Collateral Management for OTC Derivatives

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Securities lending & borrowing

Haircuts

Exchange traded derivatives

CCP

Triparty

Segregation

Margin calls

Clearing broker

Variation margin

Risk

Margin calculation

Regulatory reporting

Central bank

Technology

Documentation

Transformation

Eligible collateral

Repo

Netting

Initial margin

Cost

Collateral optimisation

Hedging

Substitution

OTC derivatives

Dispute

Liquidity

Agenda

1	Belfius
2	View on organisation of operational activities
3	View on IT architecture
4	Process flow
5	What's next?
6	Discussion

Meaningful and Inspiring for the Belgium Society

INTEGRATED BANK-INSURER

ANCHORED IN ALL SEGMENTS OF THE BELGIAN ECONOMY
Historical focus on Retail & Public
Diversification towards Private, Wealth, Business and Corporate

RISK MANAGEMENT
Technical expertise

CUSTOMER SATISFACTION
DRIVEN BY OMNI-CHANNEL STRATEGY
Higher customer interaction based on Data, Digital & Marketing
Entrepreneurial (self-employed) sales force focused on added value advice
Strong brand underpinning distinct positioning

FINANCIAL MANAGEMENT
Technical expertise

AUTHENTIC BELFIUS VALUES

REVENUE DIVERSIFICATION & SUSTAINABLE GROWTH	EFFICIENCY GAINS	SOUND RISK PROFILE & STRONG BALANCE SHEET

SOLID PROFIT CAPACITY & STRONG SOLVENCY
SUPPORTING LONG-TERM ATTRACTIVE DIVIDEND

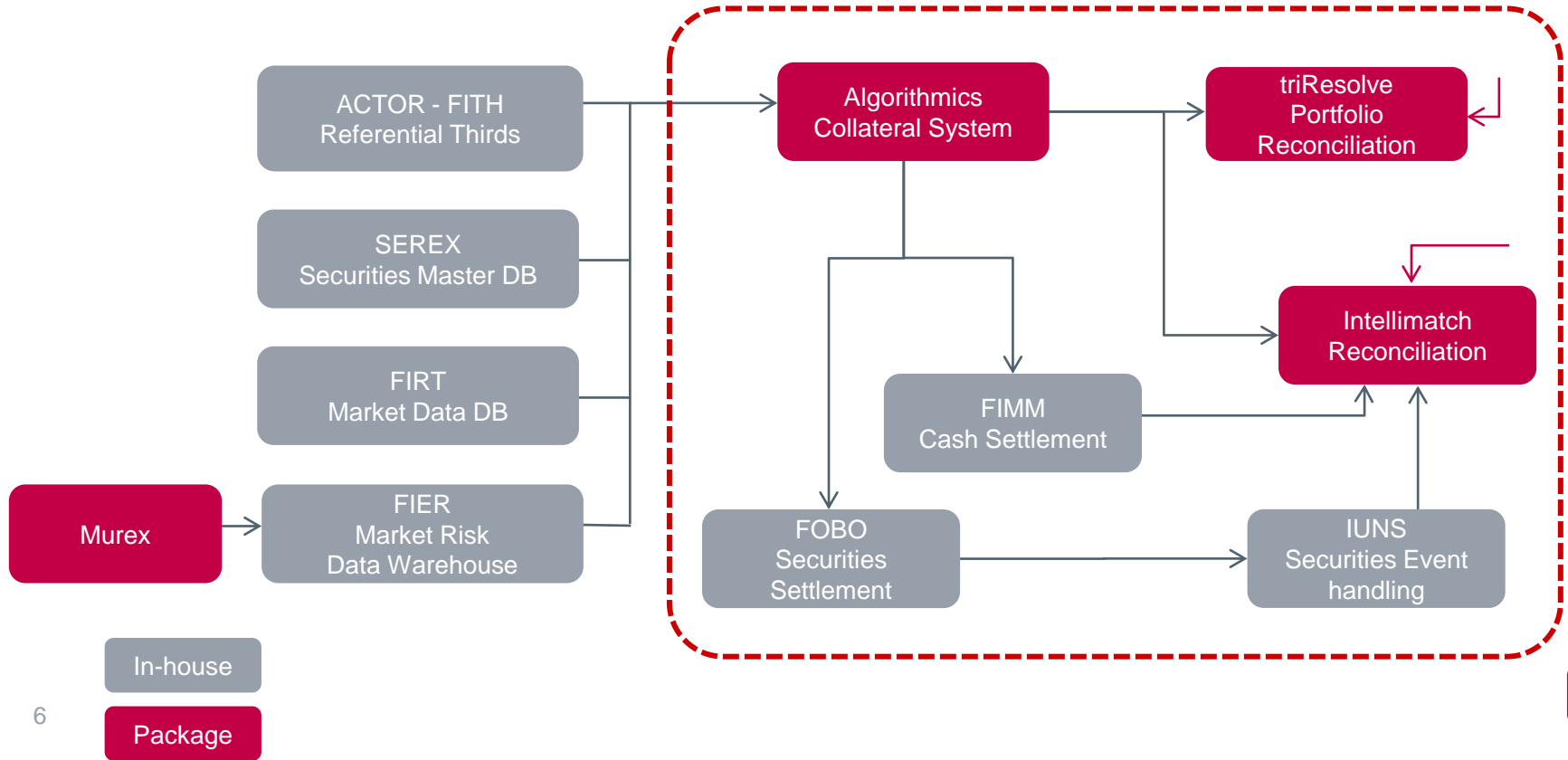| Cost-Income ratio < 60%	CET I ratio > 13,5%	Solvency II ratio > 160%	ROE 8 à 9%

2 View on organisation of operational activities

3 View on IT architecture

ACTOR - FITH
Referential Thirds

SEREX
Securities Master DB

FIRT
Market Data DB

Murex

FIER
Market Risk
Data Warehouse

Algorithmics
Collateral System

triResolve
Portfolio
Reconciliation

Intellimatch
Reconciliation

FIMM
Cash Settlement

FOBO
Securities
Settlement

IUNS
Securities Event
handling

In-house

Package

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4 Process flow

Belfius		Counterparty
↔	Set-up of the counterparty	↔
↔	Trade execution, capturing and processing	↔
←	Calculate exposure / margin calls	→
↔	Issue / receive margin calls	↔
↔	Margin call agreement and processing	↔
↔	Dispute management	↔
↔	Portfolio reconciliation	↔
↔	Manage collateral inventory	↔
←	Reporting	→

4 Process flow

Set-up of the counterparty

- Business policies
- Capture counterparty data
- Negotiate and approve legal framework (master - & collateral agreement)
- Capture terms of the master - & collateral agreement
- Multiple changes to legal framework (e.g. driven by regulation)

- Industry agreed template for on-boarding counterparties (entity profile)
- Legal documentation standardisation (e.g. ISDA Clause Library)
- Electronic negotiation of legal framework and Digitalisation of legal framework into a centrally shared Legal documentation repository (e.g. ISDA Create which is also connected to e.g. AcadiaSoft)

	Set-up of the counterparty	
	Trade execution, capturing and processing	
Be**l**f**i**u**s**	Calculate exposure / margin calls	**C**o**u**n**t**e**r**p**a**r**t**y
	Issue / receive margin calls	
	Margin call agreement and processing	
	Dispute management	
	Portfolio reconciliation	
	Manage collateral inventory	
	Reporting	

4 Process flow

Trade execution, capturing and processing

- Not a specific collateral management activity but key for an efficient collateral management process
- Each party has its own version of a transaction in its system (sometimes even multiple)
- All parties spend a lot of time reconciling (internal and external) for multiple reasons
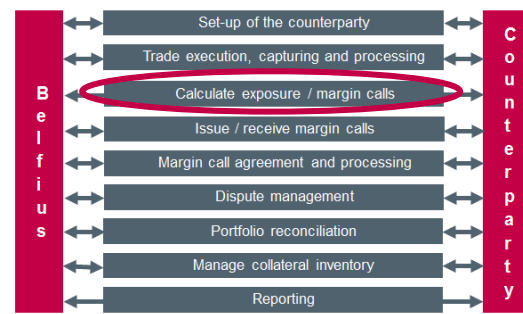- Main focus on implementation of regulatory reforms

- Need to address post-trade inefficiencies
- Standardisation is essential in order to achieve increased efficiency and to take advantage of new technologies
- Creating standard representation (golden source data) for derivative products across the trade lifecycle (incl. events, …) upon which services can be built (e.g. ISDA Common Domain Model – blueprint for how derivatives are traded and managed)

4 Process flow

Calculate exposure / margin calls

| Set-up of the counterparty |
| Trade execution, capturing and processing |
| Calculate exposure / margin calls |
| Issue / receive margin calls |
| Margin call agreement and processing |
| Dispute management |
| Portfolio reconciliation |
| Manage collateral inventory |
| Reporting |

Belfius — Counterparty

- Gather data required for margin call calculation (trade data, trade MTM, cash & securities collateral, …) + upload into collateral management tool
- Plausibility checks
- Match and aggregate trades and positions to agreements and take into account agreement provisions (thresholds, MTA, ...)
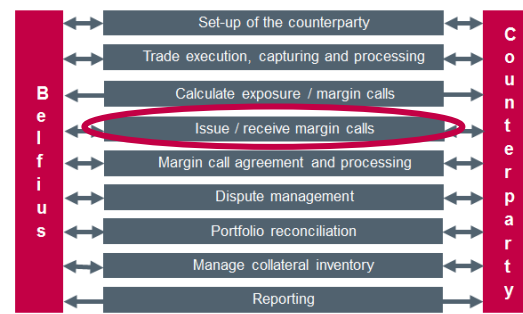- Calculate required margin calls

- Market initiatives that contribute to a 'less silo' approach at the level of:
    - Legal framework characteristics and registration
    - Trade capturing
    - Valuation

4 Process flow

Issue / receive margin calls

| Set-up of the counterparty |
| Trade execution, capturing and processing |
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| Manage collateral inventory |
| Reporting |

Belfius | Counterparty

- Sending out margin calls to counterparties
- Anticipating incoming margin calls from counterparties

- Currently still very mail based margin call process
- Non-integrated use of AcadiaSoft MarginSphere

- Best practice for Margin Call Issuance and Response (ISDA 02/2018)
- Electronic platforms for the exchange of margin calls (e.g. AcadiaSoft MarginSphere, Bloomberg Cloudmargin, Swift messaging standards)

4 Process flow

Margin call agreement and processing

- Manual matching of incoming margin call messages of the counterparties
- Agree on outgoing margin calls:
  - Counterparty agrees on margin call and advices on the collateral to be posted
  - Eligibility check / agreement on the proposed collateral to be received
- Agree on incoming margin calls:
  - Check with anticipated margin calls, agree on margin call and propose collateral to be posted (according CSA eligibility / internal optimisation criteria)
  - Counterparty checks and agrees on the collateral to be received
- Processing of collateral trades (similar to other cash / securities trades)
- Monitoring of failed trades and capture info into collateral management process

- Electronic platforms for the exchange of margin calls and the settlement of collateral
- Solutions that support collateral selection & optimisation (e.g. standard collateral eligibility schedule, common definitions & sources for HQLA, common sources for asset pricing and ratings, DLT initiatives)

4 Process flow

Dispute management

- Dispute management governed by Credit Risk policy
- Identification of disputes through margin call process an recurrent portfolio reconciliations
- Disputes are escalated for further follow up to:
  - Operations (differences linked to documentation and deal characteristics)
  - Risk Management (differences linked to valorisations)
- Implement actions upon specific disputes

- High quality operational processes / shared 'golden copy source of trade data'
- Harmonisation of valorisation models / solutions that allow to reconcile in a cost effective manner underlying valorisation parameters

4 Process flow

Portfolio reconciliation

	Set-up of the counterparty	
	Trade execution, capturing and processing	
B	Calculate exposure / margin calls	C
e	Issue / receive margin calls	o
l	Margin call agreement and processing	u
f	Dispute management	n
i	Portfolio reconciliation	t
u	Manage collateral inventory	e
s	Reporting	r

- Regular and ad hoc portfolio reconciliation, frequency based on counterparty classification and on number of outstanding trades (using triResolve)
- Reconciliation of collateral movements intraday and on S+1 (based on standard Swift messages for cash / securities movements)

- triResolve (market standard tool for portfolio reconciliation)
- Analogous to dispute management, portfolio reconciliation differences reduce substantially in case of:
    - High quality operational processes / shared 'golden copy source of trade data'
    - Harmonisation of valorisation models / solutions that allow to reconcile in a cost effective manner underlying valorisation parameters

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4 Process flow

Manage collateral inventory

Belfius		Counterparty
	Set-up of the counterparty	
	Trade execution, capturing and processing	
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	Reporting	

- Monitoring of upcoming events on Securities collateral and request substitution (default)
- Substitutions are operationally handled similar to regular calls (eligibility checks, …) and are booked as 2 individual collateral tickets
- Interest calculation on interest reset date of the collateral agreement, matching with the counterparty and operational processing

- Pledging collateral via Triparty collateral agent
- Standardisation / centralisation of interest calculation (ultimately move from manual process to automated process)

4 Process flow

Reporting

Belfius

Set-up of the counterparty	
Trade execution, capturing and processing	
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Reporting	

Counterparty

- Different types of internal and external reporting on Collateral Management OTC Derivatives:
  - Unmatched trades
  - Valorisation differences
  - Risk coverage
  - Disputes
  - Required regulatory reporting
  - …

- The more standardised and STP Collateral Management OTC Derivatives flows are, the more efficient reporting becomes
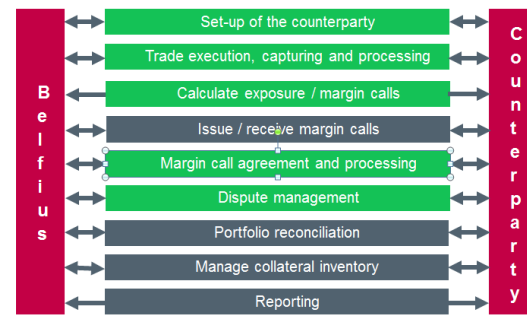
5 What's next?

Initial margin
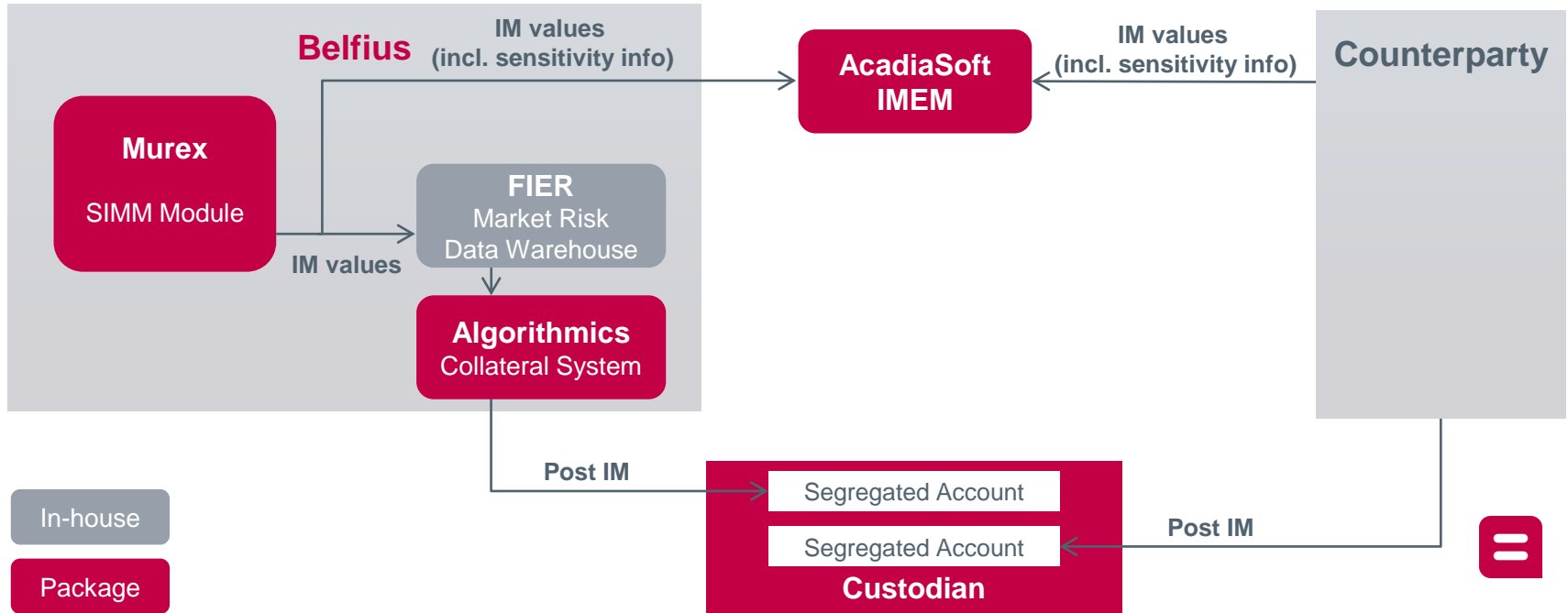
5 What's next?

LCH SwapAgent?

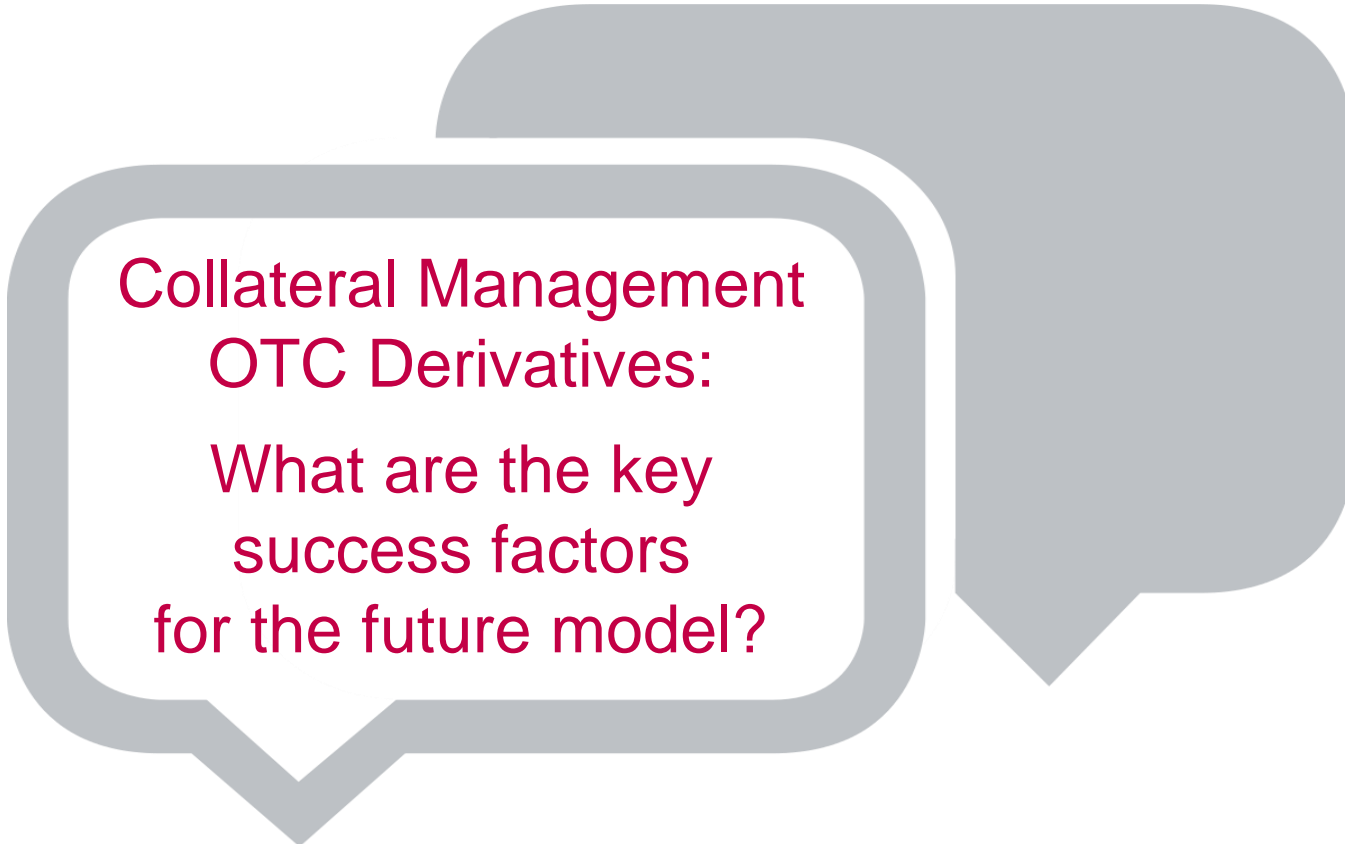| LCH SwapAgent	Possible impact on Process flow
Set-up of the counterparty	Standardised documentation through introduction of Rulebook (standardised collateralisation and settlement) (*)
Trade execution, capturing and processing	Standardised processing through affirmation platform (end-to-end trade life cycle management) (*)
Calculate exposure / margin calls	Independent valuation and risk calculation (*)
Margin call agreement and processing	(*) makes margin call agreement process efficient, settlement could be on a net basis
Dispute management	(*) eliminates disputes
Possible additional impact	STM (Settlement To Market) Optimisation services

6 Discussion

Collateral Management OTC Derivatives:

What are the key success factors for the future model?