
Making data transparent and accessible

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“If you have an apple, and I have an apple and we exchange apples, then you and I will still each have one apple.

But if you have an idea, and I have an idea and we exchange these ideas, then each of us will have two ideas”.

George Bernard Shaw

Introduction

In a highly competitive business environment, focusing on the needs of customers is only way to be “... an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation”¹. However, great goals are hard to achieve. From this point of view, it is very important to know how to prioritize the objectives. Hence, thinking about better customer satisfaction, the decision was made to re-organize the entire statistical business process model at first.

Why the new statistical business process model?

First of all, to change dramatically existing excel-based production into standardized procedures for each step of the data collection, processing and dissemination, and create comprehensive database responding to the statistical requirements on both international and domestic level. As a result of this idea, at the end of 2015 National Bank of Georgia launched innovative statistical business process model, so-called SebStat, as a modern and flexible statistical system for central bank.

What is the SebStat?

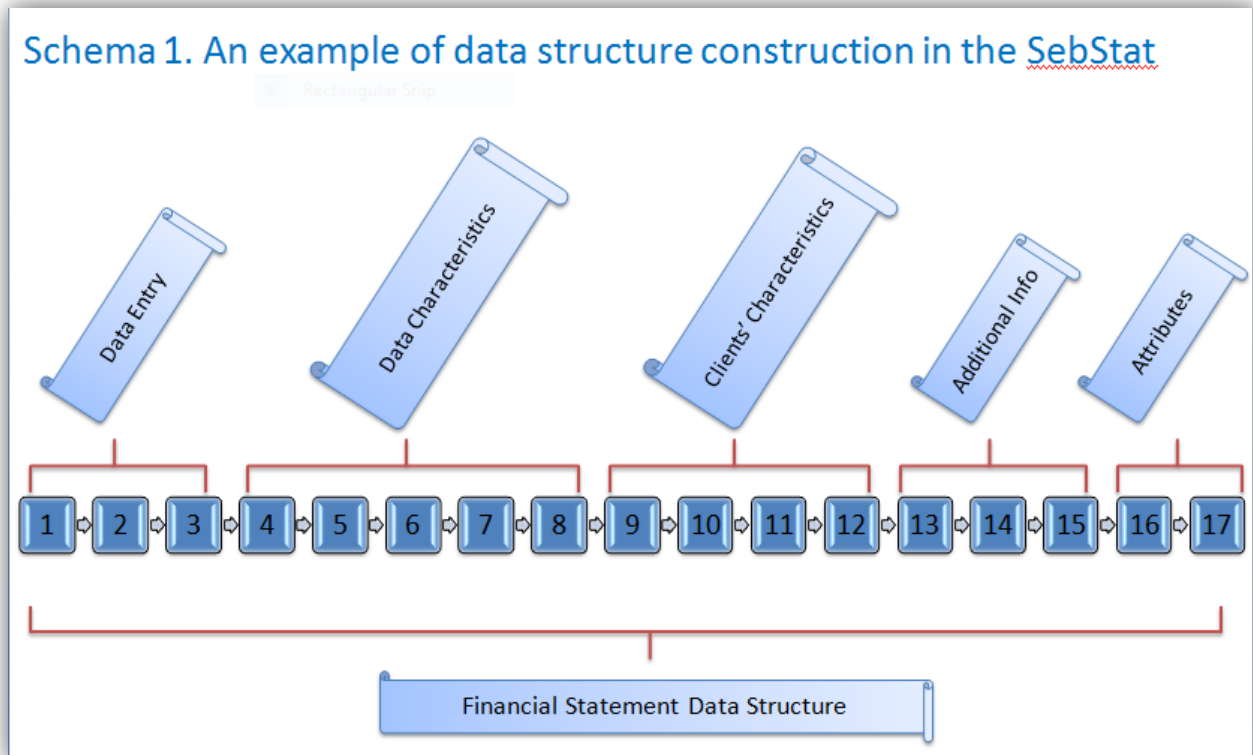
SebStat is web-enabled statistical Informational System for central bank, capable of making statistics more flexible, cost-saving, transparent and user-friendly than before.

SebStat is statistical business process model that is intended to collect, validate, process and disseminate statistics under the NBG mandate. It’s conceptual and IT architecture is based on well-organized data structure

¹ Fundamental Principles of Official Statistics. Resolution adopted by the General Assembly of UN on 29 January 2014. <https://unstats.un.org/unsd/dnss/gp/FP-New-E.pdf>.

definition (DSA), which makes required data understandable from methodological point of view for all users, and respondents are able to generate and submit data easily, through unique keys, describing detailed data characteristics.

What is the key that describes the data? It is a set of certain characteristics, which gives a complete picture of what the data we are dealing with. The schema below illustrates financial statement data structure for commercial banks, constructed on the base of such kind of appropriate characteristics. Each item of the key is selected from the relevant code-list. As a result, the key gives a very clear picture of the content of the given data.



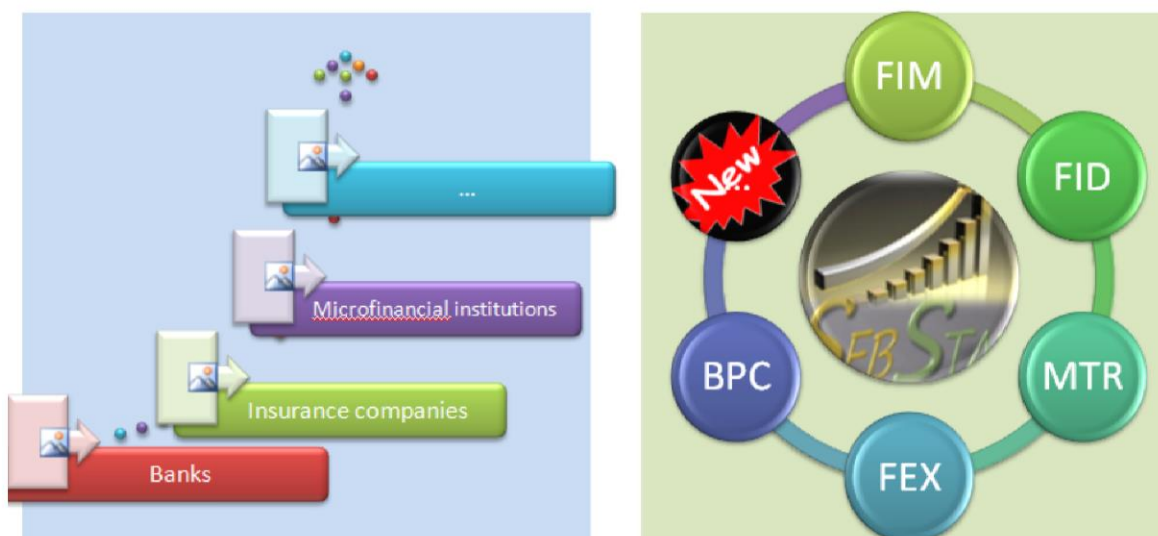
SebStat is a standard framework and harmonized methodology to assist financial institutions:

- In forming financial and statistical databases, and
- With automation of statistical data production, validation and submission procedures.

SebStat is a scalable platform, which allows expand existing content of database with a new data families, new structural details or new institutions easily, by means of well-established standard approaches and procedures.

From the institutional point of view, system’s coverage implies step-by-step involvement of various financial institutions in the project, depending on statistical importance of them for the national economy. On the other hand, from the coverage point of view, system can be developed gradually and continuously by adding additional statistical domains (see schema 2 below. FIM, FID, MTR, FEX and BPC are existing statistical domains).

Schema 2. SebStat as a scalable platform



What has changed in our statistical practice after the implementation of SebStat?

Launching of SebStat is the turning point in the NBG's statistical practice. It allows to:

- Improve quality and timeliness of statistics in an increasingly demanding world;
- Exclude any manual intervention when collecting, processing and disseminating information;
- Support monetary policy with comprehensive and timely information;
- Disseminate wide range of statistical time series for domestic and international users;
- Develop a coherent statistical meta-informational system;
- Increase confidence in NBG's statistics;
- Elevate the NBG's reputation;
- Help data providers to produce high quality statistics in line with the international statistical standard;
- Make easy to share related knowledge and experience with interested parties;
- Create new data sources for compilers of other macroeconomic statistical systems, as well as for macro-prudential analysts;
- Make statistical reporting development process less-costly and –burdensome;
- Be compatible with other international statistical systems, such as SDMX, etc.

From the respondents point of view implementation of SebStat means no paper or excel spread sheets reporting, overlapping and data inconsistency. There is no necessity for data reconciliation among the different statistical domain, submitted to the different units of the NBG, as it was practiced before. Clear and standardized methodological guidelines provide a uniform understanding of the required data. Automation of data production and validation makes very easy reporting cycle and reduces the reporting burden significantly.

Moreover, standardization of data structure makes extremely easy to identify, design and build new requirements within the existing mode, without additional costs. On the other hand, thanks to optimization of

statistical business process as a whole there is more time for analytics, improving communication ways with users, system development etc.

SebStat plus BI platform

What is the next most important step to do?

Providing comprehensive, timely and impartial information for the users through user-friendly interface is our next important priority.

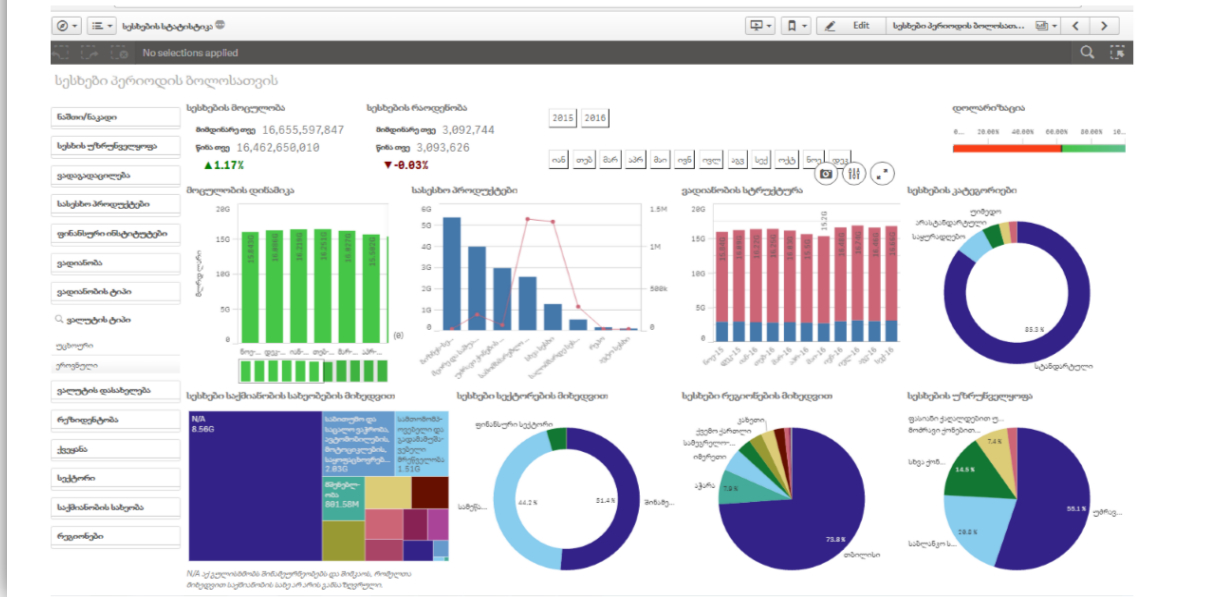
In order to solve this task National Bank of Georgia has decided to use BI (Business Intelligence Software) platform for data delivering.

The BI platform would display customer information from SebStat database in user-oriented, interactive, visual dashboards, which require no specific IT or other background in customer analytics. Moreover, each visual element on the dashboard can be drill-downed according to user's analytical purposes. Schema 3 below represents an example one of the BI dashboards. However, user can make a choice what kind of visualization is more reliable for own goals. Any visualization object of a dashboard can be used as a condition of a filter, the selection of which results in the simultaneous filtering of the rest. The system ensures various outputs into a Dashboard: numeric, graphical, percentage, text, multiple selections from the menu box, data linked to a geographical map, etc.

Full functionality is available for all users with no limitations of time spend within the system. They can extract their reports; all dashboards, maps, graphs, tables and reports have the capability to be exported to PDF, Excel or in a CSV format, which makes the system more user-friendly and comfortable.

In general, system is supported with functionalities, which are flexible and able to work without scripting or IT intervention.

Schema 3. An example of BI dashboard



More specifically, implementation of BI allows achieving the following goals:

- Flexibility of data processing, reporting and visualization;
- Capability of producing a broad spectrum of analytical outputs;
- Delivery of an interactive dashboard to enable users to explore the Bank’s information assets;
- Centralization, automation and governance of the data visualization process;
- Increasing the efficiency of information exchange both within, and outside of the Organization;
- Raising the level of information security;
- Improving the reliability of information;
- Significant reduction of the time required for accessing information;
- Significant reduction of the time required for creating structural reports and dashboards;
- Mitigating the risk of human errors;
- Mitigating reputational and operational risks of the Organization.

Implementation of abovementioned new statistical business process model, on one hand, and using a modern technology for deriving statistical data in desired formats (tables, graphs and other visualizations), on the other, makes NBS Statistics clear and understandable for users. All statistical outputs are supported with metadata and guidance and user can easily get information on data structure and other details. More specifically, dashboard schema 3 above demonstrates, that structural metadata user can see directly on the screen, while the more detailed metadata is available by clicking on alphabetical classified index.

Communication

Success in statistical activity starts not only with a deep understanding of international statistical standards, or with a creative statistical solutions, but also with a clear communication strategy, making data more available for users, and at the same time, more understandable, useful, efficient, and transparent.

National Bank of Georgia recognizes the importance of good communication practice. In this regard, one of the most important priorities for NBG is effective relationship with data providers, and first of all, with commercial banks. They are main providers of information, on which SebStat database is created. Hence, making available for them whole spectrum of summary statistics on financial sector developments, as well as well-organized own information, through appropriate web-application, would be a great benefit for their effort to establish strength and stable statistical database at the NBG.

Conclusion

“If you make small goals and accomplish them, it gives you the confidence to go on to higher goals”.²

Indeed, our successful solution regarding new statistical informational system inspires us to expand our activity toward further developments and design new statistical domains, and create new statistical products portfolios under the NBG’s mandate. On the other hand, it is very important to develop statistical literacy issues among users and thereby increase awareness of financial and external sectors statistics, usefulness of disseminated data, and at the same time, get useful messages from them on market inherent statistical needs. Motivation to do this is very high, because the literate society is important not only for adequate interpretation of data, but also for making more substantiated demands to statistical bodies, which can become the main driver for further developments.

² John H. Johnson, American businessman. https://www.brainyquote.com/quotes/authors/j/john_h_johnson.html.