

EBA SRT Test Proposals

Principal Based Approach

Commensurate Risk Transfer

EBA SRT Test Proposals

Observations / issues with original proposal

When considering clean-up call for unexpected loss (UL) event timing:

- **Significant concern for pro-rata structures.**
- Size of UL event is extreme and **unrealistic compared to the outstanding portfolio.**
- Amending structures to pass unrealistic tests **significantly reduces economics to unfeasible level.**

Alternatively, considering earliest time call for UL event timing:

- **Tests pass** due to greater protection remaining.
- **Significant capital costs** making **transactions unfeasible.**
- Santander **never structures positive incentives for issuers to call** transactions at time calls.

Alternative Proposals considered

All proposals maintain the EBA’s proposed treatment for expected loss (EL) and focus on the size, or timing of UL event:

- 1) **UL Size – Outstanding Balance:** Amend size of UL event by calculating based on outstanding principal in final year prior to clean-up call.
- 2) **UL Timing – EBA Back-Loaded vector:** Amend UL event loss distribution as per EBA’s proposed ‘back-loaded’ EL vector.
- 3) **UL Timing – Rating Agency vector:** Amend UL event loss distribution as per rating agency back loaded scenario.

Other proposals considered but dismissed:

- **Modelling UL on a loan-by-loan basis** at the maturity of every securitised exposure. – We determined this may be overly complex for large consumer portfolios with limited value added.

Santander Proposal to EBA

Option 2: Amend UL event loss distribution as per EBA’s proposed ‘back-loaded’ EL vector.

We believe this meets the EBA’s objective in providing a **significant stressed loss scenario** to SRT structures (total size unchanged from original proposal) on a **consistent basis** across banks, which is also relatively **simple to model and monitor across banks.**

We also agree with the EBA SRT Report that the proposal to model the lifetime behaviour of transactions under stress, at inception, can provide a more **dynamic test which better reflects the economics.**

In the following slides we demonstrate the outcomes for each proposal on the PBA/CRT tests using four real-life indicative transactions, and provide our opinion on the benefits and drawbacks of each.

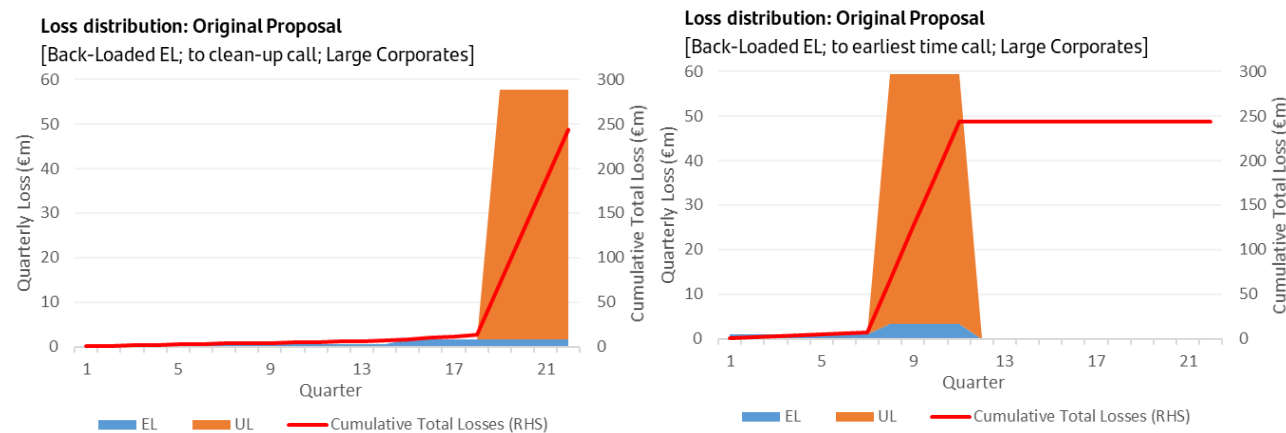
Original EBA Proposal

UL event based on **initial portfolio size** and applied over the final 4 quarters prior to a **clean-up call**¹:

- Majority of tests investigated fail due to amortisation prior to extreme UL event.
- Adjusting structures to pass significantly reduced economics to unfeasible level.
- We think either the size or timing need amending.

Alternatively, UL event applied over final 4 quarters prior to the **earliest time call**:

- All tests investigated pass due to greater protection outstanding.
- However, significant capital cost which makes transactions unfeasible.
- Santander never structures time calls with a “positive incentive” for the originator.



Benefits:

- ✓ Significant stress to test efficacy of structures.

Drawbacks:

- ❖ Size of UL event when only c.10% of the portfolio is outstanding is unrealistically extreme.
- ❖ Using earliest Time Call results in significant capital cost, making SRT unfeasible.
- ❖ JST unlikely to approve transactions with “positive incentives” for the originator to exercise time calls

Test Results – Current Proposal					To clean-up call		To earliest Time Call	
Ref	Asset Class	Capital treatment Pre-	Post-	Test	Evenly Loaded	Back-Loaded	Evenly Loaded	Back-Loaded
1	Project Finance	F-IRB	SEC-IRBA	PBA CRT	Pass	Fail		
2	SME Leases	STD	SEC-SA	PBA CRT				
3	Auto loans	A-IRB	SEC-IRBA	PBA CRT				
4	Corporates	A-IRB	SEC-IRBA	PBA CRT				

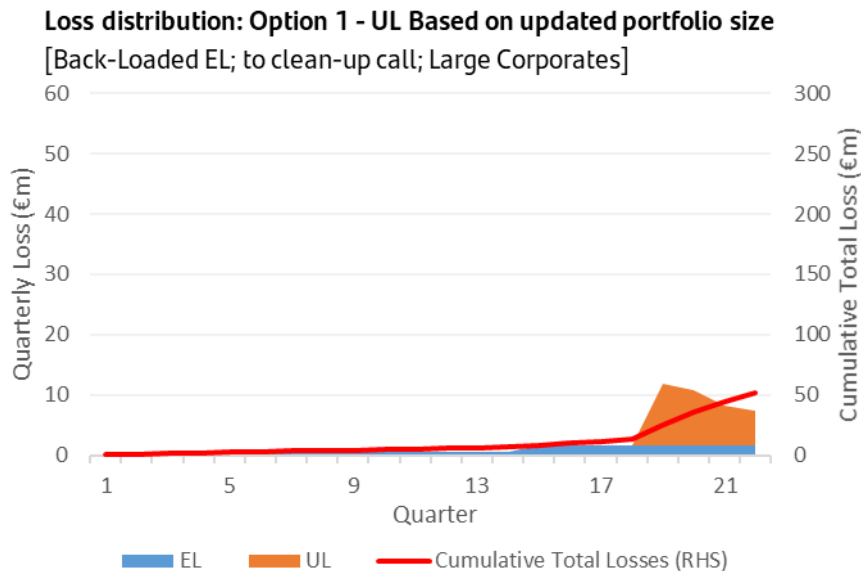
¹ Clean-up call date determined under evenly loaded EL scenario modelling

Option 1 – UL Size: Outstanding portfolio Balance

Amend the size of UL event based on outstanding portfolio balance, applied to the final 4 quarters prior to a clean-up call¹.

- Some transactions investigated fail due to reduced stressed loss amount (i.e. reduced risk transfer).

No change to UL timing; EL size; or EL timing



Benefits:

- ✓ **UL event sizing is more reflective** of the outstanding portfolio in the final periods of transaction.

Drawbacks:

- ❖ **Test is less stressful** due to reduction in quantum of losses, cumulative UL c.10-15% of current proposal.

Test Results – Option 1

Ref	Asset Class	Capital treatment		Test	Evenly Loaded	Back-Loaded
		Pre-	Post-			
1	Project Finance	F-IRB	SEC-IRBA	PBA CRT	Pass	Fail
2	SME Leases	STD	SEC-SA	PBA CRT		
3	Auto loans	A-IRB	SEC-IRBA	PBA CRT		
4	Corporates	A-IRB	SEC-IRBA	PBA CRT		

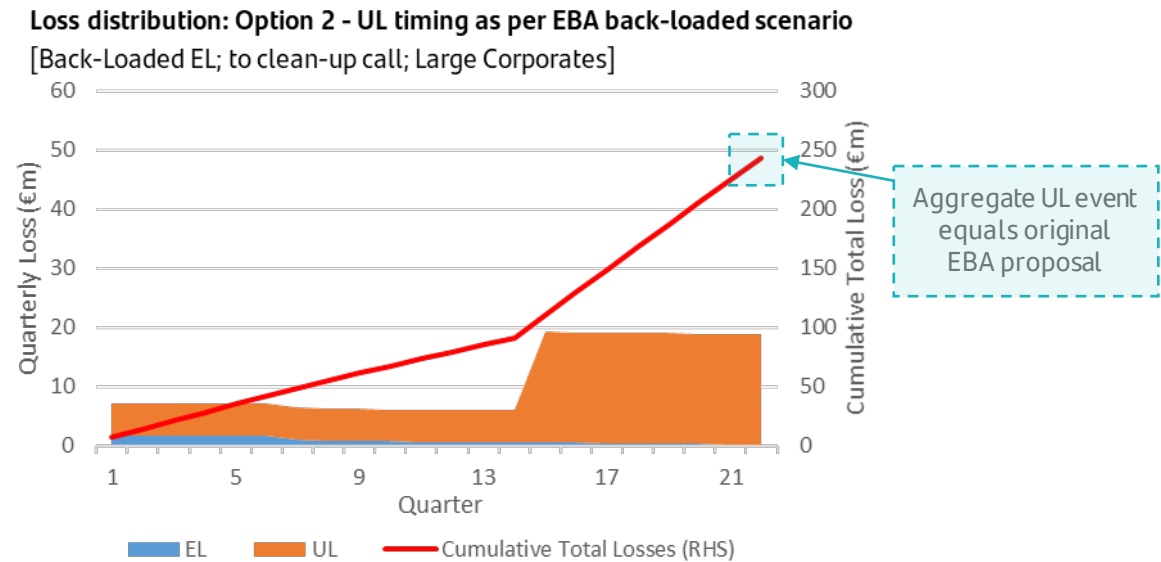
¹ Clean-up call date determined under evenly loaded EL scenario modelling

Option 2 – UL Timing: Using EBA ‘back-loaded’ vector

Amend timing of UL event based on EBA's proposed EL distribution under ‘back-loaded’ scenario. i.e. 33.3% of losses allocated to first 2/3 and 66.6% of losses allocated to final 1/3 of transaction life, as determined by clean-up call¹.

- All transactions investigated pass tests.

No change to **UL size**; **EL size**; or **EL timing**



Benefits:

- ✓ Significant stress to test efficacy of structures.
- ✓ Simple to implement and monitor across banks.
- ✓ Structural protections for pro-rata amortisation (e.g. triggers to sequential) more likely to behave as intended.
- ✓ More aligned to bank economic modelling of a back-loaded stress.

Drawbacks: None noted.

Test Results – Option 2

Ref	Asset Class	Capital treatment		Test	Evenly Loaded	Back-Loaded
		Pre-	Post-			
1	Project Finance	F-IRB	SEC-IRBA	PBA CRT	Pass	
2	SME Leases	STD	SEC-SA	PBA CRT		
3	Auto loans	A-IRB	SEC-IRBA	PBA CRT		
4	Corporates	A-IRB	SEC-IRBA	PBA CRT		

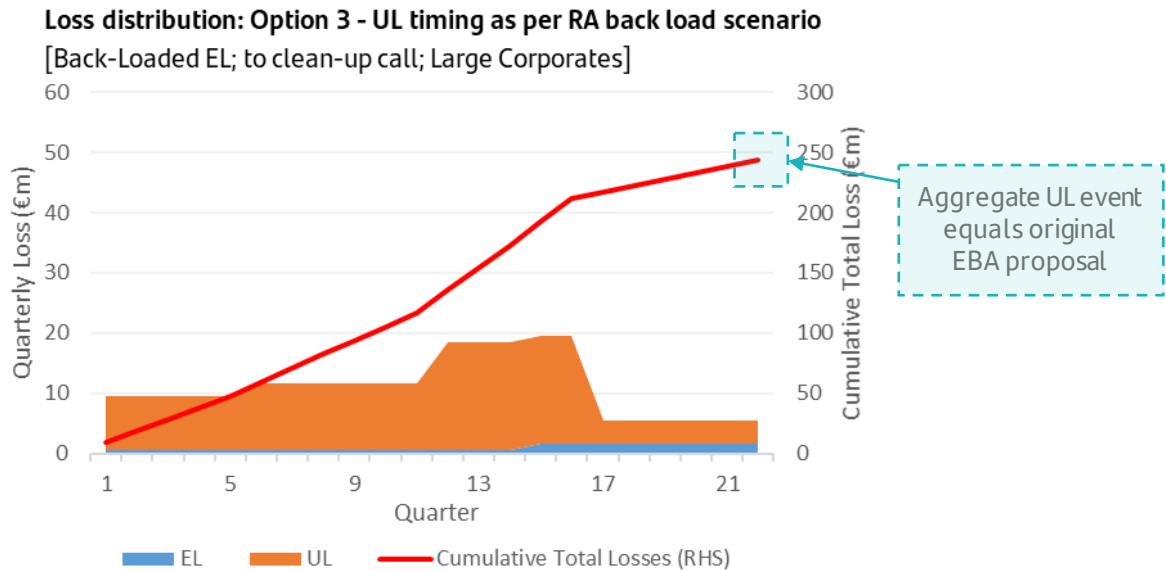
¹ Clean-up call date determined under evenly loaded EL scenario modelling

Option 3 – UL Timing: Using Rating Agency vector

Amend timing of UL event based on an implied Rating Agency back-loaded stress loss vector up to clean-up call¹.

- All transactions investigated pass tests.

No change to **UL size**; **EL size**; or **EL timing**



Benefits:

- ✓ Significant stress to test efficacy of structures.
- ✓ Simple to implement across banks.
- ✓ Structural protections for pro-rata amortisation (e.g. triggers to sequential) more likely to behave as intended.
- ✓ More aligned to bank economic modelling of a back-loaded stress.

Drawbacks:

- ❖ Divergence amongst banks depending on Rating Agency vectors used.
- ❖ Unrated transactions require proxy vector.

Test Results – Option 3

Ref	Asset Class	Capital treatment		Test	Evenly Loaded	Back-Loaded
		Pre-	Post-			
1	Project Finance	F-IRB	SEC-IRBA	PBA CRT	Pass	
2	SME Leases	STD	SEC-SA	PBA CRT		
3	Auto loans	A-IRB	SEC-IRBA	PBA CRT		
4	Corporates	A-IRB	SEC-IRBA	PBA CRT		

Rating Agency vector used

Period of transaction	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Distribution of losses	20%	30%	40%	10%	100%

¹ Clean-up call date determined under evenly loaded EL scenario modelling

Annex

1. EBA Test Background
2. Quarterly loss distribution
3. Overview of test results
4. Detail of structures

Relevant Terms

EL	Expected Loss
UL	Unexpected Loss
PBA	Principal Based Approach
CRT	Commensurate Risk Transfer
RW	Risk Weight

EBA Test Background

Principle Based Approach (PBA) (Recommendation 12):

New test to demonstrate at least 50% of Unexpected Losses (UL) transferred to investors, developed as improvement to simplistic mezzanine test.

$$\frac{\text{Regulatory UL on transferred positions}}{\text{Regulatory UL of underlying portfolio}} \geq 50\%$$

Commensurate Risk Transfer (CRT) (Recommendation 13):

To demonstrate that the capital relief of the transaction is commensurate to the risk that is transferred.

Test is not new, but the prescribed lifetime modelling is new and much harder to pass.

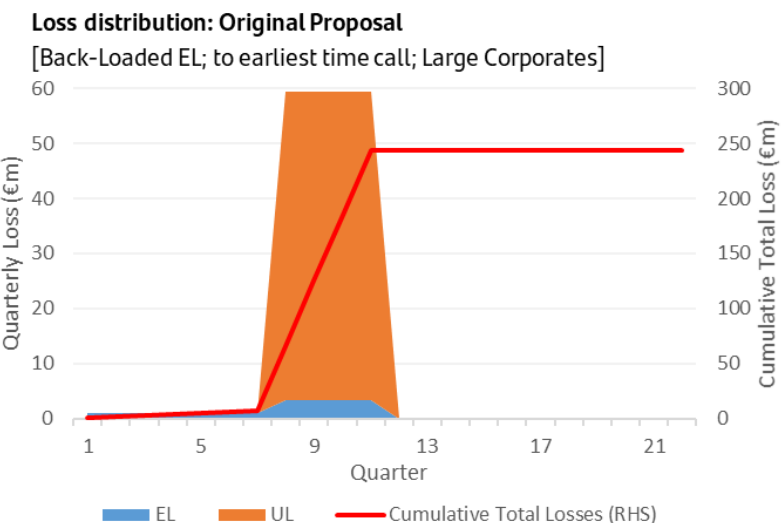
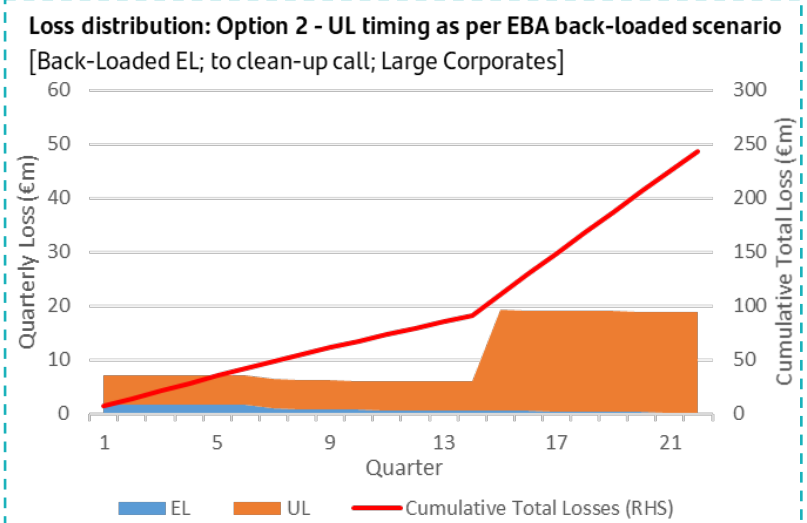
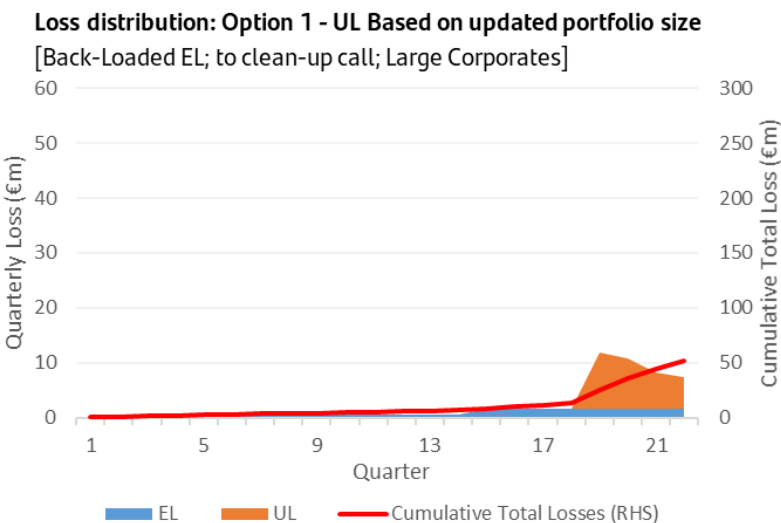
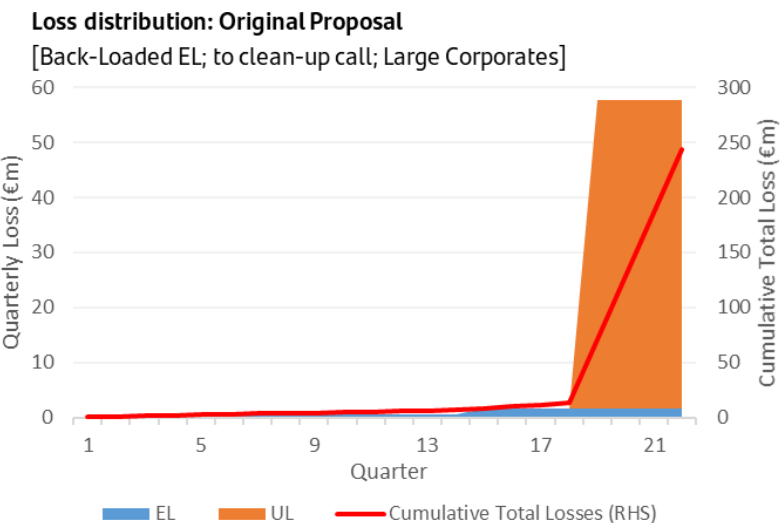
$$\frac{\text{Capital pre-SRT} - \text{Capital post-SRT}}{\text{Capital pre-SRT}} \leq \frac{\text{Lifetime EL} + \text{Regulatory UL on transferred positions}}{\text{Lifetime EL} + \text{Regulatory UL of underlying portfolio}}$$

- Applicable for SRT transactions only, and at issuance only
- EBA advocates grandfathering of all existing SRT transactions
- JST will NOT refer to the EBA Report in their evaluation of current deals until it is formally included in their Rule Book.

Both tests are performed under the following Expected Loss (EL) scenarios and Unexpected Loss (UL) event (Recommendation 9 and 10):

- **Evenly loaded EL (all SRT transactions)** – fixed Regulatory EL % applied to each period outstanding balance. For standardised assets accounting IFRS 9 EL is instead used.
- **Back-loaded EL (pro-rata amortisation only)** – Aggregate nominal EL calculated as per evenly loaded case, but with timing transformed such that 33.3% of losses are applied to the first 2/3 of life of transaction and 66.6% of losses applied to final 1/3 of transaction.
- **UL event size** – **Initial portfolio size** x portfolio RW% x minimum Reg. Capital (8%)
- **UL event timing** – **Occurring in the final year** of transaction – We have considered both the clean-up call date, based on scheduled amortisation and 'evenly loaded' EL, and the earliest time call.
- **Excess spread** modelled to reduce the transferred losses for Traditional and Synthetic SRT [numerator]. For Traditional SRT that meet the **Market Test**, then underlying portfolio losses also reduced by same amount [denominator]

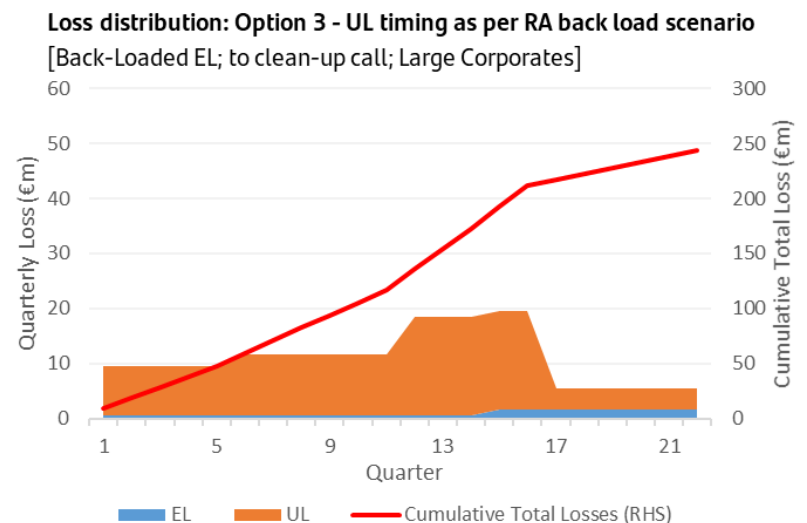
Quarterly Loss Distribution per proposal



All graphs illustrate distribution and timing of losses for a Large Corporate A-IRB portfolio under a back-loaded EL scenario under each proposal.

Note that the **total cumulative losses** under Original; Option 2; and Option 3 are **identical**.

- Portfolio/Structure Assumptions:**
- Notional = EUR 5.6bn
 - RW = 50% (UL = 4.00%)
 - Reg PD = 0.28%
 - Reg LGD = 45%
 - Amortisation = Pro-Rata
 - Amortisation Loss trigger = 0.50%
 - WAL = 2.9 years
 - 'N' = 150



Santander's Recommendation

Overview of Test Results

Santander's
Recommendation

Ref	Asset Class	Capital treatment		Test	Original Proposal [to clean-up call]		Original Proposal [to time call]		Option 1 – UL Size (Outstanding Balance)		Option 2 – UL Timing (Back-Loaded vector)		Option 3 – UL Timing (RA vector)	
		Pre-	Post-		Evenly loaded	Back- loaded	Evenly loaded	Back- loaded	Evenly Loaded	Back- Loaded	Evenly Loaded	Back- Loaded	Evenly Loaded	Back- Loaded
1	Project Finance (Long-dated & slotting)	F-IRB	SEC-IRBA	PBA	Pass	Fail								
				CRT			All EBA Tests passed when using earliest Time Call for UL event...							
2	SME Leases (Standardised)	STD	SEC-SA	PBA										
				CRT			...however, resultant capital treatment means all deals have significantly reduced or negative Economic Value, making SRT unfeasible.							
3	Auto loans (High reg EL)	A-IRB	SEC-IRBA	PBA										
				CRT										
4	Corporates (Low reg EL)	A-IRB	SEC-IRBA	PBA										
				CRT										

Detail of Structures

Ref	Asset Class	Capital treatment		EL	UL	Placed tranche size	Cum. loss trigger to Sequential	Excess Spread	Clean-up call	Modelled Clean-up call date ¹	Earliest Time Call
		Pre-	Post-								
1	Project Finance (Long-dated & slotting)	F-IRB	SEC-IRBA	0.68%	5.36%	10.30% (FLT+Mezz)	1.48%	No	Yes 10%	Q 43	Q 26
2	Leases (Standardised)	STD	SEC-SA	0.11%	5.12%	14.20% (Mezz)	0.66%	Yes 0.11% p.a.		Q 24	Q 16
3	Auto loans (High reg EL)	A-IRB	SEC-IRBA	0.83%	4.80%	8.40% (Mezz)	1.50%	No		Q 20	Q 13
4	Corporates (Low reg EL)	A-IRB	SEC-IRBA	0.13%	4.00%	6.60% (Mezz)	0.50%	No		Q 23	Q 12

¹ Clean-up call date determined under evenly loaded EL scenario modelling

Thank You.

Our purpose is to help people and businesses prosper.

Our culture is based on believing that everything we do should be:

Simple Personal Fair

