

# International Financial Reporting Standard IFRS 17 – Practical Experiences from Implementation

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## ABSTRACT

This paper provides an overview of the SAS solution offering for the new International Financial Reporting Standard IFRS 17, which includes a product bundle of SAS® Infrastructure for Risk Management, SAS® Risk and Finance Workbench, and SAS® Visual Analytics. We cover both the main features of the solution and specific project-related details that relate to items that we have already observed in project implementations.

## INTRODUCTION

The International Accounting Standards Board (IASB) has developed a new financial reporting standard for insurance companies called IFRS 17 that significantly impacts financial disclosures, entire data and system landscapes, and responsibilities through various stakeholders. The goal of IFRS 17 is to establish more standardized and transparent financial reporting for insurance companies all over the globe. It becomes effective by 1<sup>st</sup> of January 2022, with a one-year transition phase prior to that date.

SAS already supports insurance companies that are facing the technical and functional challenges of IFRS 17. We accompany our customers in implementing the right architectural design concepts for either integrating with existing landscapes or reshaping them. We offer both data management tools and analytical content that is specific to the IFRS 17 regulation and beyond.

## THE SAS OFFERING

The SAS solution for IFRS 17 is a bundle of SAS products that address the different needs within an end-to-end closing process. While traditional SAS data management tools and analytical functions build the fundamental framework of data preparation, the SAS solution also offers pre-built analytical content for calculations and postings that are specific to IFRS 17. The solution includes advanced reporting that enables you to drill down to results at the so-called unit of account level. The solution is rounded by a process engine that you can link to the calculations and postings to enable you to have a full controlled overview about the entire process at any time.

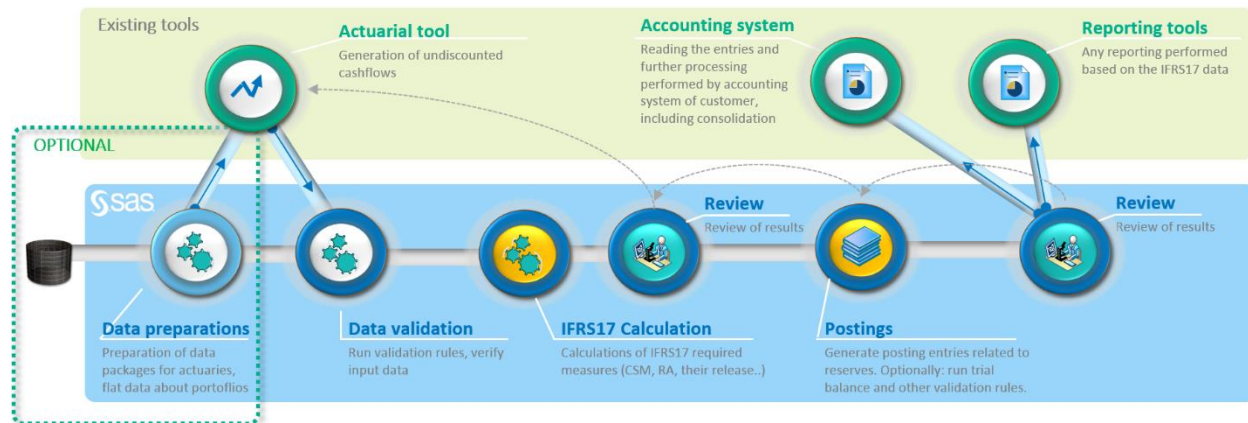


Figure 1: End-to-End Closing Process

It is worth mentioning that the SAS philosophy is to integrate with existing actuarial and accounting tools, because insurance companies often have complex IT landscapes. However, the solution can be also extended wherever necessary to fill out gaps in these landscapes. For example, we often encounter environments where especially companies with non-life business also want a tool to capture cash flow generation.

## CALCULATION AND POSTING ENGINE

When transforming data from A to B, you need to have an exact understanding of the starting point as well as the target picture.

The SAS solution has several entry points. **The solution's** content package comes with a pre-defined data model that SAS calls the landing area. This data model that can collect either very granular coverage data or data that is already grouped into the CSM group, which is the IFRS 17 unit of account. This level is the lowest level of granularity for the IFRS 17 calculations and postings. Within the SAS solution, this is referred to as the insurance contract group (ICG).

Most of the current implementation projects tend to use the entry point with already grouped ICGs. But this option also allows further flexibility. You can provide undiscounted cash flows and let the SAS solution discount automatically, or you can provide present values where the discounting happens in other actuarial tools that are already in place. The latter is most often seen with life insurance contracts.

Once the input data is present, the next step is performing the calculations or measurements. This is handled by the heart of the SAS solution, SAS Infrastructure for Risk Management.

SAS Infrastructure for Risk Management is a high-performance execution platform where calculations or code (such as SAS code or a Java program) are executed sequentially or in parallel while taking into account dependencies of the calculation steps. The chain of calculation steps is also called a job flow.

Figure 2 shows a list of executions of available job flows that are in the IFRS 17 content package, including discounting, data validation, calculations based on the methods General Measurements Model (GMM), Premium Allocation Approach (PAA), Variable Fee Approach (VFA) and posting-related job flows.

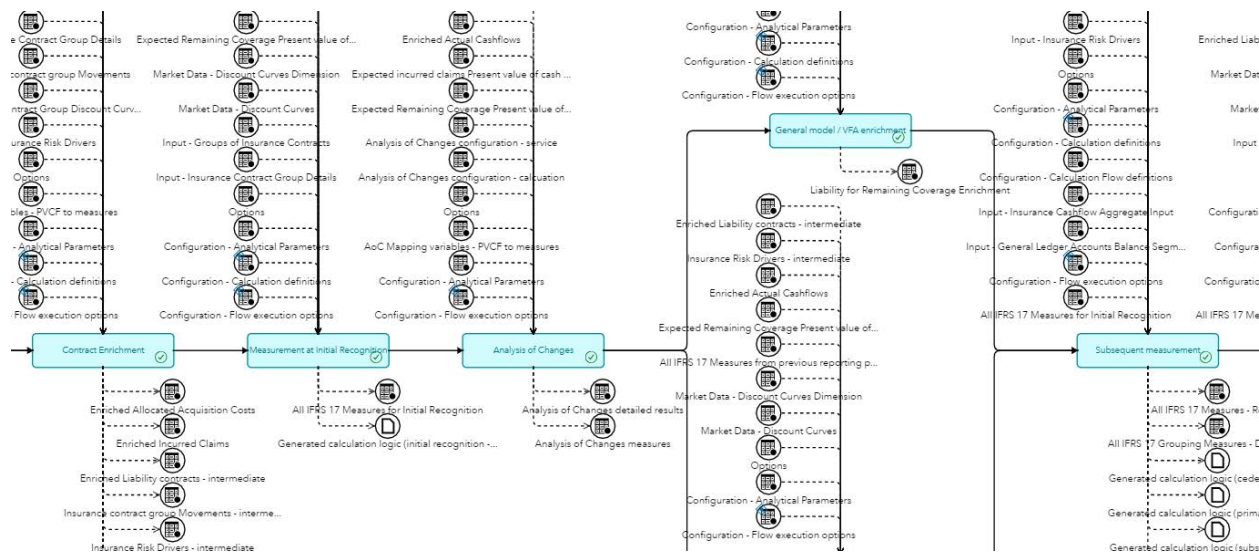
Within SAS Infrastructure for Risk Management, a job flow is not only optimally processed, it also enables you to fully trace the calculation steps by zooming into detailed input data and interim results.

Furthermore, SAS Infrastructure for Risk Management also allows you to modify input data and parameters for your analysis purpose without interfering with the actual production runs.

Figure 3: IFRS 17 Calculation Job Flow is a zoomed-in view of the detailed step of the calculation logic in the SAS solution where the methodology for GMM, PAA, and VFA is implemented.

Status	Last Run	State	Instance	Flow	Base Date	Description
✓	Mar 24, 2019, 10:03:07 AM	🚦	Load Final Entries to Subledger 2019.03.24_09...	IFRS17 - SLAM - Sign-off SL Entries	Dec 31, 2021	Load Final Entries to SL Journal and ...
✓	Mar 24, 2019, 10:01:10 AM	🚦	Batch Journal Line Entry Creation 2019.03.24_0...	IFRS17 - SLAM - Generate SL Entries based on A...	Dec 31, 2021	Create SL Batch Entries
✓	Mar 24, 2019, 10:00:40 AM	🚦	GMM VFA PAA - 2019.03.24 9:00:34	IFRS17 - Calculation based on Discounted Inputs	Dec 31, 2021	GMM VFA PAA - Project: IFRS17 - 20...
✓	Mar 24, 2019, 10:00:02 AM	🚦	Discounting cash flows 2019.03.24 8:59:59	IFRS17 - Produce Discounted Inputs	Dec 31, 2021	Discounting cash flows - Project: IFR...
✓	Mar 24, 2019, 9:59:25 AM	🚦	Data Quality 2019.03.24_08h59m22s	IFRS17 - Data Quality	Dec 31, 2021	Run data quality checks
✓	Mar 24, 2019, 9:45:22 AM	🚦	Load Final Entries to Subledger 2019.03.24_08...	IFRS17 - SLAM - Sign-off SL Entries	Dec 31, 2020	Load Final Entries to SL Journal and ...
✓	Mar 24, 2019, 9:43:33 AM	🚦	Batch Journal Line Entry Creation 2019.03.24_0...	IFRS17 - SLAM - Generate SL Entries based on A...	Dec 31, 2020	Create SL Batch Entries
✓	Mar 24, 2019, 9:43:04 AM	🚦	GMM VFA PAA - 2019.03.24 8:42:58	IFRS17 - Calculation based on Discounted Inputs	Dec 31, 2020	GMM VFA PAA - Project: IFRS17 - 20...
✓	Mar 24, 2019, 9:42:24 AM	🚦	Discounting cash flows 2019.03.24 8:42:22	IFRS17 - Produce Discounted Inputs	Dec 31, 2020	Discounting cash flows - Project: IFR...
✓	Mar 24, 2019, 9:41:48 AM	🚦	Data Quality 2019.03.24_08h41m45s	IFRS17 - Data Quality	Dec 31, 2020	Run data quality checks

**Figure 2: SAS Infrastructure for Risk Management Job Flow Overview**



**Figure 3: IFRS 17 Calculation Job Flow**

### Handshake between calculation results and postings

The calculation job flow generates so-called accounting events. These accounting events are then collected by the posting job flow, which maps these items into accounts by pre-defined rules.

The target picture here is the IFRS 17 subledger that is spanned by many dimensions. The main dimension is the IFRS 17 chart of accounts. Accounting events are another dimension that defines every movement of the evolution of a balance sheet item from the opening balance to the closing balance.

The SAS IFRS 17 content package contains a pre-defined IFRS 17 subledger that can be fully replaced by a customer-specific subledger or can be extended by several subledgers or a chart of accounts.

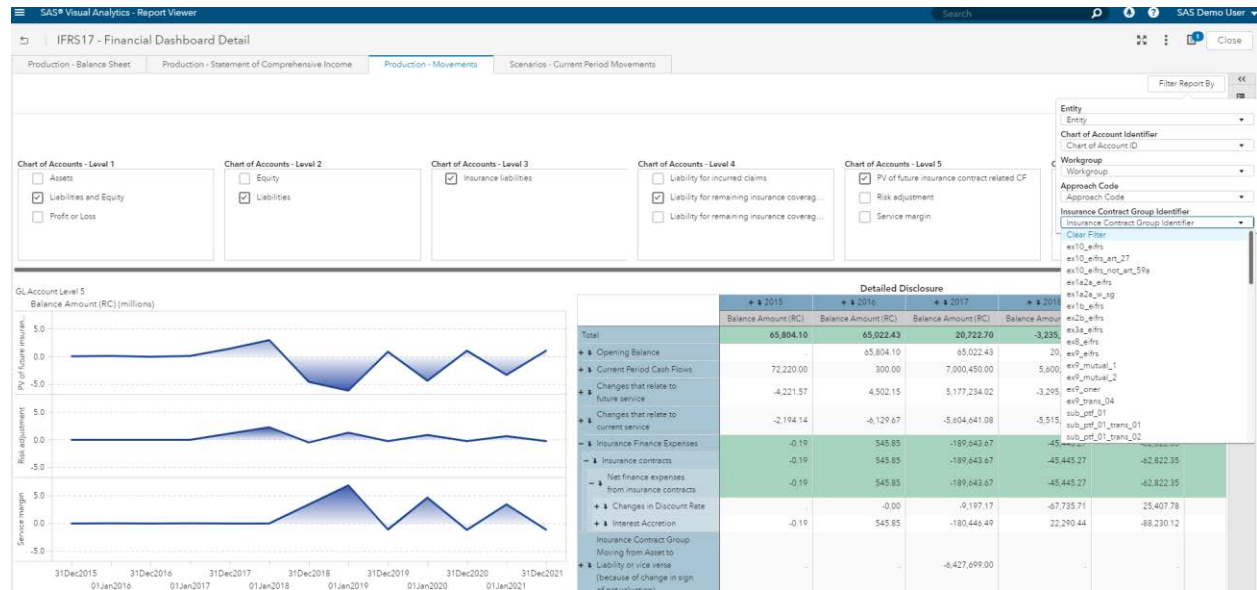
Therefore, one of the main areas of project implementation is **answering the question “how to bring in the company’s chart of account” into the solution, rather than just “how to bring in data for calculations.”**

It is worth mentioning that the accounting framework that is used within the IFRS 17 package is a generic framework that is also used in other SAS content packages such as IFRS 9 or CECL.

## ADVANCED REPORTING

One of the main advantages of our SAS solution is that users can analyze the results prior to sending data to their general ledger for consolidation or further sign-off steps.

They can do so by looking at a pre-configured balance sheet, a movement report, or custom dashboards which they can build by themselves in SAS Visual Analytics.



**Figure 4: IFRS 17 Financial Dashboard in SAS Visual Analytics**

The SAS Visual Analytics reports are only views of the data provided to the reports. Therefore, the real challenge is making sure that the right data with all the necessary attributes and the desired granularity is supplied to the reports.

Within the SAS solution, you can drill down from the entity level to the insurance contract level to analyze results. However, there is no limitation in defining these views. The SAS posting framework allows you to define additional in-between layers, such as results grouped by lines of business or results grouped using attributes that are used in the **company's decision** or sign-off processes.

Thanks to the sample data that is included in the IFRS 17 content package, you can analyze how the SAS solution has implemented the IFRS 17 standard without having to use your data in the system. In addition, the sample data can be also used for deriving mapping concepts for the ETL of your data from source systems into the SAS solution.

Another advantage that the SAS solution offers is the ability to perform subsequent measurements and analyze the results for several reporting periods. For example, you can see the impact of interest or currency exchange rate changes or other movements such as derecognition events.

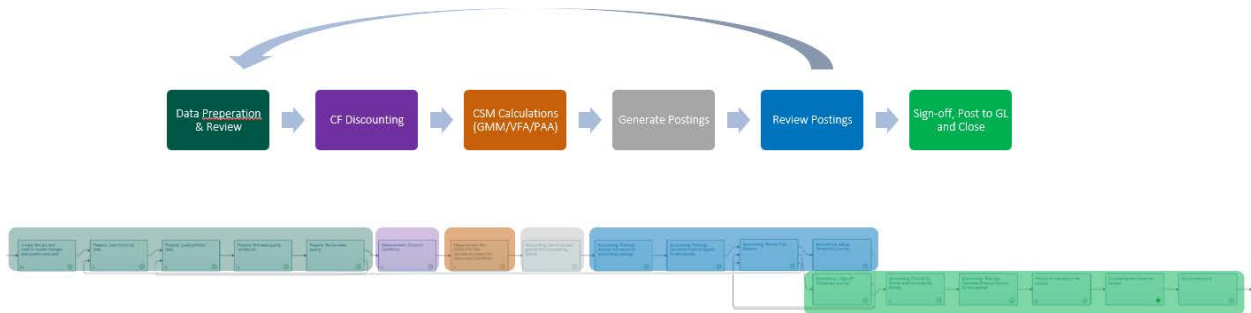
### Auditability and Traceability

To follow a transformation from A to B requires transparent steps as well as protocols about **"how is this number derived?"** SAS uses here an open box mentality and supports this with various reports about the traceability of results back to the input data. The four-eyes principle can be easily extended to an *n*-eyes principle.

## PROCESS HANDLING

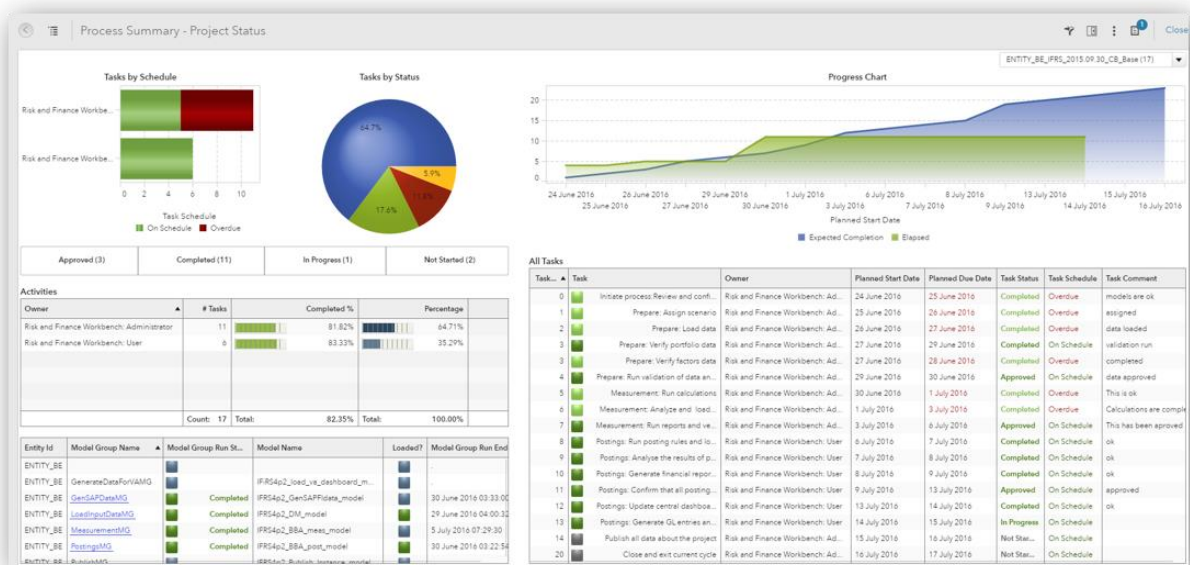
Besides the data preparations, another important aspect about a reporting implementation is the definition of the end-to-end process. Ideally, you can embed your entire closing process into a process that is scheduled in batch. But in reality, your process will have breakpoints where user interaction is required. For example, sign-off steps or late adjustments might be required.

The SAS Risk and Finance Workbench allows you to build the end-to-end processing for IFRS 17. The content package includes a demo process that can be adjusted during the project implementation.



**Figure 5: The IFRS 17 Demo Process**

All of the information about the process, including the answer to the questions “who has done what and when,” is **logged** in SAS Risk and Finance Workbench. This information is extracted into a SAS Visual Analytics dashboard that allows precise monitoring of the status of the closing process.



**Figure 6: IFRS 17 Process Dashboard**

But it is not only the process modeling capability of SAS Risk and Finance Workbench that is used for the IFRS 17 solution - the reporting capability is also predefined with content. SAS has included in the reports disclosure samples that are recommended by IFRS auditors.



The reporting feature in SAS Risk and Finance Workbench is especially useful, because it allows you to use custom Excel templates for reporting. Defining reporting needs based on Excel templates is a common approach for companies.

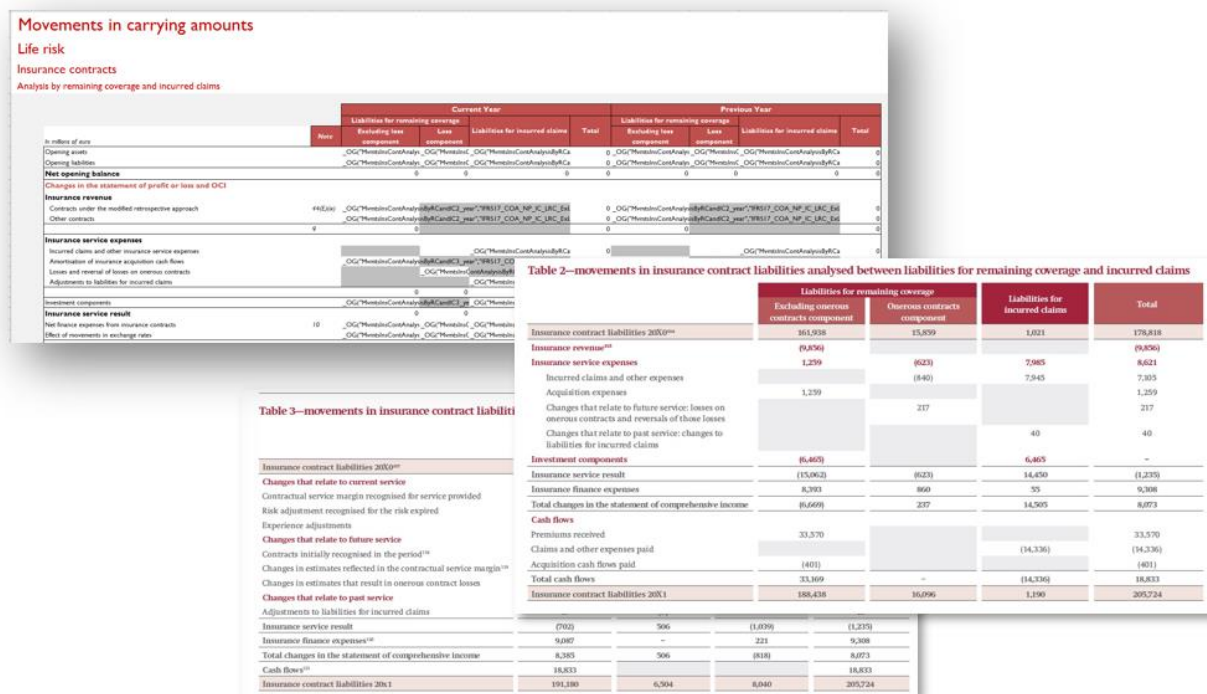


Figure 7: Custom Reporting Templates in Excel

## CHALLENGES IN THE FIELD

The fact that the application date of IFRS 17 was postponed, underlines the fact that insurance companies are facing many challenges on their implementation journey.

While some early birds already have a clear picture of the interpretation of the new standard and what it means for their company, others seem to have just started this evaluation process. It remains to be seen whether there will be more delays similar to what we have experienced with the Solvency II framework.

SAS can already provide project experience from all over the world that relates to many of these challenges that our customers are facing.

## A CRYSTAL-CLEAR REGULATION?

With IFRS 17, the IASB has defined an accounting standard that is supposed to define common principles across insurance companies that allow for better transparency and comparability of their financial statements.

Some of these principles are indeed linked to clear guidelines, but others leave a lot of gray areas that are subject to different interpretations. In addition, we are facing a standard that might also have various local derivations in different countries. For example, a large operating insurance group is facing the challenge of an implementation project with multiple generally accepted accounting principles (GAAP).

We have had to keep this in mind when developing the SAS solution. Although we are offering pre-built content for the standard, we have to enable all of the content functions to

be easily adopted for local extensions, whether they are coexisting or interacting on the same platform.

In addition, although the primary goal is about being compliant with the standard, the project framework needs to consider more than that. For example, management decisions or the change of underlying parameters that might have an impact on the balance sheet and P&L (sensitivity tests) need to be analyzed and simulated in scenario runs and forecasts.

With the help of the separation of the technological platform and the analytical content (comparable to the separation between a smartphone and an app) and the intrinsic functionalities of SAS Infrastructure for Risk Management and SAS Risk and Finance Workbench, we offer a very flexible solution that fulfills these needs.

## WHO OWNS THE PROCESS?

**Who can dare to ask “is IFRS 17 a clash of cultures?” This might seem to be a radical question, but if you have been involved in a meeting between actuaries and accountants, it is maybe not that far from reality.**

The SAS solution offers a quickstart approach that allows you to process use cases end-to-end, from calculations up to the postings, without having all data in place but by working with synthetic cases. This exercise is recommended in the early (assessment) stage of a project in order to derive business requirements and data mappings.

During the assessment stage, one of the key factors is that both business stakeholders (actuaries and accountants) have a common understanding of their requirements.

While the accountants need to understand that key measures such as the Contractual Service Margin (CSM) are determined by much more granular level of data, the actuaries need to be aware of how their calculation assumptions are reflected in the financial figures.

This is only one of many reasons why implementing a SAS IFRS 17 project is not only about data and reporting, but also about the defining and controlling an end-to-end process with different stakeholders and breakpoints.

## READY FOR LARGE DATA VOLUMES?

We have observed that the ICG concept of the IFRS 17 standard leads to different volumes of data. **A company’s portfolio might contain anywhere from a few hundred ICGs to tens of thousands of them, depending on the interpretation of the regulation, management decisions, or the ability to handle granular information.** In addition, our customers sometimes introduce a layer below the ICG (for example, to group several currencies into one ICG). Even this subgroup logic is supported by our solution.

In the most extreme case (such as a big company with long-term insurance contracts and therefore long-term cash flows), this can lead to several terabytes of data being generated per reporting period.

In addition to the sheer amount of data, this complexity also has an impact on performance and design of the closing process. SAS offers a high-performance platform in order to meet these performance requirements. Moreover, we encourage project implementations to consider project and data aspects to be strongly connected to each other, and to provide the most efficient target architecture for the fast close process.

## CONCLUSION

In this paper, we have given a glimpse into the SAS solution for IFRS 17 and the first project challenges that our customers are facing.

The integration of SAS Infrastructure for Risk Management and SAS Risk and Finance Workbench provides a powerful tool for being compliant with IFRS 17 and going beyond it. The workflow process in SAS Risk and Finance Workbench streamlines the work tasks and facilitates collaboration among stakeholders. It also provides a simple solution for stress testing, iterative scenario analysis, and customized reports. The automatic data driven high-speed calculation in SAS Infrastructure for Risk Management addresses the challenge of extensive computation.

Overall, the seamless integration brings flexibility, efficiency, auditability, and traceability to the reporting process. In fact, we have already seen the success of integration in several other SAS solutions, such as SAS® Regulatory Content for IFRS 9. Along with the new features coming out for SAS Infrastructure for Risk Management and SAS Risk and Finance Workbench, we will surely anticipate greater potentials powered by the integration of the two platforms.

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## RECOMMENDED READING

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