

## ***The need for improvement of Governance Operations in Risk & Financial Management***

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### **Introduction**

Effective Governance in Financial Institutions is largely dependant on information management and analytical reporting.

One of the outcomes of the current crisis is the need for improvements in systems and procedures that feed with prepared data - or are part of - the process meant to support board reporting production and board-related business analysis.

Board decision support systems, that in the following will be denominated *Governance Operations* ("deciding" is the normal operative task of board of directors) are a key element of company success. Optimal-performance Governance Operations allow company boards the time to decide optimally and react quickly to crisis. Under-performance Governance Operations do not allow for fast re-strategizing and quick reactions.

Governance activities are marked by specific key cycles, such as:

- strategic planning & budgeting cycle,
- financial reporting cycle (monthly, quarterly, half-year, yearly)
- ICAAP evaluation cycle

The efficiency of Governance Operations can be grossly assessed by comparing the typical time scale required to complete these cycles with the typical time scale of financial market changes or business conditions changes. One can easily use this criterion to check the current Governance efficiency of institutions belonging to industry sectors.

The Chief Risk Officer Forum ('CRO Forum') is an organization comprised of the Chief Risk Officers of major insurance companies and financial conglomerates (for more info visit [www.croforum.org](http://www.croforum.org) ). In an assessment study published by the CRO Forum on January 3, 2009 [1], a sample of 18 insurance financial groups was asked for the time required to calculate Group Economic Capital (EC).

Over 75% of companies belonging the sample require more than 50 days to achieve the results (see Figure 1). This figure can be taken as an estimate of the time scale required to achieve a substantial analytical assessment of Group financial situation.

**Number of days currently used for each step in calculating economic capital (full EC process)**

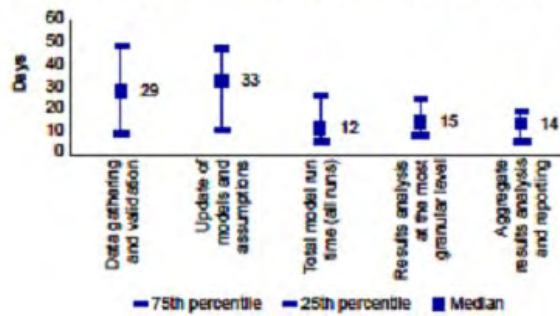


Figure 1. – from [1]

Another alternative gross estimation of this time-scale can be achieved examining the time required to issue substantial financial reporting information, for instance the time required to issue annual financial reports and balance sheet info. A survey conducted in 2008 by KPMG [2] about financial reporting practice in the Banking sector provide an hint on this (Figure 2). Most Groups in Europe are releasing financial reporting info in the range of 50 to 80 days after the end of the previous year.

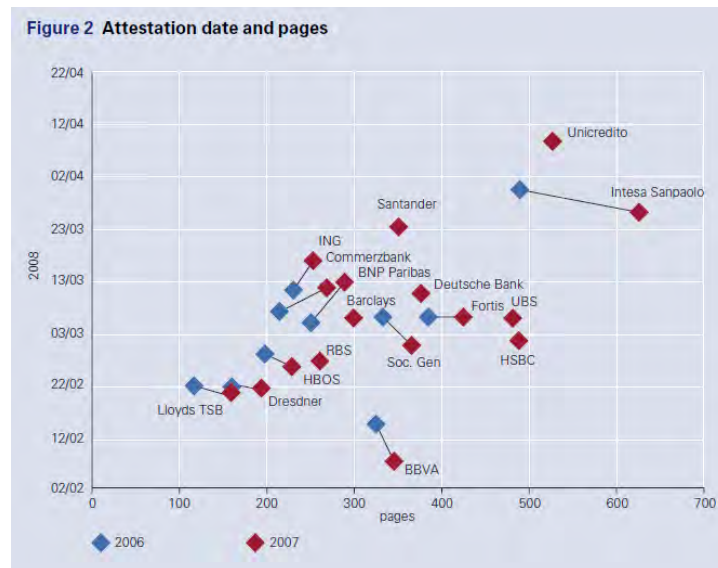


Figure 2. – from [2]. Vertical: date of release of financial report in 2008; Horizontal: number of pages in the report

The previous time scale should be compared with the typical business or market change time scale. An estimate of time scale change can be derived by the analysis of market index pattern. As an example, by using the CDR index profile during the period 2007-2008, as published by *The Economist* [3], one can easily estimate that the typical time scale of substantial changes (spikes over the basic volatility level) is of the order of one month or less (see Figure 3).

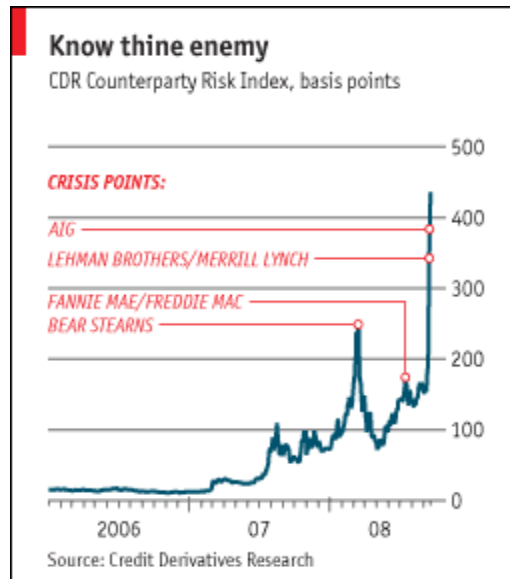


Figure 3. – from [3]

Comparing these two different time-scales shows that the ability of boards to assess changes in business conditions, elaborate a counter-strategy, check it and act it are strongly limited by the ability of current Governance Operations to supply timely information.

### Requirements on Organization and IT

In a recent article, *The Economist* [5] commented on the role of IT in the recent crisis. Information Systems of most global financial institutions are currently complex and not completely integrated, being the result of M&A and other re-structuring processes.

According to a survey on SAS banking customers and other institutions on the time required to produce RWA, in some cases the need to support new Basel II processes by using existing systems forces institutions to operate several manual adjustments and data re-work that account for up to 50% of time required to complete the process.

Given the current status of process organization and support, there is a strong need for *more streamlined Governance operations*, a more comprehensive *board reporting* information system with an appropriate *data management* capability. The same general requirements emerged also from a recent document by the Senior Supervisors Group [4], published in October 2009. In commenting the ability of companies to detect and react to the financial crisis, the document state:

“ One firm noted that it had the ability to aggregate data to a single large counterparty within a day; however, during some periods in fall 2008, information was needed on a dozen or more counterparties that were of concern.

Two-thirds of firms indicated that they were only partially aligned with regard to the capacity to estimate asset class concentrations and institutional counterparty exposures within hours. “

This is in line with comments reported by *The Economist*. Moreover, the latter mentions another issue that goes beyond the pure timeliness and integration problem:

“[...] As a result [of organizational changes and the consequent status of information systems], many banks have huge problems with data quality. The same types of asset are often defined differently in different programs.

Numbers do not always add up. Managers from different departments do not trust each other's figures. Finding one's way through all these systems is detective work, says a former IT manager at a big British bank. “And sometimes the trail would go cold.” “

This particular data quality issue is related to business sense of information coming from different systems, belonging to different business unit and that must be co-operatively used to manage the global company. The un-reliability of business data is responsible for costs and delays related to the need for verification, alignment and re-calculation of data.

### **Support offered by Technology**

Data Integration in large scale Organizations is today a relatively *feasible* architecture given the opportunities offered by data warehousing technology, but as a matter of fact Data Integration is *still an on-going issue* in the agenda of most Organizations, in particular in the field of Management Information Systems for large Groups.

According to SSG [4]:

- Many firms' information technology (IT) infrastructure is inadequate to monitor risk exposure accurately [pag. 4]
- Firms face considerable challenges in developing the needed infrastructure and management information systems (MIS) [pag. 4]
- Poor integration of data [...] resulted from firms' multiple mergers and acquisitions [pag. 5]

Besides this, the other relevant task Organization are facing with is Data Quality in the *user / business process perspective*. The meaning of the term “data quality” is going beyond purely *syntactic* data issues, such as:

- Missing attributes
- Errors due to data values not belonging to the proper domain

Data that should have a *business sense* based on common definitions and rules, while coming from different systems and business practices, are a common issue in financial group management.

One should be able to spot errors when data are present and belong to the assigned domain, but are non conformant to expected patterns in time or in correlation with other data; suspect cases should be interpreted and validated to finally identify the need for corrective actions.

In this context ensuring data quality is mainly related to the ability to interpret data and to spot non-conformant information.

The usage of *advanced analytical techniques* in data quality is a key to overcome this problem.

The basic idea is that using models whose parameters are set by the available data one can spot un-common data and interpret them. This process can be structured by using statistical methods so that it can be not only effective but also efficient.

## **SAS for Risk Management – perspective**

SAS is delivering a *specific financial information management architecture* with on-top a company predictive performance management capability.

The underlying data management technology includes *advanced data quality features* that can strongly improve Governance Operations. These features include the full usage of the SAS Analytical platform, with all the statistical methodologies in the time domain and in the cross-sectional multivariate statistical analysis domain. A recent positioning of SAS in the Data Quality supplier space prepared by Gartner Research can be found in [6], where SAS is ranked in the “visionary” segment of the supplier world.

In a more wide-scope risk-related research, SAS has been evaluated recently by Chartis Research in its RiskTech 100 [7] ranking, achieving first position among Risk Technology supplier.

In fact, concerning Risk Technology, the market perceives the need for a mix of basic components to profile good technology suppliers. SAS won because its offering is an optimal combination of

- Technology
- Set of Functionality
- Innovation strength
- Customer Service

SAS risk & financial management solutions development for Banks, Insurances and other Financial Institutions is oriented to continue along this mix. In particular the development effort of SAS R&D has largely addressed issues like:

- Data Integration, in particular the integration of detailed group-wide data
- Data quality, with a focus on large scale forecasting & statistical techniques used to validate large information base, using a concept of ex-post modeling to spot special cases

In the SAS perspective, besides data integration and data quality issues, other relevant topics in the risk management evolutionary path are:

- Risk Measurement systems becoming part of the overall planning, budgeting and capital allocation system
  - After a decade of regulator - driven implementations of risk measurements systems, there is now a strong need for business management - driven risk measures
  - Many organizations face the challenge of shortening information production time scale
- Risk Measurement is increasingly part of CFO – driven *analysis* of business risks/opportunities
- Many Banks and other financial organizations share the aim for a complete and coherent implementation of *Value Management*
  - ICAAP is an opportunity to boost value-based management processes
- There is a general tendency to improving CFO processes efficiency
  - Manual adjustment reduction / elimination
- Adapting organization to the new post-crisis context calls for an improvement of Governance Operations, in particular
  - Strategy Management support
  - Elimination of manual adjustment in financial reporting
  - High-speed scenario generation and simulation
- Predictive Modeling is a key to support forward-looking management approaches

SAS is working toward a closer integration between Financial Management & Risk Management Architectures, by leveraging its framework structure and the already available and proven solutions for Financial Management, Risk Management and Strategy Management.

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## **Bibliography**

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- [5] *The Economist*, December 3<sup>rd</sup>, 2009
- [6] *Gartner Magic Quadrant for Data Integration Tools*, November 2009
- [7] *Chartis RiskTech100™ report*, 2009.