

# How basic rules of Market Risk Management can lead to a successful SAS project?

**Corine Ceola**, *Head of FMR Transversal - VaR & Internal Model*

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# SUMMARY

- Financial Market Risk Management
- VaR framework until 2007
- 2008 - 2009: the choice according to constraints
- 2010 - 2011: the project with SAS
- From 2012: the road is open

# Financial Market Risk Management

- Market Risk Management:
  - ❑ defines the global risk framework (measures and limits) applicable to the dealing room activities (front office); this framework is composed by several market risk indicators
  - ❑ measures, controls and analyses the potential variations of the value of portfolios by the means of those market risk indicators
- Definitions:
  - ❑ market risk indicators: calculated variations of the value of portfolios according to potential variations in market parameters such as interest rates, foreign exchange rates, stock prices, etc.
  - ❑ potential variations in market parameters: standardized or random
  - ❑ Value-at-Risk (VaR)
- VaR:
  - ❑ used for Regulatory Capital if risk management framework (the so-called « Internal Model ») is approved by the regulators

# VaR framework until 2007

- Need for a more global coherency
  - ❑ Methods: several methods depending on the type of market parameters
  - ❑ Process: several process depending on the type of market parameters and systems (front office and market risk management)
- Need for more flexibility
  - ❑ Quick integration of new risk indicators (i.e. new market parameters)
  - ❑ Possibility to review/enhance the approaches
- Regulatory constraints
  - ❑ Maintain the quality and follow the market and activity evolutions on the Internal Model perimeter
  - ❑ New constraints following crisis 2008: obligation of calculation of a new market risk indicator (the so-called stressed VaR)

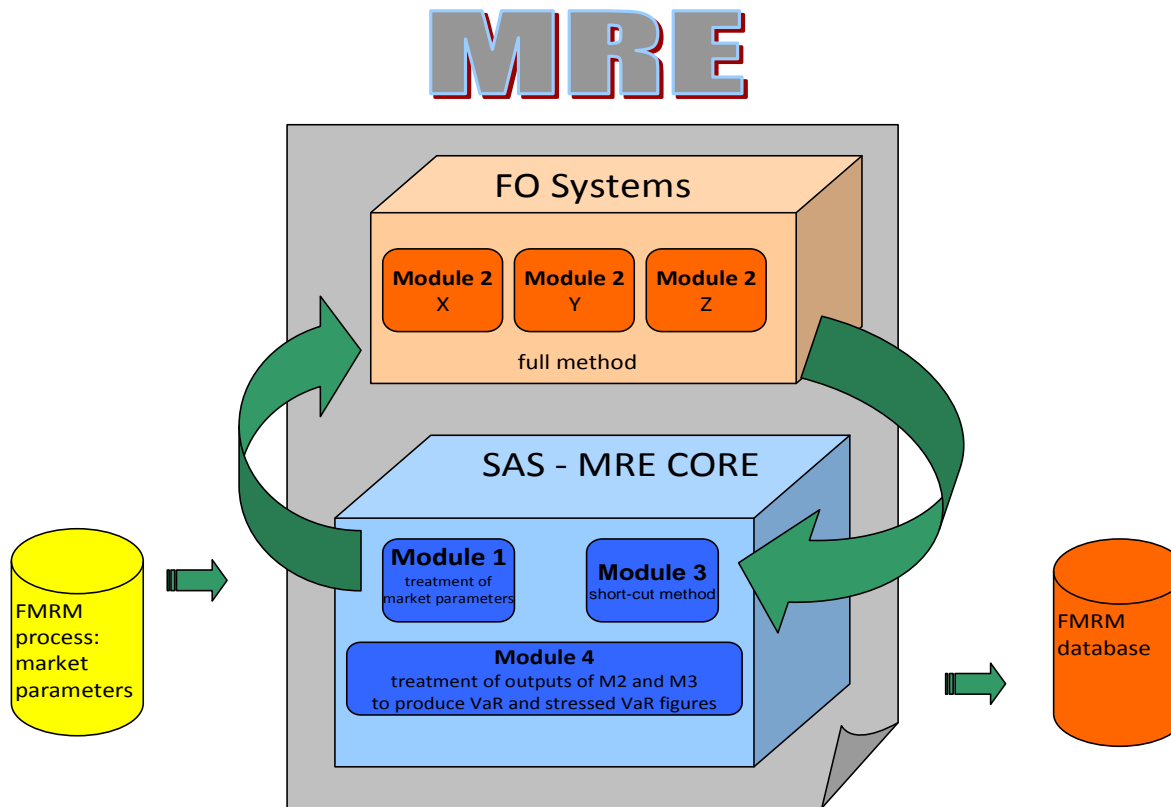
## 2008 – 2009: the choice according to constraints

- first step: choice of unique method for VaR and stressed VaR
- second step: choice of unique process according to constraints:
  - ❑ management: capitalize on existing architecture and systems in Front Office and Market Risk Management (no duplication)
  - ❑ Market Risk Management: mathematics and statistics, flexibility, volume, interactivity with other systems
  - ❑ IT: software or open system? in-house development or external provider?
- workshops with IT and/or external providers => SAS chosen

## 2010 – 2011: the project with SAS

- several releases running on 2010 and 2011 for the so-called project « Market Risk Engine » (MRE)
- releases are performed thanks to joint venture between SAS and Dexia (IT and Market Risk Management)
- releases according to selected market parameters and modules:
  - ❑ Module 1 - SAS: treatment of market parameters
  - ❑ Module 2 - not SAS: exact computation in Front Office systems of basic figures useful to produce VaR and stressed VaR
  - ❑ Module 3 - SAS: approximated computation of basic figures useful to produce VaR and stressed VaR
  - ❑ Module 4 - SAS: calculation and analysis of VaR and stressed VaR

# 2010 – 2011: the project with SAS



## 2010 – 2011: the project with SAS

- Main challenges are
  - ❑ project management due to the project complexity
  - ❑ performance and volume
  - ❑ interface and mapping rules
  - ❑ interaction with other projects (FO system evolution, IT evolution, etc)

## From 2012: the road is open

- Dexia will benefit from an architecture which allows :
  - a global and homogenous VaR coverage
  - the flexibility to review the existing approaches
  - the capability to easily integrate an additional risk factor (i.e. additional market parameter)
  - the ability to face the future (unknown) challenges

Thank you for your attention.  
Remarks? Questions?