ICMA European Repo & Collateral Council (ERCC) General Meeting

Impact of Regulation on Repo

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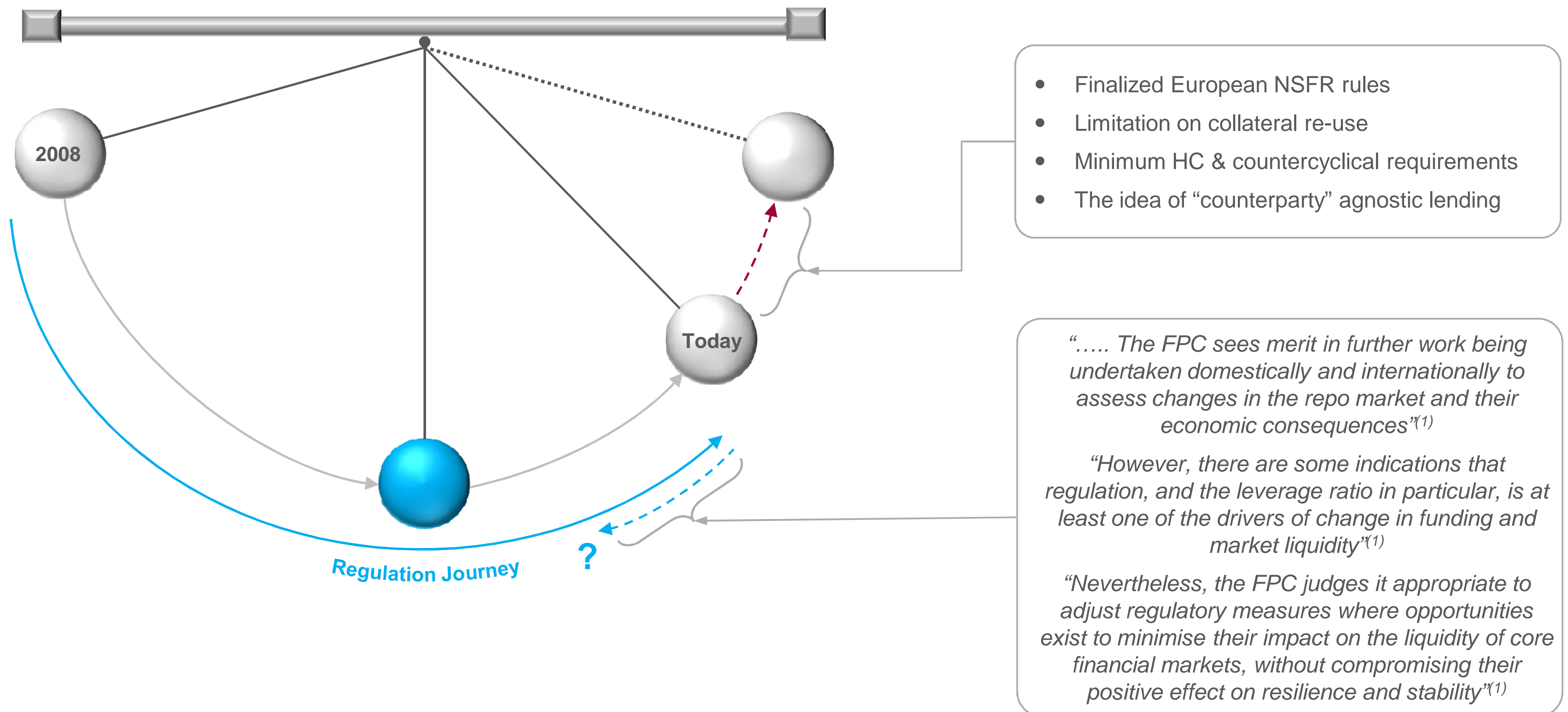
The Regulatory Pendulum: Direction of Travel?

Following the events of 2008 there was little doubt the regulatory pendulum would swing in the direction of a more uncompromising application of regulation in order to promote macro prudential stability. New regulation was written against the back drop of a caustic political environment, with the then available evidence, and with no credible ability to fully assess its impact. Eight years later we have new facts, we're starting to observe unintended consequences, and regulators are asking questions.

Is there enough evidence to support delaying the regulatory pipeline and/or recalibrate existing rules?

Is the pendulum moving towards equilibrium?



- Finalized European NSFR rules
- Limitation on collateral re-use
- Minimum HC & countercyclical requirements
- The idea of "counterparty" agnostic lending

"….. The FPC sees merit in further work being undertaken domestically and internationally to assess changes in the repo market and their economic consequences"[(1)]

"However, there are some indications that regulation, and the leverage ratio in particular, is at least one of the drivers of change in funding and market liquidity"[(1)]

"Nevertheless, the FPC judges it appropriate to adjust regulatory measures where opportunities exist to minimise their impact on the liquidity of core financial markets, without compromising their positive effect on resilience and stability"[(1)]

1. *Bank of England, Financial Stability Report, July 2016, Issue No.39.*

BCBS268 Proposed Revisions to the Basel III Leverage Ratio

Highlights from the Consultation	
Settlement Balances	• Most European banks adopt a trade date accounting approach which recognizes or derecognizes trading portfolio items bought and sold on trade date –i.e. cash execution activity. • However, these trades do not settle until a few days later, e.g.T+2. As a result, IFRS accounting rules provide that a "settlement liability" (in the case of a security purchase) or a "settlement asset" (in the case of a security sale) is recognised for the cash payable /receivable between trade date and settlement date. BCBS consultation is seeking harmonisation with the US approach, no change in the accounting principles but even out in the leverage exposure measure. • *US GAAP allows brokers to net down these settlement balances to a single item regardless of isin, counterparty, currency, etc.*

Secure Funding Transactions (SFTs)	• Basel proposed that open trades cannot net because they do not meet the criteria of having an explicit settlement date, but they request further evidence of the adverse impact of this treatment on open repos and any arguments for why further revisions may be warranted.
	• Not addressed in this consultation:
	  ▪ In the E-C add-on for SFTs, there is a double count for cash collateralised stock borrow where the haircut is on the accounting balance sheet and double counted in the leverage exposure via the E-C add on.
	  ▪ Clarification around treatment of Forward Starting Reverse Repos.

Derivatives RC and PFE – 'Big Help to Client Swap Clearing Banks'	• The PFE add-on - Basel proposes replacing CEM with SA-CCR however, the PFE cannot be reduced for any collateral posted by the counterparty or any negative mark-to-market of the derivative. • Replacement Cost - Basel also proposes the SA-CCR calculations.

Regulators Searching for Reasons
Allocation of Capital: Further Understanding is Needed

"In principle, leverage ratio requirements, as currently calibrated, would constrain only firms with relatively low risk-weighted assets on average. The impact will also depend on the business level at which it is applied. For the UK leverage ratio framework, this is currently at the consolidated level only"[2]

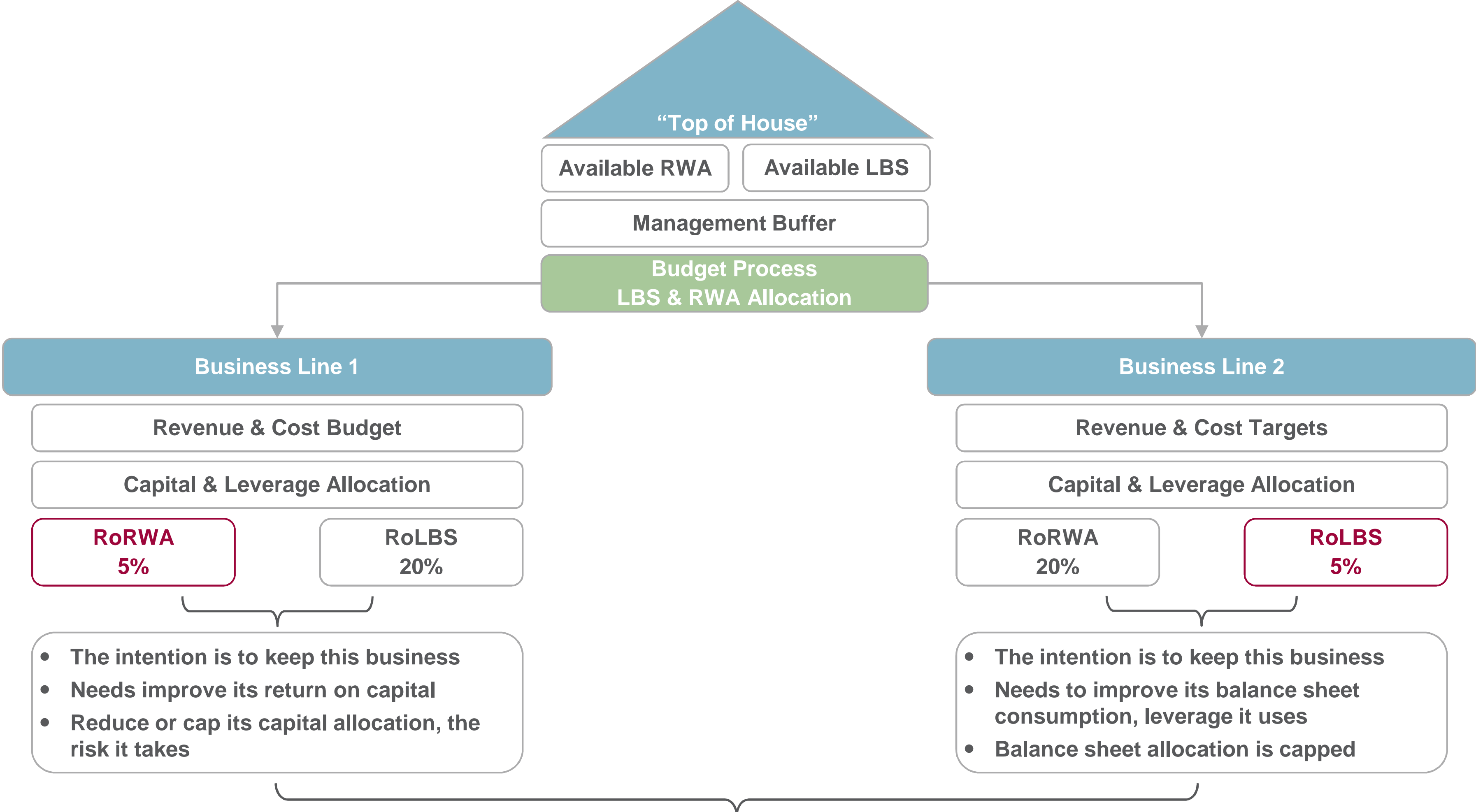
"However, if the leverage ratio were viewed as binding on individual business lines, this may create incentives for a dealer to increase margins, or reduce volumes, on lower-risk activities such as repo (Duffie 2016).[1]"

"Nevertheless, there is some market and supervisory intelligence that dealers are considering the marginal impact of a leverage ratio requirement at the level of individual business lines when making decisions about how to allocate balance sheet to different activities"[2]

"As set out in the Review of the FPC Direction on a leverage ratio requirement and buffers chapter, in the light of evidence of declining market liquidity in some core financial markets and of a decline in availability of repo financing, which supports market functioning more broadly, the FPC is restating its intention for its leverage ratio framework to be applied at consolidated level and not to individual activities"[2]

1. *Duffie, D (2016), 'Submission in response to US Treasury Notice seeking public comment on the evolution of the Treasury Market structure'; www.darrellduffie.com/uploads/policy/DuffieTreasuryRFIApril2016.pdf.*
2. *Bank of England, Financial Stability Report, July 2016, Issue No.39.*

Understanding Capital Allocation: a Top Down Process



In the past business lines were allocated a revenue budget, influencing their behavior and decisions. Post 2008, revenue remains important but the focus has turned to risk & leverage. Which forms the foundation for how a banks' performance and stability is measured and assessed. Allocating financial resource to individual business lines forces them to either seek efficiencies and/or amend their business model to address their weaker return metric. This can include increasing prices or simply reducing activity to bring down the use of capital.

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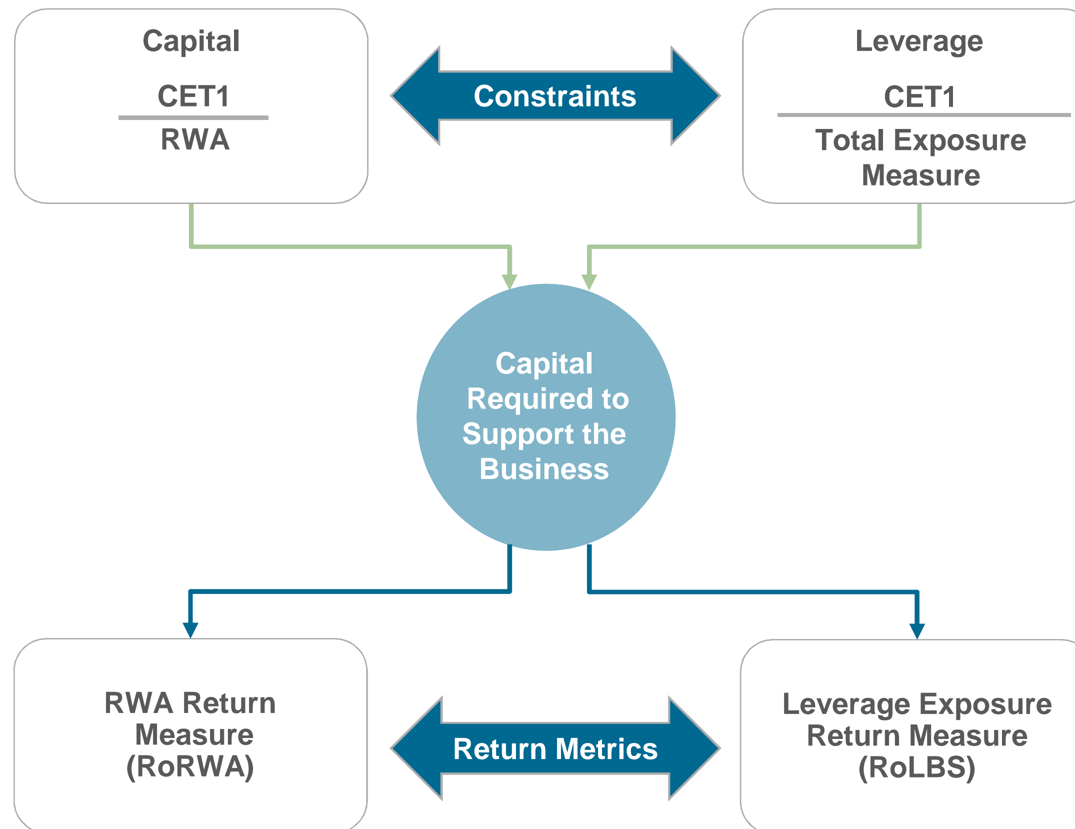
Assessing the Leverage Ratio: Blunt and Blind

Basel III is actually very simple.
Everything is about CAPITAL, the good stuff, loss absorbing, and expensive to raise. The amount of capital a bank holds will influence both the size and shape of businesses that can be supported. Businesses will be measured against their use of capital by both: how much they need to support required leverage and / or the amount of risk it takes.



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Repo Returns Under Leverage Returns (RoLBS)?

Assumptions	
BCBS 270 Balance Sheet	£1bln
PnL Flat 1YR Run Rate	100bp
Operating Assumptions[1]	
Cost / Income (C/I) Ratio	55%
Tax Rate	35%

How much capital does a bank need to support £1bln of Repo?

$4\% = \frac{X}{£1bln}$ → X = £40m

How much gross revenue do I generate?

£1bln x 100bp = £10m

What is my NET revenue?

PBT: £10m – C/I Ratio = £4.5m

Net Income: £4.5m – 35% Tax Rate = £2.925m

What do my Repo returns on leverage balance sheet look like?

Return on Leverage Balance Sheet (LBS)

Gross	PBT[2]	NET
$\frac{£10m}{£40m}$ = 25%	$\frac{£4.5m}{£40m}$ = 11.25%	$\frac{£2.925m}{£40m}$ = 7.32%

1. *Note: Figures illustrative ONLY.*
2. *PBT = Pre Tax Profit.*

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Repo Returns Under Capital (RoRWA)?

Assumptions	
BCBS 270 Balance Sheet	£1bln
PnL Flat 1YR Run Rate	100bp
Counterparty Risk Weight (CP-RW)	100%
FCCM Volatility Adjustment Haircut*	7%(2)
Hair Cut Applied to Client Trades	0%
Operating Assumptions(2)	
Cost / Income Ratio	55%
Tax Rate	35%

How many RWA's are produced with the given trade assumption?

RWA = EAD x CPRW
EAD: £1bln x 7% = 70m
CPRW: 100%
RWA = 70m

How much capital do I need to support 70mln of RWA?

$11\% = \frac{X70m}{£}$ → X = £7.7m

How much gross revenue do I generate?

£1bln X 100bp = £10m

What is my NET revenue?

PBT: £10m – C/I Ratio = £4.5mln

Net Income: £4.5 – Tax = £2.925m

What do my returns based on RWA exposure look like?

Return on RWA

Gross	PBT	NET
$\frac{£10m}{£7.7m}$ = 130%	$\frac{£4.5m}{£7.7m}$ = 58%	$\frac{£2.925m}{£7.7m}$ = 38%

1. *Note: Figures are illustrative ONLY.*
2. *Source: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:176:0001:0337:EN:PDF Figure is a blended Rate to simply illustrate and example.*

Repo Returns Under Leverage Returns with an Asset Class & Activity Discount (RoLBS)?

Assumptions	
BCBS 270 Balance Sheet	£1bln
PnL Flat 1YR Run Rate	100bp
Apply an Asset Class & Activity Discount to the Leverage Exposure	50%
Operating Assumptions[1]	
Cost / Income (C/I) Ratio	55%
Tax Rate	35%

How much capital does a bank need to support £1bln of Gov't Repo?

$4\% = \frac{X}{£1bln}$ → $X = £40m$

Apply a 50% LR 'discount' for Gov't Repo?

$2\% = \frac{X}{£1bln}$ → $X = £20m$

How much gross revenue do I generate?

£1bln x 100bp = £10m

What is my NET revenue?

PBT: £10m – C/I Ratio = £4.5m

Net Income: £4.5m – 35% Tax Rate = £2.925m

What do my Repo returns on leverage balance sheet look like?

Return on Leverage Balance Sheet (LBS)

Gross	PBT[2]	NET
$\frac{£10m}{£20m} = 50\%$	$\frac{£4.5m}{£20m} = 22.5\%$	$\frac{£2.925m}{£20m} = 14.6\%$

1. *Note: Figures illustrative ONLY.*
2. *PBT = Pre Tax Profit.*

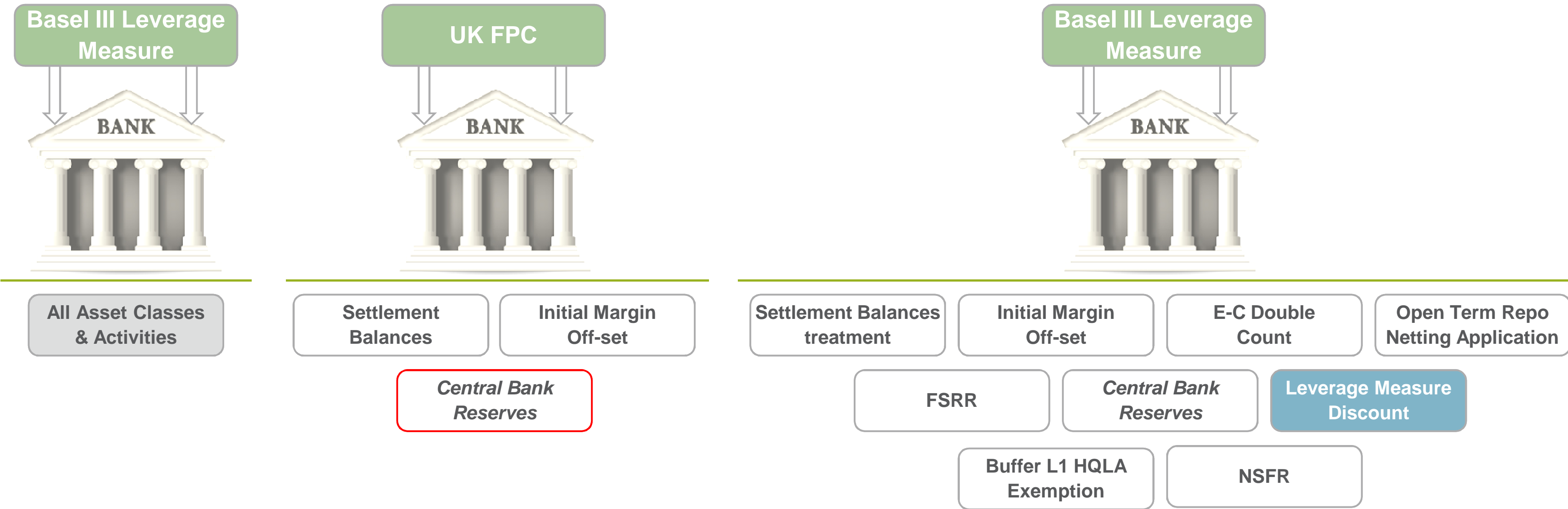
Proposed Changes will help but Might not be Enough

The FPC's recommend adjustments to the Leverage Ratio will have a positive effect in reducing the leverage exposure measure footprint for STFs and cash trading. What it doesn't change is the actual quantum or cost of capital needed to support these activities. Recalibrating the overall leverage ratio target could be one solution but may have undesirable effects. A more targeted approach maybe to apply a leverage measure discount, which considers activities and asset classes that are vital to macro prudential stability.

Comparing the Return Outcomes to 12% Return on Equity Target

REE Metrics	Results	Pass/Fail Return Hurdle
Return of LBS (RoLBS)	7.3%	✗
Return of Capital (RoRWA)	38%	✓
Discounted Return of LBS (RoLBS)	14.6%	✓

✗ Fail ✓ Pass

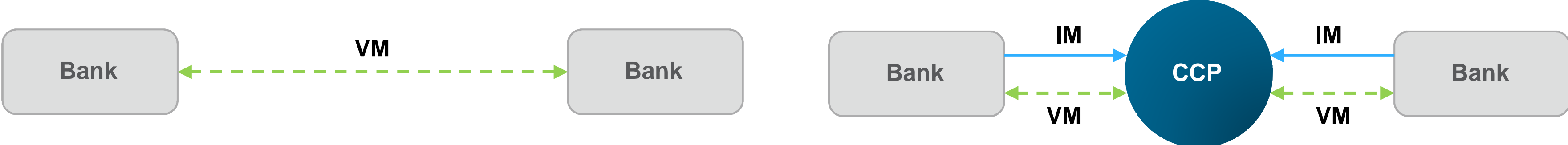


Margin Requirement for Uncleared Derivatives:
The wait is Finally Over

Increased Demand for Collateral but How Much?

Even though the regulatory decision is still pending regarding which risk model can be used to calculate the required initial margin, an important aspect, which will have a large influence is the fact that the collateral will be segregated and cannot be rehypothecated. This will have a lasting effect on its availability and price.

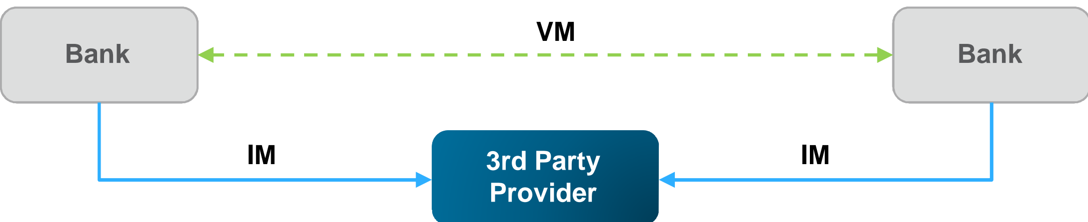
Bi-lateral Margin Requirements | **Cleared Product CCP Margin Requirements**



Estimated Collateral Requirements[1]

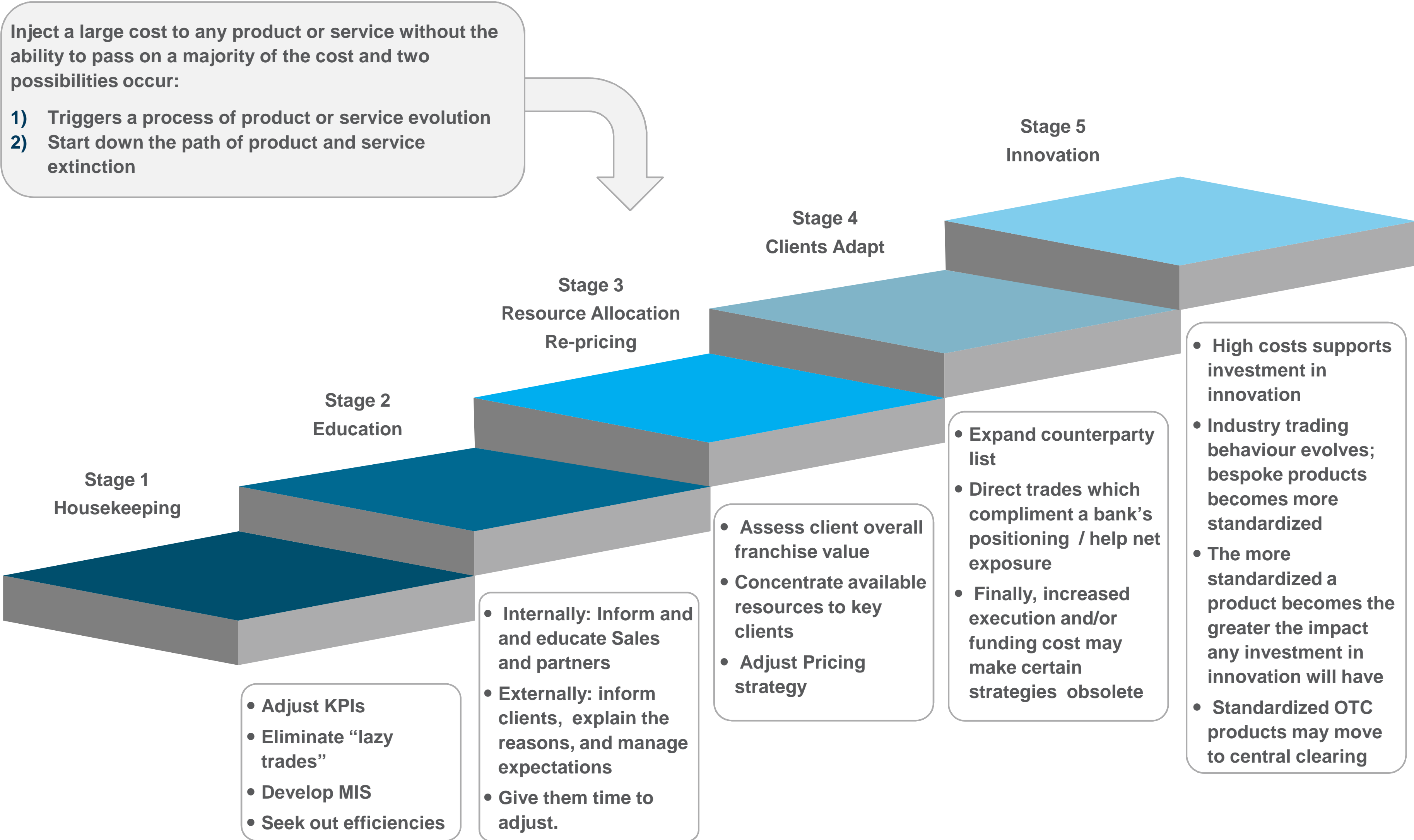
Non-Cleared Product Segregated IA

Businesses will gain a benefit though reduced capital requirements (RWA) but will be introduced to new costs and the relationship between collateral and balance sheet, which will unless they can increase revenue, have a drag on their RoE



1. *Source: Barclays Estimates.*

Collateral Demand: Have we Considered Everything?



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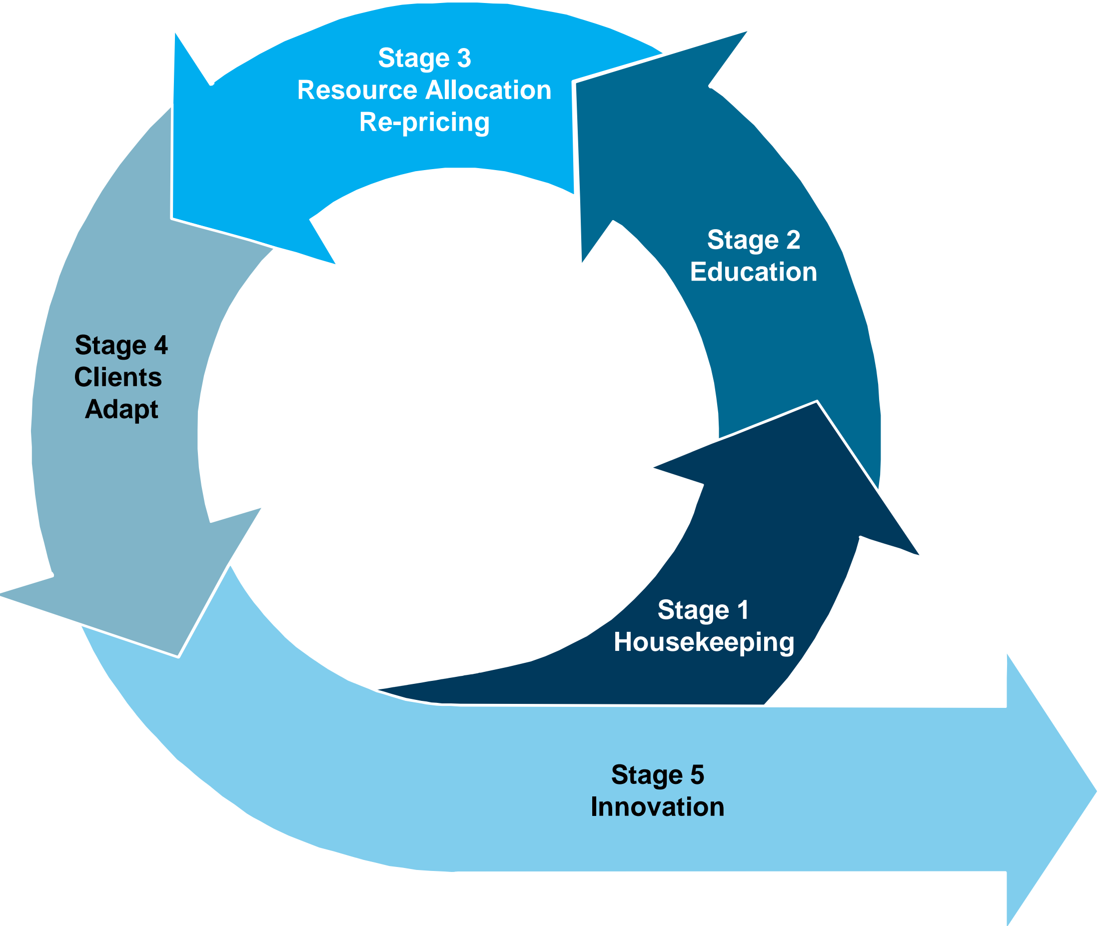
Collateral Demand: Only Time will Tell……

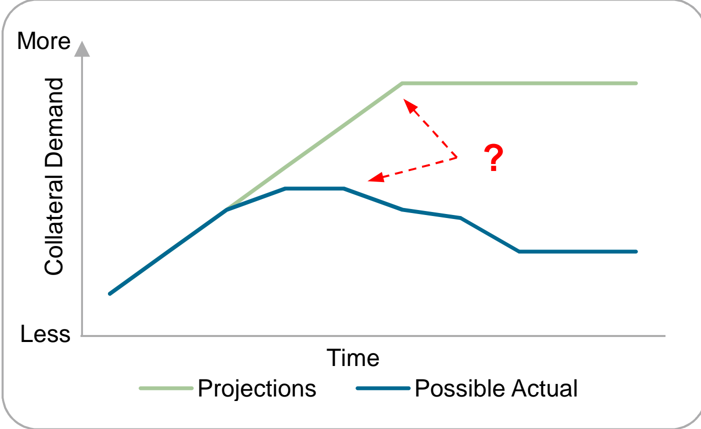


Successful Product and Service Evolution

Results in:

- Activity levels decrease and/or innovation takes root
- Both outcomes reduces the need for capital to support exposure and improves the return profile
- Less exposure, requires less collateralization
- The reduced need to collateralize exposure leads to reduced demand for collateral
- So how accurate are the forecasts for collateral?

Collateral Forecasting



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