Webinar – 30th January, 2019

Cost effective solutions to the challenge of ISDA SIMM™Backtesting & Benchmarking

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Thank You For Joining Us

Agenda:

- Introducing AcadiaSoft
- Insights into the regulatory requirement for ongoing IM performance monitoring
- ISDA's role in this space and current state of industry advocacy
- Understand how existing in-scope firms approach compliance
- Benefits and implications of outsourcing your IM Backtesting & Benchmarking reporting
- How AcadiaSoft can help your firm comply and save time and money
- Q&A Panel Discussion
- Questions

Speakers:

Mark Demo
AcadiaSoft - Head of Industry & Strategy

Michael Kjørtsholtsen
Nordea - Head of Risk Control

Christoffer Schuhmacher
Nordea - Chief Controller Market Risk

Nnamdi Okaeme
ISDA - Director of Risk & Capital

Donal Gallagher
Quaternion - CEO

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Introducing AcadiaSoft

What: Company Origin

- 10 years ago AcadiaSoft set the standard for electronic margin and collateral messaging via our MarginSphere® platform
- Today, we maintain over 150,000 active VM CSA agreements, nearly 100% of all active Regulatory IM CSA agreements and process tens of thousands of margin calls daily
- In September of 2016, we introduced our IM calculation and reconciliation service – used today by every Phase 1, 2 and 3 institution
- At the same time, we began to create the AcadiaSoft Hub which acts like a collateral messaging and data operating system for the OTC industry

Introducing AcadiaSoft

How: AcadiaSoft Hub

- Similar in concept to how your smartphone handles access to applications, user entitlements, communications, data handling and security – the hub functions in much the same way
- Maintain the largest directory of unique margin relationships in the world
- Connecting hundreds of clients and counterparties and dozens of collateral management vendors for margin and collateral messaging
- Partner with multiple IM optimization vendors to reduce the total amount of Initial Margin firms post to one another
- Receiving over 1.5 million trades and 30 million sensitivities daily to support IM calculation and reconciliation
- Continual feedback from the industry via working group collaboration

The Ongoing Monitoring Requirement – USPR & others

USPR Requirement

"More specifically, the final rule requires that the model be independently validated prior to implementation and on an on-going basis which would also include a monitoring process that includes back-tests of the model and related analysis (benchmarking) to ensure that the level of margin being calculated in consistent with the underlying risk of the swap being margined"

https://www.fdic.gov/news/board/2015/2015-10-22_notice_dis_a_fr_final-rule.pdf

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The Ongoing Monitoring Requirement – USPR & others

- CFTC
  - https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/federalregister121615.pdf
  - pages 97, 100 and 256
- ESMA
  - https://www.esma.europa.eu/document/final-draft-rts-risk-mitigation-techniques-final
  - pages 8, article 21, quantitative requirements, page 41
- MAS
  - http://www.mas.gov.sg/~/media/MAS/Regulations%20and%20Financial%20Stability/Regulations%20Guidance%20and%20Licensing/Securities%20Futures%20and%20Fund%20Management/Regulations%20Guidance%20and%20Licensing/Guidelines/Guidelines%20on%20Margin%20Requirements
  - Page 9

The Ongoing Monitoring Requirement – USPR & others

- JFSA
  - https://www.fsa.go.jp/news/27/syouken/20160331-4.html
  - (in Japanese)
- APRA
  - https://www.apra.gov.au/sites/default/files/Final-CPS-226-September-2017.pdf
  - Page 13
- OSFI
  - http://www.osfi-bsif.gc.ca/Eng/fi-if/rg-ro/gdn-ort/gl-ld/Pages/e22.aspx
  - Section 3.2
- HKMA
  - https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/supervisory-policy-manual/CR-G-14.pdf
  - Schedule B

IM Monitoring Compliance Approach

- AcadiaSoft surveyed a number of Phase 1 and 2 firms regarding their approach to IM monitoring
- All firms performed some form of annual Backtesting & Benchmarking
- All firms performed some form of quarterly monitoring which included Backtesting and Benchmarking (static)
- Some firms performed more frequent monitoring (dynamic) than quarterly (i.e. Monthly or Weekly)

Leveraging the Infrastructure for Firm-Level Governance

- The final rules broadly state that there are requirements to re-calibrate (at least annually), backtest and monitor the performance of the initial margin model on an ongoing basis.
- SIMM is unique because it is an industry model; but it is also a model that firms must own and govern.
- Given the unique nature of the model, key processes required by the firms to maintain a regulatory-compliant SIMM are facilitated at the industry level
- Fulfilling these key processes requires industry-level governance. An important aspect involves leveraging existing firm-level governance processes and infrastructure. Hence, it is important that:
  - Firms own and manage (either directly or through a 3rd party) robust SIMM governance processes that can be adapted and leveraged for participation in the industry-level governance
  - There are clearly defined standards for the:
    - Elements required for participation in the industry-level governance process
    - Assessment of the outcomes or evidence from these processes and what the evidence could mean for SIMM

Evidence-based Approach for Governance

- A number of enhancements made were driven by regulatory requirements and specific requests from regulators

- In future, the expectation is that changes to SIMM will be to ensure:
  - SIMM is always regulatory compliant
  - SIMM always meets the needs of the markets by ensuring:
    - Changes made are based on evidence provided by the ISDA SIMM Governance Forum, which comprises existing and potential SIMM users
    - Through the ISDA SIMM governance process that evidence, which forms the basis for SIMM change, can be highlighted
    - Determination of changes to be made involves analysis of evidence and, discussion and assessment of potential solutions
    - Assessment of evidence is based on the criteria of persistence, systemic (or widespread) nature and materiality of the observation

- Hence, the **Key Pillars** of the governance process – Quarterly Monitoring, Annual Re-calibration and Backtesting – are essential in maintaining a regulatory compliant SIMM that meets market needs
  - Quarterly monitoring is important to regularly assess if/where changes are required
  - Annual Recalibration and Backtesting are vital for validating change proposals

Quarterly Monitoring

ISDA Safe, Efficient Markets

- Quarterly monitoring involves assessing the performance of the current version of SIMM on a periodic basis

- A key aspect of the quarterly monitoring exercise is assessing shortfalls in the coverage of P&L moves by the initial margin determined using the IM model

- The general approach to shortfall analysis for quarterly monitoring for the effective SIMM version involves:
  - 1+3 backtesting over a stressed period and a recent market history
  - Comparison of actual portfolio P&L moves to SIMM

- To fulfil the requirements of the quarterly monitoring exercise, firms are required to submit data that includes:
  - Description of portfolios in scope
  - SIMM overall health check – overall exceedance rate
  - Shortfall analysis that includes SIMM early warning
  - Reconciliation issue report

- Data is aggregated and anonymised for industry consideration

Annual Re-Calibration Process

ISDA Safe, Efficient Markets

- The calibration process is a key pillar in SIMM Governance and is required to validate change proposals

- The purpose of calibration is to revise the input data for the model following:
  - Changes to model design
  - Inclusion of new risk factors
  - Changes in market conditions

- The calibration exercise involves the following processes:
  - Collecting the calibration data
  - Calculating historical returns
  - Independently validating the calibration results

Annual Backtesting Process

- The purpose of backtesting the proposed new SIMM version is to:
  - Check that the calibrated inputs result in suitable model performance
  - Assess the model design changes and ensure they meet the expected performance

- Annual backtesting process involves the following:
  - Designing the backtesting approach
  - Addressing all the elements of the backtesting exercise
    - Selecting in-scope portfolio and consistent backtesting period
    - Calculating SIMM and P&L vectors for in-scope portfolios
    - Performing the Basel Traffic Light Test for exceedance analysis

- The annual backtesting leverages the 1+3 backtesting process used in the quarterly monitoring of the current SIMM version

- As part of the annual backtesting exercise, SIMM is also compared with initial margin for cleared products (Comparison is based on products which are common to SIMM and which can be cleared)

Summary

- The design of SIMM is consistent with meeting regulatory requirements and supports ease of implementation, use and reconciliation

- SIMM methodology, operational application and proper governance combine toward a common purpose to ensure:
  - Appropriate methodology to cover systemic risks
  - Strong operational controls and application across firms
  - Robust SIMM monitoring across industry, with thoughtful changes

- ISDA want SIMM to be a viable option for all market participants that want to use it:
  - We recognise that participation in the ISDA SIMM governance processes can be difficult and costly for firms (and particularly for phase four and five firms)
  - ISDA is working with the regulators to help minimise the obstacles for firms in phases four and five that would like to use SIMM

Q&A on individual firm perspective and principles

Michael Kjørtsholtsen and Christoffer Schuhmacher of Nordea discuss with Mark Demo (AcadiaSoft) their perspectives on the IM ongoing monitoring requirement, the principles that they apply when creating their own model validation and governance process and what criteria they used when deciding whether to build or outsource the work

Christoffer Schuhmacher
Nordea - Chief Controller Market Risk

Michael Kjørtsholtsen
Nordea - Head of Risk Control

Mark Demo
AcadiaSoft - Head of Industry & Strategy

How can AcadiaSoft help your firm?

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Quaternion's approach

Experience across industry

- No single template for regulatory backtesting approach across the Phase 1/2/3s
- In many cases, IT challenges limit the ability of firms to look across their entire portfolios
- Market data gaps also cause issues for firms
- Coming at a time when cost is a major focus for the sector

Collaborative client-led partnership

- With AcadiaSoft we saw the opportunity to develop a service that :
  - shared our vision of openness and transparency
  - delivered as a 'best practice' standard backtest
  - provides essential support to clients with a detailed BBSR with detailed analysis and commentary to support regulatory compliance
  - supports the entire ISDA SIMM™ end-to-end process within the AcadiaSoft Hub environment
  - lower cost through mutualisation
  - with all data is held securely within AcadiaSoft's data center

IM Backtesting and Benchmarking

Overview of the Service

- Quarterly (static) portfolio backtesting and benchmarking of ISDA SIMM™
- Designed to cover all user product requirements over time
- Employs a range of lookback periods (up to 11 years) and benchmarks
- Offered by AcadiaSoft and jointly developed with Quaternion RiskManagement

How will it help in-scope firms?

- Alongside the sensitivities calculation service, offers ability for firms to ensure industry best practice compliance with IM requirements
- Product coverage constantly evolving
- Support to help clients on-board, process and manage backtest results
- Highly cost effective on a comparative fully-loaded cost basis
- Service Incorporates future proofing of any changes

Example Backtesting and Benchmarking Summary Report

Contents

5.2.1 Interest Rate Risk Class

5.2.1.1 Delta Margin

The delta P&L contributions are estimated via a sensitivity-based approach. The backtest is passed quite comfortably in the green zone for interest rate delta.

The most extreme scenarios occur in late 2008 and early 2009 and are driven by large movements in USD swap rates.

Side	Observations	Count Exceedances	Amber Threshold	Red Threshold	Result
Call	2314	3	40	70	Green
Post	2314	5	40	70	Green

Figure 6: Interest Rate Delta Backtesting Results

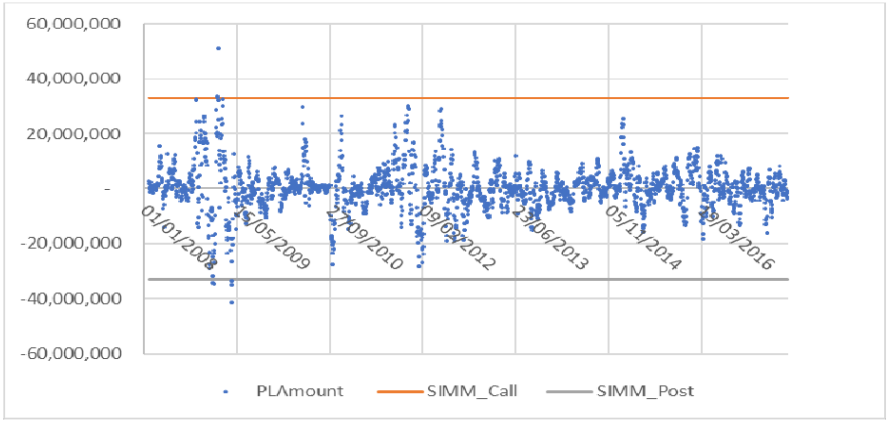

Figure 7: Interest Rate Delta P&L comparison to Interest Rate Delta Margin SIMM

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Q & A

Submit your questions via user panel

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Thank you for attending

For more information on IM Backtesting & Benchmarking and Uncleared Margin Rules visit our dedicated website: www.acadiasoft.com/umr_compass or schedule a meeting: info@acadiasoft.com

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