Forecast Data Management System (FDMS+) for European Commission
The European Commission is one of the main institutions of the European Union. It represents and upholds the interests of the EU as a whole. The Directorate-General for Economic and Financial Affairs (DG ECFIN) of the European Commission strives to improve the economic wellbeing of the citizens of the EU—through policies designed to promote sustainable economic growth, a high level of employment, stable public finances and financial stability. To ensure the smooth functioning of Economic and Monetary Union (EMU), DG ECFIN focuses on economic surveillance, monitoring, and forecasting. To this end, it carries out a wide range of macroeconomic analytical tasks using appropriate and high quality economic and statistical indicators, produces comprehensive economic forecasts for all Member States as well as the EU’s main economic partners, and disseminates research findings relating to ECFIN’s policy priorities. ec.europa.eu
To produce forecast data in a more efficient and secure manner, DG ECFIN needed an enhanced solution. In response to this, Prognoz developed the **Forecast Data Management System (FDMS+)**, a comprehensive time series database management system based on the Prognoz Platform. The Prognoz designed solution consists of **three main parts**: Data Repository, Forecast Tool, and Dissemination Tool. The **Data Repository** provides a single entry point for DG ECFIN users to retrieve data from multiple sources. Various sources ranging from cross-country databases to country-specific data sources were incorporated into the repository to support DG ECFIN’s policy and monitoring work. The **Forecast Tool** in **FDMS+** supports the production of decentralized comprehensive economic forecasts, which encompasses activities including production of external assumptions, retrieval of the latest historical data, collection of individual country forecasts, data aggregation, consistency checks, and data reporting in the form of tables, charts, and maps. The **Dissemination Tool** is Web-based and aims to empower DG ECFIN officials to communicate
and exchange data with external users. In addition, FDMS+ is built to provide a secure and flexible software environment for DG ECFIN’s day-to-day tasks in statistical data collection, management, analysis, forecasting, and dissemination. The Prognoz solution provides controlled access to information (data, metadata, groups, and hierarchies), tools (data import tools, shared routines, reports, visualizations, models), tasks, and structured means to communicate with other users in the data areas.
Description

**KEY FEATURES**

The **Data Repository’s** purpose is to provide a single entry point for all the DG ECFIN users to the most frequently used (DG-internal and external) data sources: Eurostat, macro-economic data from national sources, IMF macro-economic statistics, ECB statistical data warehouse, OECD Statistics. Each database in the repository is organized as a time series database to provide optimal performance when DG users operate with it. The repository also allows managing structural metadata and metadata dictionaries.

The **Forecast Data Management System (FDMS+)** includes all the functionalities of the forecast process, while improving data handling (e.g. integration of databases, data repository), output (tables, graphs and maps), data aggregation, consistency checks and validation as well as data security while reducing business continuity risks.
The reports generated are live and tied to databases, giving the users the ability to refresh the reports any time they want to. The following are some example of reports that are implemented in FDMS+

- Production of the external assumptions and their circulation;
- Retrieval of country-specific historical data into Excel sheets;
- Production of the raw forecast numbers by country desks;
- Inserting of forecasts by the country desks into forecast sheets in Excel;
- Transposition of forecast values into a country-specific transfer matrix;
- Data aggregation;
- Execution of consistency checks including the trade consistency exercise;
- Production of the graphs and tables for the forecast document.

Concerning the production of forecasts, the current process involves the following main steps:

The reports generated are live and tied to databases, giving the users the ability to refresh the reports any time they want to. The following are some example of reports that are implemented in FDMS+:
FDMS+ provides access to a repository of data and tools which help the DG ECFIN experts to automatically generate reports with the aim to integrate them in the publication: European Economic Forecast.

Results of the implementation of the system

- FDMS+ provides access to a repository of data and tools which help the DG ECFIN experts to automatically generate reports with the aim to integrate them in the publication: European Economic Forecast.

- For the automatic generation of the reports, the full forecast process is prepared in FDMS+ ranging from data submission, data validation, data calculations to the automatic update of the reports. This automation of tasks and creation of complex consistency checks improved both the work efficiency and the reliability of the data.

- Prognoz is proud to announce that the last two forecast publications were successfully created using the FDMS+ system.