

Monitoring of securities held by financial institutions: merging statistical and supervisory demands

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1. Introduction

The development of information systems and harmonisation of statistics² has allowed the gradual introduction of a new data collection method: collection of data on an instrument-by-instrument basis. The main prerequisite for using this method is the existence of a high-quality public register, for example a securities register. A common data source independent of the reporting agent can thus be used to compile uniformly defined aggregates and thereby enhance the quality of statistics.

The statistics units of the Czech National Bank (CNB) were faced in 2007 with the challenge of implementing single monitoring of securities held by banks and investment funds in such a way as to satisfy the statistical and regulatory demands and to ensure efficient data collection, paying due heed to data quality and the reporting burden. Given acceptable starting conditions, collection of data on a security-by-security (sec-by-sec) basis was selected in both cases.

2. The data collection setup at the CNB

Financial institution reporting at the Czech National Bank is split into the statistical area and the regulatory area. Data are collected through a single statistical information system, as the banking data collection and transfer systems were developed and operated by the CNB's statistics units.

As far as bank reporting is concerned, organising the preparation of the two areas of reporting and drafting relevant single legislation are traditionally tasks for the central bank, as banking supervision has always been a part of the CNB's organisational structure.

A major event impacting on the non-bank data collection setup was the reform of financial market supervision in 2006 and 2007. The non-bank financial market supervisory authorities were relocated to the central bank, where all financial market supervision was unified and then reorganised.

This reorganisation led to new demands for a single reporting setup and a single technical solution for collecting data from all groups of regulated entities for all groups of users. The central bank's statistics units set about converting the various forms of regulatory reporting into a single model combined with statistical reporting. This process was completed in 2007.

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² For the sake of simplicity the term "statistics" will be used to refer to any sort of defined data collection and subsequent processing, be it for the needs of the central bank's statistics units or for supervisory and regulatory purposes. Use of the term "statistics" to mean an area of activity or an organisational unit within the central bank will be specified where relevant.

3. The role of statistics units in the CNB's single reporting model

The new data collection setup at the Czech National Bank involved setting rules, work procedures and competences to enable standardised processing of the requests of all CNB statistical or regulatory users for data from financial intermediaries.

The central bank's statistics units have a twin role in the data collection process. On the one hand they are data users themselves (monetary statistics, balance of payments statistics, financial account statistics), but on the other they have responsibility, or shared responsibility, for data collection, and are also responsible for running the single information system. They use this system to define user reporting requirements and data transfer process requirements, and for data quality control. The monetary and financial statistics unit, for example, plays an important integrating role in bank reporting, because, despite being one of the users itself, it is responsible for organising bank data collection and for drafting the single legislation and general procedures for bank data collection. As for reporting by other categories of financial intermediaries, for example investment funds, credit unions, insurance corporations and pension funds, the relevant reporting is more decentralised but retains the basic rules of the single reporting model, ie the use of a universal information system and fixed working procedures for reporting.

In this paper, we offer our experience regarding a practical solution for collecting data on securities held by banks and investment funds. The questions are how it should be organised, what methods should be chosen, and what compromises should be made in the monitoring of securities holdings to cover the diverse needs of various business areas, ie monetary, financial and external statistics vs regulatory demands.

4. The solution for the collection of data on a security-by-security basis at the CNB

The incorporation of the single financial market regulator into the CNB's organisational structure and the ensuing need to expand the data collection function provided a common impetus for the challenge of finding a suitable way of collecting data on securities held by banks and investment funds. The data collection design had to be tailored to the needs of all users. In the central bank's new organisational setup, these users consisted of both statistical and regulatory units, ie units concerned with (i) monetary and financial statistics; (ii) balance of payments statistics; (iii) financial account statistics; (iv) credit institution supervision; and (v) capital market supervision.

The collection of data on securities holdings also had to take account of the requirements formulated by the European Central Bank for balance of payments statistics and monetary and financial statistics based on a centralised securities database (CSDB). These requirements consisted of:

- The need for a single approach to the collection of data in the field of portfolio investment as laid down in the "Guideline of the ECB on the statistical reporting requirements of the ECB in the field of balance of payments and international investment position statistics, and the international reserves template" (ECB/2004/15)
- The collection of data on securities held by investment funds as laid down in the "Regulation of the ECB concerning statistics on the assets and liabilities of investment funds" (ECB/2007/8), which entered into force on 27 July 2007.

The security-by-security method was chosen as the optimum solution for both banks and investment funds. The results of cost analyses, which included discussions with all users and

designers as well as representatives of banks and investment funds, ultimately led to two different compromises.

4.1 Collection of data on a security-by-security basis

The creation of high-quality securities registers enables single pieces of information on a particular security to be used jointly not only by reporting agents, but also newly by data recipients or compilers of the relevant statistics. In the harmonised statistics a common data source independent of the reporting agent can thus be used to compile uniformly defined aggregates, thereby preventing a non-uniform description of the same security, eg information on the issuer's sector or the price. This has led to the phasing-in of a new data collection method, namely collection of data on a security-by-security basis.

The existence of a high-quality register is a necessary condition for adopting this data collection method. One then has to start assessing the ensuing costs and benefits. These include:

- (i) **Reporting burden:** If data from the register are used at the statistics compilation stage, the respondent should only have to report information that only he or she knows and is therefore not contained in the register. Moreover, the register is a wider data source, and the compiler specifies which, if any, of this information – for example additional breakdowns – is to be incorporated into the relevant reporting, thereby increasing the flexibility to make changes to reporting. *Use of the security-by-security method should reduce the reporting burden.*
- (ii) **Data quality:** Processing of single items of data by the compiler and the subsequent acquisition of missing information from the single register should generally *increase the quality of the compiled data*. In the case of securities, however, practical difficulties can arise with the use of single pieces of information, due, among other things, to the fact that they are marketable instruments. Reporting agents relinquish the practice of independently compiling and submitting relevant information, such as a complete, balanced sectoral balance sheet, and delegate this responsibility to the data compilers. The compiler thus receives an incomplete balance sheet from the reporting agent and only later centrally performs the calculation and acquires the missing information from the register for all respondents and then compiles the balance sheet. The quality of the resulting data is thus an outcome of two opposing tendencies. On the one hand, the use of the single items of information from the register increases data quality, but on the other, data quality may be reduced by a potential security information deficit on the part of the compiler and/or by a substandard register.
- (iii) **Compiler burden:** As the compiler is responsible for compilation quality, *he or she faces an increased burden*. The compiler must newly perform a series of tasks as described in item (ii). This transfer of compilation burden from reporting agent to compiler plays a key role in the choice of suitable collection method. The increase in the compiler burden must therefore be kept to an acceptable level. The fact that the statistics unit must have a securities specialist is another cost item.
- (iv) **Technical costs:** Lastly, one needs to consider the potential technical costs, as the central bank's information system may have to be modified to cope with receiving large amounts of data.

If the cost-benefit criteria are not met, the standard scenario cannot be used and a compromise must be found. If even the compromise proves to be unacceptable, the security-by-security approach must be abandoned and aggregated data collection retained.

4.2 Securities held by banks

It has proved difficult in the given conditions to formulate a single security-by-security solution for the collection of data on securities held by banks. Even before the single financial market regulator was established it had been clear that this data collection process needed to be unified, because information on banks' securities holdings was being collected separately for the needs of monetary statistics, portfolio investment statistics and banking supervision. Duplicate information was being gathered, so the requirement was clear: find a single solution meeting the needs of all stakeholders. The merger of financial market supervision accentuated the need to optimise the system, and also added a new user – the capital market supervisory unit.

The starting point for the single security-by-security solution was the requirement formulated in the ECB Guideline (ECB/2004/15), in the shape of a “Monthly stocks [sec-by-sec] + derived monthly flows [sec-by-sec]” model using a centralised securities database (CSDB).

In the search for a single security-by-security collection solution the main obstacle turned out to be an increased compiler burden, especially in the case of the monetary statistics. The proposed standard sec-by-sec scenario using a CSDB would have involved a major intervention into the existing compilation process for monetary financial institution (MFI) balance-sheet statistics in respect of stocks and, in particular, transactions. In addition, the ECB Regulation (ECB/2007/13) does not recommend collection of data on securities holdings by the sec-by-sec method for monetary statistics, unlike portfolio investment statistics. The monetary statistics unit rejected the proposed sec-by-sec method, preferring to retain aggregated data collection. Moreover, the banking supervisory and regulatory unit questioned the proposed standard sec-by-sec model envisaging the use of a CSDB to complement the basic information on securities provided by banks. According to the regulator, banking supervision is based in essence on authentic information from the regulated entity, so the bank itself must report complete information on the security – including the information contained in the CSDB. Despite its controversial nature, this opinion had to be taken on board even though it reduces data collection quality and increases the banks' reporting burden. Hence, it seemed at this stage that a single solution could not be found and that collection of data on securities holdings would remain as fragmented as ever.

The breakthrough came at a consultation with banks. The banks' representatives made it clear that they would prefer a single security-by-security solution to the existing fragmented reporting setup. In addition, they said that reporting of complete information on securities within a sec-by-sec collection framework would be convenient for them and would not represent an increased burden. However, accepting this offer meant accepting a compromise, in the sense that the register data would not be used during the compilation stage, but each respondent would use it when compiling complete information on its securities (data record – key family). This meant that the expected increase in sec-by-sec data quality through the use of single items of register information by the compiler, which was the primary benefit of the standard sec-by-sec scenario, would not materialise. At the same time, the banks were willing to provide sec-by-sec test data for testing the compilation procedures.

The subsequent discussions involved bank representatives and representatives of all relevant units of the CNB. The costs and benefits of the proposed compromise were weighed. It was ultimately decided that if the results of the testing were satisfactory, the compromise would be acceptable. An analysis of the proposal revealed that (i) it would significantly reduce the reporting burden; (ii) the compiler burden, especially in the monetary statistics area, would not increase as dramatically as shown for the original standard scenario using a register; (iii) data quality would remain approximately unchanged; (iv) all user demands would be met and there would be no duplicate reporting; (v) the specific demand of the banking supervisory unit for reporting of the full data record would be met; and (vi) the technical costs would increase slightly.

Tests of the quality (completeness) of the security-by-security data, tests of integrity with other statements, and finally tests of compilation of outputs by individual users were performed on the test data during the latter half of 2007. The tests proceeded satisfactorily and the proposed bank reporting solution was ultimately accepted by all stakeholders for implementation in 2009.

4.3 Securities held by investment funds

The search for a single security-by-security solution for the collection of data on securities held by investment funds was prompted by the requirement contained in the new Regulation (ECB/2007/8) to collect fully harmonised (steady-state approach) balance-sheet assets and liabilities of investment funds for the needs of the monetary statistics under the combined approach. This approach allows national central banks to use the security-by-security method with the aid of a CSDB in order to collect data on the securities held by investment funds. Naturally, the proposed solution could not be limited to the needs of the monetary statistics unit, but also had to be incorporated into the wider context of the needs of the other statistics units and the capital market supervisory unit.

The main aims were the same as in the search for the bank data collection solution, but, owing to a different starting position, the approach taken was different. In this case, security-by-security data collection already existed, tailored to the specific needs of the collective investment supervisory unit. Two solutions were possible: either to modify the existing regulatory sec-by-sec statement and collect single data items, or to leave the regulatory data collection in place and design a standard sec-by-sec scenario using a CSDB for the needs of the monetary statistics, the balance of payments statistics and the financial account statistics.

Initially, a single sec-by-sec statement was proposed for the statistics units and the collective investment supervisory unit. This proposal, however, involved a fairly complicated merger of the diverse statistical and regulatory requirements (period, submission date, reporting population, specific regulatory and statistical instruments). In this case, a single solution did not prove to be optimal. The variant in the shape of a single statement for both statistical and regulatory users, which had proved successful in the case of banks, turned out to be a no go for investment funds. The investment funds did not agree with the initial sec-by-sec data collection proposal, pointing out that the regulatory requirements were diametrically opposed as regards, for example, data on relations to legislation, investment limits on fund assets, investment limits per issuer or investment fund, total purchase prices and shares in securities issued by a single issuer. It was apparent that, unlike in the case of banks, a single solution could not be found.

The optimum solution, upon which all the relevant user units and investment funds eventually agreed, was to leave the original regulatory sec-by-sec statement in place and design a new statement based on standard sec-by-sec data collection using a CSDB, in accordance with the requirements formulated in Regulation ECB/2007/8 and Guideline ECB/2004/15. An analysis of the agreed solution showed that it was acceptable. The costs and benefits in this case could be summed up as follows: (i) the increase in the reporting burden would be minimised; (ii) the compiler burden would increase moderately; (iii) data quality would increase; (iv) all user demands would be met and there would be no duplicate reporting; and (v) the technical costs would increase moderately. So the standard sec-by-sec scenario, ie single sec-by-sec data collection using a CSDB, will not be implemented in the case of investment funds either. Sec-by-sec data collection had to be split into a statistical component and a regulatory component.

5. Conclusion

The merger of statements on securities held by banks and investment funds on a security-by-security basis undoubtedly represents a great increase in data collection efficiency for both reporting agents and central banks. The course of the two projects shows that it was not easy to find generally acceptable solutions and that the solutions ultimately chosen are a compromise between the needs, objectives and capacities of reporting agents, compilers and users. In particular, in the case of sec-by-sec collection of data from banks it appears at first glance that the concession towards a single solution involving the transfer of registry data to the reporting entity is too large and undermines the main benefit of the standard sec-by-sec approach. However, we feel that the introduction of modified sec-by-sec data collection is a step in the right direction and that it will be possible in the future to implement the standard sec-by-sec approach gradually and make full use of the register for output compilation.