households. The feasibility (in terms of costs and benefits) of such a reduced version of the TPR scheme, as well as its applicability/usefulness, would have to be examined further. It is thus recommended that the possibility of conducting a pilot study be explored as part of the follow-up to the work of the TF-PICS.

Aggregate versus security-by-security reporting

26. The security-by-security approach presents many advantages in terms of quality (e.g. accuracy, consistency, etc.), standardisation and synergies with other statistics. In connection with the availability of a securities database (SDB), it potentially offers many additional breakdowns in the field of portfolio investment statistics (e.g. by instrument type, issuer sector, issuer country, currency of issue, maturity, etc.).

27. This approach therefore also offers a high degree of flexibility in terms of adapting to new requirements and recalculating consistent time series, and enables numerous quality checks at the level of individual securities. A further advantage of security-by-security reporting is that it allows the compiler to directly derive income data on an accruals basis by using an SDB. However, the lack of ISINs (or other international identifiers) for certain instruments might present an obstacle in some countries to the universal applicability of security-by-security reporting.

28. In comparison with aggregate reporting, security-by-security reporting implies a shift of the costs from the reporting agents to the compiler. The overall costs (i.e. for both reporting agents and compilers considered together) of introducing new breakdowns would diminish however. Security-by-security reporting requires a significant initial investment (i.e. to set up an SDB and implement changes in procedures) and implies additional database maintenance costs.

29. The availability of the CSDB would improve the degree of standardisation and harmonisation of portfolio investment statistics and would allow the costs of implementing a security-by-security approach to be shared by compilers.

Recording stocks and/or flows

30. One of the key questions concerning any collection system is whether data on flows, stocks or both should be collected from respondents. It would be ideal in terms of quality and consistency to collect both stocks and flows together at the same frequency. However, this might not always be feasible as it may make the reporting burden too heavy.

31. The accumulation of flows to derive stocks is currently a fairly common practice. However, this is not acceptable on an annual basis for a future data collection scheme. Certain requirements (e.g. the provision of data on external debt or the calculation of accruals) may require the production of stock figures more often than annually. The TF-PICS is of the opinion that accumulating flows to derive intra-annual stocks for these purposes should be deemed an acceptable practice, but only if done on a security-by-security basis.

32. The derivation of flows from stocks has many advantages in terms of the reporting burden. Reporting agents often find stocks easier to report at a high frequency, thereby improving timeliness. On the other hand, drawbacks such as the decrease in quality (e.g. accuracy), a higher compilation and processing burden for the compiler, the likely increase in errors and omissions, or missing data on gross stock market activity, should also be taken into consideration. In order to ensure the quality of the derived flows, the availability of stocks with monthly periodicity was considered a prerequisite. Moreover, the use of security-by-security methods in both reporting and compilation would produce much more reliable results than the use of aggregate data.

Repurchase agreements

33. The repo market has gained a high level of significance in securities markets in recent years. Given the usually rather short maturity of repos and the large volume of gross flows involved, the distortions are more significant for portfolio investment transactions than for positions.

34. Whatever the case, custodians can identify their own repo-type transactions and positions, so that, generally speaking, repos conducted by Monetary Financial Institutions (MFIs) should not constitute a problem for the correct recording of portfolio investment. However, custodians cannot in general identify clients' repos unless they are directly involved as a counterpart. Therefore, repos mainly distort indirect custodian-based reporting systems, while they distort direct reporting systems and indirect settlement-based systems to a lesser extent. The size of this problem with indirect reporting depends on the participation of resident sectors other than the MFI sector in the repo market, which is rather limited so far.

35. At present, many countries can only derive information on repo-type transactions from settlements. The availability of information on repos is holding back some ongoing developments in the field of b.o.p. statistics. Direct reporting by end-investors and/or indirect reporting by asset managers are other sources enabling the relevant adjustments to the information provided by

custodians on clients' holdings. Here again, the need for additional monthly reporting concerns only resident institutions in sectors potentially active in the market (e.g. institutional investors).

36. In addition to the possible corrections needed in the field of portfolio investment, the TF-PICS is of the opinion that separate reporting on repos may also be useful for analytical purposes and for covering potential future output requirements (e.g. ongoing discussions concerning the forthcoming sixth edition of the Balance of Payments Manual of the International Monetary Fund (BPM6) on separate disclosure of repos as loans in the other investment account).

Distinguishing between portfolio investment and direct investment

37. According to the fifth edition of this Manual (BPM5), all tradable shares and debt securities held between associated enterprises should be recorded as direct investment in the b.o.p. and the i.i.p. Two problems can arise from this recommendation. Double-counting can occur when such instruments are included in both direct investment and portfolio investment reports. If, however, such holdings are included in portfolio investment and excluded from direct investment, there is a misclassification.

38. Depending on the collection systems for portfolio investment and direct investment, certain corrections are needed to avoid double-counting and/or misclassifications. To enable these corrections to be made, information on the issuer and the end-investor is needed. Security-by-security reporting is most useful in this regard.

Sampling and grossing-up techniques (in the context of security-by-security reporting)

39. The applicability of sampling and grossing-up techniques to the collection of portfolio investment figures warrants a thorough analysis. The TF-PICS was unable, in the time available to it, to investigate these techniques to the extent deserved. It is therefore recommended that such an analysis be conducted as part of the follow-up work.

40. The TF-PICS did, however, investigate sampling and grossing-up in connection with another important issue related to the collection and compilation of portfolio investment data, namely security-by-security reporting. On this subject, the TF-PICS concluded that security-by-security reporting would have the same advantages in direct reporting/survey systems as in indirect collection systems, e.g. for classification and valuation purposes.

41. Empirical evidence, though not totally conclusive, suggests that a meaningful grossing-up of the results of sample surveys at the level of individual securities is not feasible. The diversity of respondents' portfolios broken down by ISIN may be too great for this purpose. The sample required for such a detailed grossing-up would have to be close to a census. Data originally collected on a security-by-security basis would then be grossed up after the individual securities were aggregated by instrument, country and issuer sector. In the case of security-by-security reporting, there would be no need to make special provisions in the sample selection.

The case of multinational companies

42. In the course of analysing potential future reporting systems for portfolio investment, it became clear that it was necessary to take a closer look at the ongoing work of the Technical Group on Direct Reporting (TG-DR) on the multinational model. In view of the overlap between their work, both the TG-DR and the TF-PICS felt it necessary to exchange views and experiences. The TF-PICS contacted the TG-DR, offering to study the multinational model in its own investigations.

43. The main conclusion of the TF-PICS from the multinational exercise was that the reporting forms for portfolio investment (i.e. the August 2001 version) were not flexible enough to fit into the various potential DCMs for portfolio investment. Some additions to the reporting forms were recommended to ensure that these forms would fit into the future framework for portfolio investment collection systems.

44. In the majority of cases and countries, the relative importance of either non-financial or multinational companies for portfolio investment assets does not seem very high, although the absolute figures may not be negligible. On the liabilities side, the importance of these companies as securities issuers has grown in the euro markets as a result of financial disintermediation and the intensification of euro issuance and can be deemed significant for some countries, especially those that are small.

Ways of approaching the reporting population

45. This chapter presents a general overview of the three channels through which b.o.p. compilers can obtain the relevant information on portfolio investment transactions and positions. It is important to point out that these ways of obtaining information from reporting agents neither represent complete DCMs nor recommendations by the TF-PICS. In order to be used in practice, any single approach normally requires some kind of combination with either of the two remaining channels.

46. The TF-PICS identified three different channels for obtaining the information from the reporting population. (A) and (C) represent indirect channels, whereas (B) corresponds to a direct approach. The three channels are as follows:

- (A) Indirect settlement-based reporting by domestic banks for their own transactions and transactions executed on behalf of their clients;
- (B) Direct reporting by domestic issuers/end-investors; and
- (C) Indirect reporting by custodians or other intermediaries (e.g. asset managers/brokers/dealers).

47. In principle, all ways of approaching reporting agents are compatible with security-by-security reporting. Channels B and C could involve the reporting of only stocks or flows (probably in combination with security-by-security reporting), with the respective missing stocks or flows then being derived (although the TF-PICS does not consider the derivation of stocks by accumulating flows on a yearly basis to be an acceptable practice).

48. The three channels were assessed against the following criteria: the reporting population, its size and the reporting frequency, the output requirements as defined in Chapter I, the criteria for timeliness currently set out in ECB Guideline ECB/2000/4, the availability of quality and consistency checks, and the ability to provide information on income. In addition, by assessing the channels in this way, it was intended to derive arguments on their applicability under the so-called “matrix” approach, i.e. the pros and cons of each channel are weighed up for each individual sector of the economy (see Chapter VI).

49. The way in which these three channels are practically combined at present is illustrated in the second part of this chapter where current practices and future plans for new collection systems in EU countries are presented.

Channel A: indirect settlement-based reporting by domestic banks

50. The TF-PICS identified the following advantages of this type of collection method. As a result of its dependence on indirect reporting by MFIs, the size of the reporting population is relatively small. Another advantage of this collection method stems from the long history of co-operation between national central banks (NCBs) and MFIs and its ability to provide data at a high frequency within the appropriate deadlines. Furthermore, settlement-based collection systems are relatively easy to adapt to security-by-security reporting (thus enabling further quality checks) and present only minor problems with regard to double-counting of direct and portfolio investment.

51. As regards the disadvantages, the TF-PICS identified problems resulting from the widespread use of netting and clearing techniques and the clear need for complementary reporting via Channel B, e.g. for settlements through accounts with foreign banks. There would also be a need to supplement this channel with the collection of pure stock statistics via either of the other two channels. It is very difficult for this system to deliver income figures on an accruals basis (unless calculated using monthly stocks on a security-by-security basis, in combination with the information provided by an SDB). Finally, this channel is unable to provide a geographical breakdown of liabilities by creditor country.

Channel B: direct reporting by resident issuers/end-investors

52. The main advantages of Channel B can be summarised as follows. All relevant reporting agents can, in principle, be covered by this channel (i.e. there is no need to complement the information collected with additional reporting through other channels). When collecting stocks and flows together at the same frequency, they can be fully reconciled, thus allowing more macro and micro-analytical consistency checks, although, as both stocks and flows are collected through the same channel, consistency can only be ensured by checking against other independent information sources. Additionally, income figures can be delivered on an accruals basis (though probably following accounting guidelines rather than statistical valuation rules). Lastly, it is possible to distinguish

between direct and portfolio investment on the assets side (and also on the liabilities side if the share register approach is being followed).

53. The most important drawback of this collection method is the potentially large size of the reporting population (e.g. households), which makes the use of some kind of sampling or grossing-up technique necessary. The TF-PICS also expects some difficulties in receiving the data at a high frequency and within the appropriate deadlines, especially for some specific sectors. It can be more difficult to use security-by-security reporting for sectors unfamiliar with this way of reporting/storing information, although there is not much experience on this subject yet.

54. Care has to be taken in order to collect the information according to BPM5 principles and methodology, which differ from the accounting principles used by reporting agents when producing their balance sheets. As with Channel A, this method cannot deliver a geographical breakdown of liabilities by creditor country (unless the share register approach is being followed). Furthermore, corrections are needed on the liabilities side to exclude/correct for direct investment holdings (except where a share register approach is applied).

Channel C: indirect reporting by custodians or other intermediaries

55. Like Channel A, this reporting channel benefits from a relatively small reporting population and it is able to deliver data at a high frequency within the appropriate deadlines, though perhaps with some additional burden on the compiler. It is relatively easy to adapt to security-by-security reporting (thus enabling further quality checks). Like Channel B, it allows a full reconciliation between stocks and flows, in particular when the information reported by custodians enables the identification of individual clients (e.g. via tax registration numbers). Micro-checks are also possible through Channel C. Income can be collected on an accruals basis, but instead of being reported by the intermediaries, it is deemed more appropriate to produce these data by combining monthly stocks on a security-by-security basis with information from an SDB.

56. This channel does, however, require some complementary information via Channel B, i.e. direct reporting of securities held in custody abroad. There is also a need to solve specific problems, such as: (i) the exclusion of repo-type transactions/positions; (ii) the risk of double-counting; and (iii) the exclusion of direct investment holdings. Some of these problems could be overcome by making use of Channel B. Again, this channel – like both the other channels – does not enable the derivation of a geographical breakdown of liabilities by creditor country.

Current practices and future plans

57. For information on the current deployment of the three channels and partial changes to current systems, the reader is referred to the full report (see Table II.1). It is worth noting that a number of countries have recently decided to abolish their current collection systems, either completely or only for portfolio investment.

58. For instance, the following countries have already started a complete restructuring of their systems. Austria plans to abolish its settlement-based collection system and will introduce indirect reporting by custodians (Channel C) within a couple of years. It is considering using the residual approach for liabilities so as to be able to compile both the b.o.p. and the i.i.p., as well as a set of financial accounts. By analogy, Spain will also introduce indirect reporting by custodians in combination with direct reporting for securities deposited abroad from 2002 onwards for both stocks and flows, but the settlement-based system (which will be kept to compile parts of the b.o.p.) will temporarily continue being the basis for the b.o.p./i.i.p. until the new system is seen to deliver consistent information of sufficient quality. The Netherlands will abolish its settlement-based collection system in the first half of 2003, and replace it in the area of portfolio investment with direct reporting (Channel B) for assets and indirect reporting (Channel C) according to the mixed approach for liabilities. All three countries have chosen to maintain or introduce security-by-security reporting in their new systems.

Conclusions and recommendations

Introduction

59. This chapter lists a number of conclusions and recommendations. Some were taken directly from the previous chapters, while others were drawn up by combining the analyses from Chapters IV and V. They were selected/prepared to provide countries with advice on how to maintain their current data collection systems and/or on which issues to study when thinking about a move to a different system. The TF-PICS considers these issues to be important factors in determining the quality of the data that can be produced with a certain type of collection system.

60. The TF-PICS agrees that the driving force behind any harmonisation of inputs should be the search for common strategies, which could assist in facing common challenges concerning the quality of the European aggregates and national statistics. The following recommendations can therefore be regarded as a definition of good or best practices, to be taken into consideration by compilers depending on the relevance for their country and the consequences for the compilation of the euro area aggregates.

61. It was deemed important to mention that any change to existing collection systems or a move to a completely new collection system involves considerable costs, although the TF-PICS did not investigate these in detail. The TF-PICS also acknowledges that specific features of cross-border securities trading in individual economies may render certain data collection strategies more or less suitable. In particular, in the case of non-banks, the quality of the data collected depends on the degree to which compilers can enforce reporting obligations (e.g. through penalties or fines), the political acceptance of an increased reporting burden and, not least, the resources available to the compiler.

62. However, any reporting channels based on current (country-specific) circumstances should always take into account the fact that these circumstances are potentially subject to (relatively rapid)

changes, which are beyond the control of the b.o.p. compiler. Thus, a forward-looking approach, which offers some flexibility to adapt to new institutional and business frameworks, would be desirable.

General conclusions and recommendations: security-by-security reporting

63. The TF-PICS has concluded that, although security-by-security reporting entails considerable costs to set up and maintain, it has so many advantages that compilers should seriously consider its adoption if it is not used already. Especially in terms of quality (i.e. accuracy and consistency), standardisation and flexibility, security-by-security reporting presents many advantages for the compiler.

64. It can also be used to derive flows from high-frequency stock data, which would reduce the reporting burden for reporting agents and make possible many quality checks at a very detailed level. Especially in combination with the availability of stocks at a monthly frequency (either collected or derived), security-by-security reporting can be extremely useful for the calculation of interest on an accruals basis. Security-by-security reporting reduces the amount of detail (in terms of breakdowns) to be reported by respondents, with a consequent reduction in their reporting burden.

65. In addition, from a euro area perspective, the availability of security-by-security data permits the performance of detailed one-off checks in case of inconsistencies in the euro area aggregates. This may be particularly helpful in the context of the indirect reporting method applied for the compilation of euro area portfolio investment liabilities and in view of the divergent compilation methods in place in the euro area countries.

66. Many of the costs of a security-by-security reporting system are fixed, which means that these can be spread more widely by using the system as intensively as possible. The availability of the CSDB will be key in harmonising these efforts and will allow costs to be shared among compilers. A significant advantage of this database is that it will provide homogeneous breakdowns (i.e. by instrument, country and issuer sector). Additionally, other information available in the CSDB (interest rates, prices, currencies of denomination, etc.) will allow securities to be valued homogeneously. Concerning costs, the extent to which they are spread depends on the way the division of labour is organised between compilers. An equitable spread of the costs will be critical to the success of the CSDB.

Conclusions and recommendations for specific features of data collection models

Input dimensions of data collection models: a general framework

67. One basic conclusion from the material gathered during the work of the TF-PICS is that it was not possible to derive a single and uniform DCM that would be applicable in all countries. Instead, the most detailed recommendations that can be provided for data collection systems resemble a “common platform” for the collection of data on portfolio investment.

68. Furthermore, the TF-PICS reckons that there is no single way of approaching specific reporting groups (i.e. either directly, or indirectly through custodians or domestic MFIs) suitable for all types of reporting agent. In fact, the most suitable collection system for any individual country may be likely to combine features of both direct and indirect reporting, applying one or the other for each institutional sector. In this respect, the TF-PICS suggests the adoption of the “matrix” approach, as set out by the Committee on Monetary, Financial and Balance of Payments Statistics (CMFB) and the STC. In the work of the TF-PICS, this has come to be known as the “sectoral” approach.

69. The TF-PICS classified individual combinations of input dimensions (which can be employed under the “sectoral” approach) as “ideal”, “good” or “acceptable” practices. The actual selection of specific practices (subject to a minimum ranked as acceptable) by individual countries will depend on the specific domestic circumstances and resources available. A cost-based assessment of all individual DCMs was deemed beyond the mandate of the TF-PICS.

70. In contrast to the output requirements set out in the introduction, any DCM can be defined by specific features on its input side, which can be analysed according to selected dimensions, e.g. level of detail and type of information collected, collection method, reporting channel or frequency of reporting (see Table VI.1 of the full report).

Input dimensions of data collection models: a ranking of combinations

71. Any DCM may be described by a combination of the following three dimensions: “level of detail”, “type of information” and “frequency”. The annexed table presents a list (“cascade”) of selected combinations, which the TF-PICS considers as relevant. On the one hand, this list allows a comparison of data collection systems of individual countries as they stand today. On the other hand, it ranks the list of acceptable practices (from the ideal approach to the minimum acceptable solution).

72. The TF-PICS developed a classification of the input dimensions into “acceptable” (and better) combinations and “unacceptable” approaches. Combination (7) represents the features of a data collection system that reporting agents of any institutional (sub-)sector should, in theory, be able to meet (i.e. a “minimum benchmark”). Combinations above this line are considered as generally accepted targets for any improvements to DCMs.

Input dimensions of data collection models: direct versus indirect reporting

73. Beyond the general framework presented above, the TF-PICS identified a small number of general principles guiding the choice between direct and indirect reporting. Only for MFIs and for households was there a clear-cut consensus about the most suitable approach. Direct reporting would be the most suitable approach for MFIs, and households could in practice only be covered through indirect reporting. As stated above, for other non-MFI sectors, the most suitable approach depends on various factors, which the compiler has to assess.

74. In general, direct reporting was believed to be more suitable for large companies than for small and medium-sized ones. Furthermore, the quality of the data will be higher if the requested

information is closer to the business needs of the company itself. In this respect, information on stocks is often more readily available than that on flows.

75. The main advantages of indirect reporting are its efficiency (it covers a large target population with a small number of reporting agents) and its timeliness. There are, however, also a number of drawbacks, particularly for the collection of data on portfolio investment. These drawbacks differ according to the exact source of the indirect reporting (i.e. banks providing settlement data, custodians or investment managers). Where necessary, indirect reporting needs to be supplemented with direct reporting.

76. The combination of direct and indirect reporting presents its own problems too. Care should be taken to avoid both gaps (lack of coverage) and overlaps (double-counting). Again, security-by-security reporting could prove to be a helpful tool in this respect.

Issues for further investigation

77. The TF-PICS also suggests a number of issues for further investigation. They include portfolio investment income, a feasibility/pilot study for a minimum TPR approach, a more detailed study of the applicability of sampling and grossing-up techniques, and the conduct of specific case studies on internet trading (a subject not covered in this report owing to time constraints).

78. As the TF-PICS did not explicitly investigate the actual applicability of any suggestions for individual countries, feasibility studies would be necessary to study the cost and other aspects of the implementation of recommendations presented in this report. The results of these feasibility studies and any other experience gained from changes made to national models should be exchanged between the compilers of b.o.p./i.i.p. statistics.

79. Finally, the TF-PICS agrees that all conclusions drawn in this report may be called into question by future developments and financial market innovations. Thus, the TF-PICS stresses the need for the relevant bodies to permanently monitor these developments and to review their impact on the results of this report.

Annex

Features of data collection models: ranking of combinations of input dimensions

(1)	Monthly flows [security-by-security] + monthly stocks [security-by-security]	Ideal
(2a)	Monthly flows [security-by-security] + quarterly stocks [security-by-security]	Good
(2b)	Monthly flows [security-by-security] + annual stocks [security-by-security]	
(3)	Quarterly stocks [security-by-security] + monthly flows [aggregate]	Acceptable
(4)	Monthly stocks [aggregate] + monthly flows [aggregate]	
(5)	Monthly stocks [security-by-security] + derived monthly flows [security-by-security]	
(6)	Annual stocks [security-by-security] + monthly flows [aggregate]	
(7)	Quarterly stocks [aggregate] + monthly flows [aggregate]	
(8)	Derived annual stocks [security-by-security] + monthly flows [security-by-security]	Unacceptable
(9)	Quarterly stocks [security-by-security] + derived quarterly flows [security-by-security] + <i>estimated monthly flows [aggregate]</i>	
(10)	Annual stocks [security-by-security] + quarterly flows [aggregate] + <i>estimated monthly flows [aggregate]</i>	
(11)	Quarterly stocks [aggregate] + quarterly flows [aggregate] + <i>estimated monthly flows [aggregate]</i>	
(12)	Derived annual stocks [aggregate] + monthly flows [aggregate]	

Notes: “Derived stocks” = accumulation of flows.
“Derived flows” = difference between stocks (adjusted for exchange rate and price changes).
“Estimated flows” = monthly split estimated from quarterly flows.