

Model Governance & Advanced Analytics What's different and what have we learnt?

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Business Context

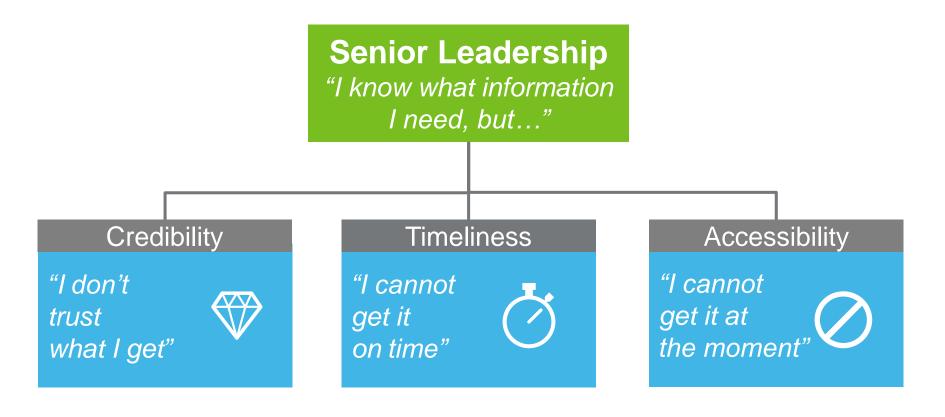
Forward Looking Insight Needs

Business Forecasting & Analysis



Common Challenges Organizations Face

Forward Looking Insight Needs



Why Challenging?

Stakeholders

Processes

Culture

Corporate Solutions



Multiple Stakeholders

Difficult to address different perspectives/needs across multiple stakeholders.



Data & Model Integration

Multiple model and data sources are used for corporate consolidations



Model Ownership

Difficult to re-run and consolidate multiple models where ownership decentralised.



Spreadsheets

Too much reliance on complex spreadsheets to meet an enterprise need.

Different priorities, requirements on timing, granularity of information

"Improvise" the corporate model: losing credibility of insights

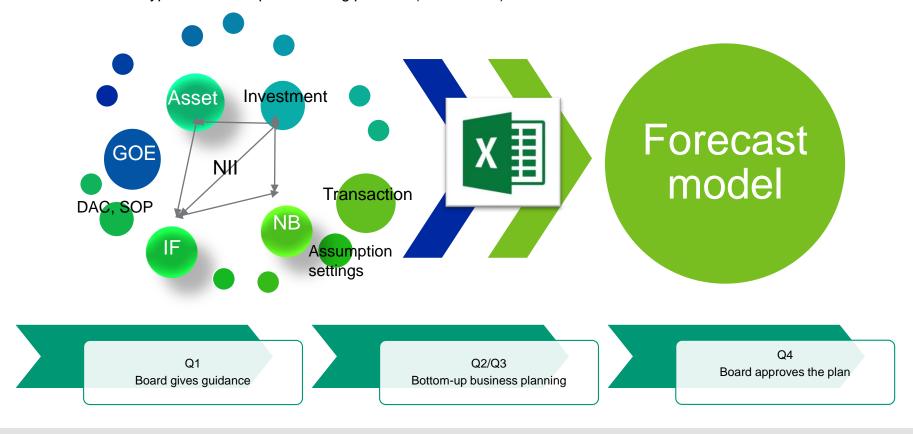
Not easy for corporate team to use or access, significant reliance on the heavy model re-runs Lack of governance and efficiencies

An Example of Excel Challenge

Fragmented Forecasting Processes

Audit trail goes cold fast, lack of governance and efficiencies, hard for investigation, expose to key man risk and model risk.

Illustration: a typical bottom-up forecasting process (1-3 months)



Are Spreadsheets Meeting Your Needs?

Challenge – Typically, a complex web of spreadsheets is used to consolidate results from multiple asset & liability models for business forecasting and what-if analysis.



Individual not Enterprise

Spreadsheets deliver a limited capability to support insight needs of the enterprise.



Risk of Errors

Complex spreadsheets that lack governance and transparency are prone to error.



Hidden Costs

Building, using and maintaining spreadsheets can be very time-consuming and costly.

Desire for Change – Management want better insight capabilities but the alternative to spreadsheets has not been clear without a costly and complex bespoke implementation.

Advanced Modeling Framework

Enhanced Analytics

A Business Orientated Approach

Modelling Capability

Optimal balance between bottom-up and top-down modelling approaches.



Timely

Within hours rather than weeks.

BUSINESS ORIENTATION

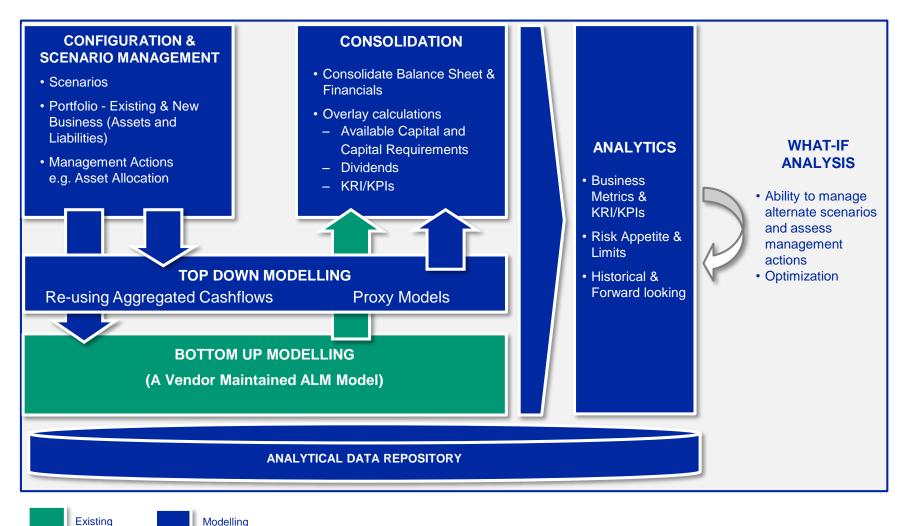
Focus on the senior management's business needs

Requires complementary modelling capabilities

TRADITIONAL MODELLING PERSPECTIVE

Focus on granularity & accuracy

Target Modelling Framework

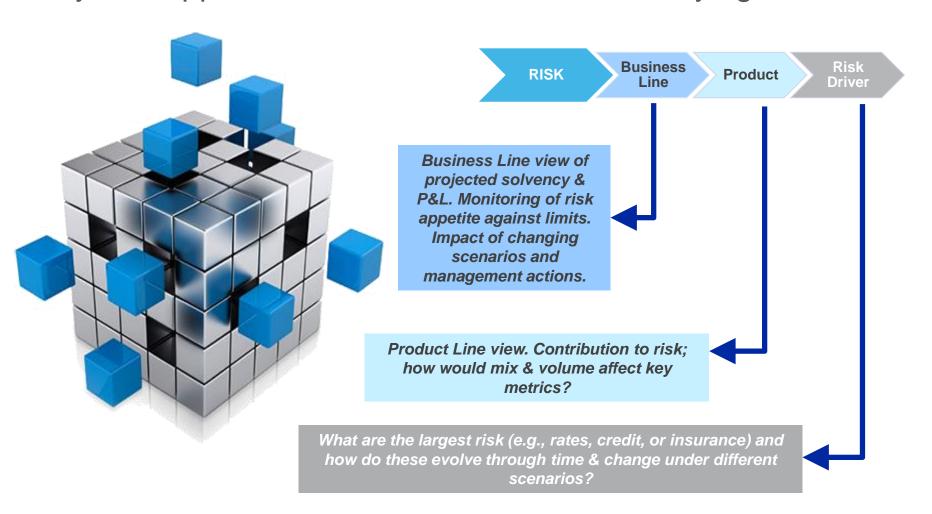


Infrastructure

Framework

Actionable Risk And Business Analytics

Layered approach with drill down to the underlying drivers

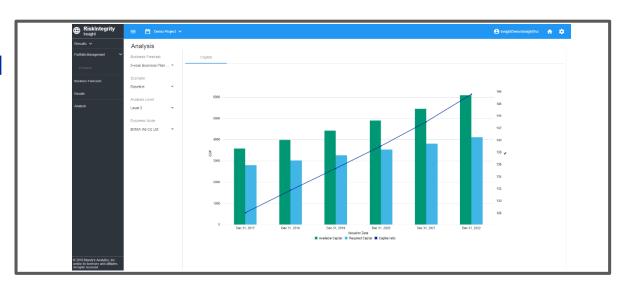


Empowering The Business

Business Orientated Solution

Configurable off-the-shelf modelling solution designed to project the:

- Income statement
- Balance sheet
- Solvency



Combination of Top-Down and Bottom Up Approach

The combination of Top down and bottom up modelling framework designed to **leverage output from existing modelling** infrastructure.

Strategic "What-If" Solutions

- Market stresses
- Insurance stresses
- NB planning
- Asset balance

Layered Analytics

Designed to enable multi-dimensional drill down analysis to the relevant underlying drivers.

Flexible charting and **comparison analysis** out-of-the box.

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