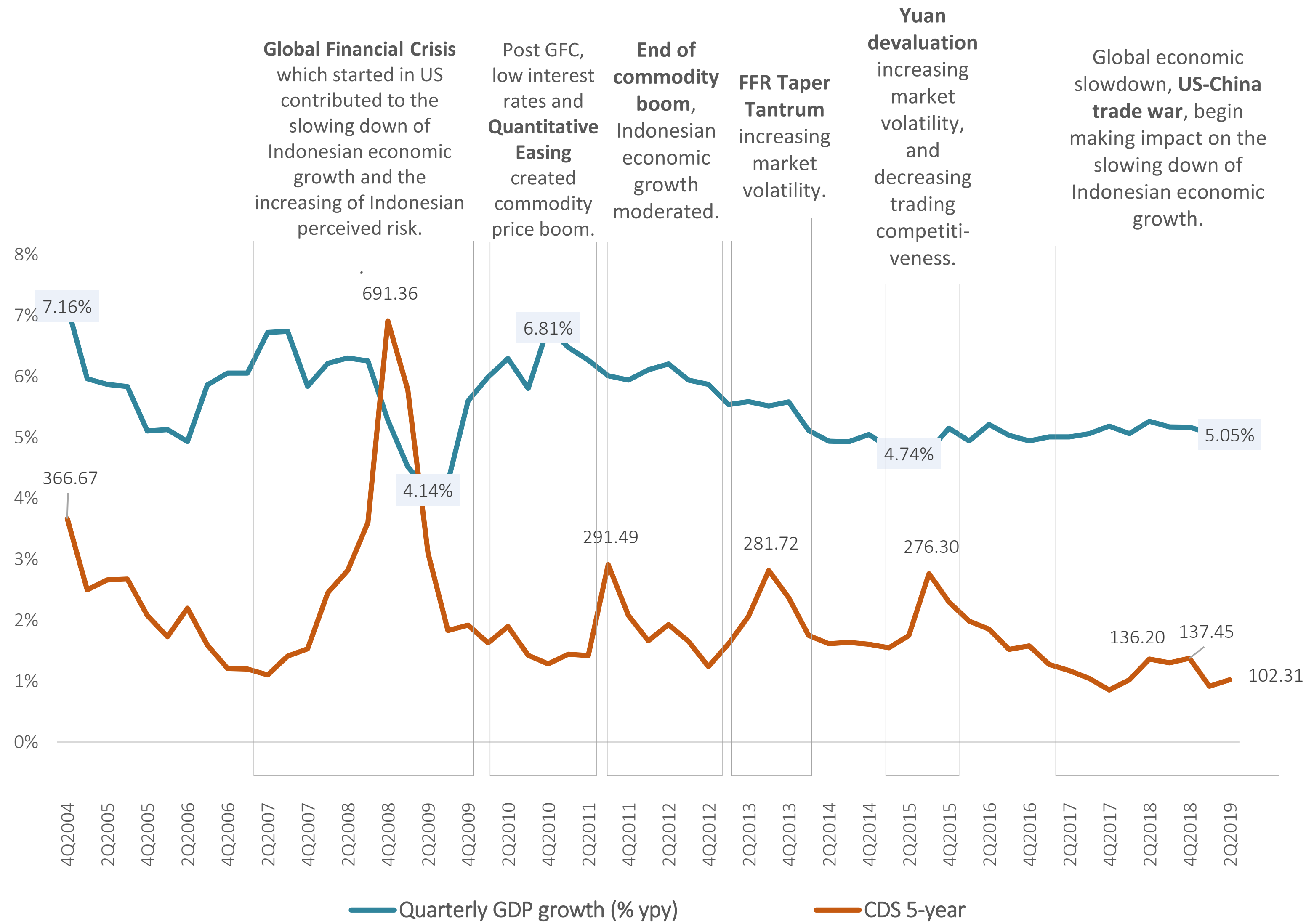
Bank Mandiri Wholesale Asset Quality

Analyst Day, Jakarta 8 November 2019

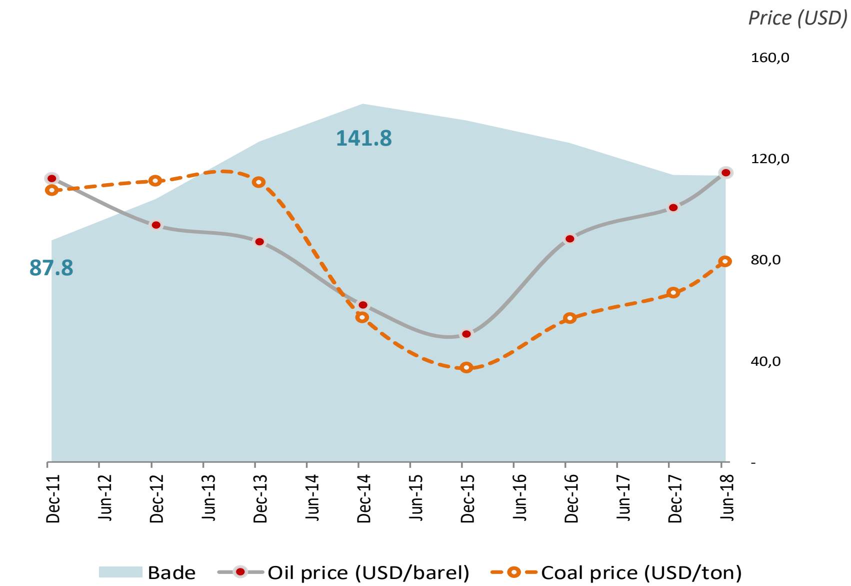
Indonesia economic cycle post-Asian Financial Crisis

External economic and market shocks have been posing quite significant pressures to Indonesian financial market, trade and economy.



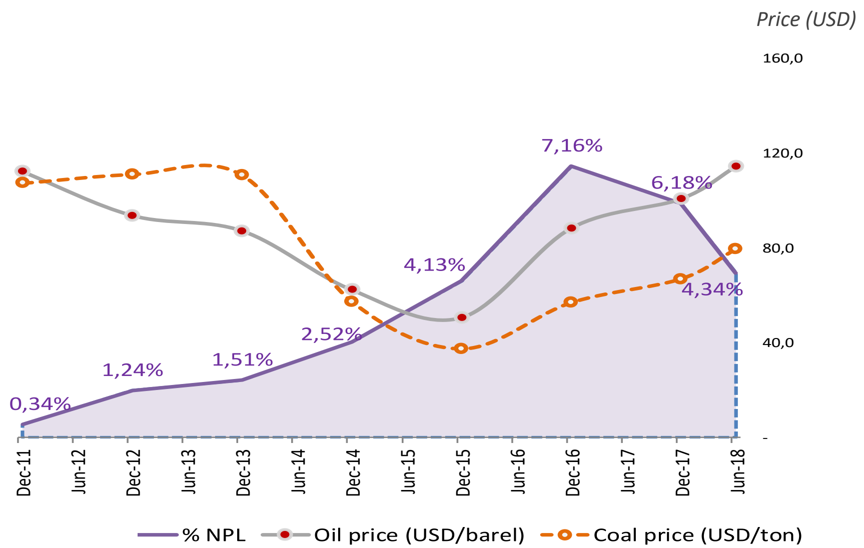
Commodity prices correction followed by credit deterioration

Indonesian banks experienced credit quality pressures following commodity prices correction where some banks were still growing and were late to phasing out from commodity related sectors.



Exposure in IDR Trilion.

- Post-GFC, global quantitative easing and high demand from China pushed commodities prices upward making record prices during 2009-2010.
- Loan to mining and extraction sectors grew significantly following increase in commodities prices (grew ± 60% from Dec-2011 to Dec-2014).
- The proportion of BMRI's mining and extraction sector portfolio (Coal, Oil & Gas, Mining) is 4.50% and the quality is managed in low NPL level 2.85%.



- Sub-sequent weakness in China economy had slowed down demand for energy, commodities and raw materials, significantly pushing commodities prices down.
- Late phasing out from commodity-related sectors resulted in the increase of NPL in those sectors (e.g. mining and extraction sectors).

Lessons learned from economic cycle and commodity prices correction

Macroeconomic & business cycle awareness, robust credit risk management and effective early warning process can protect banks' credit portfolio from increasing credit risk.

01

Macroeconomic awareness

Understanding of economic & business cycle and their specific natures in each phase will help Bank formulate more accurate and timely business strategy and credit risk management, e.g. business target adjustment in the wake of potential economic downturn/recession.

02

Robust credit risk management

Effective and robust credit risk management covers every phase in lending, starting from portfolio guideline and borrower selection (front-end), loan monitoring and early-warning mechanism (middle-end), to exit strategy (back-end).

03

Effective early warning process

Early warning monitoring becomes crucial especially during economic downturn. Regular watchlisting process is useful in identifying potential deterioration in borrower's performance. Stress testing helps anticipate unfavourable economic condition that might impact on sector or portfolio performance.

Challenges remain for Indonesian banking industry

Export-oriented borrowers and commodity related sectors will likely experience pressures on their performance, while banks will rely on robust liquidity management to maintain profit margin

1

Early Sign of Global Recession

- Slowing US growth
- Recession in Germany
- Uncertainty surrounding Brexit
- Negative yield in a developed country
- Inverted yield curve in US

2

Trade War Impact

- Slowing down of trade and export, particularly on commodity
- CPO price volatility
- Yuan vs Rp. fluctuation

3

Tightening Liquidity

- Increase in liquidity risk
- Pressures on margin from competition for funding

4

Regulation Challenges

- IFRS 9 might affect loan provisioning
- Basel 4 will add more complexity to bank's operation

As an indication of increasing default risk of bank's borrowers especially those focusing on exports and commodity-related sectors

The need for stronger liquidity and sound profitability management

Topics of the day

Risk governance, processes and tools in credit decisioning and monitoring

Robust credit risk management continues even after selection and approval processes completed, where we now intensely focus on managing our portfolio through various layers of monitoring, review, what-if analysis and mitigation processes.

Bank Mandiri wholesale portfolio quality

Our wholesale portfolio maintains relatively good quality, especially in corporate segment, although LaR stays elevated (in-line with macroeconomic development and due to more prudent and earlier restructuring).

Prospective and low risk industry sectors dominate our wholesale portfolio.

Monitoring of big accounts

Big watchlist borrowers have been given more focus, with more frequent monitoring, strong provisioning, etc. Bank also has been working on applicable solutions for those large accounts.

IFRS 9 preparation

New IFRS 9 provisioning will impact on wholesale provisioning and business strategy.

With strongly conservative first time provisioning in Jan-2020, impact on CET 1 is estimated up to 300 bps, while on-going CoC is estimated to be around 1.4-1.5%.

1 RISK GOVERNANCE, PROCESSES AND TOOLS IN CREDIT DECISIONING AND MONITORING

2 BANK MANDIRI WHOLESALE PORTFOLIO QUALITY

3 MONITORING OF BIG ACCOUNTS

4 IFRS 9 PREPARATION

Risk Governance in Wholesale Credit Process & Decisioning

Executive level committees set risk appetite and risk boundaries in wholesale credit decisioning. Independent risk control is assured through four-eye principle between business units and credit risk taking units.

Bank has been improving its credit risk governance and processes - and even establishing new governance function, e.g. group limit setting through Business Committee, borrower's rating assignment through Rating Committee, more agile Portfolio Guideline process, more disciplined four-eye process, and enhanced approval process in commercial segment by decentralizing loan approval process for certain limit starting in 2017.

PORTFOLIO GUIDELINE

Risk Management & Credit Policy Committee (RMPC)

RMPC sets and approves Bank's appetite on sectoral allocation and industry sector limits

CREDIT LIMIT SETTING

Business Committee

Business Committee approves borrowers limit on individual level and group level

CREDIT RATING SETTING

Rating Committee

Rating Committee assigns borrower's credit rating

FOUR-EYE PRINCIPLE

Business Unit

Credit Risk Taking Unit

Business units and credit risk taking units perform mutual credit risk analysis and review as part of four eye principle starting from setting the pipeline until monitoring the accounts

LOAN APPROVAL DECISIONING

Credit Committee

Credit Committee discuss and approves credit facility and sets covenant

Risk Monitoring Committee

A Board level committee that oversees risk management policies and implementation including on wholesale portfolio

Board of Commissioners

BoC reviews and approves house limits on few large accounts

Credit Initiation Processes

Bank collects targeted customers and selects pipeline by analyzing borrower's prospects and business conditions through *Loan Follow the Transaction*, Portfolio Guideline and Customer Checking mechanism

A. Setup Targeted Customer Process

In the last couple of years, Bank has standardized and improved its client acquisition process to target various potential channels and clients e.g. CASA clients, wealth mgt clients, value chain, top-up eligible borrowers, regional top players, etc.

1. **Eligible Top Up Good Quality Loan (Non LAR + Non Watchlist)**
2. **Funding Customer Non Borrower**
3. **Company owned by Priority Banking Customer**
4. **Top 20 TFD*** Supplier & Buyer Existing borrower
5. **Top 10 Player by Sectoral Economic** Main Player in specific region
6. **Value Chain Anchor Client Corporate Banking**
7. **Funding Customer Non Borrower Non Commercial (Size Commercial)**

*) Transaction Flow Diagram

B. Portfolio Guideline (PG)

PG assigns industry classification and sets industry sector limits, and screens potential borrowers to achieve desired sector allocation and acceptable diversification. Recently Bank adds stress testing result and ESG (environment, social, governance) factors to PG parameters, and performs mid-year review in addition to annual PG review.

Attractive | Neutral | Selective | Exit

C. Customer Checking

Name clearance process is now standardized, and simplified to key significant factors, to speed up client acquisition process.

Not Bank's Customer yet

Bad

CUSTOMER CHECKING

Good

Already Bank's Customer

Name Clearance

Portfolio Guideline

Bank Mandiri sets appetite on portfolio allocation and diversification through portfolio guideline processes which screen prospective industry sectors with acceptable risks and select potential clients that meet risk acceptance criteria

	Description	Coverage	Overriding Mechanism
Industry Class	• A guidance to determine the **prospective and selective industries** • Classify the industries into : **"ATTRACTIVE"**, **"NEUTRAL"**, **"SELECTIVE"**, **"EXIT"**	• Sector • Bankwide • Region • Segment	• Override approval for Selective sectors • Principle approval for temporary limited-expansion sectors (e.g palm oil sector)
Industry Acceptance Criteria	• **Checklist of basic criteria** for selecting prospective borrower in certain industries • Consisting of **Management, Legal, Technical, Marketing and Financial** aspects	• Sector • Bankwide	• General Industry Acceptance Criteria (IAC) • Specific IAC
Industry Limit	• **Maximum exposure limit for each industry sector**, calculated as a percentage of total portfolio or certain nominal	• Ecosystem • Bankwide • Region • Segment	• Limit switching • Limit override • Temporary limit restrictions

Wholesale Credit Approval Processes

Credit approval process covers several phases, from credit analysis, assessment, approval to disbursement, to ensure the quality of approved borrowers

Pipeline
Bank has now implemented a pipelining process to collect quality potential borrowers to ensure high conversion/ acceptance level

Initiation & Analysis
1. Data Collection
2. Data Verification
3. Appraisal
4. Rating & Financial Spreadsheet
5. Rating Verification
6. Credit Proposal Drafting

Legal, Compliance and Collateral Checking

Risk Assessment & Mitigation
1. Risk Review
2. Decisioning based on risk mitigation & risk tolerance

Recommending Committee
Recommending officers in business unit/credit recovery unit and risk taking units review the credit proposal before recommending to Credit Committee

Credit Committee - Credit Approval
Credit Committee discuss and approves credit facility

Credit Risk Monitoring Processes – Watchlist

Borrowers are regularly checked through on-site inspections. Performing clients also go through watchlisting process and risk-classification process.

Watchlist (ALERT Tools)

Bank has improved Early Warning Signal mechanism for performing borrowers to assess potential deterioration in their performances and credit quality by adding specific criteria to generate better watchlist result

Watchlist Indicators

1. Character & reputation
2. Borrower's account performance
3. Financial performance
4. Market update & production
5. Management information
6. Loans requirements
7. On-site inspections result
8. Industry outlook
9. Impact from regulations/ government policies
10. Borrower's performance outlook

Segments

- Corporate
- Government & Institutional
- Commercial

Borrowers

All borrowers with good collectability (col. 1 & 2), except non-performing

Watchlist Analysis

Status

- Watchlist
- Non Watchlist

Collectability Recommendation

Action Plan

Watchlist mechanism done quarterly & mandatory for borrowers monitoring by system (ALERT Tools)

Credit Risk Monitoring Processes – Panel Review Classifications

After watchlist analysis, Bank performs borrower classification review conducted by risk taking units, business units, and special asset management units

For the last couple of years, Bank has been conducting risk classification process to complement watchlist process. Risk classification process is a more refined review completed with specific actions, conducted quarterly by panel team of risk taking units, business units, and special asset management units.

Category

All performing borrowers in wholesale segment

Timeframe

Quarterly / On-demand

1 Early Classification

1. Non watchlist borrower classified as low risk
2. Deep dive analysis is needed for watchlist borrower by considering:
   - Business prospect;
   - Loan Worthiness
   - Historical Payment;
   - Covenant fulfilment, etc.

2 Early Discussion

1. Analyzing main concerns (executive summary)
2. Panel discussion between DH / CMRH at Risk Taking Unit to finalize the classification proposal

3 Panel Discussion GH / ECO: Classification Finalizing

1. Risk Classification
2. Classification finalization process also taking into account feedback /considerations from Business Unit and SAM.
3. Formulate action plan

Credit Risk Monitoring Processes – Credit Quality Review (1/2)

Bank has installed a dedicated unit (Credit Control & Supervision) to enhance review & monitoring process on decision & loan quality

Credit Quality (NAK) Review

1. **Loan Structure / Product**
2. **Assumption & Limit Setting**
3. **Financial Analysis**
4. **Risk Assessment & Mitigation**
5. **Suitability with Terms & Condition**

Credit Proposal (NAK) Quality Score

Business Activity Monitoring

1. **Suitability of Purpose & Use**
2. **Covenant & Business Unit Consideration**
   - Financial Factors
   - Non Financial Factors
3. **Underlying Suitability for Disbursement**
   - Proper Documents
   - Asset
4. **Business & Financial Performance**
   - Financial Statement
   - Transactions
   - Periodic Call
5. **Others**
   - Legal Issue
   - Regulatory Comply
   - Owner Issue

Output

1. Critical : Stopper
   (temporary or permanently stop loans withdrawal)
2. Recommendation for improvement

Credit Risk Monitoring Processes – Credit Quality Review (2/2)

From operational risk stand point, Bank created Senior Operational Risk (SOR) function for wholesale banking to perform post-approval checking on compliance and operational risk aspects of credit approval process

- Identification process include end-to-end Process, Risk Control & How to Test, e.g. watchlist implementation, on-the-spot monitoring, monitoring insurance due, and others covenant.
- Source of Identification include :
  1. End to end process mapping
  2. Internal & External Audit Funding
  3. Director Concern
  4. Incident Historical
- Control testing activity done regularly every 3 months, 6 months, and 12 months.

Roles & Responsibility

01	OPERATIONAL & COMPLIANCE RISK MANAGEMENT	• Operational risk framework implementation • Develop Risk awareness program at 1st line • Operational & compliance risk profile report & recommendation to management • Discipline enforcement to record operational / compliance incident to system. • Business Continuity Plan (BCP) supervisor
02	COMPLIANCE ASSURANCE	• Policy, procedure & initiative product / activities review • Internal & External regulation sharing/socialization • Anti Fraud Strategy & Good Corporate Governance Implementation
03	AUDIT SUPPORT	• Support internal/external audit & monitor the action plan

Credit Risk Monitoring Processes – Stress Testing & Sensitivity Analysis

Bank conducts regular macroeconomic stress testing and ad-hoc sensitivity analysis as precautionary measures for potential downturn/adverse conditions

APPROACH & SCENARIO → **METHODS** → **MITIGATION**

Sensitivity Analysis

APPROACH & SCENARIO

Single factor shock, e.g. significant commodity price correction

Covering **industry sectors** that share significant portion of Bank's portfolio and are currently under pressures.

Output:
Early identification of potentially defaulting borrowers if risk factor (price) continues deteriorating.

METHODS

Estimate the impact of pre-defined single factor shock on borrowers financial performance, e.g.:

- Lower than expected product/service demand
- Significant drop of company sales
- Increase in COGS and expenses
- Increase in interest expense and financial payment

MITIGATION

- Lowering industry sector limit
- Tightening industry acceptance criteria (IAC)
- Close monitoring of potentially defaulting borrowers

Bank has done sensitivity analysis on upstream to downstream of Palm Oil Industry

Stress Test Scenario Analysis

APPROACH & SCENARIO

Multiple macroeconomic factor shock, e.g. simultaneous drop/increase in GDP growth, commodity prices, interest rates, USD/IDR, etc.

Covering **wholesale segments** and **retail products**.

Output:
Early identification of business segment or industrial sectors potentially affected by macro shocks, and estimated impact on NPL and bankwide P&L and CAR.

METHODS

Wholesale
Two steps models :

1. Satellite model in projecting macroeconomic shock on borrowers financial performance (COGS, Sales, Interest Expense)
2. Financial Model (EBITDA vs (interest exp. + CPLTD))

Retail : Regression models (portfolio level)

MITIGATION

- Reviewing sector allocation (portfolio guideline)
- Reviewing industry acceptance criteria (IAC)

Credit Collection & Recovery (1/2)

Special Asset Management units set and implement strategies on collection and recovery on non-performing portfolio

	Prevention	Rescue	Exit
Loan coverage	Performing Loan (Collectability 1 & 2)	Non Performing Loan (Collectability 3, 4 & 5)	Write-off Account
Units responsible	Business Units (Task Force) SAM (Loan Workout)	SAM (Loan Workout)	SAM (Loan Recovery)
Tools	ALERT Tools (Watchlist)	RESCUE Tools	
Strategy		Restructuring : ▪ Rescheduling ▪ Interest Rate Restructuring ▪ Moratorium (grace period) ▪ Refinancing	Settlement : ▪ Sale of collateral (liquidation) ▪ Finding Strategic Investors (Novation, Subrogation, Cessie) ▪ Bankruptcy proceedings ▪ Legal enforcement proceedings ▪ Debt to Equity / Asset swap

Issues & Challenges

- Flexibility : State-owned banks are not allowed to give principle haircut.
- Borrower's lack of willingness to repay (e.g using bankruptcy protection law to prevent bank from obtaining optimal bad debt recovery).
- Weakened economic & business conditions provide limited possibility for borrower's business recovery.
- Declining purchasing power triggering investors to delay (wait and see) asset purchasing.

Strategy

- Optimizing BMRI's large customer base (Corporate / Commercial & Wealth Management prime customers) as potential Strategic Investor.
- Bundling Scheme for Investor: providing a diverse schemes/ products to facilitate investors in buying assets/loan exposures from BMRI.
- Stakeholder Relationship Management: maintaining collaborative partnerships and relationships with Indonesian Financial Services Authority (OJK), law enforcement unit/bureau, curator, etc. that contribute to the success of loan restructuring/settlement.

Credit Collection & Recovery (2/2)

Restructuring scheme depends on diagnostic result of each borrower to ensure correct remedial action

CONDITION

Due to Financial Condition:

- Rescheduling
- Refinancing by new lenders
- Postponement of principal repayment
- Waive of accumulated accrued interest
- Insolvency / bankruptcy proceedings

CONDITION

Due to Capacity of Production:

- Equity injection from investor
- Break up / sale of non core assets
- Additional facilities to debtor
- Reduction of interest rate
- Deferment of interest payment

CONDITION

Due to Management:

- Debt to Equity Swap
- Transfer to a new company
- Legal enforcement proceedings

CONDITION

Due to Prospect of Industry:

- Covenant waiver and reset
- Mergers / Acquisition
- Sale of loan exposures to strategic investor
- Sale of assets

3rd Line of Defense – Internal Audit

As the 3rd line of defense, Internal Audit is also critical in ensuring that the overall credit risk management process for wholesale portfolio is sufficiently prudent in preventing Bank's wholesale portfolio from deterioration.

110 Auditor

Activity
Internal Audit

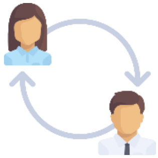
- Assurance
- Consulting

Activity
Investigation

- Investigation

Internal Audit Role on Preventing Bad Debt

Providing insight on credit risk control for each line of defense



Ensuring that each line of defense is working properly as designed

Ensuring that Bank's control design is implemented effectively

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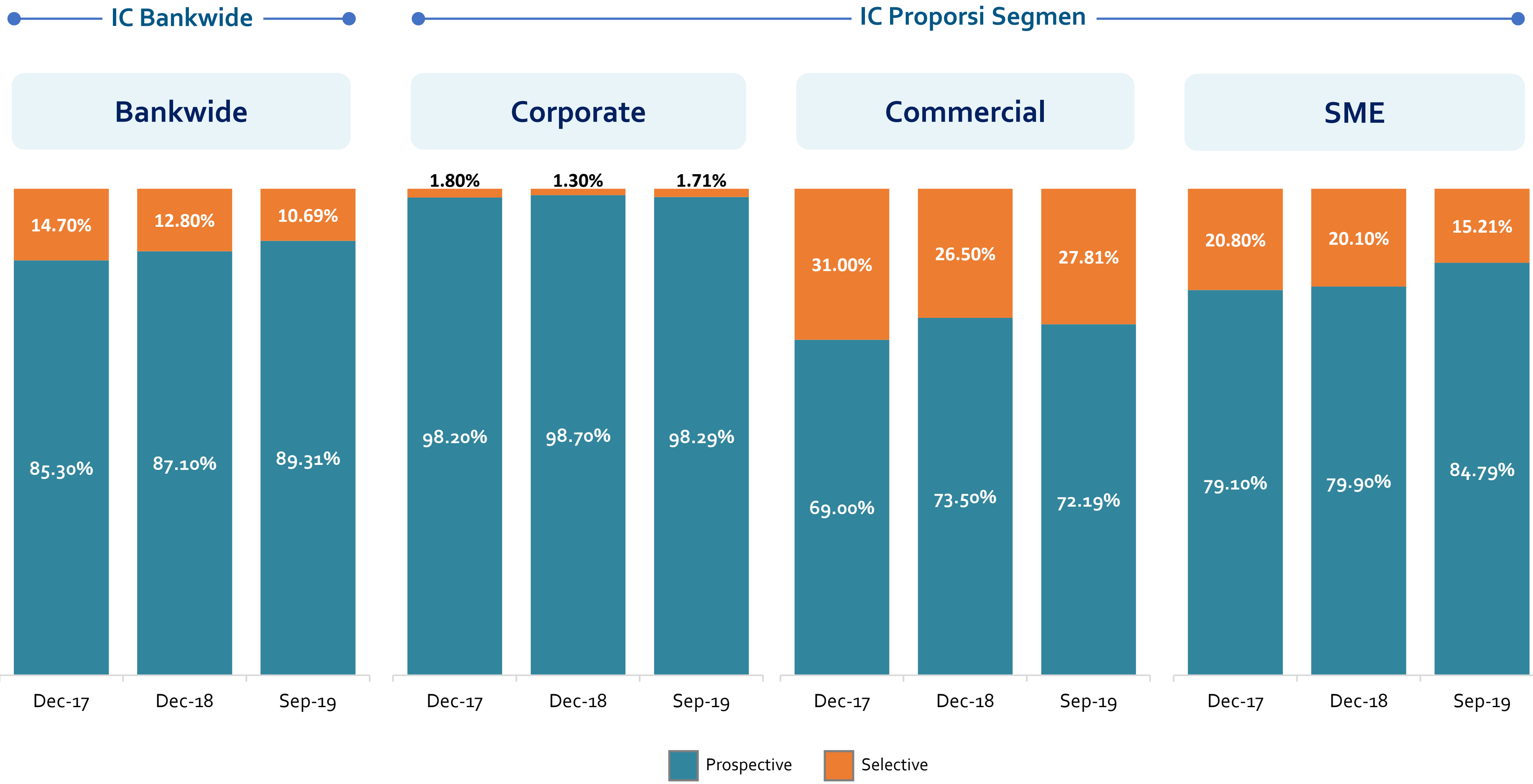
Sectoral Mix

Growth is focused on prospective sectors (attractive and neutral) to improve portfolio sectoral mix



Notes :

- *IC = Industry Class*
- *Selective include Exit classification*
- *Corporate Include Government & Institutional*
- *Decrease of Bankwide Mix Attractive sector caused by a change in sector classification compared to 2018 (e.g Palm Plantation & CPO and Fertilizer & Pest Industry)*
- *Decrease of Corporate Mix Attractive sector caused by a change in sector classification compared to 2018 (e.g Palm Plantation & CPO , and Tobacco Industry)*
- *Decrease of Commercial Mix Attractive sector caused by a change in sector classification compared to 2018 (e.g Palm Plantation & CPO , and Fertilizer & Pest Industry)*
- *Segmentation based on Reporting Segment, for Commercial Segment exluding BUC reporting CR (Credit Recovery)*

Portfolio Quality Bankwide – Top 10 Sectors

Most of Bank's top 10 industry sectors are dominated by prospective sectors (attractive & neutral class) with improvement in credit quality

No	Sector	IC 2019*	Outstanding Sep-19			%Mix		% Col 2 Sep-19		% NPL Sep-19	
			IDR Bio	%YoY	%YtD	Sep-18	Sep-19	Sep-18	Sep-19	Sep-18	Sep-19
1	Palm Plantation & CPO		68,830	0.83%	-3.76%	9.97%	9.45%	0.80%	1.69%	0.26%	0.18%
2	Energy & Water (Utilities)		41,194	17.19%	21.27%	5.13%	5.66%	0.84%	1.56%	0.03%	0.39%
3	Financial Services		36,446	44.48%	39.60%	3.68%	5.01%	0.18%	0.13%	6.34%	4.36%
4	Fast Moving Consumer Goods		28,657	-15.60%	-16.46%	4.96%	3.94%	0.53%	0.61%	4.97%	5.84%
5	Construction Infrastructure Services		26,352	25.86%	5.87%	3.06%	3.62%	1.59%	1.10%	0.85%	0.82%
6	Food, Beverage, & Cigarettes Retail Trade		24,598	6.47%	-1.26%	3.37%	3.38%	4.37%	3.15%	2.24%	1.79%
7	Construction Non Infrastructure Services		18,443	8.45%	-2.48%	2.48%	2.53%	9.34%	6.69%	5.32%	6.86%
8	Telecommunication		17,547	15.86%	33.19%	2.21%	2.41%	2.66%	2.24%	3.31%	0.43%
9	Metal Industry & Wholesale Trade		17,338	2.30%	6.11%	2.48%	2.38%	12.14%	13.62%	13.32%	8.88%
10	Fertilizer & Pest Industry		15,643	-3.73%	-3.19%	2.37%	2.15%	0.26%	0.00%	0.05%	0.07%
	Other Sectors		433,075	4.94%	-1.28%	60.27%	59.48%	5.85%	6.55%	3.14%	2.74%
	Total		**728,122**	**6.35%**	**1.27%**	**100.00%**	**100.00%**	**4.48%**	**4.87%**	**3.04%**	**2.61%**

*) IC Bankwide

Portfolio Quality Corporate – Top 10 Sectors

Corporate segment maintain its high portfolio quality, where its top 10 industry sectors are prospective sectors (attractive & neutral class)

No	Sector	IC 2019*	Outstanding Sep-19			%Mix		% Col 2 Sep-19		% NPL Sep-19	
			IDR Bio	%YoY	%YtD	Sep-18	Sep-19	Sep-18	Sep-19	Sep-18	Sep-19
1	Energy & Water (Utilities)		37,384	19.05%	23.48%	10.47%	11.58%	0.36%	0.29%	0.00%	0.00%
2	Palm Plantation & CPO		36,938	-3.51%	-7.34%	12.76%	11.45%	0.00%	0.00%	0.00%	0.13%
3	Construction Infrastructure Services		22,678	31.10%	5.41%	5.77%	7.03%	0.00%	0.00%	0.00%	0.00%
4	Fast Moving Consumer Goods		21,716	-18.77%	-20.99%	8.91%	6.73%	0.00%	0.00%	0.00%	0.00%
5	Financial Services		21,130	56.62%	55.56%	4.50%	6.55%	0.00%	0.00%	0.00%	0.00%
6	Fertilizer & Pest Industry		13,896	-3.37%	-3.46%	4.79%	4.31%	0.00%	0.00%	0.00%	0.00%
7	Metal Mining		13,401	-11.53%	13.98%	5.05%	4.15%	0.00%	0.00%	0.00%	0.00%
8	Telecommunication		12,650	24.89%	58.76%	3.38%	3.92%	0.00%	0.00%	4.86%	0.00%
9	Oil & Gas Wholesale Trade		11,874	-38.26%	-51.72%	6.41%	3.68%	0.00%	7.90%	0.00%	0.00%
10	Construction Non Infrastructure Services		11,298	6.40%	-6.78%	3.54%	3.50%	0.00%	0.00%	0.00%	0.00%
	Other Sectors		119,765	16.06%	-0.97%	34.41%	37.11%	1.95%	2.08%	0.16%	0.14%
	Total		**322,731**	**7.61%**	**-0.54%**	**100.00%**	**100.00%**	**0.71%**	**1.10%**	**0.22%**	**0.07%**

*) IC Corporate

Portfolio Quality Commercial – Top 10 Sectors

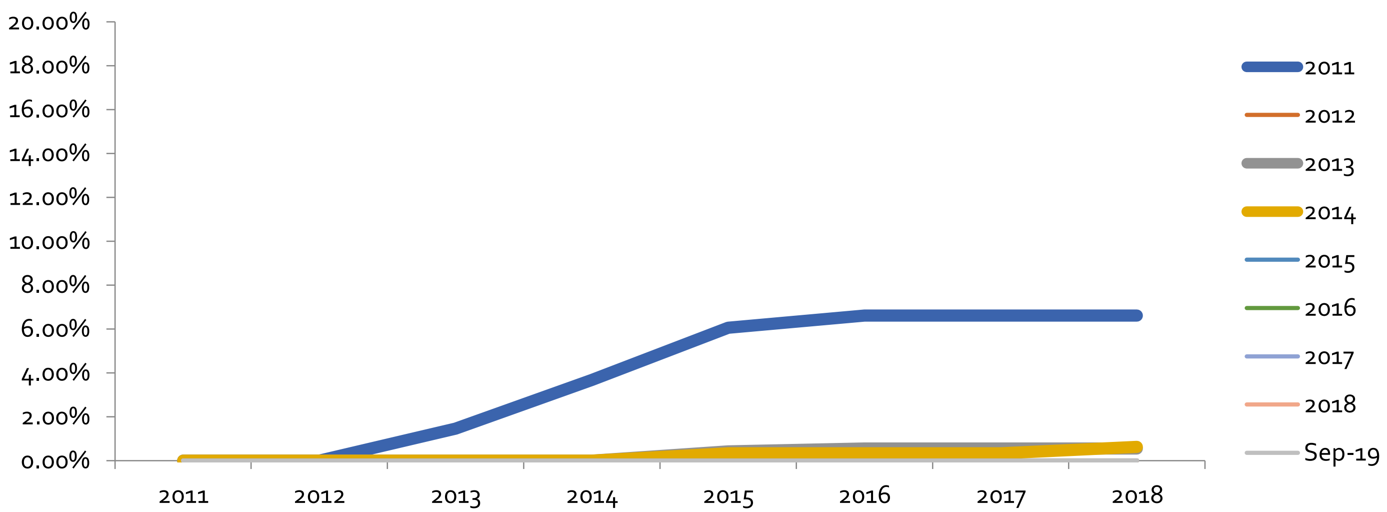
Some sectors in commercial segment are selective sectors, which still have potential to grow with more stringent acceptance criteria

No	Sector	IC 2019*	Outstanding Sep-19			%Mix		% Col 2 Sep-19		% NPL Sep-19	
			IDR Bio	%YoY	%YtD	Sep-18	Sep-19	Sep-18	Sep-19	Sep-18	Sep-19
1	Palm Plantation & CPO		21,231	3.70%	-2.95%	14.43%	15.38%	1.93%	4.35%	0.00%	0.00%
2	Water Transportation Services		11,573	0.62%	2.04%	8.11%	8.38%	31.31%	28.12%	2.21%	3.92%
3	Financial Services		9,674	9.81%	4.53%	6.21%	7.01%	0.49%	0.43%	17.49%	15.86%
4	Metal Industry & Wholesale Trade		7,432	-2.53%	0.06%	5.37%	5.38%	26.29%	29.75%	29.52%	20.56%
5	Property – Investment		6,223	121.36%	123.38%	1.98%	4.51%	0.00%	5.96%	0.00%	0.43%
6	Fast Moving Consumer Goods		6,051	-2.86%	2.17%	4.39%	4.38%	2.18%	2.46%	26.09%	27.48%
7	Construction Non Infrastructure Services		5,182	0.07%	-3.85%	3.65%	3.75%	29.10%	23.12%	16.76%	24.05%
8	Telecommunication		4,634	2.96%	0.08%	3.17%	3.36%	8.70%	7.95%	0.18%	1.62%
9	Industry & Product Textile		4,523	-21.14%	-16.31%	4.04%	3.28%	25.19%	70.56%	2.75%	2.99%
10	Energy & Water (Utilities)		3,618	1.70%	3.06%	2.51%	2.62%	4.85%	14.65%	0.05%	4.40%
	Other Sectors		57,902	-11.58%	-10.97%	46.15%	41.94%	9.65%	13.32%	13.30%	13.17%
	Total		**138,044**	**-2.73%**	**-3.18%**	**100.00%**	**100.00%**	**11.29%**	**14.45%**	**10.86%**	**10.46%**

*) IC Commercial

Loan Performing Analysis in Corporate Segment

Since 2012, corporate portfolio has been consistently showing very low level of NPLs from new booking



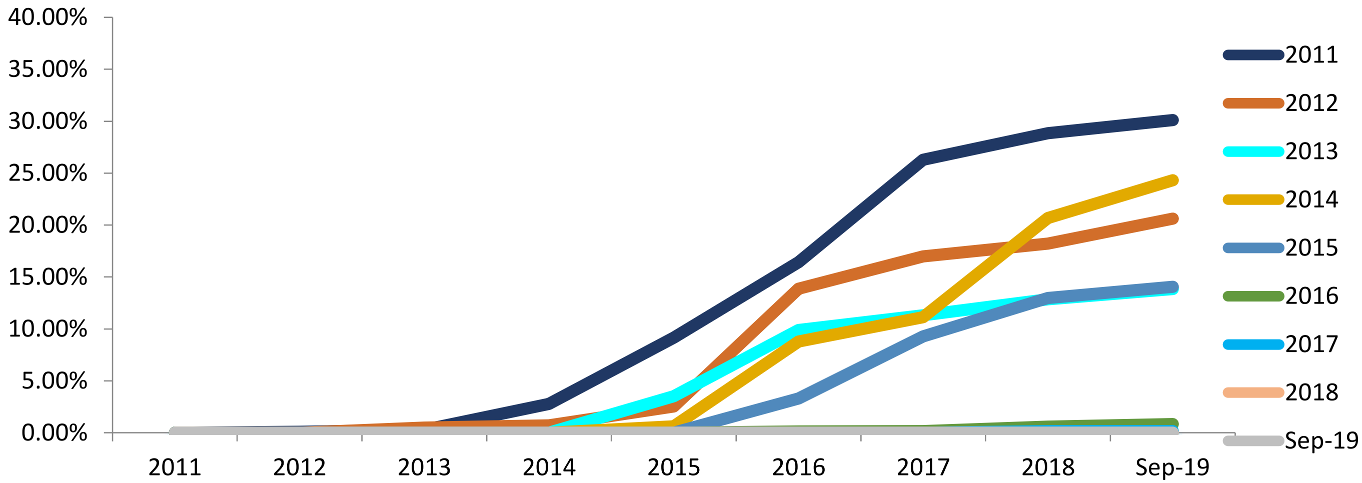
NPL per Total Loan (%)

Year Originated	Total Booking	2011	2012	2013	2014	2015	2016	2017	2018	Sep-19
2011	30,154.17	0.00%	0.00%	0.00%	1.46%	3.68%	6.06%	6.60%	6.60%	6.60%
2012	27,239.26		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2013	31,755.36			0.00%	0.00%	0.00%	0.42%	0.55%	0.55%	0.55%
2014	29,259.32				0.00%	0.00%	0.33%	0.33%	0.33%	0.62%
2015	44,031.21					0.00%	0.00%	0.00%	0.00%	0.00%
2016	73,964.16						0.00%	0.00%	0.00%	0.00%
2017	93,802.04							0.00%	0.00%	0.00%
2018	22,395.64								0.00%	0.00%
Sep-19	90,084.40									0.00%

Increasing NPL in 2014 due to United Coal Indonesia, in 2015 due to Zug Industry Indonesia and in 2016 due to Global Teleshop.

Loan Performing Analysis in Commercial Segment

Commercial portfolio originated before 2016 contributed to high level of NPLs, while loans booked in 2016 onward has been showing much less NPLs



NPL per Total Loan (%)

Year Originated	Total Booking	2011	2012	2013	2014	2015	2016	2017	2018	Sep-19
2011	**21,526.39**	0.00%	0.09%	0.30%	2.78%	9.15%	16.42%	26.29%	28.86%	30.11%
2012	**26,972.14**		0.02%	0.50%	0.72%	2.55%	13.86%	16.98%	18.21%	20.62%
2013	**33,692.10**			0.00%	0.00%	3.52%	9.91%	11.33%	12.85%	13.86%
2014	**19,592.73**				0.00%	0.62%	8.79%	11.14%	20.68%	24.32%
2015	**16,062.36**					0.00%	3.31%	9.30%	12.99%	14.05%
2016	**16,920.21**						0.15%	0.17%	0.61%	0.85%
2017	**10,025.60**							0.00%	0.17%	0.17%
2018	**8,519.73**								0.00%	0.00%
Sep-19	**11,708.64**									0.00%

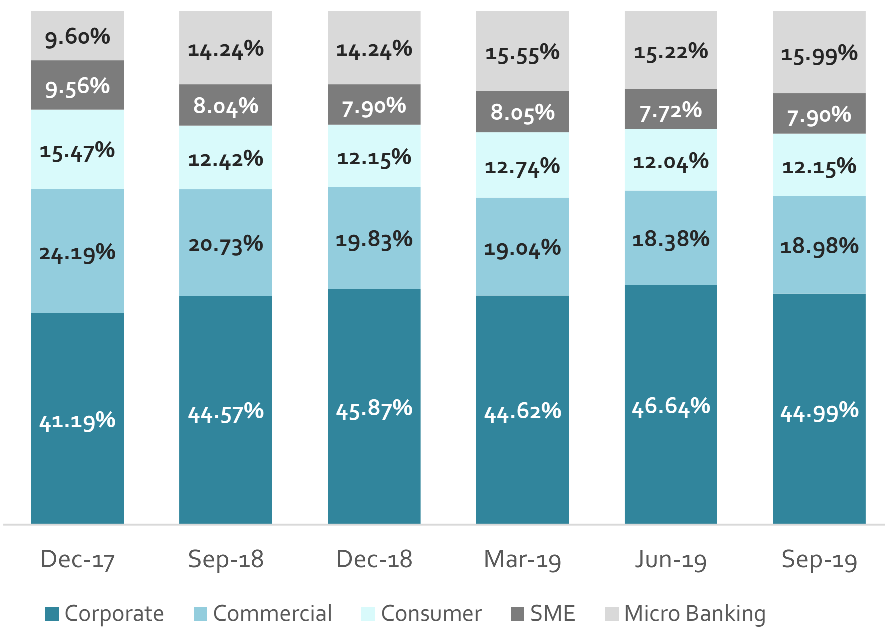
There are several debtor which is downgrade to Non Performing Loan less than 1 (one) year since the first lending in 2012 due to Intan Harapan Tani 88, in 2016 due to Hasilku Selalu Ada, and in 2017 due to Sinarlestari Ultrindo

Portfolio Quality

Commercial segment portion had been steadily declining as an effort to control and improve its portfolio quality, while providing room for growth for lower risk corporate and micro segments

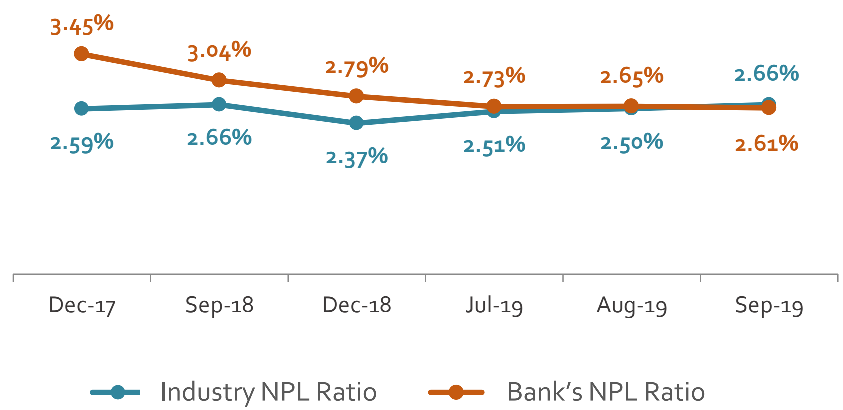
Bank's loan portfolio is still dominated by corporate segment that historically has lower risk

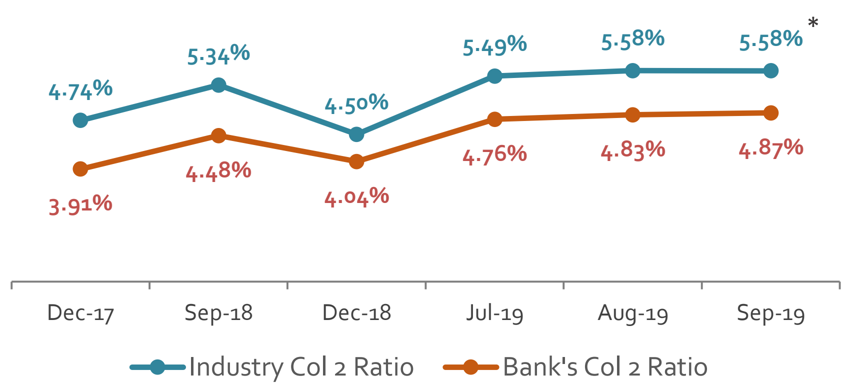
	Dec-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19
Wholesale	65.37%	65.30%	65.70%	63.66%	65.02%	63.97%
Retail	34.63%	34.70%	34.30%	36.34%	34.98%	36.03%



	Dec-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19
Total Loan	644.26 T	684.66 T	718.97 T	684.53 T	725.29 T	728.12 T

Bank's gross NPL continues improving, moving toward industry average, while SML portion is better than industry



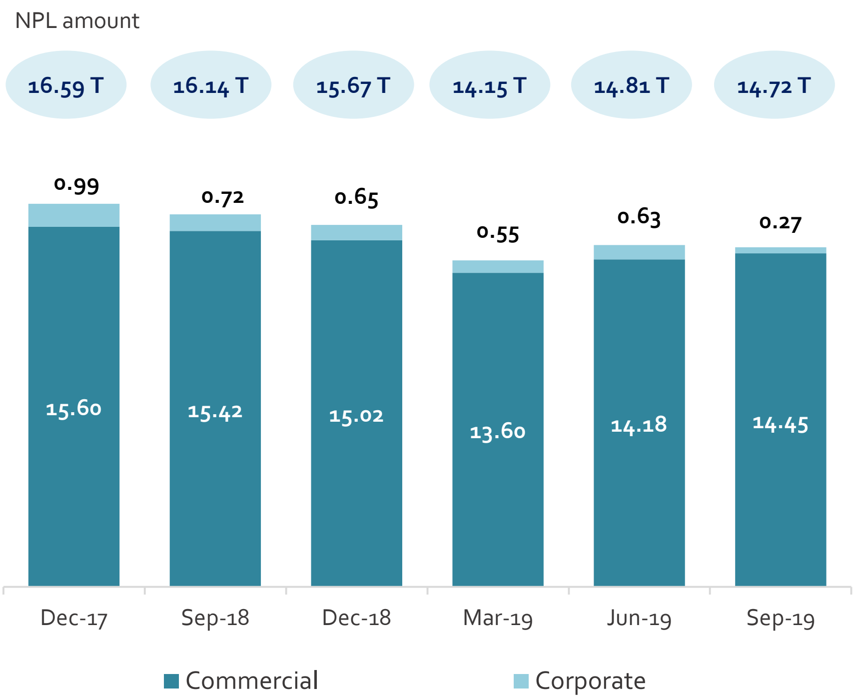


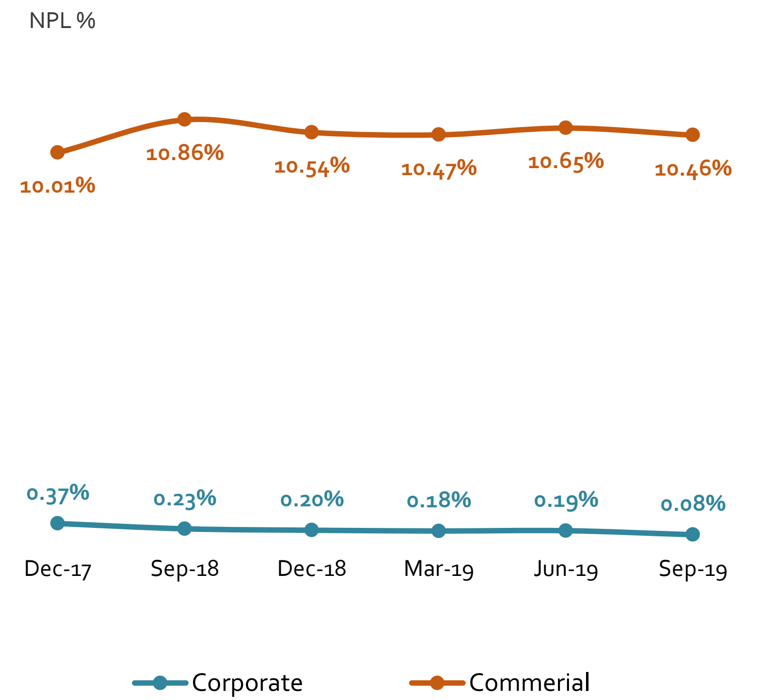
**) Industry Col 2 Aug-19*

Portfolio Quality – NPL Portfolio Wholesale Segment

With loan growth that is slower than previous years, NPL ratio for corporate portfolio is able to trend down, while for commercial portfolio is relatively flat

Bank's NPL for corporate and commercial segments have been improving and relatively steady

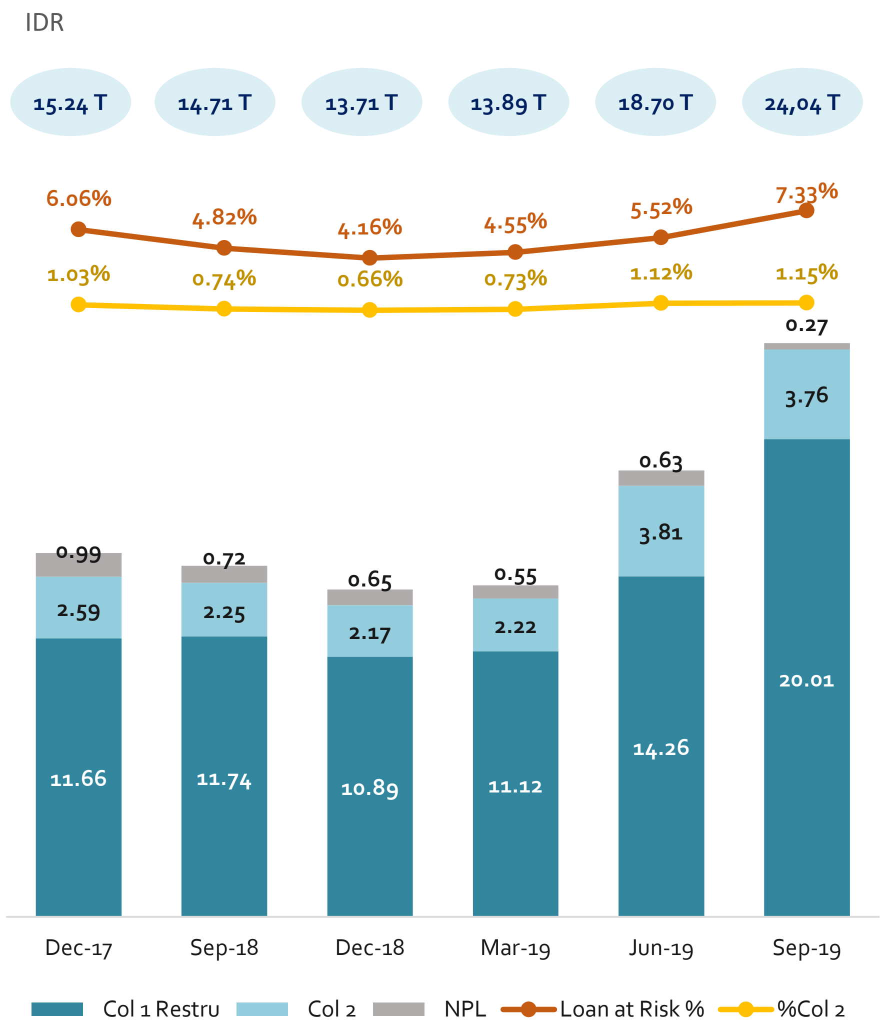




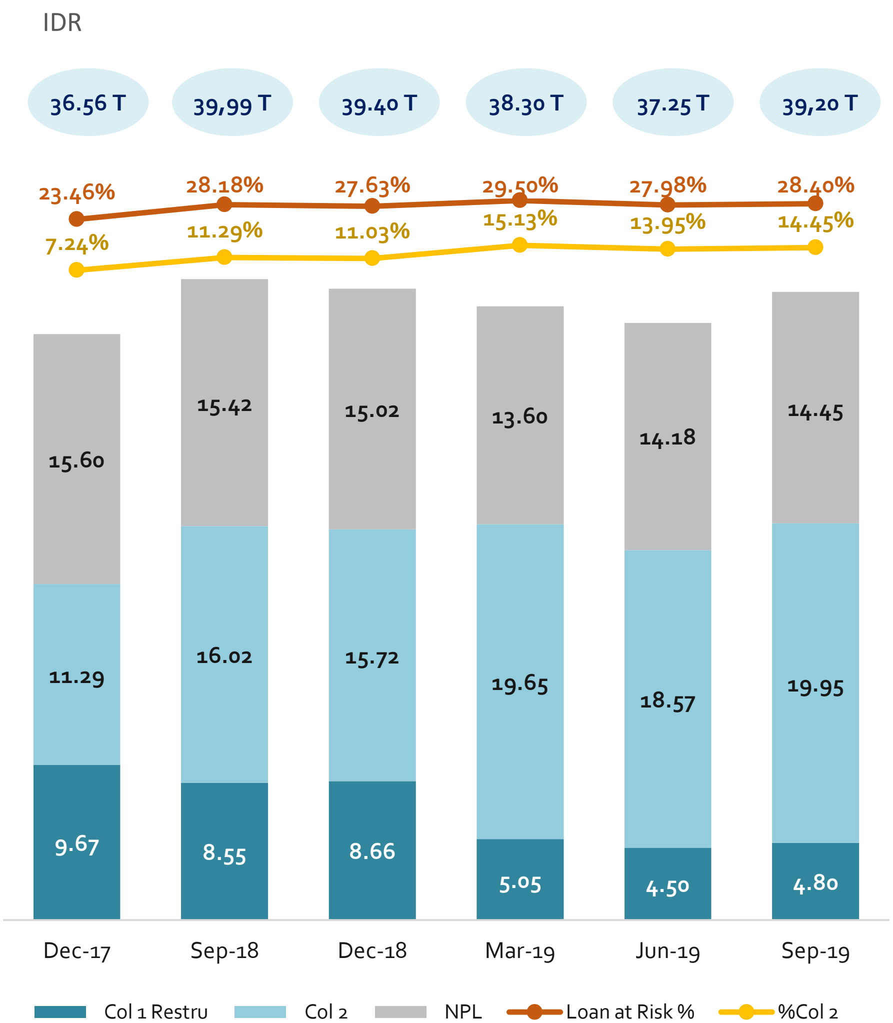
Portfolio Quality – Loan At Risk

Increase in LaR for corporate portfolio is due to restructured accounts of some SOEs.

Loan at Risk in Corporate segment is increased, dominated by the increase on col. 1 restructuring



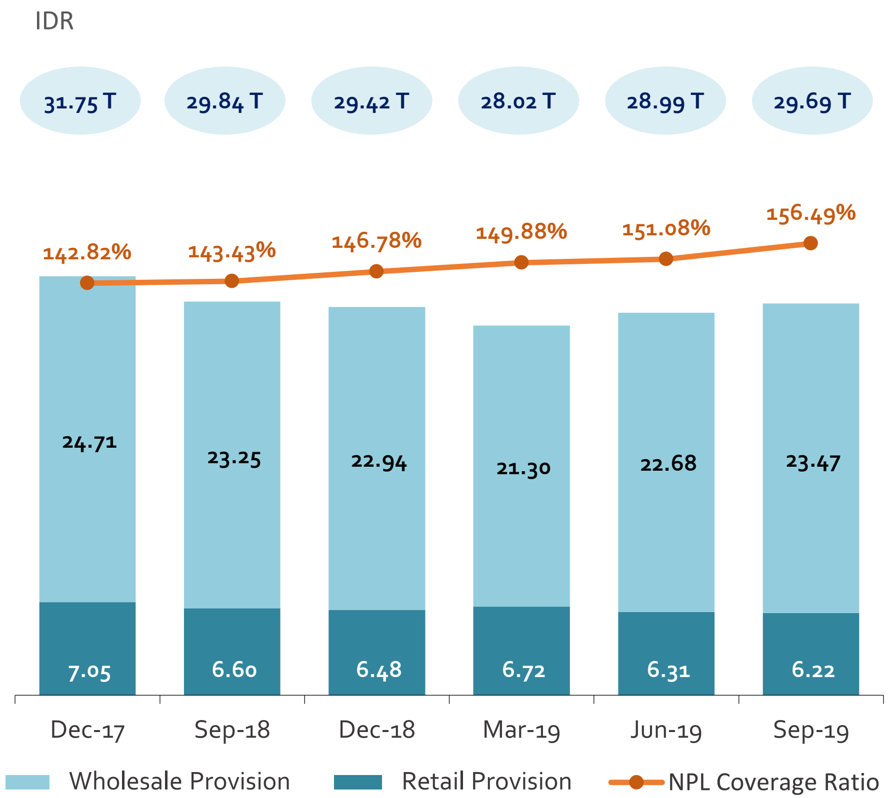
% Loan at Risk in Commercial segment is relatively stable throughout the year



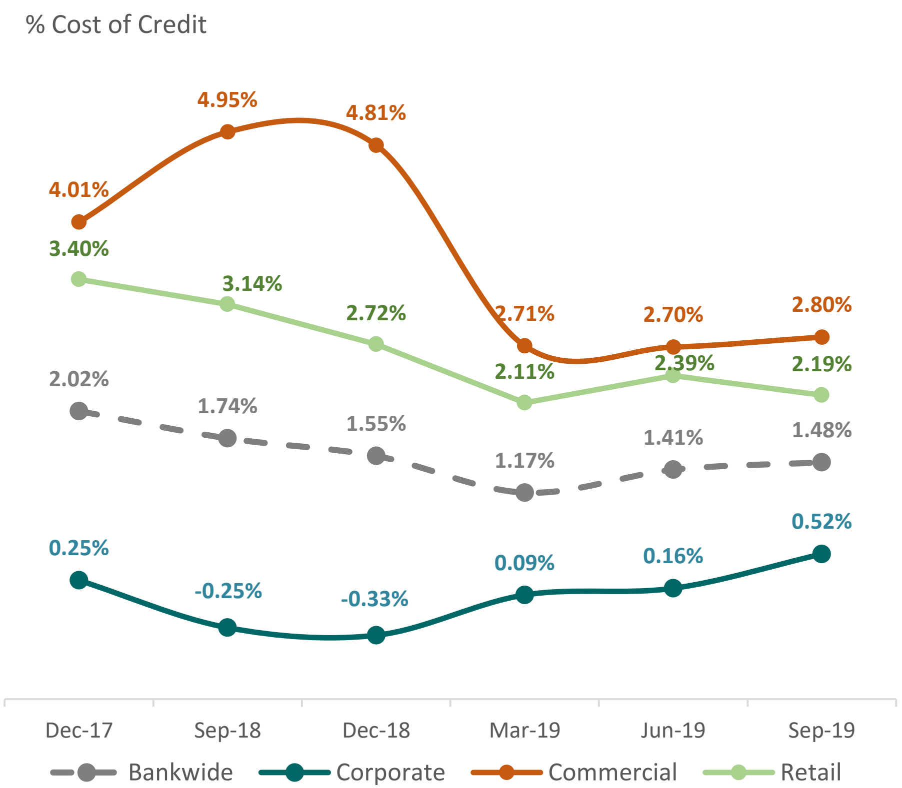
Portfolio Quality – Loan Provisioning

Provisioning coverage and % CoC is maintained at sufficient levels and show improvement overtime

Provisioning coverage per Sept 2019 is increased compared to previous quarter



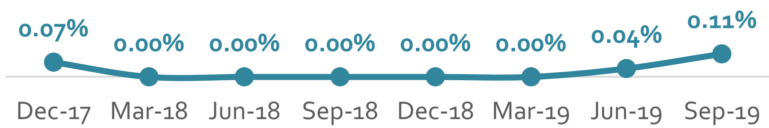
% Cost of Credit is slightly increased compared to previous quarter



Comparison of Downgrade Tren from Watchlist 4Q - 2017 to 3Q – 2019

Watchlist portfolio has been managed properly showed by relatively low numbers of downgrades compared to watchlist and there are no surprise downgrade (outside watchlist debtors)

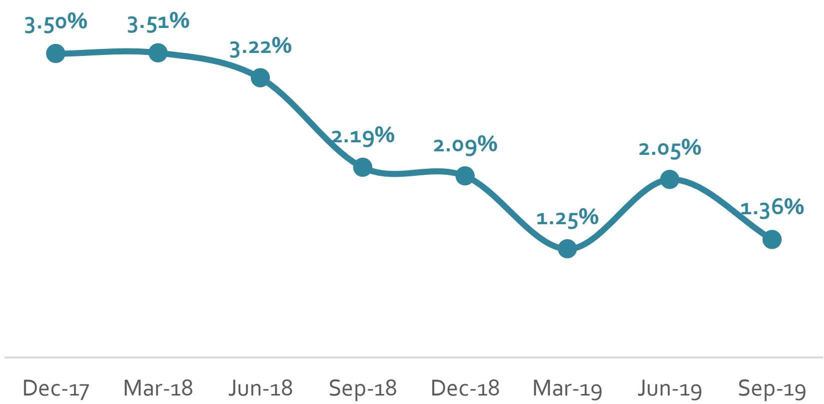
Corporate Segment



Debtors downgrade to NPL in 2Q19 from borrower group in palm plantation IDR 83 Bio (paid off in October 2019)

Debtors downgrade to NPL in 3Q19 from borrower in fertilizer trading sector IDR 121 Bio

Commercial Segment

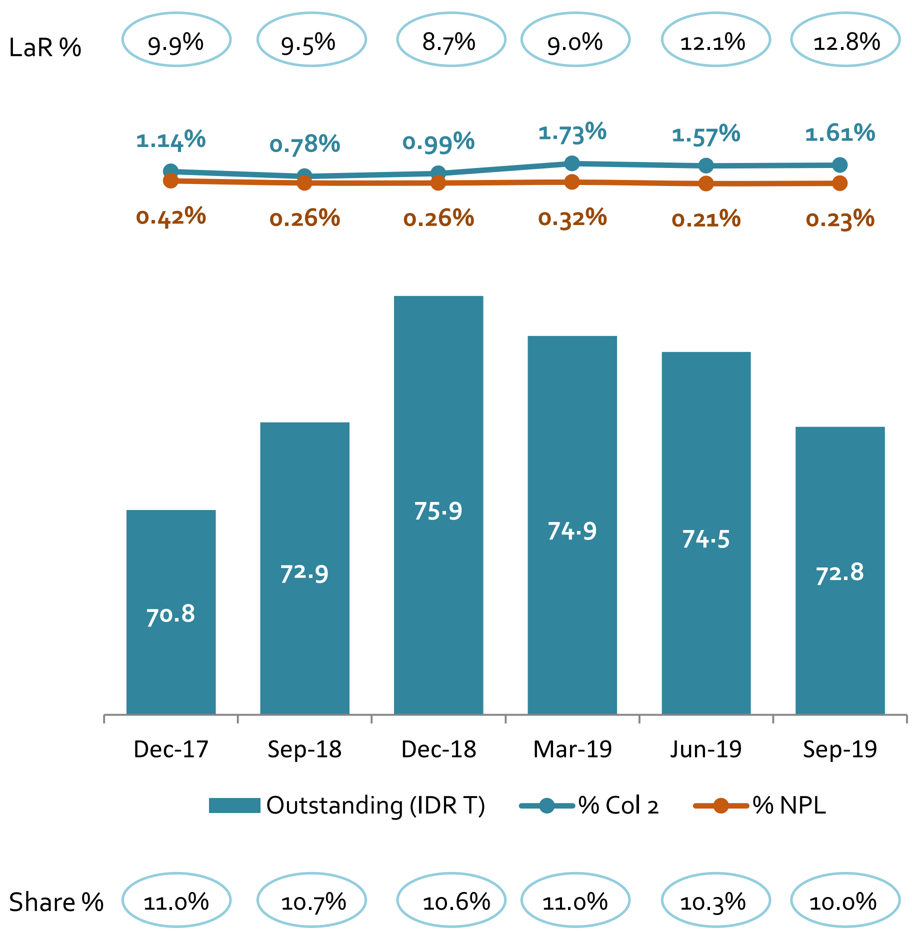


Top debtors downgrade to NPL in 2Q19 from borrower group in shipping industry IDR 670 Bio

Top debtors downgrade to NPL in 3Q19 from borrower in hotel industry IDR 91 Bio

Sectoral Review – Palm Plantation & CPO

Palm Plantation & CPO sector has NPL 0,2%

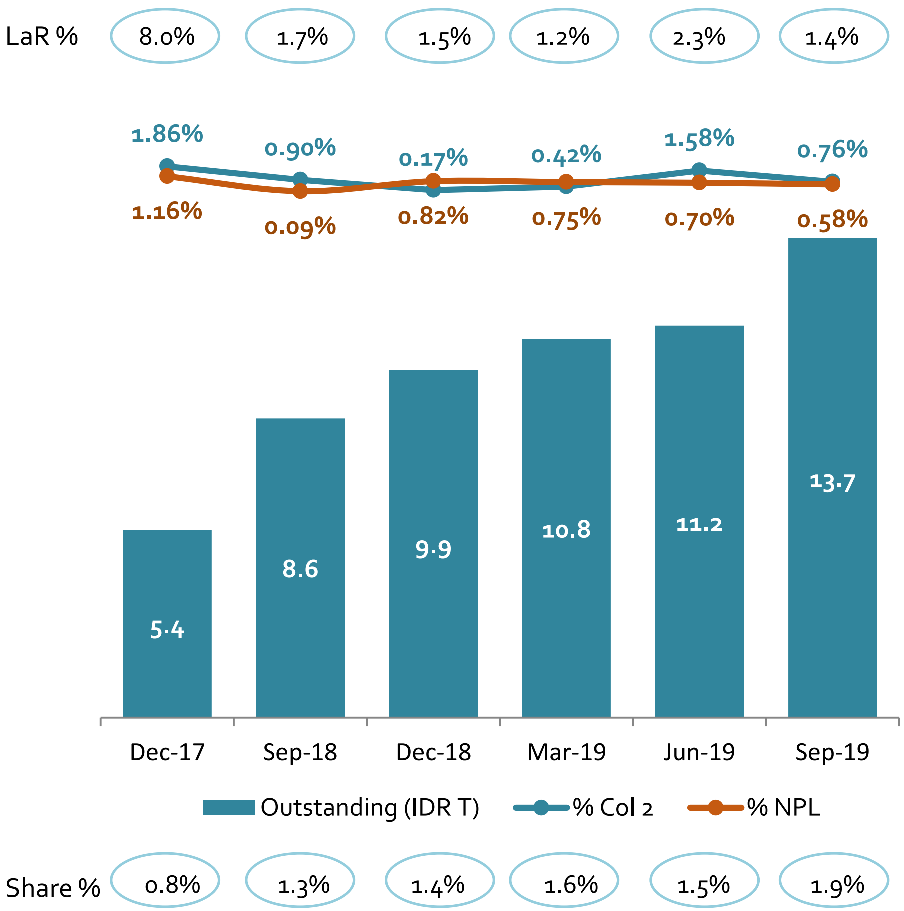


Notes : Palm Plantation & CPO ecosystem consists of Palm Plantation & CPO and Trading of CPO and Palm Oil Products

- Bank's borrowers' CPO production cost is on average between 280 – 350 USD/ton, while the lowest CPO price in 2018 is USD 430 USD/ton and the highest in October-19 is 585 USD/ton indicating bank's borrower are more resilient to CPO price volatility
- Bank imposes strict **Industry Acceptance Criteria (IAC)** to preliminary assess potential borrowers. Those IAC, for example, covers criteria on :
  1. Focus on financing well-known borrowers
  2. Preferably ISPO / RSPO certified
  3. Prioritize in the mid-stream and down-stream industries or integrated palm oil companies.
- Based on the results of **Sensitivity Analysis**, the mid-stream and down-stream industries are more resilient to fluctuations in palm oil prices. In order to manage Bank's portfolio, Bank Mandiri implemented **temporary limited expansion** mechanism for Palm Plantation & CPO sector to anticipate the decline in CPO price.
- Growth in the Palm Plantation & CPO sector is prioritized in the mid-stream and down-stream industries or integrated palm oil companies. The proporsion of BMRI's mid-stream, down-stream and integrated palm oil companies is more than 50% with 0% NPL rate

Sectoral Review – Coal (Industry & Trading)

Coal Sector portfolio is low in NPL as a result from strict borrower selection (IAC) that prefer well-known large coal producers

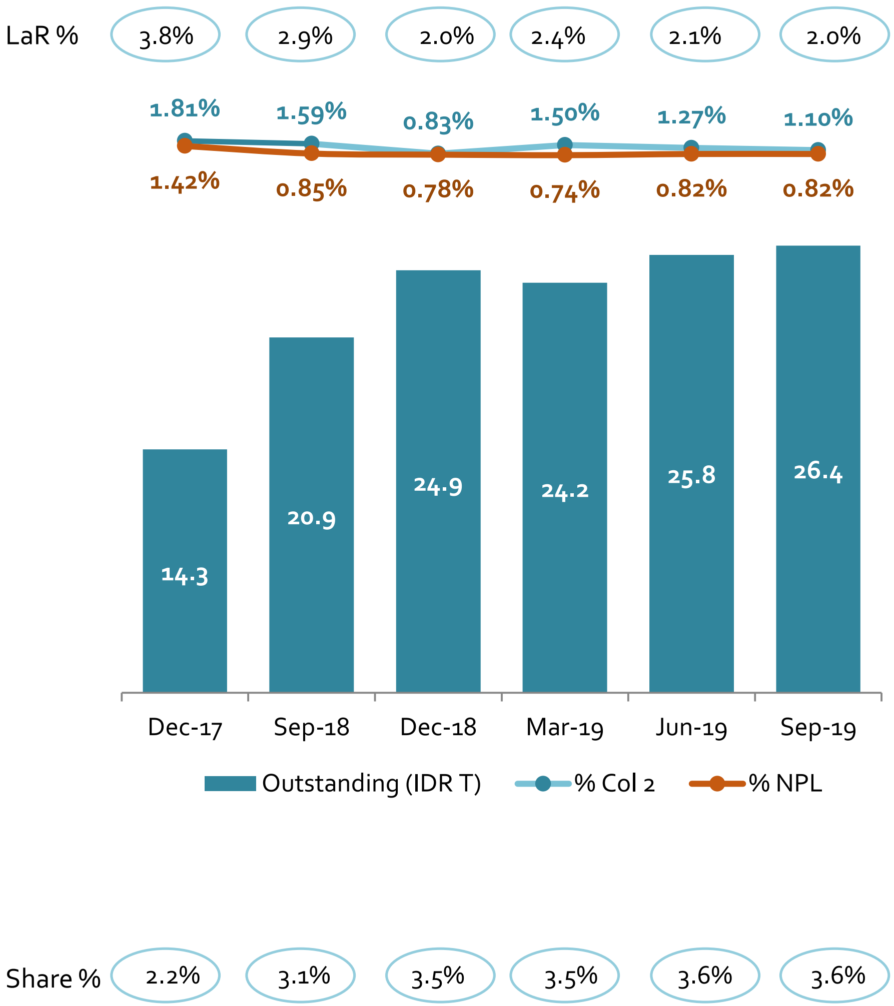


- Bank's borrowers coal cash cost is around 30 USD/ton, while current price is around 40-50 USD/ton (domestic price) indicating bank's borrower are more resilient to coal price volatility
- **Industry Acceptance Criteria (IAC)** for coal sector consist of at least the following:
  1. Top players with low cash cost
  2. Have partnership / agreement contract with well-known companies.
- Bank Mandiri's Coal portfolio quality is maintained with NPL level c 0.6%.
- If coal price continues declining, Bank will likely to implement **temporary limited expansion** mechanism.

Notes : Coal ecosystem consist of Coal Industry and Coal Trading

Sectoral Review – Construction Infrastructure Services

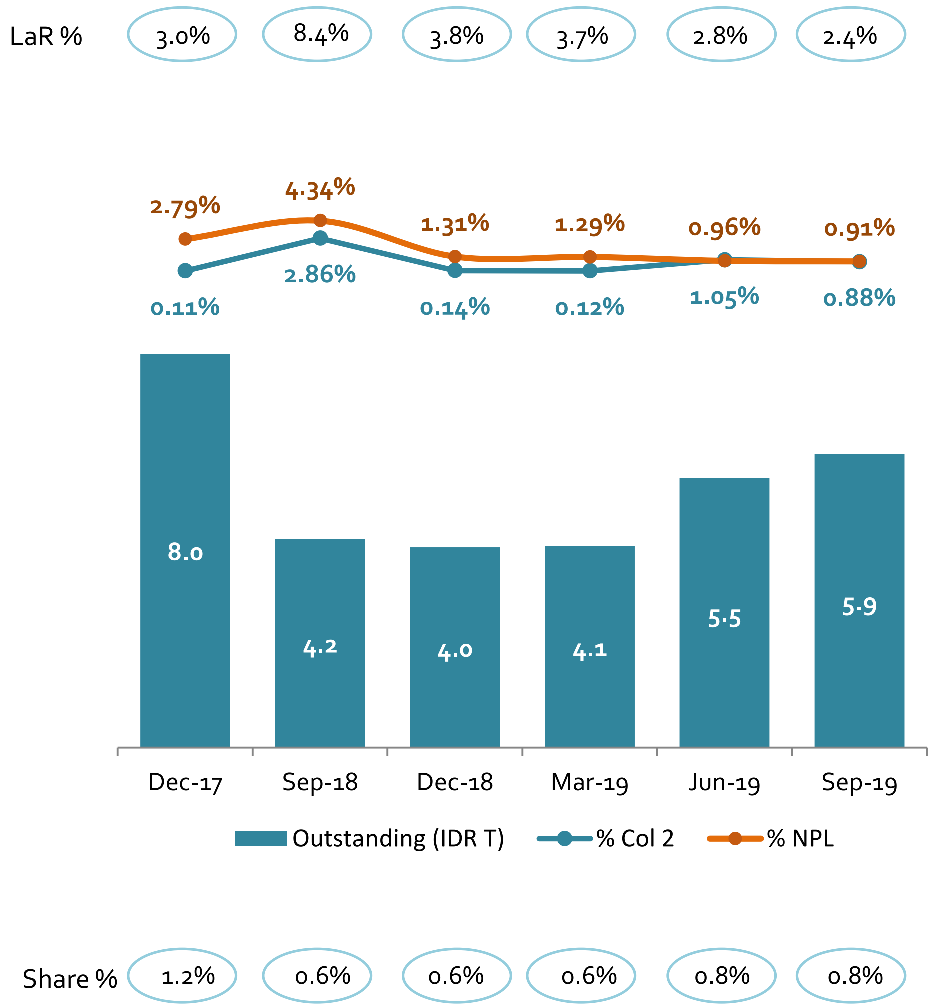
National Strategical Projects (e.g. infrastructure projects) provide support for high growth in construction sector, with low NPL



- IAC for Infrastructure Construction Services financing, covers at least :
  1. Project feasibility aspects
  2. Project owners are government or selective SOE
  3. Well known contractor – preferably SOE contractor
  4. Has potential value chain
- Bank Mandiri's Infrastructure Construction Services portfolio quality is maintained with NPL level c 0.8%.
- Government policies are still the main driver in Construction Services growth, especially Infrastructure.

Sectoral Review – Cement (Industry & Wholesale Trading)

The expansion of BMRI's Portfolio in Industry and Wholesale Trading Cement is focused on low risk and big names customer



- Oversupply and high level of competition are the biggest issues of Cement Industries for the years ahead
- Bank follow certain criteria for Cement Industries, including but not limited to :
  1. Good financial condition
  2. Top player in cement industries
  3. The availability of main raw material sources is guaranteed
- For the Cement Distributor, Bank also follow certain criteria, including but not limited to :
  1. Good financial condition
  2. Top player in cement distributors
  3. Having a wide marketing network
- Government infrastructure projects are the main driver in Cement Industries.

1 RISK GOVERNANCE, PROCESSES AND TOOLS IN CREDIT DECISIONING AND MONITORING

2 BANK MANDIRI WHOLESALE PORTFOLIO QUALITY

3 MONITORING OF BIG ACCOUNTS

4 IFRS 9 PREPARATION

Initiatiatives to Maintain Wholesale Loan Portfolio

Measures and initiatives have been taken not only to manage and improve current credit quality but also to prepare for possible economic downturn risk and idiosyncratic risk of borrowers

Sectoral Aspects

Group Borrowers in the Selective Sectors (M)
Group borrowers which half of their exposure in selective sector are 6,94% of total exposure and the quality is properly managed.

Mitigation through Credit Structure (Q)
Refinancing term loans which credit exposure above 50% of its limit are 12,81% from total exposure and still manageable.

Sensitivity Analysis (Q)
Stress testing result in our CPO, Coal, and Oil & Gas debtor show additional projected NPL + 108 bps in 2019 (worst scenario) and still manageable.

Borrowers Conditions

Mapping High Leverage / Debt Capacity *) (Q)
High leverage exposure is relatively low (1,86% from total exposure) and still manageable

High FX Exposure or Import with no Natural Hedging (M)
FX exposure without hedging is only 0,17 % from total exposure.

Deep Dive on SOE (BUMN) Loans (Q)
BUMN Loans are monitored and mitigated properly, ie. by reviewing the progress of each project

Collateral Review (Y)
Reviewing collateral valuation in order to meet BMRI risk appetite.

Review on Share Banking Transaction (M)
Portfolio which CASA below loan threshold only 5,84 % from total exposure and monitored intensively to increase transaction in BMRI

Business Opportunities

Bonds Maturity Profile (Q)
There are 56 wholesale debtors that have ± 85 Tn total bonds with maturity in 2020 that could be a business opportunity

**) High Leverage Indicator*

- *DER > 3,5x*
- *DSCR < 1,2x*
- *Debt to Ebitda > 3x*
- *ICR < 1,5x*

Continuous Monitoring (Monthly (M) Quarterly (Q) Yearly (Y))

Related Unit : Wholesale Risk Solution, Credit Portfolio Risk, Commercial Risk 1 & 2, Corporate Risk

Achieving Sustainability Growth
Knowing good existing portfolio

Maintaining Good Credit Quality
Delivering early warning sign

1 RISK GOVERNANCE, PROCESSES AND TOOLS IN CREDIT DECISIONING AND MONITORING

2 BANK MANDIRI WHOLESALE PORTFOLIO QUALITY

3 MONITORING OF BIG ACCOUNTS

4 IFRS 9 PREPARATION

Provisioning under PSAK 71

Bank calculates the impact of PSAK 71 Impairment using Individual Approach and Collective Approach

Segment/Product	Approach	Staging		
		Stage 1	Stage 2	Stage 3
Corporate and Commercial	Individual: • Min. Outstanding Rp 25 Bio (CIF Level) • 90+ DPD • Restructured Loans Collective: Accounts that do not meet the Individual Approach conditions	Performing Loan	• 30+ DPD • Restructured loans (non-financial distress)	• 90+ DPD • Restructured loans (financial distress)
SME	Individual: • Min. Outstanding Rp 25 Bio (CIF Level) • 90+ DPD • Restructured Loans Collective: Accounts that did not meet the Individual Approach Conditions	Performing Loan	• 30+ DPD • Restructured loans (non-financial distress)	• 90+ DPD • Restructured loans (financial distress)
Consumer Loan	All accounts are assessed as Collective	Performing Loan	30+ DPD	90+ DPD
Micro	All accounts are assessed as Collective	Performing Loan	30+ DPD	90+ DPD

	Collective Approach	Individual Approach
Methods	Under the Collective Approach, Loan Loss Provision is calculated using the Expected Credit Loss (ECL) method, by calculating PD, LGD, EAD Components based on models that have been developed	Under the Individual Approach, Loan Loss Provision is calculated using Discounted Cash Flow Method, or projection of the cash shortfall, conducted by the account managers

Provisioning under PSAK 71

Increase in loan loss provision under PSAK 71 comes mainly form accounting standard / technicalities

Stage 1 Loans

Stage 1 loans are generally charged higher PD (compared to that under PSAK 55) due to shorter DPD in the definition of default.

Stage 2 Loans

Stage 2 loans, particularly with long tenors, will be charged higher ECL due to the Lifetime ECL calculation applied.

Stage 3 Loans

Stage 3 loans are generally charged higher PD (compared to that under PSAK 55) due to PD percentage of 100%.

Multiple Scenarios

Under PSAK 71 BM is taking a more pessimistic approach in the multiple scenarios, especially for the individual impairment.

Other Factors

Other factors also contribute to the increase in ECL, among others the charges of unutilized portion of the loans

STRATEGY

01	BUSINESS PROCESS	• Front-End: Selective credit granting for higher risk borrowers • Middle-End: Early actions for higher risk borrowers • Back-End: Early action for collateral execution and restructuring strategy
02	PROACTIVE (FORWARD – LOOKING) PORTFOLIO MANAGEMENT	The ability to estimate Expected Credit loss will enable Bank to proactively manage its portfolio hence improve the quality of the loan portfolio
03	PRODUCT & POLICY	Risk-based pricing policy Selective loan granting for long-term loans Selective limit granting for credit cards

THANK YOU