

Data needs for the Single Supervisory Mechanism

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1. Introduction

On the path towards establishing the Single Supervisory Mechanism (SSM), it is essential to discuss and define meaningful data needs for one of the most significant projects in banking supervision. During the preparatory phase, a separate Workstream (WS4) was mandated to elaborate on the SSM data requirements. The preliminary result was summarized and written down in the SSM Supervisory Reporting Manual.

2. Supervisory Reporting Manual (SRM)

The Supervisory Reporting Manual (SRM), as the outcome of WS4, describes the reporting framework (data needs) of the SSM and covers the data reporting requirements for both significant and less significant institutions based on Art. 10 of the SSM-Regulation. Under this article, the ECB may request all information that is necessary to carry out the tasks conferred on it by this Regulation, including information to be provided at recurring intervals and in specified formats for supervisory and related statistical purposes.

By designing the reporting framework, the following principles have to be taken into account (WS4 2014, p. 11, 12):

- *Efficiency*, as the existence of common European reporting templates has to be considered as a pre-requisite to avoid undue burden on the reporters. In terms of data items this refers to the use of existing data sources (e.g., COREP, FINREP, MFI statistics). On the other hand, it means that NCAs are in principle the entry point for the data collection phase in order to avoid the duplication of efforts.
- *Comparability*, to ensure that data across different jurisdictions are as comparable as possible in terms of the definitions used. Owing to the applicability of different accounting standards (IFRS vs. local GAAP) across different jurisdictions within the SSM that still exist and which are not intended to be changed for the time being, the documentation of the main sources of

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discrepancy in the metadata is crucial. Otherwise the comparability will be hampered because of different valuation methods and classification concepts.

- *Coherence* between the data collected and their use by taking into account the main risk profiles of a credit institution and by organizing the data requirements accordingly in order for a centralised risk assessment system (RAS) to perform smoothly.
- *Adaptability*, as it is very important to keep a certain degree of flexibility within the reporting framework owing to the ongoing development of new requirements. However, it is crucial to schedule sufficient time for implementing new requirements.
- *Proportionality*, to reflect the different degrees of significance of institutions within the reporting framework.
- *Transparency and Traceability*, by complementing the reporting schemes with detailed definitions and instructions for each variable (data dictionary).

According to the SRM, the SSM data requirements are modularly organized into six different modules (WS4 2014, p. 12 – 25) by taking into account standardised as well as non-standardised data available at national level only. Yet also data which serve other than purely micro-prudential supervisory purposes (for instance, data for monetary analyses) have been taken into account. When such data are used for supervisory purposes, their characteristics and potential limitations should be considered.

- **Module 1: EBA ITS on Supervisory Reporting**

Module 1 represents the EBA Implementing Technical Standard (ITS) on Supervisory Reporting [Commission Implementing Regulation (EU) No 680/2014], which lays down uniform requirements (formats, frequencies, remittance dates) in relation to supervisory reporting to competent authorities for the following areas, commonly known as COREP and FINREP: (a) own funds requirements and financial information (Art. 99 CRR), (b) losses stemming from lending collateralised by immovable property (Art. 101 CRR), (c) large exposures (Art. 394 CRR), (d) leverage ratio (Art. 430 CRR), (e) liquidity coverage requirements, (f) net stable funding requirements and additional liquidity monitoring metrics (Art. 415 CRR), and (g) asset encumbrance (Art. 100 CRR). This harmonised set of reporting templates forms the core basis for the SSM reporting framework by respecting the principle

of maximum-harmonisation. This means that within the domain regulated in the ITS, competent authorities shall not impose additional requirements.

- **Module 2: Statistical Data**

Module 2 is divided into the sub-modules “Monetary Financial Institution (MFI) statistics” and “Security Holdings Statistics (SHS)”. The rationale behind this module is that statistical data provide a further source of harmonised information that might be used, with some limitations, for supervisory purposes. Although there exist various methodological and conceptual differences between these statistical and supervisory datasets (e.g., in terms of the reporting population or the consolidation scope), statistical data could serve as a complementary basis to construct early warning indicators in the absence of timely supervisory data (MFI statistics, for example, is collected on a monthly basis) or to enable a further drill-down on some of the activities of the supervised institutions.

- **Module 3: Granular credit reporting**

Developing a sound granular credit reporting framework which serves the needs of supervisors and other Eurosystem user groups is one of the main tasks during the next couple of months. The underlying idea is that granular credit data enable a multitude of usage options in the supervisory process. On the one hand, they might permit different options for further analysis not covered by other existing reporting areas; on the other hand, they might complement the information provided by other reporting systems (e.g., off-site banking business analysis, analyses for regular models examinations, and on-site inspections). Furthermore, analyses based on granular credit data might play an important role in the Supervisory Review and Evaluation Process (SREP) to evaluate a bank’s capital adequacy or might serve as an input to Risk Assessment systems (RAS). Furthermore, they could enhance the supervisors’ understanding of the banks’ portfolios, hence allowing supervisors to calibrate, verify, and challenge the outcome of rule-based risk assessment systems.

- **Module 4: Ad-hoc data collections**

At this stage it is difficult to anticipate the future SSM ad-hoc data requests. However, to conduct top-down stress tests one typically has to rely on ad-hoc data (among other data

sources) owing to the required granularity that is usually not available in regular supervisory reporting frameworks.

- **Module 5: Other supervisory national data**

This module comprises data which are typically collected by NCAs but which are not harmonised by the EBA ITS on Supervisory Reporting. For instance, these data include information on pillar 2 (e.g., interest rate risk within the banking book) and financial information (e.g., balance sheet data) from non-IFRS institutions. For the latter institutions it is envisaged to extend FINREP in order to get “comparable” data across supervised entities under different legislations. The collection of the data of this module is expected to progress towards closer harmonisation in the near future. Once harmonised, these data could become a part of the regular reporting and would be moved from module 5 to module 1.

- **Module 6: Data requirements for public disclosure**

This module contains data gathered from the institutions’ public disclosures and from market providers in order to complement some specific risk profile analyses in those areas in which information from regular supervisory reporting is less detailed. For instance, the use of different credit risk parameters, like daily and historical credit measures for individual financial and non-financial traded companies, or information on expected default frequencies and distances to default, in particular for financial companies listed in the European Union, might be a valuable contribution.

3. Integrated Reporting

Tailor-made reports that have evolved over time were designed by a number of different bodies and for a number of different purposes to enable the collection of data for the production of statistics (such as external statistics, monetary statistics, supervisory statistics). Each body devised its own approach to the data collection, which led to a lack of data consistency as well as a limited overview of the whole process. Additionally, reporting institutions introduced their own IT systems for different reporting requirements, which differed across the banks and even deviated from their own internal risk management database.

As the number of the required reports has increased substantially over the last few years and especially with the implementation of the ITS on Supervisory Reporting since the beginning of this year, additional ad-hoc data requirements should only play a minor role. Instead we should strive for using synergies of one reporting system by exploiting existing data to satisfy the supervisors' needs for reliable and consistent data.

The obvious advantages of an integrated reporting are manifold as it fosters a consistent interpretation of different statistics, an identical compilation process as well as the application of identical data quality methods. Further main benefits are the avoidance of multiple reporting requirements as well as the then applicable concept of the "one-stop-shop", which means that there is only one single entry point for the reporting institutions with regard to all data requirements, ideally facilitated by the use of the same technical infrastructure.

4. Supervisors – concentration on core activities

As today's requirements and challenges to supervisors have increased substantially, it is very important that supervisors can concentrate on and dedicate their scarce resources to their core activities. This means that supervisors, in an *ideal process chain*, should clearly specify their data needs but may subsequently rely on statisticians to design and conduct the integration and implementation as well as the collection and compilation of the data.

In general, banking supervision imposes the following requirements on statistical data: completeness, consistency, parsimony, and timeliness. All of these might sound rather self-evident. Upon closer inspection, however, several of these requirements are currently not adequately addressed or may up to a certain degree even be mutually exclusive. As a consequence, trade-offs need to be evaluated, preferences stated, and decisions accordingly implemented. The most cumbersome issues relate not to the overall concept but to the details, some of which shall be discussed together with potential options for going forward.

- *Completeness* is relevant for all the areas for which (supervisory reporting) data are used in NCAs. The following examples provide an overview but are by no means exhaustive:
 - Fulfilment of regulatory standards (e.g., minimum capitalization and other prudential requirements, minimum reserves, etc.);

- Bank analysis as part of the supervision (from analyst reports to statistical models);
- Prudential regulation: Pillar 2 requirements / SREP ratio calculation;
- Stress testing (for solvency and liquidity);
- Macroprudential analysis (from common exposures to various interbank networks).

Add to these data needs the requirement to integrate external data sources and *completeness* suddenly becomes a quite challenging criterion.

- To achieve *consistency* in the data is demanding because of various discrepancies in the supervisory reporting data. Again, a non-exhaustive list of some of the challenges may be illustrative:
 - Deviating interests: accounting vs. prudential reports (e.g. FINREP vs. COREP);
 - Different reporting frameworks: harmonised accounting vs. national accounting (e.g. IFRS vs. local GAAP);
 - Different concepts, e.g., consolidated vs. solo, immediate borrower vs. ultimate risk, etc.

To address these data needs in a consistent manner, a consistent data model is required. Such a data model needs to map the real financial situation of an institution at such a level of detail that the deviating views can be derived from a common source. Otherwise, we follow a patchwork approach – which is indeed common practice – but which ultimately leads to inconsistencies in analyses based on similar (but different) data sources.

- *Parsimony* is a user-driven concept, whereas the former two principles are requirements that relate to the data themselves. Even if someone were to meet the steep requirements of the two previous principles, nothing would be achieved if the data could not be delivered to the user analysts whose work relies on them. Hence, common definitions of the main data items, key indicators, etc. need to be developed jointly with the user analysts. These needs to be complete and unique (counter example: there are still dozens of net interest margin definitions around).
- *Timeliness* obviously means different things to different user analysts. Indeed, supervisory reporting is in competition with real-time market data and (early) quarterly reporting by the largest banking groups. Supervisors are asked to comment on / analyse developments within those banks and will – if no other data are available – rely on private data providers and / or

published accounts. At the other end of the spectrum, research analysts are less time-constrained and willingly accept more distant deadlines for the sake of consistent and valid granular data sets. Relevant supervisory reporting therefore has to come up with means to stagger deadlines in order not to become irrelevant at the shorter end, while allowing for completeness / consistency at the longer.

To summarize the supervisory data needs: the competent authorities should neither aim for the least common denominator (i.e. for the data needs that merely fulfil all previous supervisory reporting requirements), nor for the most comprehensive data requirements. Instead, they should seize the opportunity to aim for a best-of-breed system that implements the above specified data needs. The SSM provides us with an opportunity to re-think some of our established habits, so let us move out of our comfort zones and build the supervisory reporting system of the future.

Regarding supervisory requirements towards statisticians in terms of products, we should aim for a *quantitative support* to the greatest possible extent. This refers to the whole process of *data dissemination* and *data compilation* as well as the *production of secondary statistics*, which should be carried out by the statisticians themselves in order to enable supervisors to concentrate on their core activities. The same is true in the field of *outlier detection*. As statisticians have already implemented robust systems, it is much more efficient to use the existing know-how and rely on the statisticians' expertise rather than to develop and maintain a duplicate system. Even regarding the first interpretation of the data, supervisors can benefit from the statisticians when using existing analytical tools. Last but not least, especially in respect of a *model-driven statistical risk assessment*, supervisors should claim support from the statisticians. This is particularly true regarding less significant institutions, for which, owing to the application of different national accounting standards, a decentralised model is bound to be far more successful than a centralized one. Given the application of different national accounting standards with their different valuation methods, a decentralised model would probably better fit the existing national peculiarities.

To summarize, supervisors should rely on the *existing expertise and know-how* of the statisticians to be able to *concentrate on supervisory core activities*.

5. Facing the challenge – European Reporting Framework

Fundamental changes in demand call for equally profound changes in the way that statistics and statistical analyses are produced. Facing the challenge, we should strongly rely on the vision of an overall reporting and transformation process called the *European Reporting Framework (ERF)* in order to reduce the reporting burden for both recipients and reporting institutions. This ERF consists of an *input layer*, an *output layer* (comprising data needs from all stakeholders, i.e. supervisors and statisticians), and the *Statistical Data Dictionary*.

One of the main reasons behind the ERF is simply the fact that current supervisory reporting standards require data which are collected in several reports, such as COREP, FINREP, credit registers (which often serve supervisory purposes as well), various reports on banks' individual risk profiles not covered by COREP, and many more. These data are collected at different frequencies and different levels of aggregation. Furthermore, in view of the number of different reports, they are not free of redundancy. Under the ERF, however, it is envisaged to reduce the complexity by collecting all the various data required for banking supervision and for the ECB's monetary statistics, which are currently spread across many different individual reports, using an integrated approach which has its roots in one uniform *input layer*.

The *input layer* is derived from *primary data* available in the operational systems (e.g., for accounting, risk management, securities deposits) of the banks. It provides an exact, standardised, unique, and hence unambiguous definition of individual business transactions and their attributes. Consistency, the absence of redundancy, and the ease of expandability are key features of such an input layer. Harmonised transformation rules defined by banks and competent authorities in close collaboration can be applied for fulfilling the reporting requirements of banks. The "*input approach*" (i.e., the input layer and the transformation rules) should in any case remain on a voluntary basis for the banking industry.

Reporting requirements should be organised in the future in the form of a comprehensive and harmonised common primary reporting framework for regular data transmissions to European NCBs/NCAs. This reporting framework will be realised in a stepwise approach. Harmonised transformations defined by NCBs/NCAs and ECB in close collaboration will be applied to produce the required secondary statistics, the reporting templates, and other relevant aggregates.

All the information needed for the understanding of the secondary statistics and other aggregates will be described in a *Statistical Data Dictionary*.

What are the advantages of the ERF?

First and foremost, the model aims to ensure a precise, simple, and unambiguous definition of information relevant for reports by means of the input layer. With the consistency of input and output layer, the quality of reports will improve. This is achieved by using harmonised and unambiguous definitions as well as a collection method that is free of redundancy and by eliminating the need to cross-check individual reports from one and the same reporting institution. With a single *input* and *output layer*, the ERF model is both parsimonious and transparent. Furthermore, the ERF is based on the idea of holding passive data within each reporting institution. This has the following advantages:

- As the input layer defines data at an extremely granular level, changes in the level of aggregation may be implemented with greater ease.
- The model is expected to be sustainable. It should be easy (or at least easier) to meet new data requirements not yet covered by the reporting framework by amending the input layer.

Owing to the fact that (1) the input layer defines data on a very granular, transaction-based level, and that (2) it is developed in cooperation with the institutions, a clear aim is that institutions may use the input layer for different institutional internal reporting purposes as well. Finally, timeliness is also expected to increase in the medium term as certain quality checks should become redundant after the initial phase and hence be omitted as previously outlined. Moreover, the reporting burden should also decrease *ceteris paribus* (as a vast number of different reporting obligations will be replaced by a limited number of attributes/dimensions).

Note, however, that the following fact entails an important constraint on the advantages just mentioned: the complexity of the input as well as the output layer actually increases with the number of attributes/dimensions required by international or national reporting prescriptions. In other words, the scale of the layers is expanded by the extent that various international or national regulations are heterogeneous and hence not fully consistent in their definitions. To give an example: as long as the concept of a simple bank loan is defined differently in supervisory

statistics and monetary statistics, at least two or more attributes are needed instead of one attribute only to satisfy both reporting obligations (and to classify correctly the individual transactions). It is supposed that, finally, the number of dimensions within the input layer will range between 150 and 200 (as a maximum). This appears to be a great number at a first glance. However, considering the fact that not all of these dimensions have to be reported obligatorily under the output layer and considering further the ambition to feed the data reports of the bank-internal risk management from the input layer as well, this first impression is deceptive.

What are the challenges ahead?

Having discussed the expected benefits, let us now turn to the challenges we are facing. Of course, neither the ERF nor any organisational setup provides a solution to the following problems that remain yet unsolved:

Much stronger efforts for intensified international and national *cooperation and communication* are needed in the future. On a *national level*, the different public bodies that are active in the area of statistics, such as different ministries or the national statistical institutes, etc., should contribute to these efforts, which should always be guided by the clear goal of avoiding redundancies, harmonizing and sharing available information, and thus reducing the burden for all parties involved. On an *international or European level*, this implies even closer cooperation between the ECB and the NCBs, and between the ESRB and the ESAs. Here it appears that the focus lies on the following issues:

- We have to make sure that future data requests are coordinated and aligned even better than today to ensure the maximum attainable harmonization of definitions.
- We have to make sure that already existing and available data can be shared effectively.
- We have to put even more emphasis on reconciling already existing reporting requirements. Here the JEGR (Joint Expert Group on Reconciliation of credit institutions' statistical and supervisory reporting requirements) appears to be one promising first example.
- We have to evaluate the need for our statistical products on an ongoing basis. It is our impression and experience that new data requests appear quite frequently whereas an already existing reporting obligation has almost never been abolished so far. Do we really need

everything that is requested? Do we actually use everything we have? Do we have the capacities to analyse and assess all we have? Is it necessary to maintain all the different statistical and accounting concepts (monetary statistics vs. supervisory statistics, security holding statistics vs. credit registers, reporting obligations based on national GAAP vs. IFRS, etc.)?

Likewise, a closer *cooperation with data providers and reporting institutions* is required to follow the markets' trends and get a clear picture of what is possible for statistical analysis and at which price.

A further important issue is of *legal nature*. Speaking from a purely statistical perspective, we often experience that existing legal regimes prevent economically efficient solutions. For example, multi-use of data is often restricted by data-protection laws. Of course, these laws are very important. Very simply speaking, however, it sometimes appears that the new micro- and macro-prudential architecture together with the respective mandates are potentially not yet fully reflected in the relevant legal frameworks dealing with statistics. Or putting it differently, one could also say that the mandates of prudential authorities do not optimally take into account existing regulations for statistics and data protection. Apparently there is a trade-off between economic and legal reasoning. What we need are balanced solutions. In any case, this requires closer cooperation and intensified efforts with the relevant legislative authorities.

The concentration of statistical responsibilities, the new organisational setup, and the way data are treated within a new data model (ERF) call for a new, cutting-edge *technological setup*. Significantly more extensive sets of data resulting from a trend towards higher granularity require adequate IT-systems to process and interlink these vast amounts of data. Hence substantial investments in technology have to be undertaken.

6. Conclusions

To conclude, the foundation for an efficient implementation of SSM data needs is based on the following four pillars:

- The *exploitation of existing data* (quality of regular data comes before the quantity of ad-hoc data);

- The *exploitation of existing structures* (by relying on the available expertise and know-how of the statisticians);
- The *exploitation of synergies between bank-internal risk management and supervision* with respect to the required data; and
- The *development of harmonised requirements* for quantitative statistical information *derived from heterogeneous primary sources* and their implementation in *standardised reporting formats (European reporting framework)*.

List of references:

ECB (2014), “SSM Supervisory Reporting Manual, Version 1.0”