Credit Benchmark®

Methodology Committee

London & New York,
22 April 2021

Registration link: Credit Benchmark WebEx Enterprise Site
Password: Credit1234!
Global dial in numbers here
Dial in access code: 183 744 5496

Agenda
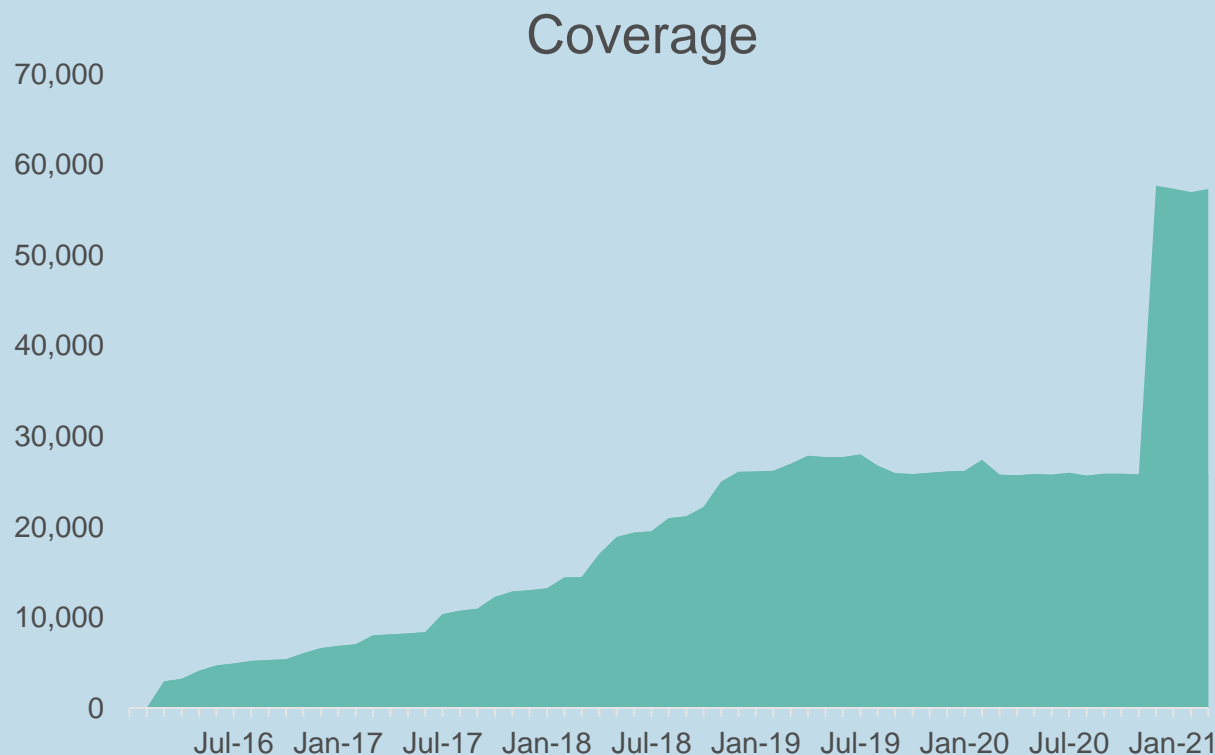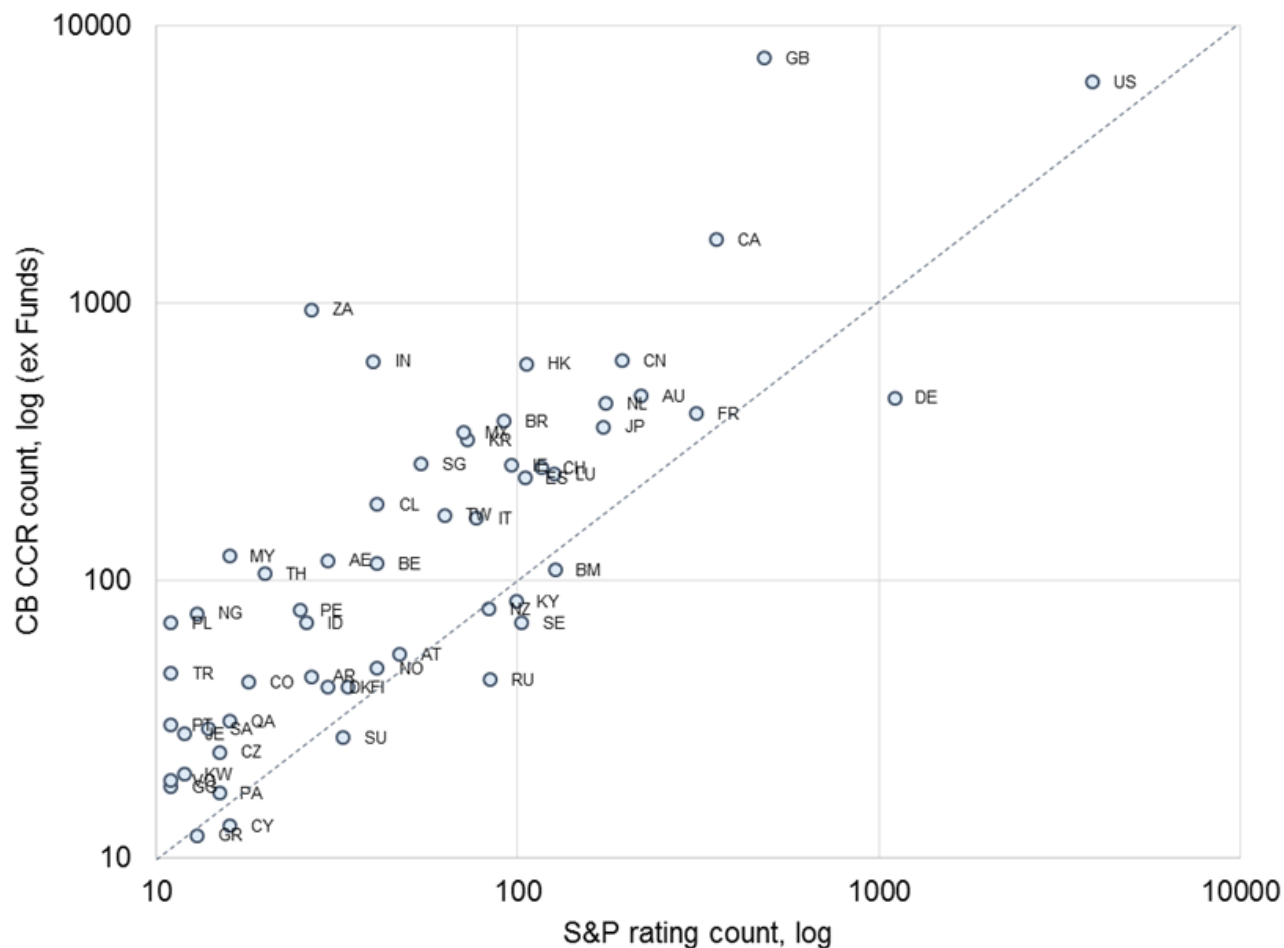
- Coverage Update
- Service Update
    - o Credit Consensus Migration
    - o Mitigating Potential Reverse Engineering
    - o Screening & Alerting
    - o Exec Risk Reports
- Impairment – 2020 Whitepaper & Results
- Point-in-time Case study – NatWest/RBS
- Core Service Case Study - ING
- Methodology
    - o Leading and lagging analysis
    - o Targeted QA approach for laggards
    - o Confirmation of change to Potential Default classification
- Initiatives
    - o Notching
    - o Basel IV
- Research
    - o Markit Buyside Signal
    - o Bloomberg/BQNT – Mirror indices
    - o ESG
- AOB

Coverage Update

- Introduction of Credit Consensus has led to significant increase in coverage
  - Increase of 124%
- All banks have seen an increase in coverage of their book
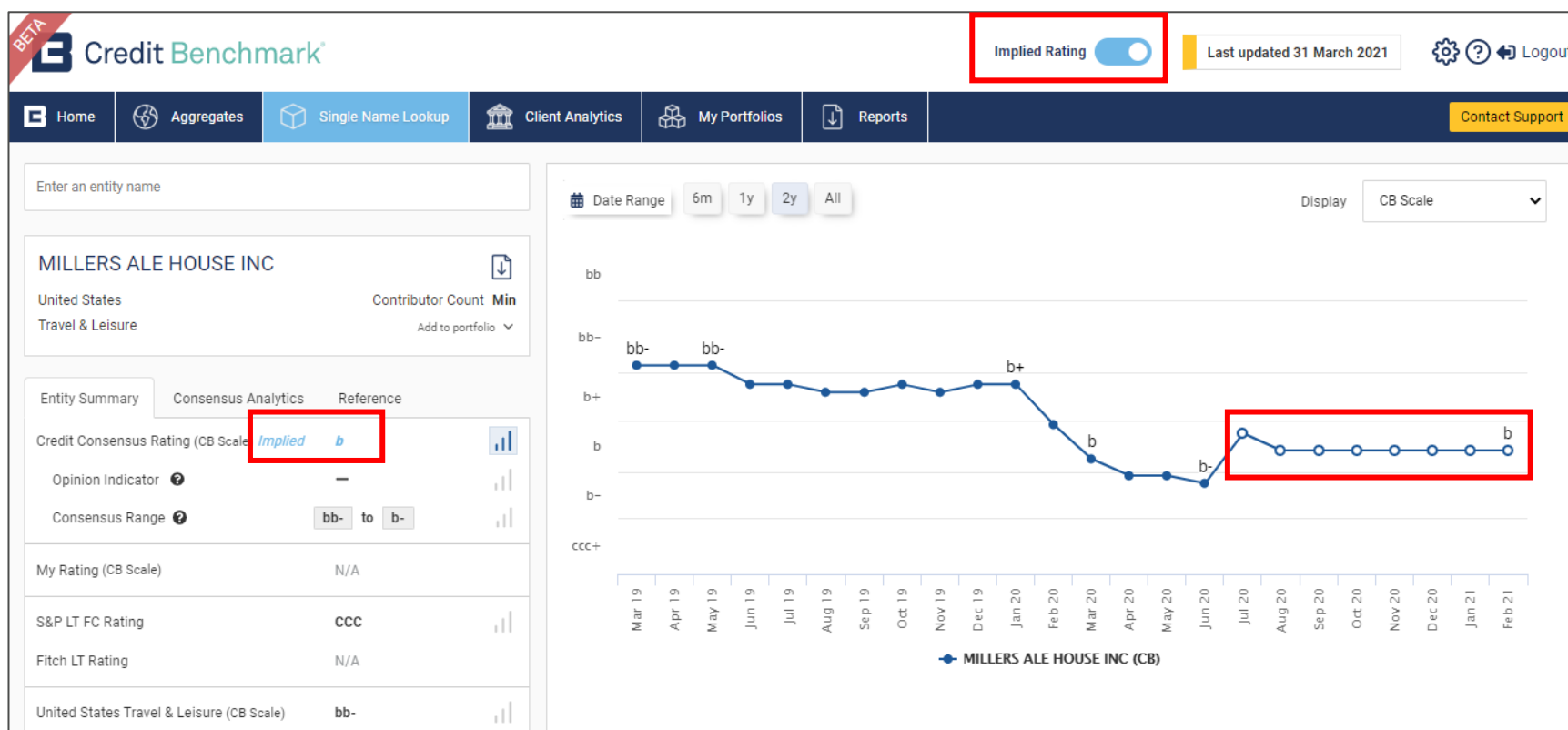 - Average of 78% increase

Coverage

Coverage Update – CRA review

- Country by country obligor comparison with rating agencies undertaken

- Credit Benchmark has better coverage than in most countries

- Significantly stronger in UK, Canada, South Africa, India, Hong Kong and China

Service Update – Credit Consensus

- Web, Excel, Feed, 3rd parties all migrated

Service Update – Credit Consensus

Implied Ratings – Preventing Reverse Engineering

- The following four measures have been implemented to ensure that reverse engineering of contributed values is not possible:

  - Implied Ratings
    - Providing only CB 100 Midpoint PD
    - Keeping CBIR private
  - All Ratings
    - Rounding SD to two significant places / RSD to one decimal place
    - Rounding skew to one decimal place

Absolute Error	Rounded SD	Rounded RSD
0%	0%	0%
0 to 1%	15%	8%
1 to 2.5%	16%	12%
2.5 to 5%	17%	19%
5 to 10%	18%	21%
10 to 25%	17%	16%
> 25%	3%	6%
NA	14%	17%

- Based on analysis, no underlying observations can be reverse-engineered precisely.
- The distribution of absolute errors is wide, raising uncertainty about results of attempted reverse engineering.
  - One does not know how far from the true observations the obtained values are, when attempting reverse engineering.

Service Update – Screening

- Development of Alerting, Client Analytics and Watchlist features
- Flexible Screening tool to construct user specific screens
- Planned for release in June/July

Service Update – Executive Risk Report Q4 2020

- The Q4 2020 analysis looked at how far your banks ratings were from consensus compared to the range of other banks.

- The results show:
  - The average percentage difference between your banks ratings (PD) & consensus (orange)
  - The range of differences from other banks (blue)

- The example results show a bank that started 2020 with ratings that were much higher than consensus.
  - They were on average setting ratings in-line with the most optimistic 25% of banks.

- Over 2020 the ratings changed to become, on average, lower than consensus.
  - Ending 2020 aligned with the lowest quartile of ratings
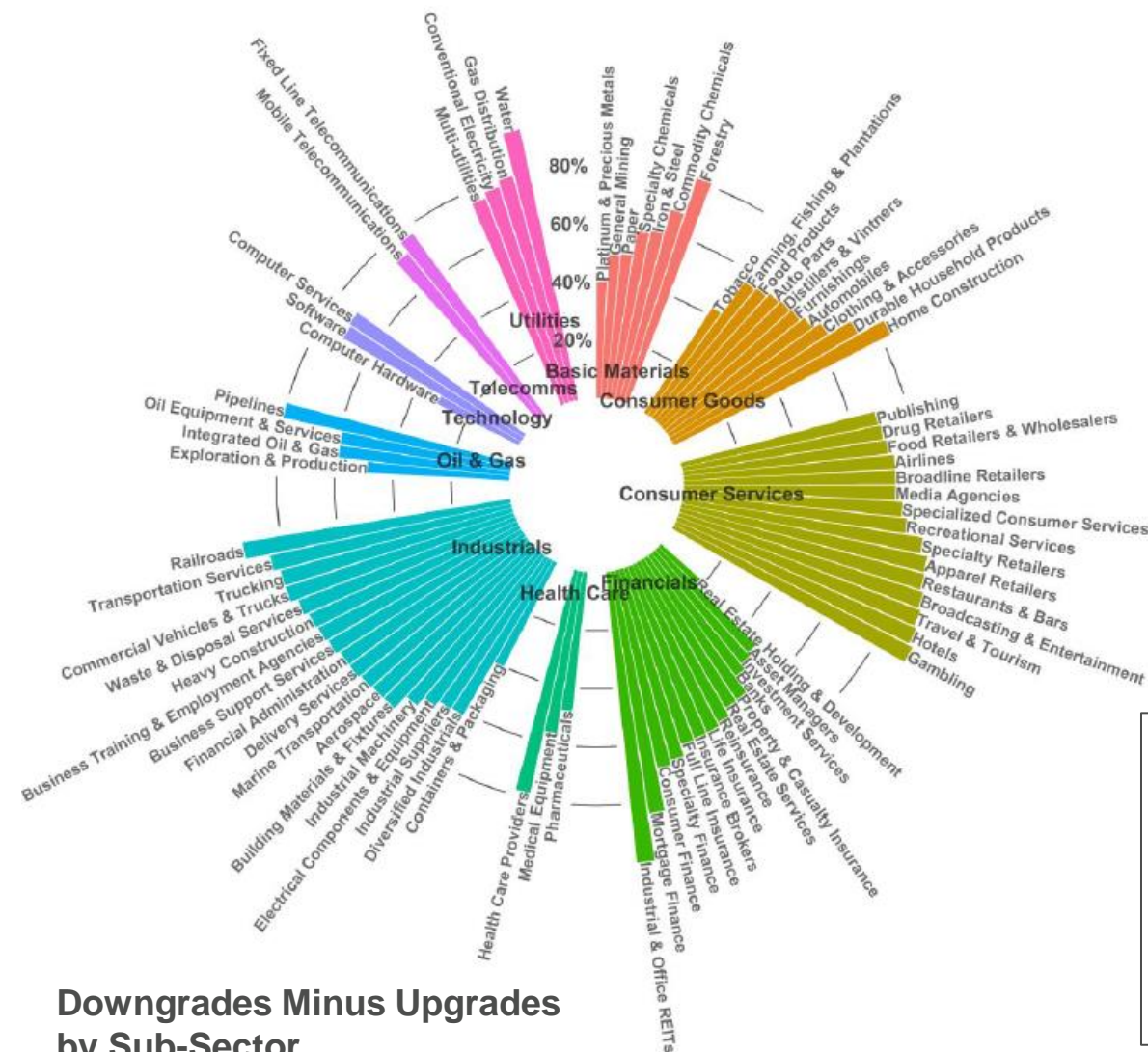
Key

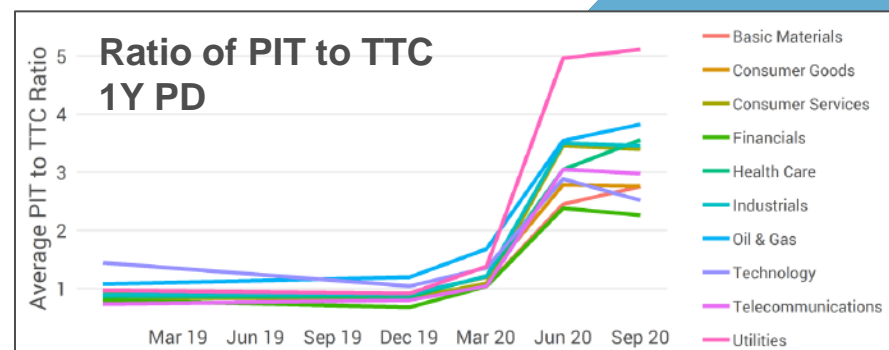Percentage difference of your Bank's ratings from consensus
Average percentage difference from consensus
Middle range other banks
90% range of other banks
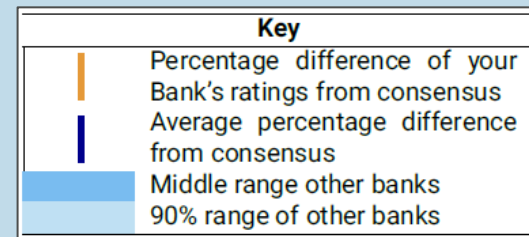
Industry Level
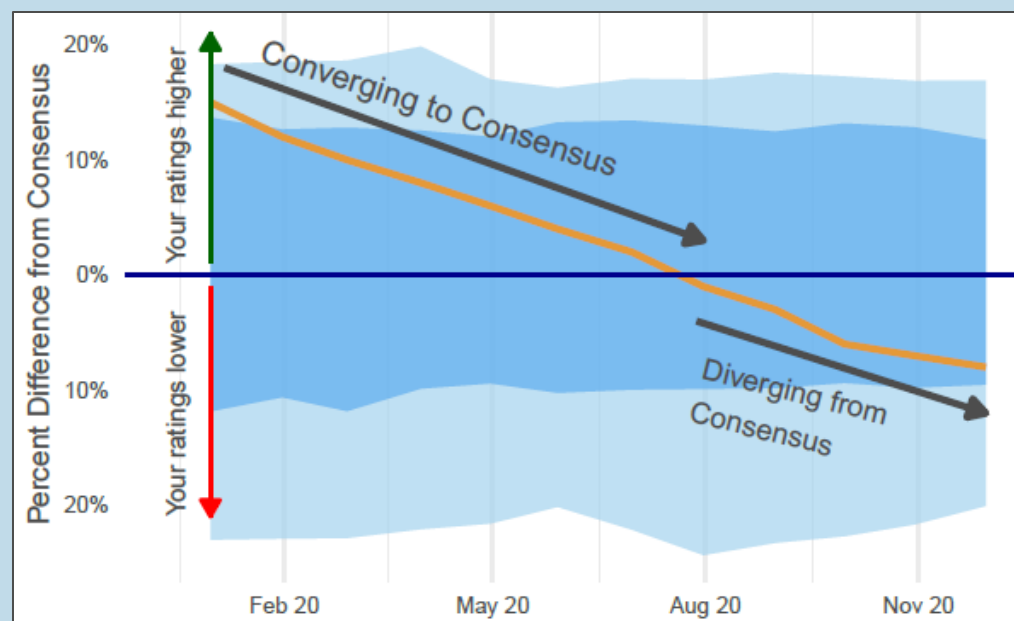
* Example data used for illustration purposes

Service Update – Impairment Report 2020 Review

Downgrades Minus Upgrades by Sub-Sector

- The 2020 impairment review looked at trends in PIT PD.

- As the datasets builds in time & depth, the review looked at behaviour through 2020 & at a granular sub-sector level.

- The chart below shows the average ratio between PIT & TTC, highlighting that Utilities' PIT curves were downgraded much more than internal rating downgrades in Q2 & Q3 than other.

- The right chart highlights sub-sectors with the highest percentage of downgrades over upgrades, giving a granular view of the impact of PIT downgrades.

Ratio of PIT to TTC 1Y PD

Legend:
- Basic Materials
- Consumer Goods
- Consumer Services
- Financials
- Health Care
- Industrials
- Oil & Gas
- Technology
- Telecommunications
- Utilities

* Example data used for illustration purposes

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Client Case Study - NatWest

David Kang

Head of Scenario Modelling
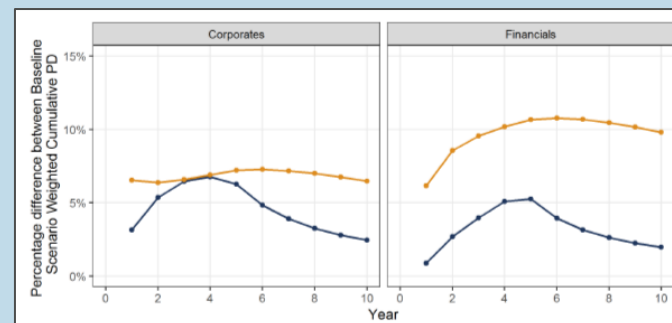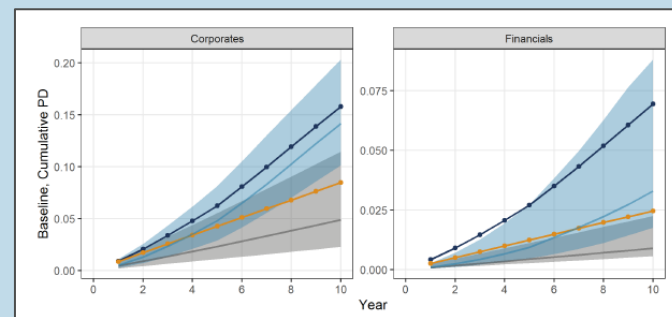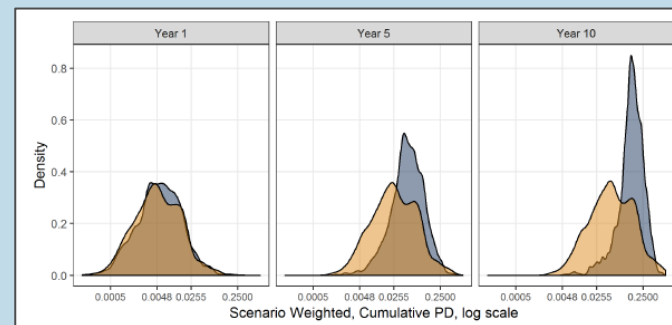
Client Case Study - NatWest

Why is benchmarking important?

- Generally strong interest from Senior stakeholders to provide peer benchmarking and external validation of modelled outcomes

- Benchmarking especially relevant to IFRS9 under COVID given the increased uncertainty around modelled outcomes

- This is further emphasized by the material model interventions compared to pre-COVID

Client Case Study - NatWest

How have we used CB PIT PDs in 2020 at NatWest?

- Provide confidence in overall level of PIT PDs by demonstrating a reasonable position within peer range

- Provide support and justification for "in-model" adjustments to internal and external reviewers.

- Insights from benchmarking over multiple time periods (relative sensitivity to economic scenarios, PIT behaviour etc.)

- Insights from benchmarking analysis across term structure shape and MES impact

All data and graphs stylized for illustration

Client Case Study - ING

Robin Zjip

ING Wholesale Banking
Lending
Capital & Liquidity Expertise Center (CLEC)

Topics

- Implementation Approach
- Use Cases
- Workflow
- Main takeaways
- Quotes

Implementation Approach

Roll out process for ING

- Started with Risk department
  - Demos organised with senior Risk managers.

- We decided to use local "champions".

- Periodic feedback sessions, sharing lessons learned

- Word of mouth led to broadening interest and expanded use

- In the near future CB rating will be implemented in global tool for client monitoring

ING Use Cases

1. Model validation

CB data used to improve our PD models.

2. Credit Analysis

Incorporate data into annual reviews new client / deal approvals, credit committees, industry reviews, portfolio monitoring exercises, early warning indicators, pre-deal screening.

3. Early warning

Tool shows consensus changes. This might trigger internal discussions on how to follow up. Alert mails from CB are very useful.

Credit Benchmark Workflow Integration

1. Regular Web App usage

More than 80 ING colleagues have access to the CB webapp

2. Excel add in

Access consensus data directly in Excel to easily embed data into existing reporting and analysis. Can be used as CB webapp light.

3. Executive Risk Report

Bespoke portfolio analysis for senior review and business / risk forums
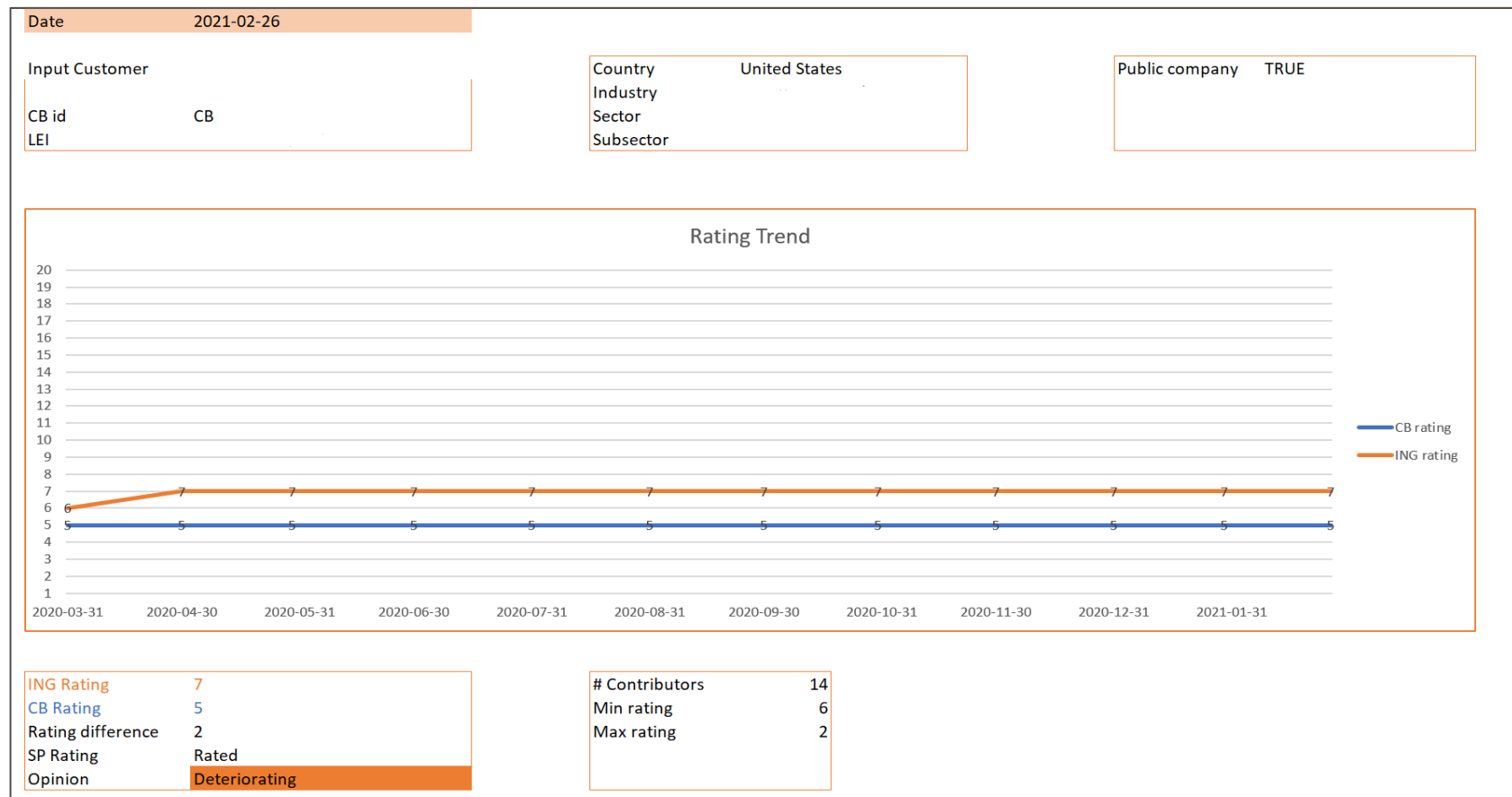
4. API -> Future functionality

Direct integration into existing data warehouse and existing technology infrastructure

Workflow Example – Excel Add-in

Two templates used extensively
- Single-name Analysis (see below as example)
- Portfolio Monitor

Credit Benchmark
Main Take-Aways

1. Buy-in SR management

2. Coordinator has good knowledge of both business and data

3. Take time for data preparation stage.

4. Local champions who can energize team members

Internal Quotes

"Insightful tool that provides quick ratification on our views taken"

Head of Transactions Services

"This is great stuff"

Local Champion Transactions Services

"CB Web App saved a huge amount of time"

Local Champion Diversified Corp

"This can provide new insights we couldn't get anywhere else"

Head of EMEA Div Corp

# Methodology – Leading & Lagging Analysis

The ability to identify whether a bank is leading or lagging in a credit event, can be identified by looking at sequences of downgrades or upgrades.

The position in the sequence indicates whether the bank is leading or lagging at reacting to the event.

- The graph shows an example*, where the bank is leading in one part of the sequence & lagging in another.

- The sequences & the banks' position in them is analysis that can be run on request.

Client is 1st to move & leads the sequence of downgrades

Example Entity

Client lags behind on the 2nd significant downgrade event
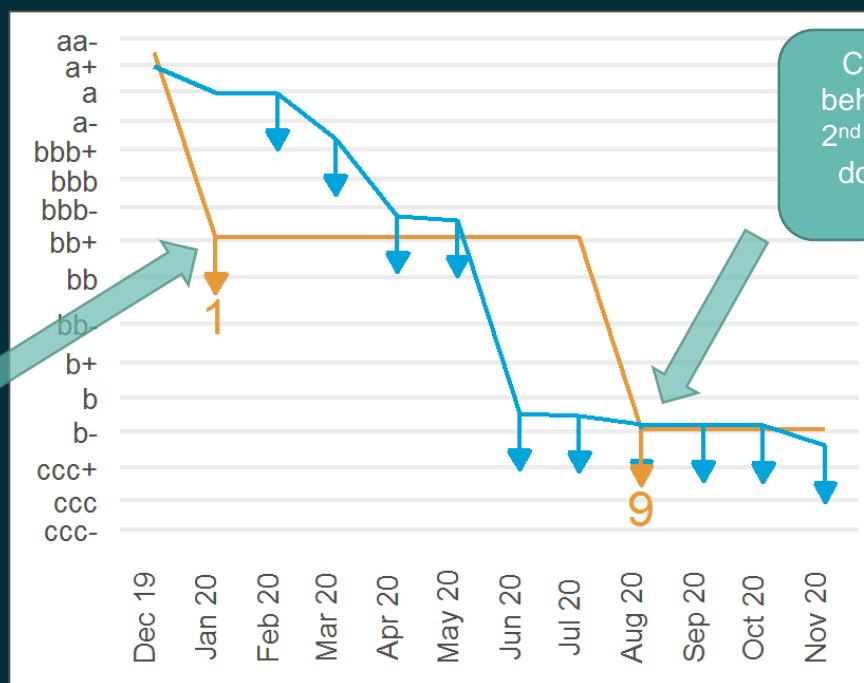
* Example data used for illustration purposes

Methodology – Laggards – Targeted QA

- In addition to the Client-based analysis, CB have been working on identifying specific laggard examples to raise with Clients for further data quality conversations

- This approach identifies names where all contributors (and the resulting consensus) have moved significantly over a period of time and one contribution remains static
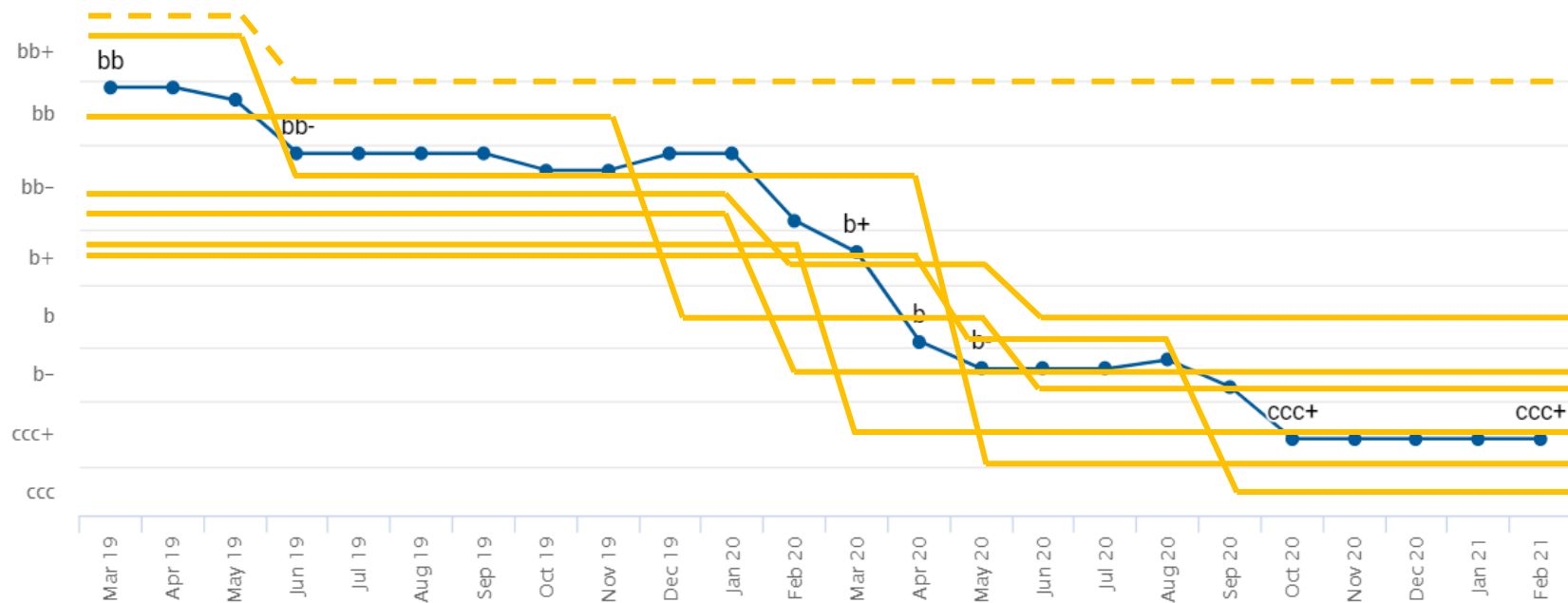
Methodology – Laggards – Targeted QA

- Analysis has shown that there are very few of these entities within the dataset, and as such an additional Quarantine Rule would be impractical
  - Based on the latest Consensus Data, <25 entities out of the >30k Consensus Universe

- These entities will form an additional level of Data Quality Assurance alongside our existing Outlier reporting process

- We hope to have engagement with the impacted Clients over the coming months and have both a useful Data Quality conversation and provide useful insight for those impacted

Methodology – Default Proposal Update

The below proposal, discussed at the previous Methodology Committee was approved and is currently being implemented

- *Based on the below factors, CB are proposing a slight modification to the current rule, for approval*

    - *One edge case highlighted by the case study approach*
    - *Analysis of all entities with PD = 10,000 in 2020*
    - *Concern over the continuing economic uncertainly*
    - *Agreement that a cautious approach is preferred with sensitive data*

- *Proposal: Modification of the Potential Default rule to change the Potential Default threshold from ccc+ to b+*
    - *As soon as more than one PD = 10,000 is contributed an entity is automatically suspended*

- *Impact: Minimal Consensus Impact, ~5 entities per month*

CB Suspend Publish when…

T-1 CBC	Current Threshold	Proposed Threshold
aaa		
aa+		
aa		
aa-		
a+		
a		
a-		
bbb+		
bbb		
bbb-		
bb+		
bb		
bb-		
b+		… t-1 Consensus is b+ or below and 1 contribution = 10,000 Bps
b		
b-		
ccc+	… t-1 Consensus is ccc+ or below and 1 contribution = 10,000 Bps	
ccc		
ccc-		
cc		
c		
d		

Initiatives - Notching

Deriving bond level ratings from entity level consensus

Issuer Type	Issue Type	Potential Notch Adjustment	Details
Sovereigns	All	0	*Sovereigns, Sub-Sovereigns, Supranationals:*
Corporates, Utilities, Infrastructure	Senior	0	*Secured and Unsecured*
	Subordinated	-1 to -2	*Includes Junior Subordinated*
	Preferred	-2 to -3	*Preferred stock*
Banks	Hybrid	0	*Hybrid with coupon skip*
	Subordinated	-1 to -2	*Subordinated Debt, Junior Subordinated, Contractual non-viability subordinated, Dated junior subordinated with principal write-down*
	Preferred	-2 to -3	*Preferred Securities and Contractual non-viability preferred*

- All notch adjustments are on the 21-category scale (E.g. 2 means issue credit quality is 2 notches lower than issuer credit quality)
- This notching methodology only applies to the issuer types above and does not include municipals, non-bank financials and any securitizations.
- CB consensus rating considered a senior unsecured equivalent.
- This approach is aligned with CRA/market practice.
- Notch adjustment is independent of current consensus rating, but **aaa** and **c** boundaries will limit some adjustments.
- Equities and Convertibles will be assigned speculative grade.
- Currently in discussion with Bloomberg about potential implementation

Initiatives – Basel IV impact for 'Basel Banks'

Basel IV will have a material impact for unrated entities, especially if they potentially belong in the upper bounds of the rating spectrum

External Ratings Equivalents	Investment Grade or Non-Investment Grade	Regulatory RWA Categories	Credit Benchmark Consensus Rating Scale*	Credit Benchmark Risk Weighted Asset Scale	Funds	Financial Institutions	Banks	Sovereign & Central Banks	Govt Related Entities	Corporates
AAA	Investment Grade	AAA to AA-	aaa	CB1	20% 100%	20% 100%	20% 100%	0% 100%	20% 100%	20% 100%
AA+			aa+							
AA			aa							
AA-			aa-							
A+		A+ to A-	a+	CB2	50% 100%	50% 100%	50% 100%	20% 100%	20% 100%	50% 100%
A			a							
A-			a-							
BBB+		BBB+ to BBB-	bbb+	CB3	100%	50% 100%	50% 100%	50% 100%	20% 100%	100%
BBB			bbb							
BBB-			bbb-							
BB+	Non-Investment Grade	BB+ to BB-	bb+	CB4	100%	100%	100%	100%	50% 100%	100%
BB			bb							
BB-			bb-							
B+		B+ to B-	b+	CB5	150%	100%	100%	100%	50% 100%	100%
B			b							
B-			b-							
CCC+		CCC+ to CC	ccc+	CB6	150%	150%	150%	150%	150%	150%
CCC			ccc							
CCC-			ccc-							
CC			cc							
NR		NR	NR	CB7	100%	100%	100%	100%	100%	100%

Basel IV – estimated cost impact on borrowers

		Current	
		$1Bn	$50Bn
Risk weight	5%	50,000,000	2,500,000,000
EAD	25%	250,000,000	12,500,000,000
RWA (RW x EAD)	1.25%	12,500,000	625,000,000
Capital @ 10 %	0.125%	1,250,000	62,500,000
Cost of Capital @ 10 %	0.0125%	125,000	6,250,000

Difference in Standardised RWA of $2 million per billion notional

		Basel III using unrated Risk Weights @100%	
Notional		$1Bn	$50Bn
Risk weight	100%	1,000,000,000	50,000,000,000
EAD	25%	250,000,000	12,500,000,000
RWA (RW x EAD)	25%	250,000,000	12,500,000,000
Capital @ 10 %	2.5%	25,000,000	1,250,000,000
Cost of Capital @ 10%	0.25%	2,500,000	125,000,000

		Basel III using rated Risk Weights @20%	
		$1Bn	$50Bn
Risk weight	20%	200,000,000	10,000,000,000
EAD	25%	250,000,000	12,500,000,000
RWA (RW x EAD)	5%	50,000,000	2,500,000,000
Capital @ 10 %	0.5%	5,000,000	250,000,000
Cost of Capital @ 10%	0.05%	500,000	25,000,000

Difference in Standardised Cost of Capital of 20 bps

The Current Consensus Rated Fund Universe

Number of Funds by Classification

Pie chart values: 2,067; 1,958; 239; 151; 63; 18,698

Legend:
- Mutual Funds
- Pension Funds
- Hedge Funds
- Venture Capital
- Private Equity
- Real Estate
- Sovereign Wealth

Mutual Fund Distribution — 18,698

CB1	CB2	CB3	CB4	CB5	CB6
8258	8989	1318	251	50	2

% of Funds with Issuer-Paid Ratings

Mutual Funds, Pension Funds, Hedge Funds

Pension Fund Distribution — 1,958

CB1	CB2	CB3	CB4	CB5
1115	595	226	56	4

Less than 0.2% of all mutual funds have a traditional issuer paid rating. (0.4% for pension funds)

Most of the world's funds are __unrated__ CB rates over 20,000+ real money funds

Research – Sec Finance and Credit Data

- Research demonstrates that IHS Markit short factor with Credit Benchmark consensus are complementary
- Results show improved risk adjusted returns for US and European equity universes

Research – Bloomberg BQNT
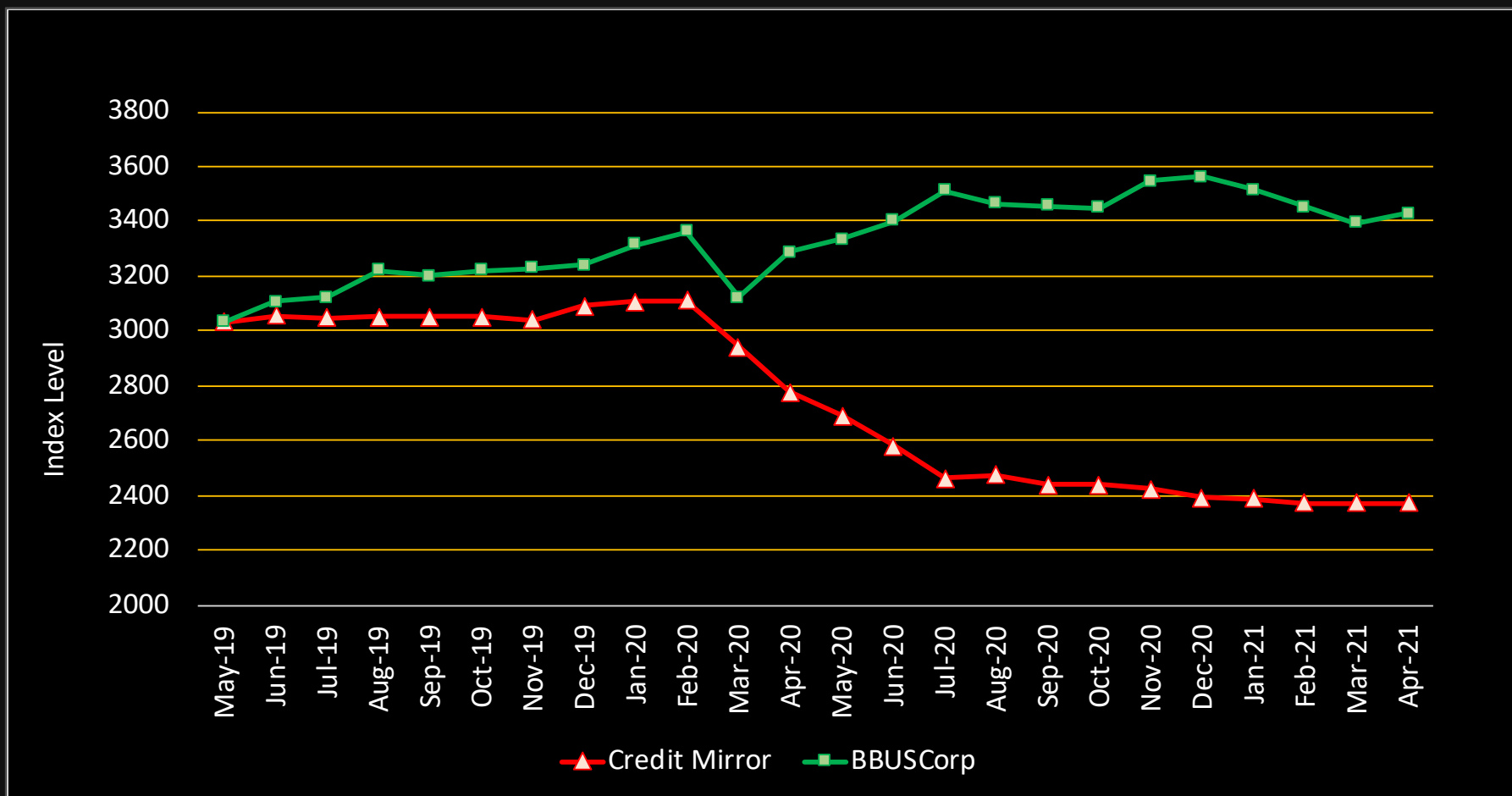
Research – ESG (Live voting poll)

AOB

- AOB
- Date of next meeting

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