

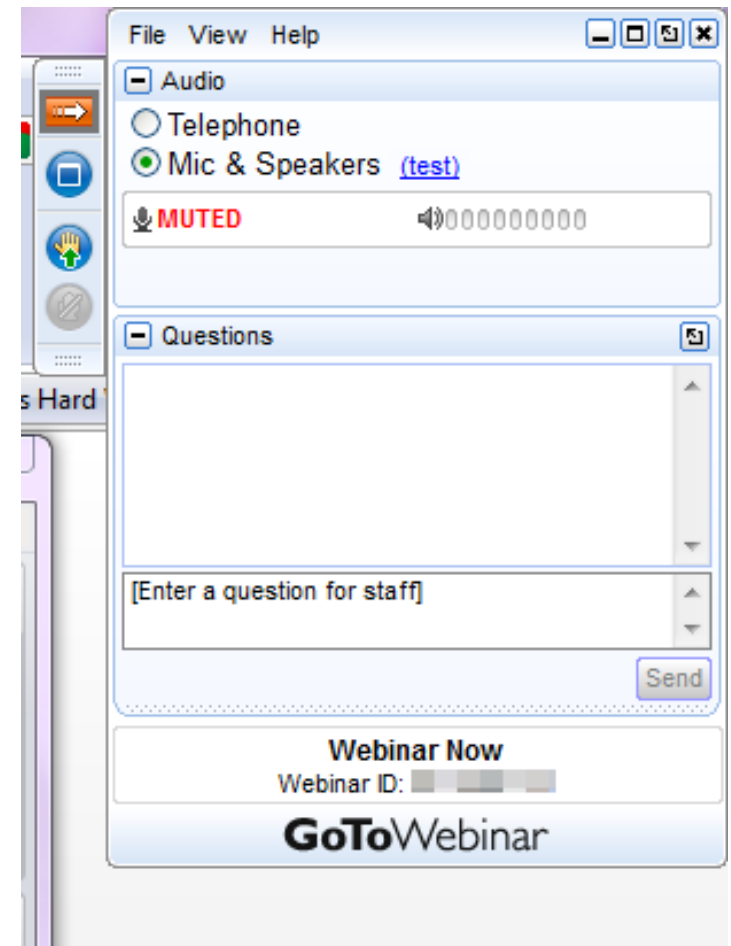
# Collateral Management in Asia: The Transition Towards a Holistic Model



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- Please ask questions and submit feedback using the webinar chat facility.
- Questions will remain anonymous
- Or email us following the webinar at: [Ms@4sight.com](mailto:Ms@4sight.com)
- We will record the webinar and send out the recording and presentation slides



## About the Speakers



Sinead O'Sullivan is Director of Business Solutions at 4sight. She has 10 years' Securities Finance experience, having previously worked at UBS and Barclays. Sinead joined 4sight in 2012, and has recently been working with clients and prospects to define solutions across the collateral management and synthetic finance market.



Sam Ahmed is Managing Director of DerivAsia. His career in banking spans 18 years across top tier banks in the Asia region. Prior to launching DerivAsia, Sam was heading Citi's Collateral Services Sales for the Asia Pac Rim region since 2011 where he was both instrumental in developing innovative solutions as well as originating sales strategy in the region.

# About the Speakers



Martin Seagroatt is 4sight's Director of Marketing and Product Innovation. Prior to working at 4sight he worked in energy risk management. In his ten years at 4sight, he has specialised in the securities lending, repo and OTC/listed derivatives collateral management business areas.



Paul Wilson is Product Director for 4sight and has 10 years' securities finance, repo and derivatives collateral management experience.

Paul has worked closely with many 4sight clients and prospects in a pre-sales and business analysis role and was instrumental in the design of 4sight's collateral management and optimization solutions.

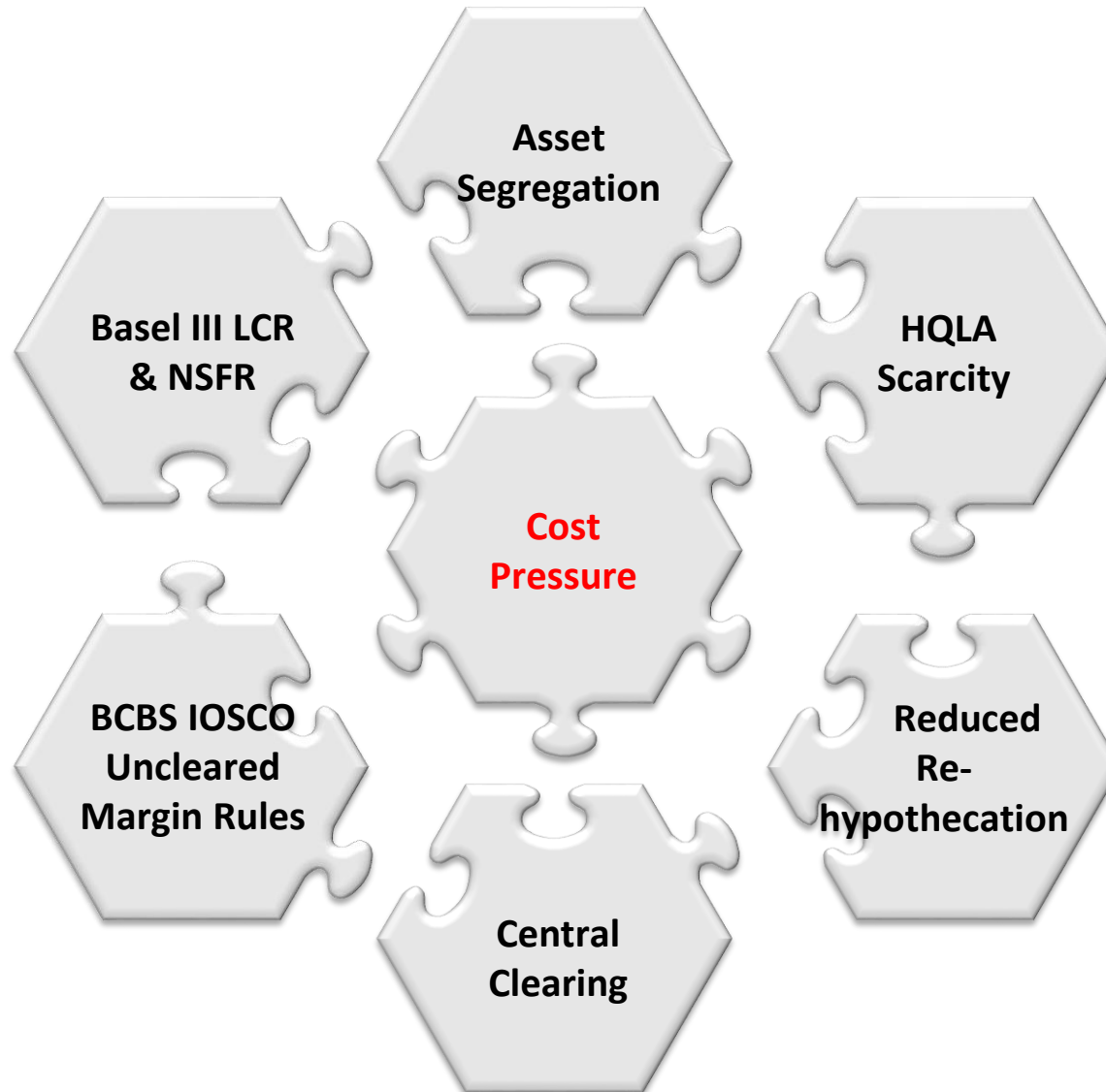
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# Agenda



1. Factors driving change in Asian Collateral Management
2. Key Challenges to market participants today
3. 4sight Collateral Healthcheck: Where are you in meeting the challenges?
4. Future Trends: Holistic financing models and integrated cross product solutions
5. Optimisation: How Far Should you Go?

# Factors Driving Change in Europe and the US





- Compared to Europe and the U.S., the OTC Derivatives markets in Asia are at an infancy stage of growth with its size being at less than 8% of total global OTC derivatives volumes
- Only 4 CCPs currently live for clearing and only one jurisdiction (Japan) that has made client clearing mandatory
- Approximately 60% of the clients met in 2011 in the region were currently managing their margin requirements using Excel or other rudimentary means
- Main reason for low interest in collateral solutions:
  - ✓lack of global regulatory guidelines to encourage the use of advanced collateral technology and streamlined processes. Indirect regulatory requirements such Basel III regulatory capital relief for credit RWA for the use of CSA's provided only incentives to larger banks
  - ✓Asia's perception of ROI discouraged large investments in technology and infrastructure for collateral
  - ✓CVA price inception was not being practiced amongst regional banks

# Key Challenges



## Challenges to Buy-side & Local Banks in Asia

- Daily Valuations: usually rely on broker valuations
- Dispute Resolutions: especially for cross border trades
- Tracking corporate actions
- Performing recall and substitutions in a timely manner
- Tracking rehypothecation
- Performing daily reconciliation

## Challenges to Sell-side & Regional and Global Banks in Asia

- Using non cash collateral
- Viewing entire inventory across all silos/divisions
- Effectively using all eligible inventory for collateral purposes
- Dealing with multiple global branches and various cut off times
- Liquidity challenges on sourcing cheapest collateral
- Increased pressure from buy-side clients on dealing with regulatory requirements
- move from bi-lateral to CCP model



# Summary: Vendors in Asia



- While vendor technology has been present in Asia since the mid 90's success had been limited to the large limited banks
- Even after the financial crises, while banks were seen boosting their credit risk mitigation platforms, little was spent between 2008-2013 in investing in superior collateral technology apart from the large regional and global banks
- Manual processes in supporting collateral is common for the buy-side along with a reliance on their broker
- The introduction of BCBS-IO스코 has, for the first time, resulted in regional regulators implementing guidelines for margining thereby forcing market participants in Asia to re-think their collateral strategy.
- However this also means the model offered by vendors previously will not be a perfect fit for Asia where BCBS-IO스코 places an ever increasing focus on liquidity and inventory management along with risk analytics
- Vendors therefore have been developing more holistic solutions to better suit regulatory needs as a result of BCBS-IO스코

# BCBS/IOSCO Uncleared Margin Rules



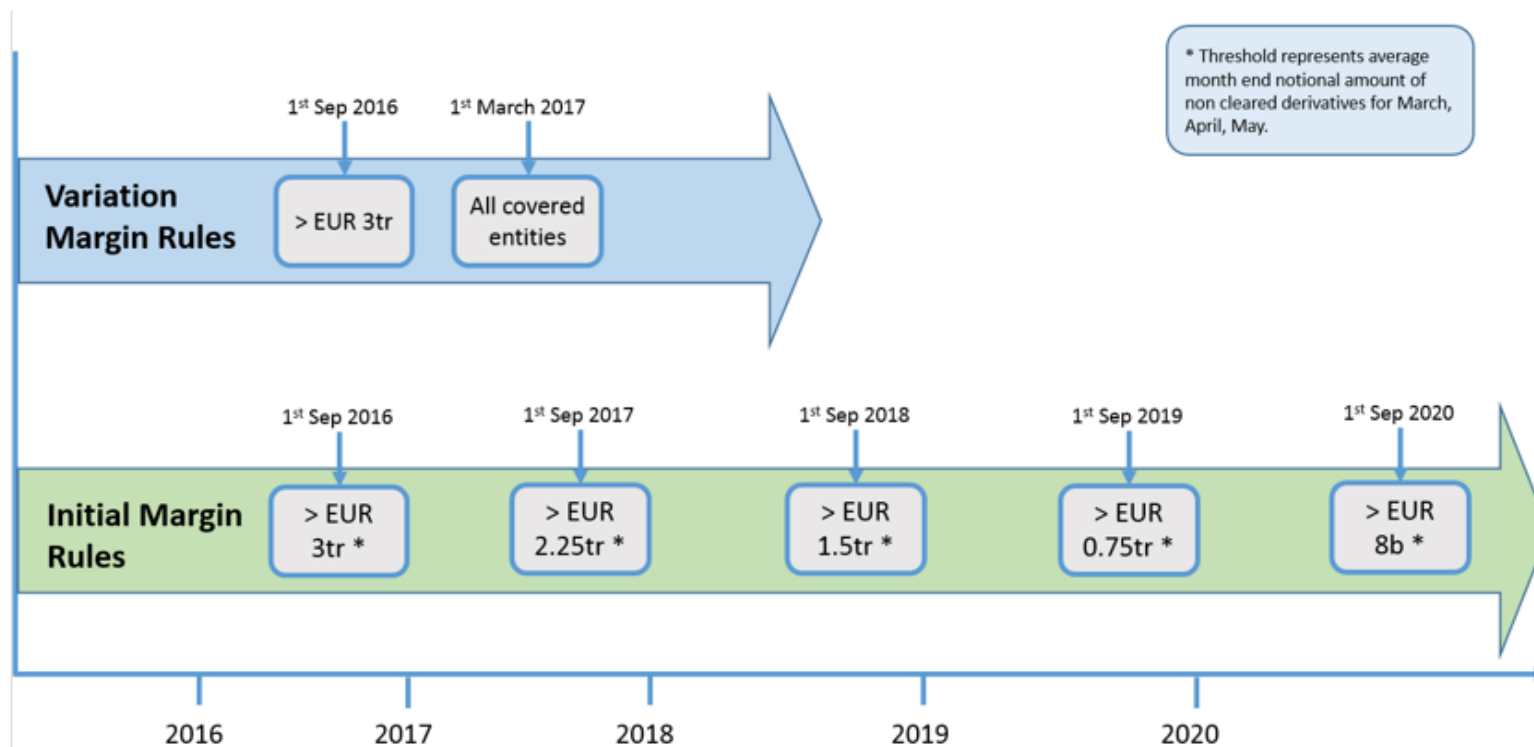
- 2 way exchange of gross IM and VM
- Baseline IM calculation: one tailed 99% confidence interval over 10 day horizon
- Zero threshold on VM
- Min transfer amount not to exceed EUR500,000
- More frequent margin calls
- Initial Margin Thresholds (if threshold 10 and IM req is 15 then would need to collect at least 5)
- Consolidated group thresholds
- Local regulators define acceptable collateral
- Additional haircut of 8% where the currency of the collateral asset differs from the currency of the derivative trade.

# BCBS/IOSCO Uncleared Margin Rules



- Rehypothecation of VM is allowed
- Rehypothecation of IM is only permitted IF:
  - Segregated from IM collectors proprietary assets
  - Only rehypothecated once – so single leg only permitted
  - Option given to IM provider to have IM segregated from collectors other counterparts (individual segregation)
  - IM provider notified of risks, gives written permission and is notified when collateral rehypothecation takes place

# BCBS/IOSCO Implementation Timelines



## Poll 1



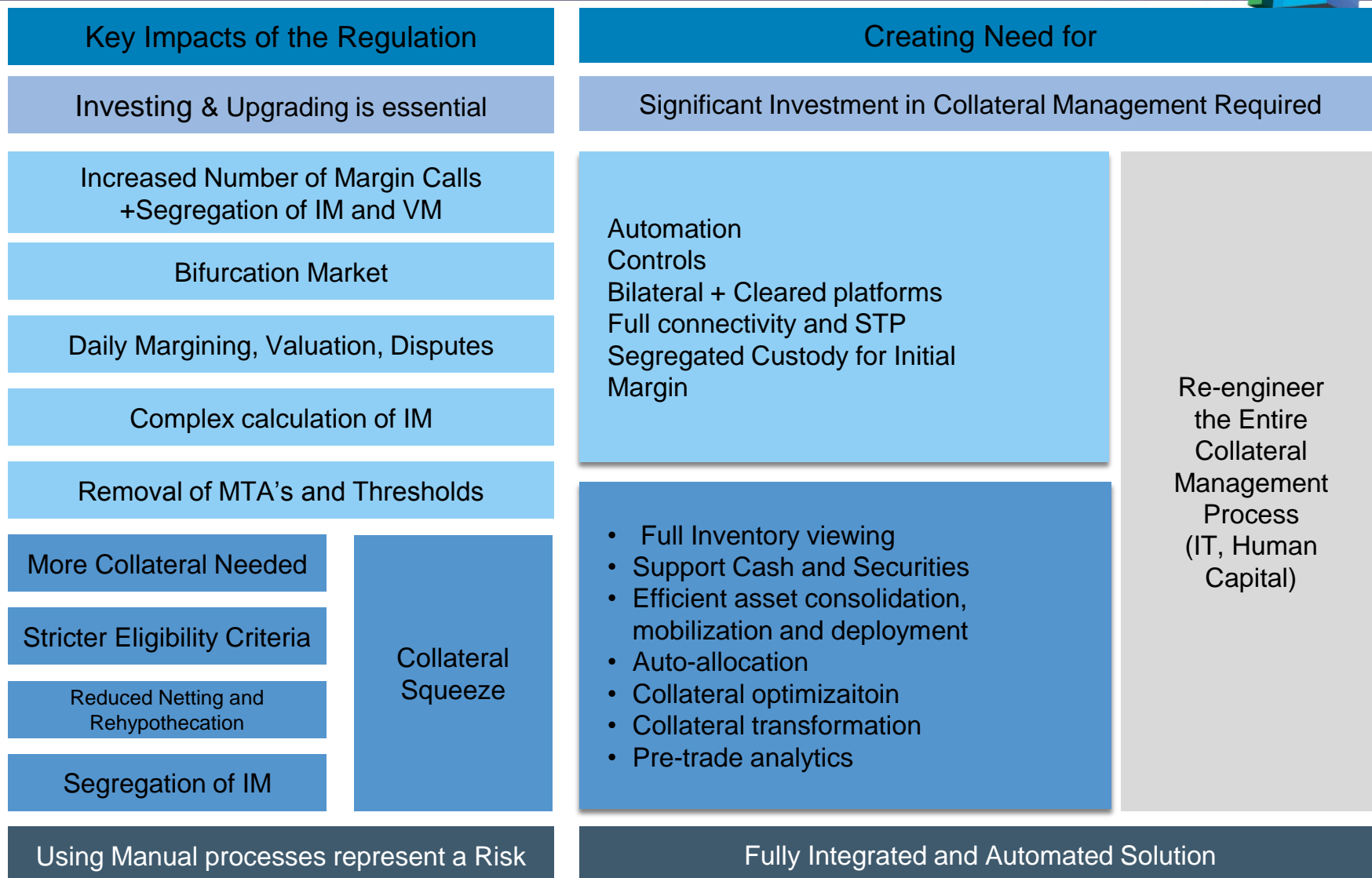
How prepared are you for the forthcoming BCBS/IOSCO rules?

- Not reviewed the rules yet
- Reviewed the rules but no target operating model defined
- Reviewed the rules and defined target operating model
- Defined target operating model and made required changes to technology systems
- Not applicable



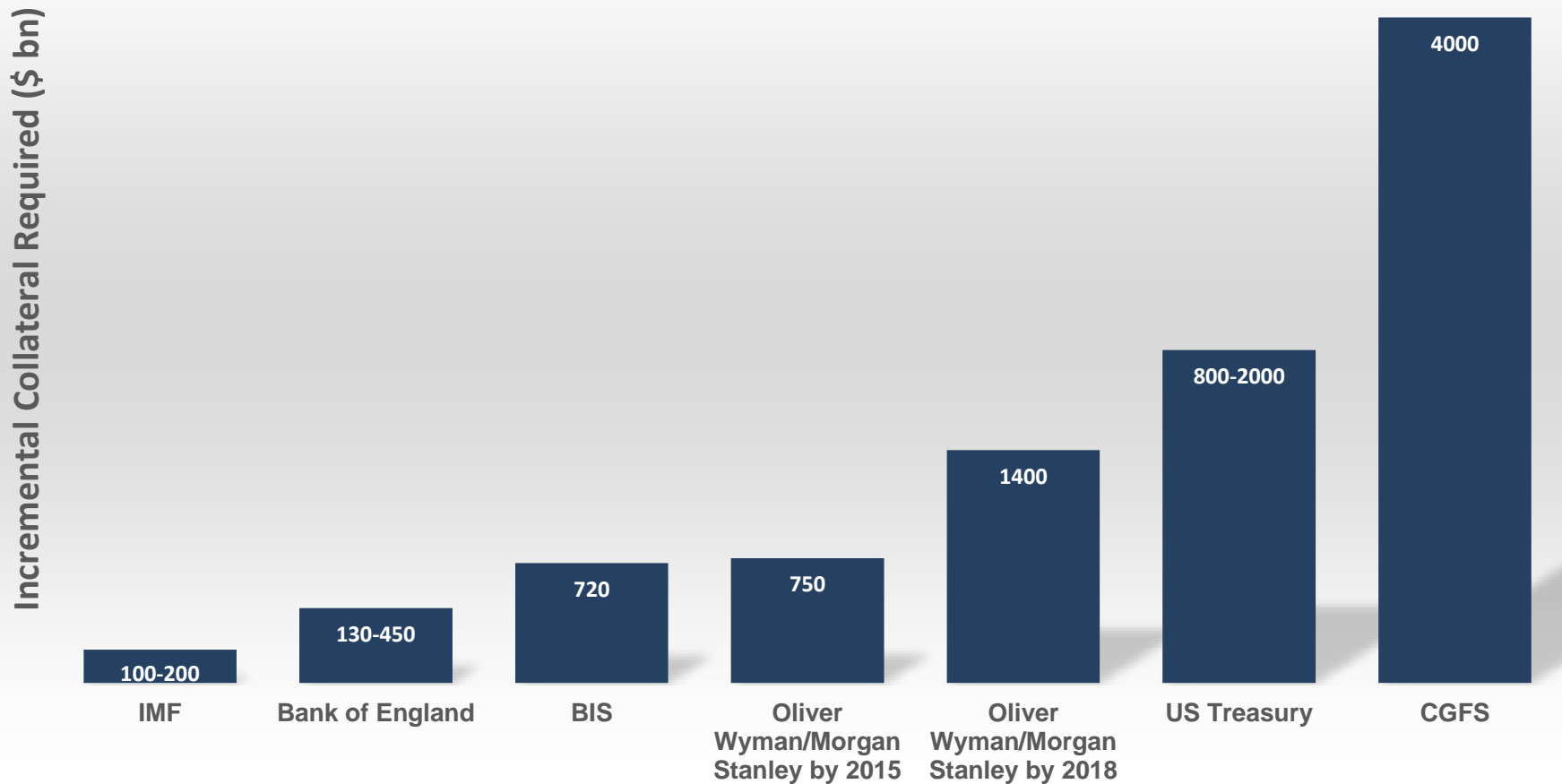
- US regulator estimates bilateral swap trades 30-40% more expensive than cleared
- Increase in demand for clearing – is there capacity?
- Extra ~ \$315b in extra collateral required according to the US Fed
- Increase in margin call volumes
- Timings will need to change for moving collateral
- Difficulties if a US counterpart trading with Asian counterpart

# Impact of Regulations – New Collateral Model





## *Estimated Demand for Collateral VS Regulations*





# BCBS IOSCO – The Game Changer



What do banks need to do?

- BCBS-IOSCO is actually allowing for a broadening of eligible collateral.
- The increase need for collateral is also prompting the larger banks to revise their internal operating model and implement the necessary changes so that they make full use of the inventory that is available to a bank and not necessary what is allocated to the collateral account. There is a move towards an enterprise collateral model
- Banks are also developing new algorithm based platforms that can help optimise their inventory for collateral usage and thereby minimize collateral costs.
- Banks need to also pay attention to their core collateral management functionalities and ensure that items such as daily margining, use of non cash collateral, the ability to recall and substitute, dispute resolution tracking are all in line with BCBS-IOSCO standards.

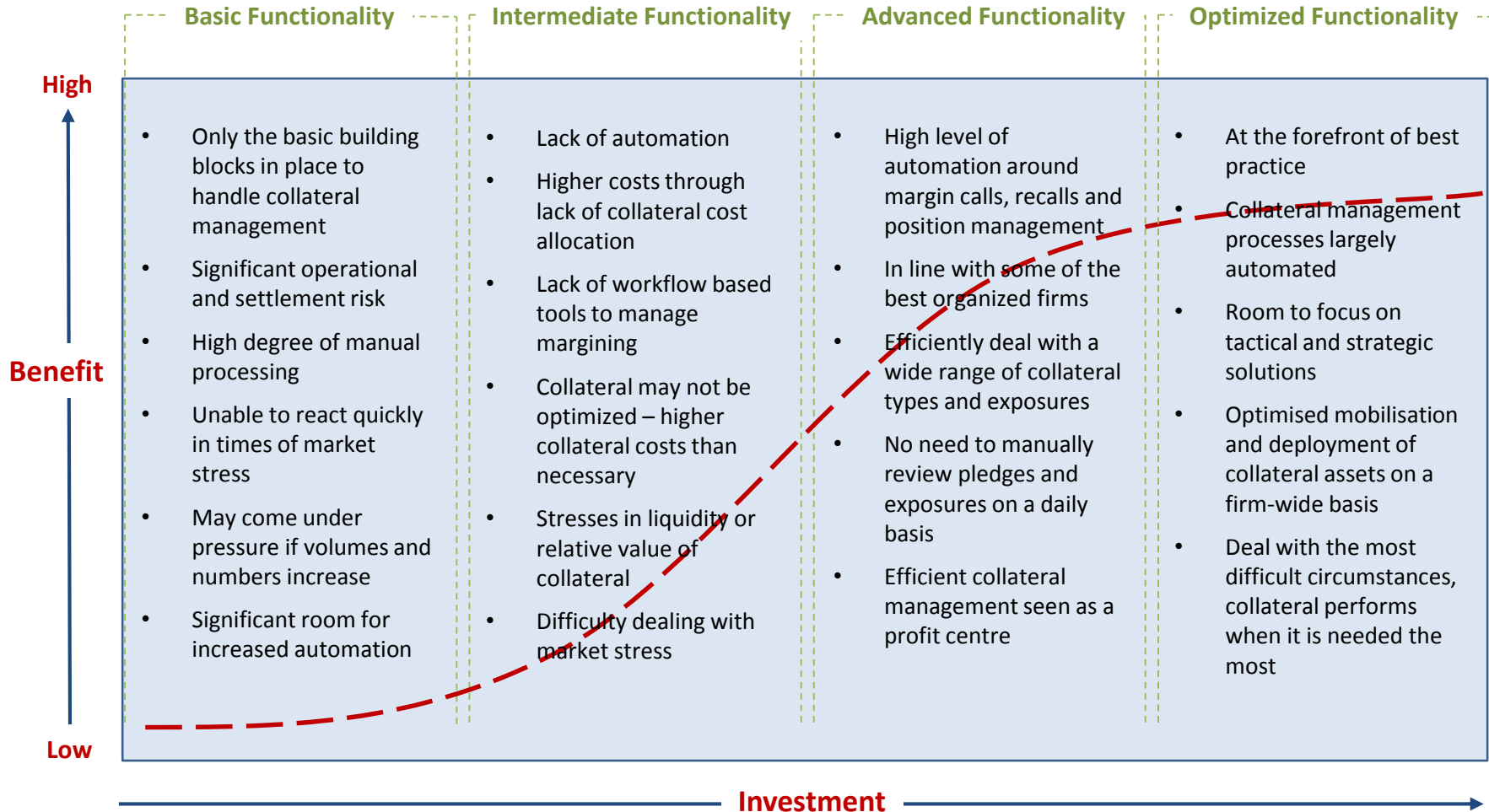
## An abstract geometric composition featuring several 3D rectangular blocks in vibrant colors: red, orange, green, and blue. The blocks are arranged in a complex, overlapping structure against a dark blue background. The lighting creates strong highlights and shadows, emphasizing the three-dimensional nature of the objects. The composition is dynamic and modern, with a focus on geometric forms and color contrast.

<b>GRADE 69</b>		<p>To arrange a complimentary 30 minute call with one of our collateral management product experts, to discuss ways to improve your collateral processes, please contact Martin Seagroatt on email: <a href="mailto:ms@4sight.com">ms@4sight.com</a> or tel +44 (0)131 221 5996</p>
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A bar chart titled "Collateral Health by Sophistication" showing the relationship between the level of sophistication and collateral health. The y-axis represents a value, with a marker at 25. The x-axis shows four levels of sophistication: Basic, Intermediate, Advanced, and Optimised. The bars show a clear downward trend as sophistication increases.

Sophistication Level	Collateral Health (Approximate Value)
Basic	25
Intermediate	22
Advanced	15
Optimised	8

# Benchmarking Your Collateral Technology



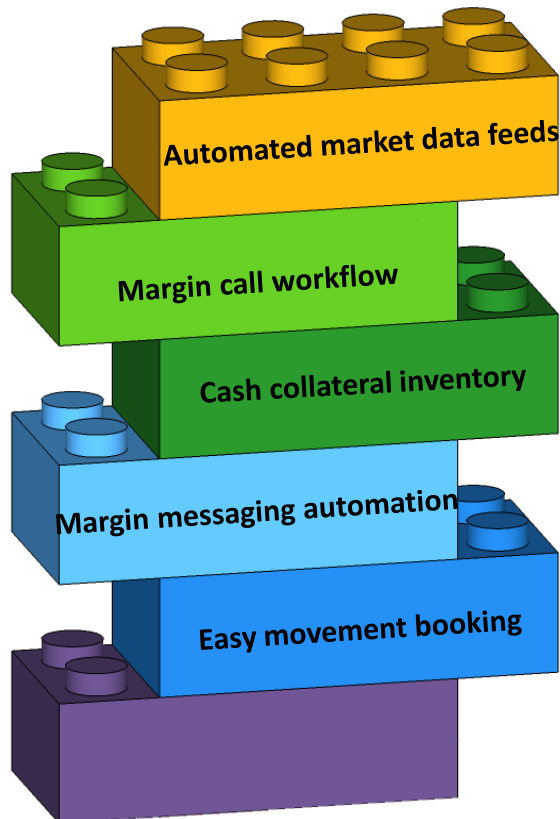
## Poll 3



What is the current state of your collateral technology infrastructure?

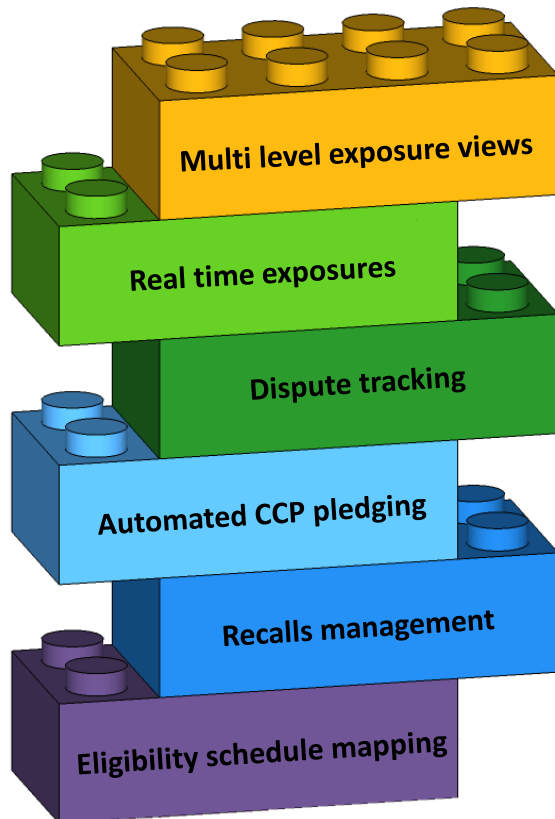
- No technology systems in place, but we plan to install
- Excel or Access technology in use
- Technology in place but it is not yet mature
- Technology in place that is mature but expensive
- Technology in place that is both mature and cost effective

# Level 1 - Basic Functionality



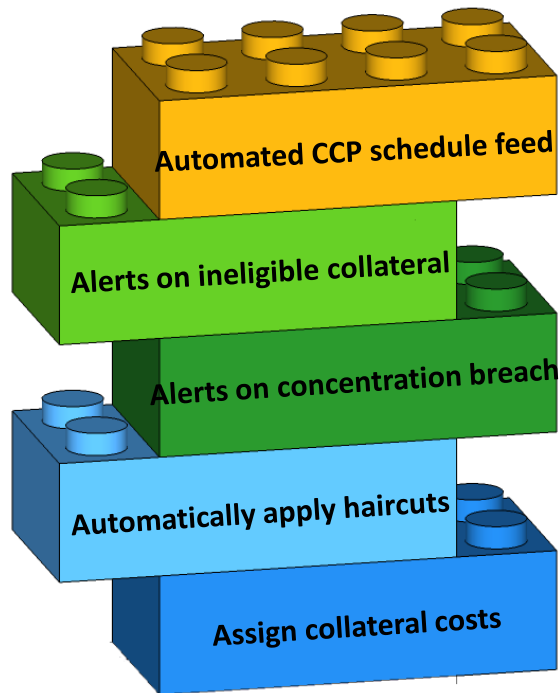
- Automated feeds of market data to support the margining process?
- Clear dashboard for margin call workflow?
- Automated the sending of margin call messages (e.g. Acadiasoft or via proprietary means)?
- Manage margin movements easily?
- Manage Basic Repo & SBL financing?
- Manage Basic TRS financing?

## Level 2 - Intermediate Functionality



- Accurately model Agreements & schedules?
- Manage, track and report on disputes?
- Automate cleared IM/VM processing?
- Manage which collateral requires recalling?
- Model Repo evergreen/term structures?
- Model complex TRS Baskets?
- Model Collateral upgrade/downgrades?
- Automate reg reports (e.g. DTCC, Regis TR etc)?
- Model effect of trading on balance sheet?
- Model effect of trading on capital costs?
- Model Liquidity classification of assets?

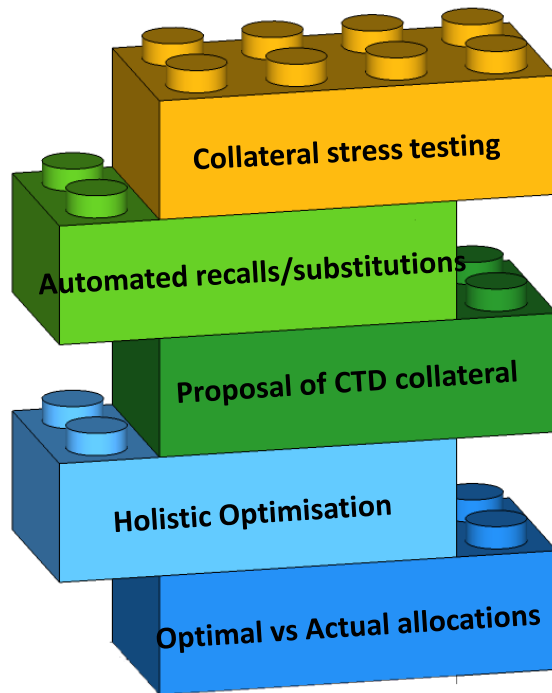
## Level 3 - Advanced Functionality



- Receive automated updates of collateral schedules through feeds from the CCP/FCM?
- receive alerts when trying to book ineligible or incorrectly haircutted collateral?
- receive alerts on concentration limit breaches?
- assign costs to collateral?
- rank collateral assets by cost?
- apply haircut-weighted cost to collateral ?
- measure the probable variation in collateral requirements given outstanding trades?
- preparedness for sudden and sizeable margin requirement from large market movements?



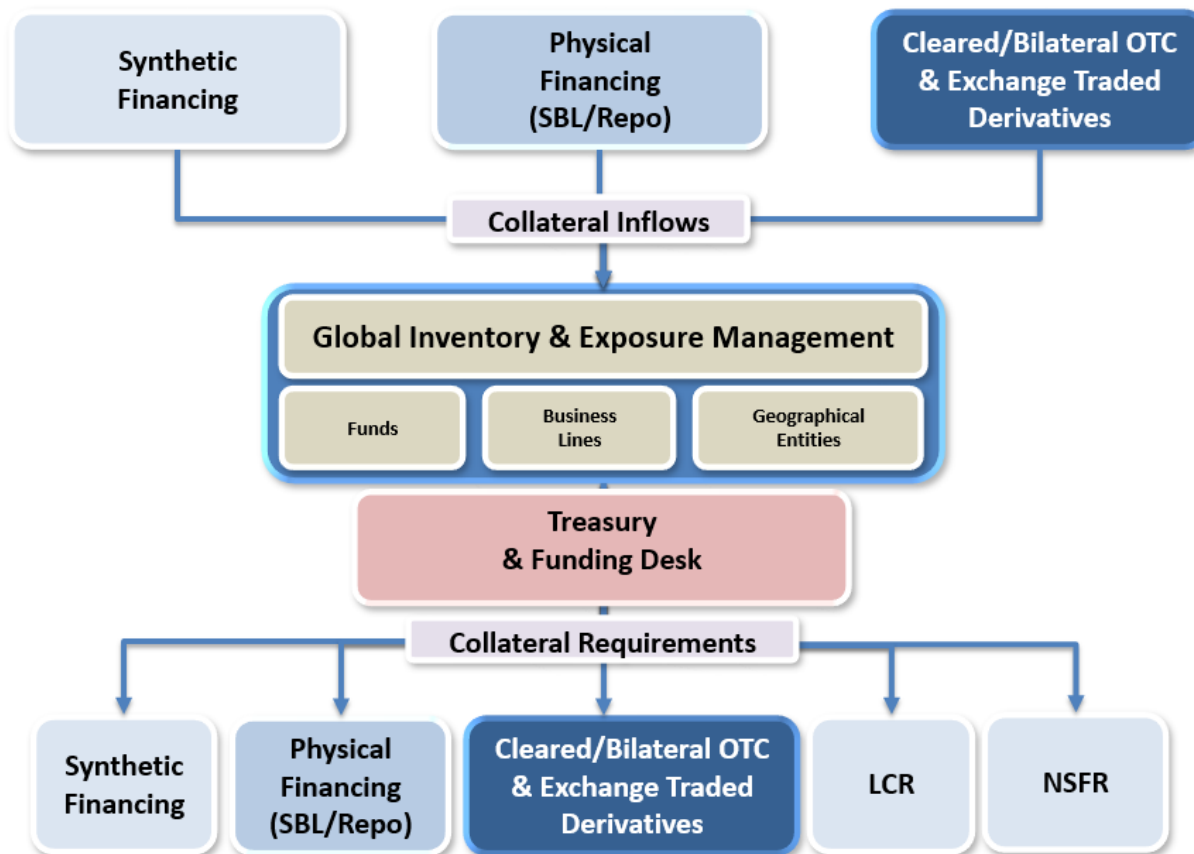
## Level 4 - Optimised Functionality



- Clear view of exposures across Securities Lending, Repo, OTC and Centrally Cleared Derivatives?
- Consolidated view of your collateral inventory across the firm in one place?
- Stress test your collateral portfolio and exposures under a range of market conditions?
- Automate and optimise recalls and substitutions for the optimal collateral mix?
- Propose optimal collateral movements per counterparty/agent?
- Optimize your entire collateral portfolio across all margin requirements on a holistic basis.
- Review your outstanding collateral pledges in relation to the optimal potential allocation?



# Future Trends



## Cross Over Points

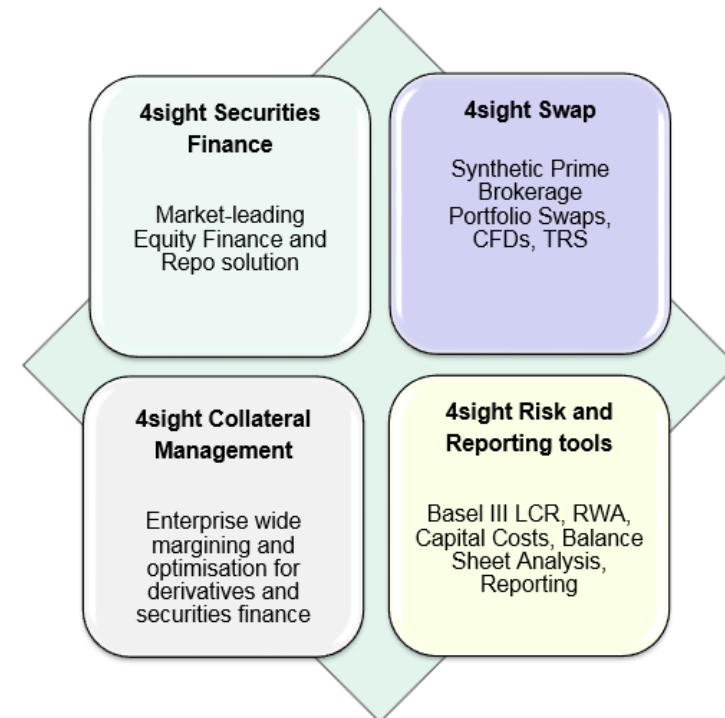
1. Matching the supply of and demand for collateral efficiently
2. Identifying cross margining and netting efficiencies
3. Internalising longs and shorts
4. Easier to allocate collateral costs and funds transfer pricing vs P&L
5. Holistic views of client activity and consumption of collateral
6. Faster trade pricing for clients
7. Reduction in operational risk

# Products



4sight Securities Finance (4SF) is an integrated, single-system, front-to-back office solution comprising four core modules, satisfying all aspects of your equity and bond financing needs.

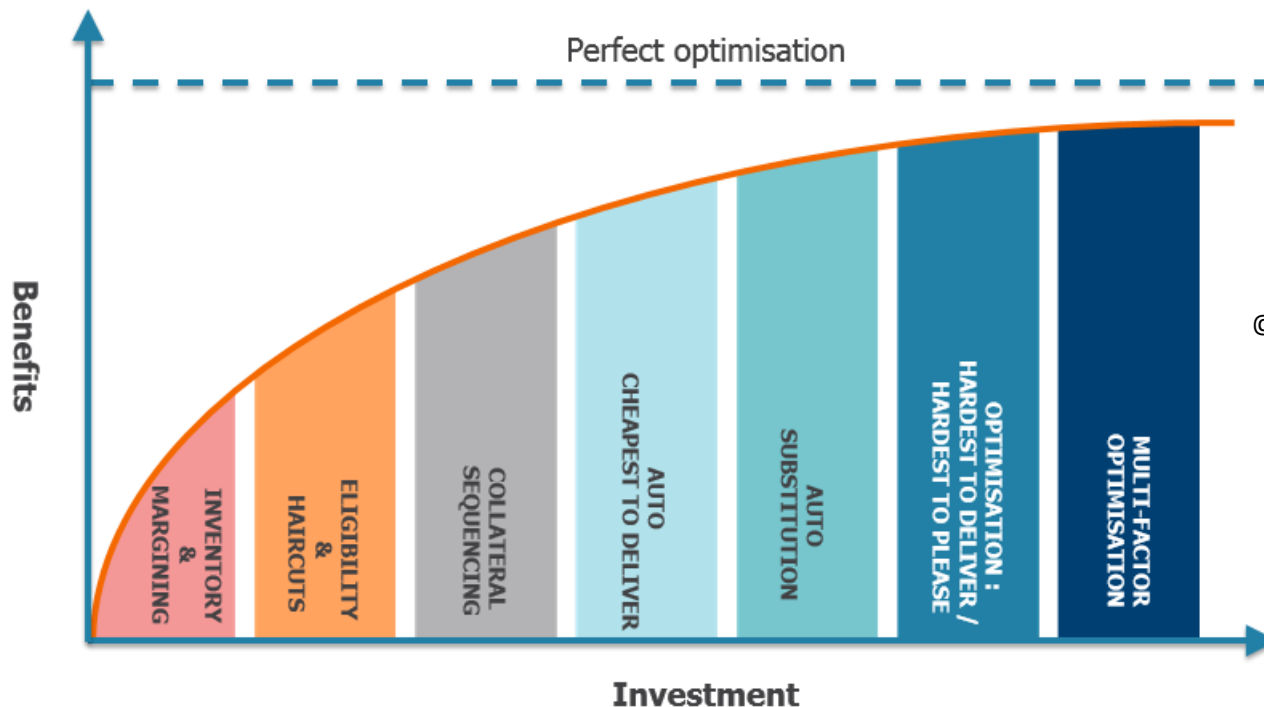
- **4SF SLAB** - the market leading Stock Lending and Borrowing software solution.
- **4SF REPO** - Repo and Bond Finance solutions for the new regulatory, liquidity and balance sheet oriented world including – for 2016- the new 4SF RoQ (Repo Organised Quoting) providing in-system support for trading on multiple Repo ATS (BTEC, MMF, EUREX).
- **4SF COLLATERAL** - Collateral Management software for enterprise-wide collateral management and optimization. XPOSE provides full cross product collateral management for Securities Lending, repo, OTC, Exchange Traded and Cleared Derivatives in a single solution.
- **4SF SWAP** - a synthetic financing solution for Contracts for Difference (CFDs), Total Return Swaps (TRS) and Portfolio Swaps.



# What level is appropriate for my firm?



- Go for the low hanging fruit first
- Assess ROI and then decide if worth moving to next stage
- Diminishing return on investment for some of the more advanced optimisation tasks
- The basic optimisation tasks can provide many of the key cost saving benefits of optimisation



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# Download the Healthcheck Tool

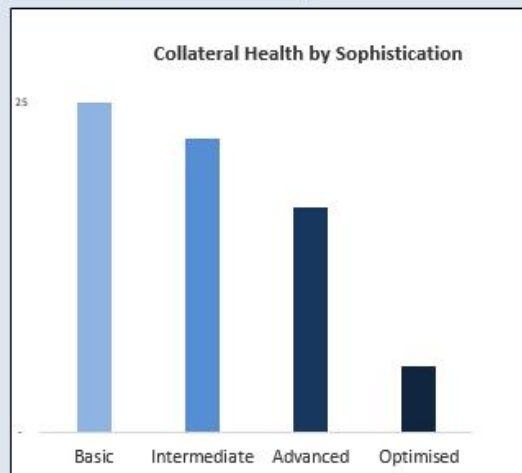


Download at <http://bit.ly/1NMRnyC>

4SIGHT FINANCIAL SOFTWARE	
Collateral Healthcheck	Your Answer
<b>Basic</b>	
Do you have a clear view of exposures across Securities Lending, Repo, OTC and Centrally Cleared Derivatives?	Yes
Do you have a consolidated view of your cash and inventory available for collateral across the firm, in one place?	Yes
Do you have automated feeds of market data to support the margining process?	Yes
Do you have a clear dashboard for Margin call workflow to prioritise calls?	Yes
Have you automated the sending of margin call messages (e.g. AcadisoSoft or via proprietary means)?	Yes
Are you able to book cash and securities and margin movements easily?	Yes
Are you able to automatically settle cash and securities and margin movements whilst monitoring fails?	Yes
Can you automatically calculate, display and invoice interest on cash collateral?	Yes
<b>Intermediate</b>	
Can you view exposures at multiple levels of your firm from the top level down to the book/trade level?	Yes
Can you view exposures in real time?	Yes
Can you manage, track and report on disputes?	Yes
Can you carry out automated CCP start of day IM/VM cash pledge processing?	Yes
Are you able to monitor which collateral requires a recall due to Corporate Action/Non-eligible/Short positions?	Yes
Have you accurately modelled your counterparties' eligibility schedules?	Yes
Can you set and monitor concentration limits based on multiple criteria?	No
Have you accurately modelled your own and your counterparties' haircut schedules?	Yes
Can you model and map CSA margining rules electronically?	Yes
Can you Model each CCP's/Broker's/FCM's collateral eligibility and haircut schedules?	Yes
Can you create, schedule, automate and output regulatory compliance and management reports (e.g. DTCC, Regis TR etc)?	Yes
<b>Advanced</b>	
Do you receive Automated updates of collateral schedules through feeds from the CCP?	Yes
Do you receive alerts when trying to pledge or receive ineligible collateral?	Yes
Do you receive alerts when trying to pledge or receive collateral in breach of concentration limits?	Yes
Can you automatically apply haircuts when pledging collateral?	Yes
Can you assign costs to collateral by assets class or other designation ?	Yes
Can you rank collateral assets by cost?	Yes
Can you apply haircut-weighted costs to collateral ?	Yes
Can you measure the probable variation in collateral requirements given outstanding trades?	Yes
Are you prepared for any sudden and sizeable margin requirement from large market movements?	Yes
<b>Optimised</b>	
Can you stress test your collateral portfolio and exposures under a range of market conditions?	Yes
Are your recalls and substitutions automated and optimised for the optimal collateral mix?	Yes
Propose optimal collateral movements per counterparty/agent?	Yes
Can you optimize your entire collateral portfolio across all margin requirements on a holistic basis?	Yes
Can you review your outstanding collateral pledges in relation to the optimal potential allocation ?	Yes
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Basic	25
Intermediate	22
Advanced	17
Optimised	5



## Further Information



- For further information please contact

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