CREDIT RISK MANAGEMENT

Credit risk arises from the failure of counterparty to meet the terms of any contract with the Bank. Credit risk is not limited to the loan portfolio but is found in all the Bank's activities where success depends on counterparty, issuer, or borrower performance. It arises any time the Bank's funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet. The Bank considers its loan portfolio as the major source of credit risk. However, other sources of credit risk exist throughout the activities of the Bank, including the banking and trading books and On- and Off-Balance Sheet transactions.

Maximum Credit Risk Exposure

The table below shows LANDBANK's maximum exposure to credit risk, before and after considering eligible collateral held or other credit enhancements.

On-Balance Sheet (BS) Items	2018 (In ₱ Millions)							
	CEA	0%	20%	50%	75%	100%	150%	CRWA
Cash on Hand	**36,941**	**36,941**						
Checks & Other Cash Items (COCI)	**51**		**51**					**10**
Due from Bangko Sentral ng Pilipinas (BSP)	**334,804**	**334,804**						
Due from Other Banks	**4,718**		**67**	**4,563**		**88**		**2,383**
Financial Assets Designated at FVTPL	**912**					**912**		**912**
Available-for-Sale (AFS) Financial Assets	**92,902**	**65,926**		**22,898**		**4,078**		**15,527**
Held-to-Maturity (HTM) Financial Assets	**496,134**	**462,778**		**15,075**		**18,281**		**25,819**
Loans & Receivables	**723,222**		**7,652**	**16,295**	**87,501**	**606,498**	**5,276**	**689,716**
1. Interbank Loans Receivables	48,449		7,364	10,732		30,323	30	37,207
2. Loans & Receivables – Others								
a. LGUs & Public Sector Entities	33,044					33,044		33,044
b. Government Corporation	1,988					1,988		1,988
c. Corporates	511,703					511,703		511,703
d. Microfinance/Small & Medium Enterprise	87,995		288		87,501	206		65,889
e. Loans to individuals	34,574			5,563		29,011		31,793
3. Defaulted Exposures	5,469					223	5,246	8,092
Other Loans and Receivables [1/]	**50,549**	**50,549**						**0**
Sales Contract Receivable (SCR)	**890**					**425**	**465**	**1,123**
Real & Other Properties Acquired (ROPA)	**4,855**						**4,855**	**7,283**
Total Exposures Excluding Other Assets	**1,745,978**	**950,998**	**7,770**	**58,831**	**87,501**	**630,282**	**10,596**	**742,771**
Add: Other Assets	**17,511**	**17**				**17,494**		**17,494**
Total On-BS RWA not covered by CRM								**72**
Total On-BS Exposures	**1,763,489**	**951,015**	**7,770**	**58,831**	**87,501**	**647,776**	**10,596**	**760,339**

1/ Arising from Repurchase Agreements, Certificates of Assignment/Participation with Recourse, and Securities Lending and Borrowing Transactions

Off-BS Items	2018 (In ₱ Millions)							
	CEA	0%	20%	50%	75%	100%	150%	CRWA
A. Direct credit substitutes	4,810			158		4,652		4,731
B. Transaction-related contingencies	59,888					59,888		59,888
C. Trade-related contingencies	2,308			1,126		1,182		1,745
D. Other commitments								-
Total Off-BS Exposures	67,006	-	-	1,284	-	65,722	-	66,364
Counterparty RWA In The Trading Book	CEA	0%	20%	50%	75%	100%	150%	CRWA
Derivative Exposures	231		10	85		136		181
TOTAL	1,830,726	951,015	7,780	60,200	87,501	713,634	10,596	826,882

CEA: **C**redit **E**quivalent **A**mount **CRM**: **C**redit **R**isk **M**itigant **RWA**: **R**isk **W**eighted **A**ssets **CRWA**: Credit Risk Weighted Assets

Credit Exposures and Credit-Related Commitments

As of 31 December 2018, LANDBANK's Gross Loans & Receivables (GLR) amounted to ₱723,222 Million, net of credit risk mitigation which consists mainly of prime collaterals such as deposit holdout, government securities (GS) and sovereign guarantees. Net of Loans & Receivables, Corporates stood at ₱511,703 Million (70.75%), followed by Micro, Small & Medium Enterprises (MSMEs) at ₱87,995 Million (12.17%), Government Corporation/Entities at ₱35,032 Million (4.84%) and Loans to Individuals at ₱34,574 Million (4.78%). The Bank also holds substantial receivables arising from Repurchase Agreements aggregating ₱50,549 Million. The ₱66,364 Million credit risk weighted asset of net Off-balance Sheet exposures of ₱67,006 Million is computed based on respective Credit Conversion Factors. These accounts are composed mainly of general guarantees of indebtedness (e.g., financial standby letters of credit - domestic and foreign), performance bonds and warranties related to particular transactions, and contingencies arising from movement of goods and trust transactions. Outstanding derivative exposures are mainly over-the-counter foreign exchange option contracts.

The Bank's GLR reflected a Credit RWA of ₱689,716 Million following the Standardized Approach. This represents 83.41% of the Total Credit RWA of ₱826,882 Million. The Total Credit RWA increased by ₱198,521 Million or 31.59%, from ₱628,361 Million in 2017 to ₱826,882 Million in 2018. The Total Credit RWA represents 91.31% of the Bank's Aggregate RWA of ₱905,541 Million.

Management of Credit Risk

Credit RM aims to adequately manage the risk of financial loss arising from the failure of borrowers or counterparties to settle their obligations in accordance with the terms and conditions of the duly approved contractual agreement.

This involves the identification, measurement and monitoring of actual or potential losses and the implementation of appropriate measures, including the setting-up of applicable limits to keep credit risk exposures within the Bank's risk appetite or the acceptable level of credit risk that it is willing to accept in pursuit of its lending plans and programs.

The Bank also manages the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions and the correlation of credit risk with other risks. The effective management of credit risk is a critical component of a comprehensive approach to RM and essential to the long-term success of the Bank.

The Bank manages credit risk through a structured framework duly approved by the LANDBANK Board that sets out policies and procedures covering the identification, measurement, control, and monitoring of credit risk. Accordingly, approval of credit application goes through prescribed loan approving levels which, depending on the transaction or amount of loan applied, could be elevated to the Credit Committee a Management-level Committee, the Investment & Loan Committee (ILC), a Board-level Committee and up to the LANDBANK Board of Director (BoD), whenever applicable. The approval process also covers proposed remedial actions aimed at helping problem accounts regain normal operations. The Bank has put in place comprehensive set of credit policies through the issuance of Credit Manual, Credit Policy Issuances (CPIs) and Credit Bulletins. As the Bank's middle office for credit risk, the Credit Risk Management Department handles credit risk oversight, risk measurement and risk rating of borrowers.

To effectively monitor and maintain the quality of its loan portfolio, the Bank conducts annual qualitative and impairment review to assure proper loan classification and setting-up of valuation reserves. As of 31 December 2018, the Bank's net Non-Performing Loan (NPL) stood at ₱3,715 Million or 0.428% of the total loan portfolio of ₱867,217 Million.

Credit Risk Rating

LANDBANK's Credit Risk Engine System (CRES) serves as the main platform for the development of statistically-based credit rating models which will be used to conduct automated credit ratings of borrowers to help determine their credit worthiness. The Bank undertakes continuing development and implementation of the automated CRES scoring facility to provide support to its ongoing initiatives for the adoption of applicable banking regulations and global best practices and approaches in Credit Risk Management.

The said credit ratings are also needed for the eventual adoption of the advance approaches in credit RM under the Basel Committee on Banking Supervision principles on sound credit RM.

Toward this end, the Bank has developed the following statistically-based credit scoring models and their corresponding rating guidelines in 2018:

- Application Scoring Model for Individual Home Buyers
- Application Scoring Model for Salary Loan Availers
- Behavioral Scoring Model for Existing Salary Loan Availers [1]
- Behavioral Scoring Model for Local Government Units (LGUs)
- Behavioral Scoring Model for Small & Medium Enterprises (SMEs)
- Behavioral Scoring Model for Corporates
- Behavioral Scoring Model for Cooperatives
- Application Scoring Model for Credit Card [1]
- Application Scoring Model for Livelihood Mobile Loan Saver [1]
- Behavioral Scoring Model for Countryside Financial Institutions [1]

Nonetheless, the Bank shall continue to use the expert-based credit rating system for Universal Banks, Commercial Banks and Offshore Banks.

Credit Risk Monitoring

The Bank has continuously adopted a formal reporting system for the LANDBANK BoD and Senior Management to be able to monitor the credit quality of individual and loan portfolio using asset quality indicators such as past due ratio, NPL ratio, level of non-performing assets, coverage ratio, concentration risk. Clean large exposures, breaches in regulatory and internal limits, potential credit risk, Directors, Officers, Stockholders and Their Related Interests loans, Related Party Transactions and compliance with Real Estate Stress Test (REST) are intensively monitored by the ILC and the RISKCOM. The recovery of written-off accounts is also within the radar of the LANDBANK BoD and Senior Management.

Collateral and Other Credit Enhancements

The Bank adopts a cash flow lending principles and collateral is not the primary factor in granting credit. The required amount and type of collateral and other credit enhancements to mitigate credit exposures depend primarily on the results of the holistic and prudent credit assessment. When needed, the Bank diligently evaluates the enforceability, realizable value and marketability of offered collaterals. The Bank's Credit Manual and CPIs provide the guidelines on the acceptability of loan collateral and maximum valuation for each type of collateral.

[1] *Credit Scoring Models Only*

The primary collaterals accepted are Holdout on Deposits, GS, Real Estate Mortgage and Chattel Mortgage. The Bank also accepts government guarantees, cross suretyship from corporations and such other eligible guarantees. In the case of agricultural and agriculture-related loans that are vulnerable to the effects of climate and weather disturbances, borrowers are encouraged to avail of crop insurance guarantees and other insurance mechanisms to shield them from these risks.

Credit Stress Test

LANDBANK regularly conducts stress testing of individual large exposure and its loan portfolio taking into account plausible risk events with high probability of occurrence. Utilizing such scenarios with documented assumptions, tests are done to determine the magnitude of impact on the Bank's loan portfolio, on the Credit RWA, and finally on the Common Equity Tier 1 (CET1) Ratio. The stress testing also includes prescribed regulatory tests such as uniform stress test and REST. Results of the stress testing, together with the contingency plans, are escalated to the ILC and RISKCOM.

MARKET RISK MANAGEMENT

Market Risk Management Framework

LANDBANK is exposed to market risks in both its trading and non-trading banking activities. The Bank assumes market risk in market making and position taking in government securities and other debt instruments, equity, FX and other securities, as well as, in derivatives or financial instruments that derive their values from price, price fluctuations and price expectations of an underlying instrument (e.g., share, bond, FX or index). The Bank's exposure on derivatives is currently limited to currency swaps and currency forwards to manage FX exposure. The Bank is also exposed to derivatives that are embedded in some financial contracts, although, these are relatively insignificant in volume.

The Bank uses a combination of risk sensitivities, Value-at-Risk (VaR), stress testing, Capital Adequacy Ratio (CAR) and capital metrics to manage market risks and establish limits. The LANDBANK Board of Directors (BoD), RISKCOM and the Asset and Liability Committee (ALCO), define and set the various market risk limits for each trading portfolio. The Treasury and Investment Banking Sector (TIBS), particularly the Financial Markets Group (FMG) which manages the Bank's trading units as well as the Asset and Liability Management Group (ALMG) which manages the liquidity and reserve positions, conducts risk-taking activities within limits and ensures that breaches are escalated to the Senior Management for appropriate action.

A management alert is activated whenever losses during a specified period equal or exceed specified management alert level. The Bank controls and minimizes the losses that may be incurred in daily trading activities through the VaR, Management Action Triggers (MATs) and Stop Loss. Positions are monitored on a daily basis to ensure that these are maintained within established position limits to control losses. Position limits are subordinated to MATs, VaR and Stop Loss limits. Macaulay and Modified Duration are used to identify the interest rate sensitivity of the Bond Portfolio of the Bank. In the same way, certain subsidiaries of the Bank independently quantify and manage their respective market risk exposures by maintaining their respective RM system and processes in place.

Market Risk Weighted Assets (ARAC II.C.2.a)

As of 31 December 2018, the LANDBANK's Total Market RWA stood at ₱9,302 Million, broken down as follows:

In ₱ Million

PARTICULARS	AMOUNT
Interest Rate Exposure	858
Equity Exposure	0
FX Exposure	138
Options	8,306
Total Market RWA	9,302

The Total Market RWA represents 1.03% of the Bank's Aggregate RWA of ₱905,541 Million.

Managing Market Risk Components

Market Risk is associated to earnings arising from changes in interest rate, FX rates, equity and in their implied volatilities. Market risk arises in trading as well as non-trading portfolios.

The Bank manages the following key market risk components using its internal risk mitigation techniques:

1. Interest Rate Risk in the Trading Book

   Interest Rate Risk represents exposures to instruments whose values vary with the level or volatility of interest rates as a result of market making and portfolio taking. LANDBANK continues to manage interest rate risk in trading activities through factor sensitivities and the use of an effective and independently validated VaR methodology and stress testing. Government Securities (GS) and Foreign Securities (FS) are subject to daily mark-to-market and controlled through risk limits such as position, VaR, MATs and Stop Loss.

PARTICULAR	DAILY LIMIT		MAT	STOP LOSS
	POSITION	VAR		
Government	₱20,000.00 M	₱150.00 M	YTD Gain Erosion	₱200.00 M

Securities				
Foreign Securities	$20.00 M	$0.20 M	Group Target	$0.64 M

YTD: Year-to-Date

The Foreign Exchange Risk in FS are accounted under Foreign Exchange Risk Management.

2. Equity Price Risk Management

LANDBANK is exposed to equity price risk resulting from changes in the levels of volatility of equity prices, which in turn affect the value of equity securities and impacts on profit and loss of the Bank. Equities are subject to daily mark-to-market and controlled through risk limits such as position, VaR, MATs and Stop Loss.

In ₱ Million

PARTICULAR	DAILY LIMIT		MAT	STOP LOSS
	POSITION	VAR		
Equity	1,000.00	15.00	YTD Gain Erosion / Group Target	90.00

FX Risk Management

Currency risk is the risk that the value of a financial instrument will fluctuate due to changes in FX rates. Using the Philippine Peso as the functional currency, the Bank monitors daily the currency positions to ensure that these are within established limits.

The following limits are set for foreign-currency related transactions:

In $ Million

PARTICULAR	DAILY LIMIT		MAT	STOP LOSS
	POSITION	VAR		
FX Trading	50.00	0.36	YTD Gain Erosion	1.15
Foreign Securities	20.00	0.20	Group Target	0.64

LANDBANK had the following significant exposures denominated in foreign currencies as of 31 December 2018:

In $ Thousand

PARTICULAR	USD	JPY	EUR	AUD	Others	Total
ASSETS						
Fx Currency Notes & Coins on Hand (FCNCH)/ Cash and Other Cash Items (COCI)	31,162	155	110	23	194	31,644
Due from Banks	78,419	1,761	6,567	208	1,130	88,085
Held for Trading	8,076	0	0	0	0	8,076
Available For Sale Investment	867,096	0	1	0	0	867,097

In $ Thousand

PARTICULAR	USD	JPY	EUR	AUD	Others	Total
Investments in Bonds and Other Debt Instruments (IBODI)	636,840	0	0	0	0	636,840
Interbank Loans Receivable	344,000	0	0	0	0	344,000
Loans & Receivables	427,314	49,074	0	0	0	476,388
Other Assets	32,467	785	0	174	710	34,136
Gross FX Assets	2,425,374	51,775	6,678	405	2,034	2,486,266
LIABILITIES						
Deposit Liabilities	1,805,536	1,649	3,915	0	0	1,811,100
Bills Payable	268,081	292,899	28,589	0	0	589,569
Other Liabilities	130,273	1,565	1,680	174	710	134,402
Gross FX Liabilities	2,203,890	296,113	34,184	174	710	2,535,071

Market Risk Measurement and Validation Tools

1. VaR Analysis VaR is a statistical approach for measuring the potential variability of trading revenue. It is used to measure market risk in the trading book under normal conditions, estimating the potential range of loss in the market value of the trading portfolio, over a one-day period, at 99.0% confidence level, assuming a static portfolio.

   The Bank uses internally developed Historical Simulation Model in computing VaR of Equities, FS, GS and FX trading portfolios as well as FX Net Open Position which is acceptable to BSP. Moreover, the Bank continuously pursues initiatives to improve its processes. The VaR disclosure is intended for external disclosure and for regulatory purposes.

   The VaR both at portfolio and across portfolio level are monitored. Daily VaR calculations are compared against VaR limits which is the monetary amount of risk deemed tolerable by Management. The over-all VaR limit for the Treasury trading activities was set at ₱193 Million throughout 2018. The Bank also determines Diversified VaR that takes into account the diversification effect in which all losses in all securities in a portfolio are imperfectly correlated.

2. Stress Test RM models have recently become the main focus of RM efforts in the banking industry where banking activities are exposed to changes in fair value of financial instruments. However, the Bank believes that the statistical models alone do not provide reliable method of monitoring and controlling risk because these models (while relatively sophisticated) have several known limitations, at the same time, do not incorporate the potential loss caused by very unusual market events. Thus, the VaR process is complemented by Stress Testing to measure this potential risk.

   Stress Test is a RM tool used to determine the impact on earnings and capital of market movements considered "extreme", i.e., beyond "normal" occurrence. The Bank utilizes Stress Tests to estimate possible losses which the VaR does not capture.

The Bank's Portfolio Scenario Analysis (PSA) analyzes the impact of major risks that emerge out of the different scenarios, considering adverse and probable risk events, on activities related to Treasury's trading and investment portfolios. This seeks to establish how far the Bank can absorb certain levels of stress, to explore the events that could cause a significant impact to the Bank and to assess its vulnerabilities and capability to deal with shocks such as price risk, interest rate risk, FX risk and eventually, liquidity risk. Reverse Stress Tests are conducted to identify and simulate the events that can lead the Bank to a particular tail event.

Results of the PSA are also simulated in the CAR computation to be able to assess its impact on the Common Equity Tier (CET) 1 ratio set at 10.17% by BSP for LANDBANK as Domestic Systemically Important Banks (DSIB) for 2018.

3. Back-Test

   LANDBANK adopts back-testing as the basic technique in verifying the quality of risk measures used by comparing actual trading results with model-generated risk measures.

Under the back-testing process, exception occurs if mark-to-market (MTM) and trading loss exceeds the result of the model-generated risk measure. The number of exceptions is noted and the model is classified into one of the three zones as follows:

ZONE CLASSIFICATION	NUMBER OF EXCEPTIONS
safe/green zone	0-4 exceptions
non-conclusive/yellow zone	5-9 exceptions
problematic/red zone	10 or more exceptions

Back-testing results are presented to the ALCO and the RISKCOM which examine the actual performance of portfolios against VaR measures to assess model accuracy and to enhance the risk estimation process in general.

4. Model Validation

   Risk models used in managing market risk are subjected to independent model validation. The Internal Audit Group (IAG) is tasked to do model validation of RM models. The Bank has also engaged the services of a third party to conduct an independent model validation.

INTEREST RATE RISK MANAGEMENT

Interest Rate Risk in the banking book (ARAC II.C.4.a)

For interest rate risk in the banking book, a key component of LANDBANK's asset and liability policy is the management of interest rate sensitivity. Interest rate sensitivity is the relationship between market interest rates and net interest income due to the maturity or re-pricing characteristics of rate sensitive assets and liabilities.

The Bank establishes the lending rates for its loans based on a spread over its internal base rate, reflecting the average cost of funds that is generally reset at the beginning of every two weeks. Interest rates on floating rate loans are typically reset every 30 to 90 days. For deposits, regular savings and time deposit account rates are set by reference to prevailing market rates.

The Bank manages interest risk based on approved policies and guidelines, established limit setting procedures and interest rate risk limits, application of interest rate risk measurement models and reporting standards such as Re-pricing Gap/Earning-at-Risk (EaR), Economic Value of Equity (EVE)-at-Risk, Bond Duration Report and Balance Sheet Duration Report.

The two interest rate risk perspectives adopted by the Bank in measuring interest rate risk in the banking book are as follows: **(ARAC II.C.4.b)**

1. Earnings Perspective: The Bank uses the Earnings-at-Risk (EaR) Model to estimate changes in net interest income under a variety of rate scenarios over a 12 month horizon. EaR is a simulation method that analyzes the interest rate risk in the Banking Book in terms of earnings (accrual basis).

   To determine the actual behavior of Non-Maturing Deposits (NMDs) and capture the Bank's actual interest rate risk exposure, the Bank analyzed its deposit base to estimate the proportion of core and non-core deposits and determine how actual maturity or re-pricing behavior may vary from the contractual terms.

   Core Deposits are NMDs which are unlikely to re-price even under significant changes in interest rate environment while Non-Core (Volatile) Deposits are NMDs that are characterized by 'activity' as manifested by the behavior based on withdrawal patterns, computed through statistical analysis of net withdrawal levels. Non-Core NMDs are re-bucketed based on net withdrawal pattern for the past five years and Core NMDs are allocated in the 'more than five years'.

   Furthermore, to enhance the process of forecasting cash flows from prepayment of loans and come up with a more accurate analysis of risk associated to interest rate in the banking book, a portion of the loan balance originally distributed across time bands is deducted representing loan prepayment and slotted in the nearest tenor "1 to 7-day bucket" based on the result of the behavioral analysis of prepayment of loans.

   Excluded at the moment in the analysis of actual maturity or re-pricing behavior for the determination of Re-pricing Gap are the term deposits subject to early redemption risk. Early withdrawal of maturing deposits is considered an isolated case which will have minimal effect in the Bank's interest rate risk estimation.

The following table sets the Re-pricing Gap position of the Bank as of 31 December 2018 and the increase/decline in earnings for upward and downward interest rate shocks in the banking book:

In ₱ Million

PARTICULARS	Within 1 month	> 1 month to 3 months	> 3 months to 6 months	> 6 months to 12 months
Financial Assets				
Liquid Assets	51,500	0	0	0
Total Investments	4,531	5,268	6,731	30,783
Total Loans	226,238	252,277	85,078	49,207
Other Assets	10	4	3	5
Total Financial Assets	282,279	257,549	91,812	79,995
Financial Liabilities				
Deposits	438,550	152,076	40,953	12,195
Bills Payable	4,206	493	12,531	0
Others	0	0	0	0
Total Financial Liabilities	442,756	152,569	53,484	12,195
Off-Balance Sheet				
Commitments	0	0	0	(59,521)
Total Off-Balance Sheet	0	0	0	(59,521)
Re-pricing Gap	(160,477)	104,980	38,328	8,279

Change in Interest Rates - in basis points (bps)

In ₱ Million

	-300	-200	-100	-50	+50	+100	+200	+300
EaR	1,208	806	403	201	(201)	(403)	(806)	(1,208)

2. Economic Value Perspective: The Bank uses the EVE-at-Risk Model to assess the potential long-term effects of changes in interest rates over the remaining life of its holdings. This model also measures the change in the Bank's EVE for specified changes in interest rates.

The table below shows the increase (decline) in economic value for upward and downward rate shocks using the EVE-at-Risk Model to measure interest rate risk in the banking book.

Change in Interest Rates - in bps

In ₱ Million

Basis	Interest Rate Scenario		EVE-at-Risk
	Peso	Dollar	
Hypothetical	+300	+200	1,662
BIS-IRRBB Calculation	+271	+200	1,330
5-year Historical Data (Year-on-Year Change on	+251	+153	1,631

Change in Interest Rates - in bps
In ₱ Million

Basis	Interest Rate Scenario		EVE-at-Risk
	Peso	Dollar	
Average Rates at 99% Level Confidence Level)			
5-year Historical Data (Year-on-Year Change on Average Rates at 95% Level Confidence Level)	+178	+108	1,252
Market Sentiment	+100	+50	903
Market Sentiment	+50	+50	136
Market Sentiment	-50	-50	(151)
Market Sentiment	-100	-50	(1,099)
5-year Historical Data (Year-on-Year Change on Average Rates at 95% Level Confidence Level)	-178	-108	(1,811)
5-year Historical Data (Year-on-Year Change on Average Rates at 99% Level Confidence Level)	-251	-153	(2,749)
BIS-IRRBB Calculation	-271	-200	(2,404)
Hypothetical	-300	-200	(3,153)

Both viewpoints are assessed to determine the full scope of the Bank's interest rate risk exposure (especially if the Bank has significant long-term or complex interest rate risk positions). Moreover, interest risk in the Bank is not managed in isolation. Interest risk measurement systems are integrated into the Bank's general risk measurement system and results from models are interpreted in coordination with other risk exposures.

The interest rate risk exposures of the Bank are measured and reported to the ALCO and RISKCOM at least on a monthly basis under the Earnings Perspective through EaR Model and quarterly for the Economic Value Perspective using EVE-at-Risk Model.

LIQUIDITY RISK MANAGEMENT

Liquidity Risk Management Framework

The Bank's liquidity RM process is consistent with its general RM framework covering risk identification, measurement and analysis, monitoring and control. The policies and procedures that govern liquidity RM are reviewed and endorsed on a regular basis by ALCO and RISKCOM for approval of the LANDBANK Board of Directors (BoD). The basic liquidity policy of the Bank is to maintain fund availability at all times and hence, to be in a position to meet all of its obligations, in the normal course of business.

The Bank considers liquidity risk based on market and funding liquidity risk perspectives. Trading or market liquidity risk refers to the inability to unwind positions created from market, exchanges and counterparties due to temporary or permanent factors. It is the risk that the Bank cannot easily offset or eliminate a position at the market price because of inadequate market depth or through market disruption.

Market liquidity risk is also associated with the probability that large transactions may have a significant effect on market prices in markets that lack sufficient depth. This liquidity risk perspective is captured through stress testing or scenario analysis.

Funding liquidity risk is the risk that the Bank will not be able to meet efficiently both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial condition of the Bank. It occurs from the mismatch of asset, liability, exchange contract and contingent commitment maturities. Funding liquidity risk is being monitored and controlled through the classification of maturities of assets and liabilities over time bands and across functional currencies as reflected in the Liquidity Gap Report (LGR).

The LANDBANK BoD exercises oversight through RISKCOM and has delegated the responsibility of managing the overall liquidity of the Bank to the ALCO. The ALCO and the Treasury Investment Banking Sector (TIBS) are responsible for the daily implementation and monitoring of relevant variables affecting Bank's liquidity position. The ALCO reviews the assets and liabilities position on a regular basis and, in coordination with the TIBS, recommends measures to promote diversification of its liabilities according to source, instrument and currency to minimize liquidity risks resulting from concentration in funding sources.

The ALCO meets twice a month or more frequently as required by prevailing situations. The RMG, through the Treasury Risk Management Department (TRMD) is responsible for the oversight monitoring of the Bank's liquidity risk positions and ensures that reports on the Bank's current risk are prepared and provided to ALCO and RISKCOM in a timely manner.

The Bank performs a comprehensive liquidity risk measurement and control using as tool the LGR covering the bank-wide balance sheet. Risk models used in liquidity RM are subjected to independent model validation as conducted by the IAG and by a Third party.

Liquidity Risk Measurement Models

LANDBANK manages the liquidity risk using the following tools:

1. Liquidity Gap Report (LGR)

   The Bank conducts liquidity gap analysis using the LGR. This risk measurement tool is used in identifying the current liquidity position and the Bank's ability to meet future funding needs. It categorizes balance sheet items according to estimated maturities of assets and liabilities in order to determine any future mismatch such as long-term assets growing faster than long term liabilities.

   TRMD prepares RBU (Peso and FX Regular), FCDU, Consolidated (Solo-Parent) LGR on a monthly basis. Parent and Subsidiary LGR is prepared in a quarterly basis. ALCO reviews the Bank's assets and liabilities position on a regular basis and recommends measures to promote diversification of its liabilities according to sources, instruments, and currencies to minimize liquidity risks resulting from concentration in funding sources.

The table presents the assets and liabilities based on the contractual maturity, settlement and expected recovery dates:

In ₱ Thousand

PARTICULARS	LANDBANK					
	2018 (Audited)			2017 (Restated)		
	Due within 1 year	Due >1 year	Total	Due within 1 year	Due > 1 year	Total
ASSETS						
Cash & Other Cash Items	36,968,265	0	36,968,265	31,384,485	0	31,384,485
Due from BSP	331,197,576		331,197,576	305,349,912		305,349,912
Due from Other Banks	5,707,747	1,705	5,709,452	5,104,789	1,698	5,106,487
Interbank Loan Receivable	18,096,177	0	18,096,177	20,981,027	0	20,981,027
Security Purchased Under Agreement to Resell	50,019,792	0	50,019,792	52,232,925	0	52,232,925
Loans & Receivables	354,791,109	437,599,763	792,390,872	266,386,189	346,329,221	612,715,410
Investments	80,551,059	539,397,877	619,948,936	36,584,475	535,440,215	572,024,690
Other Assets	4,784,696	18,577,569	23,362,265	4,537,445	19,505,134	24,042,579
Total Assets	882,116,421	995,576,914	1,877,693,335	722,561,247	901,276,268	1,623,837,515
LIABILITIES						
Deposits						
Demand	798,036,466	0	798,036,466	709,508,966	0	709,508,966
Savings	770,728,834	0	770,728,834	645,770,968	0	645,770,968
Time	73,336,620	3,039,357	76,375,977	57,114,142	2,079,279	59,193,421
LTNCD	5,000,000	6,000,000	11,000,000		11,000,000	11,000,000
Bills Payable	5,953,285	25,303,552	31,256,837	1,998,296	22,581,812	24,580,108
Unsecure Subordinated Debt	0	0	0	0	0	0
Due to BTr, BSP, & MCs/PCIC	1,473,410	305,976	1,779,386	1,650,798	299,984	1,950,782
Due to Local Banks	0	0	0	0	0	0
Other Liabilities & Payable	955,909	52,601,640	53,557,549	258,523	57,880,960	58,139,483
Total Liabilities	1,655,484,524	87,250,525	1,742,735,049	1,416,301,693	93,842,035	1,510,143,728

The Bank also prepares on a quarterly basis the Consolidated LGR (Parent and Subsidiaries).

- Core Deposit: Core Deposit is calculated based on Net Withdrawal Pattern. It serves as a buffer that protects the Bank's assets, which are subject to interest rate risks. Core Deposit level is computed to determine the lowest deposit level that is expected to be retained under normal operating conditions. The computation involves determining the deposit mix comprising of volatile and non-volatile or Core Deposits.
- Non-Maturing Deposits: Regular savings (Total savings less High Yield Savings Accounts and Easy Savings Plus) and demand deposits are Non-Maturing Deposits (NMDs). An analysis made to proximate scenario is to

simulate behavioral withdrawal pattern. This is done by observing the pattern of deposit decays of the total end-of-day data for demand deposit account based on a five-year historical demand deposit data. The highest withdrawal percentage change is determined for each tenor bucket. The percentages are used as basis for slotting the NMD amount under the different tenors.

The following table sets forth the asset-liability gap position over the detailed time period for the Bank at carrying amounts as of 31 December 2018 based on contractual repayment arrangements which take into account the effective maturities as indicated by the deposit retention history.

In ₱ Million

PARTICULARS	Due within 3 months	Due > 3 months to 6 months	Due > 6 months to 1 year	Due > 1 year to 5 years	Due > 5 years	Total
Financial Assets						
Cash & Due from Banks	323,533	0	50,340	0	2	373,875
Total Loans	257,773	93,884	71,250	176,883	260,717	860,507
Total Investments	19,241	6,731	54,579	219,817	319,581	619,949
Other Assets	3,118	0	1,666	114	18,464	23,362
Total Assets	603,665	100,615	177,835	396,814	598,764	1,877,693
Financial Liabilities						
Deposits	30,121	972	1,603	451	1,622,994	1,656,141
Borrowings	4,651	224	1,078	8,044	17,260	31,257
Other Liabilities & Unsecured Subordinated Debt	1,473	0	956	0	52,908	55,337
Total Capital					134,958	134,958
Total Liabilities & Capital	36,245	1,196	3,637	8,495	1,828,120	1,877,693
Gap Position	567,420	99,419	174,198	388,319	(1,229,356)	

As of 31 December 2018, the Bank has in its possession a comfortable level of highly liquid assets to cover for liquidity risk that may arise in the earlier tenor buckets. Most assets (particularly loans and investments) have long term maturities. Cumulative gap after contingent accounts is positive in all buckets except in the ‘more than 5 years’ bucket. Maximum Cumulative Outflow (MCO) limit was not breached in the entire time bucket within the one year horizon.

The Bank has established guidelines for liquidity risk limit setting to enable it to properly and prudently manage and control liquidity risk, consistent with the nature and complexity of its business activities, overall level of risk and its risk appetite.

The MCO limit set by the LANDBANK Board is one of the tools used to manage and control the liquidity risk in the Bank’s gap report. It is a measure of the liquidity gap between maturing assets and liabilities. MCO limits put a cap on the total amount of negative gaps in the ‘1 day to 1 year’ time buckets.

2. Financial Ratio Analysis

Financial Ratio Analysis is another liquidity risk measurement tool that calculates and compares liquidity and leverage ratios derived from information on the Bank's financial statements against set liquidity/leverage limits.

The following table sets out the LANDBANK's liquidity ratios as of the dates indicated:

In Million except when expressed in percentage

PARTICULARS	31 December			
	2018 (Audited)	2017 (Audited)	2016 (Audited)	2015 (Audited)
Liquid Assets (*)	₱ 1,032,595	₱ 972,283	₱ 867,250	₱722,850
Financial Ratios:				
Liquid Assets to Total Assets	54.99%	59.88%	61.83%	60.08%
Liquid Assets to Total Deposits	62.35%	68.21%	70.17%	69.09%

*Note: Liquid Assets include the following:
1. Cash and other Cash Items
2. Interbank Loans
3. Government Securities
4. Tradable non-Government securities and commercial paper

3. Liquidity Stress Test

The Bank conducts regular stress testing and scenario analysis to further assess the Bank's vulnerability to liquidity risk. This activity supplements the risk models used by the Bank which simulates various probable to worst-case scenarios happening in the industry that would affect LANDBANK. The following are the stress testing conducted by the Bank:

- Liquidity Stress Test/Scenario Analysis
- Fund Source Stress Test
- FX Regular Stress Test
- FCDU Stress Test

OPERATIONAL RISK MANAGEMENT

The Bank continued to take steps to strengthen its Operational Risk Management (ORM) system to fully adhere with BSP Circular 900 (Guidelines on Operational Risk Management) and BSP Circular 951 [Guidelines on Business Continuity Management (BCM)].

To strengthen the risk management culture, Risk Management Group (RMG) has conducted series of awareness cascading sessions on ORM and BCM to various units of the Bank.

Among the major improvement to adhere with BSP Circular 900 and to intensify risk assessment process are the following:

- Enhancement of Risk and Control Self-Assessment (RCSA) templates

- Revision of the Implementing Guidelines on RCSA for Process Risk and People Risk
- Implementation of top-level Key Risk Indicators (KRIs)
- Development of Risk and Opportunity Assessment (ROA) template and guidelines
- Enhancement of the risk assessment process of Bank products, programs, services, processes and other activities, including outsourcing.

The Bank also conducts regular review and continuous enhancement of the following ORM frameworks:

- Business Process Risk Management Framework (BPRMF)
- People Risk Management Framework (PRMF)
- Business Continuity Management Framework (BCMF)
- Legal Risk Management Framework (LRMF)

The frameworks aim to establish and implement RM strategies and best practices to effectively address and manage operational risk that are embedded in the day-to-day operations.

The Bank has a BCM Program which is compliant with BSP Circular 951 and ISO 22301:2012 (Business Continuity Management System). The BCM Framework is composed of the Bank's BCM Governance and Process.

As part of the Bank's BCM process, the Bank conducts annual Business Impact Analysis (BIA) and Business Continuity Risk Assessment (BCRA) to prioritize risks and implement corresponding controls, and identify and prioritize the Bank's most critical functions and IT systems in case of disruptions. Also, Business Continuity Plan (BCP) components are being reviewed, updated and tested annually to ensure validity and effectiveness of the Plans. The Bank has also supported the continuing education of officers and staff of Risk Management Group (RMG) through the certification programs where employees were licensed as Certified Risk Analysts (CRAs), Certified Risk Manager (CRM) and the BRMD Head passed the Bank Risk Management – Module 1 certification exam of Asian Institute of Chartered Banks (AICB).

Embedding of ORM across the institution is manifested with the BUs becoming aware of the specific operational risks they are confronted with. Taking a proactive stance in managing and escalating breaches as soon as they occur strengthens governance and enhances the oversight of these risks. BUs conduct self-assessment using various RM tools such as RCSA, BIA, BCRA, BCQ, heat maps, and hazard maps to quantify potential operational losses which serve as their dashboard in monitoring operational risk. RMG regularly monitors and escalate to RISKCOM and Management Committee (MANCOM) the 2018 actual losses versus estimated losses.

Operational Risk Exposure

LANDBANK uses the Basic Indicator Approach in calculating the capital charge for operational risk under Pillar 1. The average Gross Revenue of the Bank for the last three years is used to calculate the Operational RWA. Thus, with the Gross Revenue of the Bank consistently increase with business expansion, the Operational RWA has also been increasing annually. As of 31 December 2018, the Bank's Total Operational RWA using the Basic Indicator Approach was **₱69,356 Million** or **7.66%** of the Bank's Aggregate RWA of **₱905,541 Million**.

Cognizant that Gross Revenues (BSP proxy data) are but a shadow indicator of operational risks in the Basic Indicator Approach, LANDBANK conducts a simulation of the computation of the estimated losses using the Bank's actual historical losses and estimated probability of occurrence to determine the variance from the Basic Indicator Approach model. Self-risk assessment of the five sub-risks of operational risk (people, process, systems/IT, event and legal risks) shows that the total estimated loss is way below the Total Operational RWA under the Basic Indicator Approach.

INFORMATION SECURITY AND TECHNOLOGY RISK MANAGEMENT

The LANDBANK Board and Senior Management take the lead in the governance of information security and technology risk management and ensure that the Bank's strategic plans are aligned with business strategies by employing organizational, technical, and physical controls such as:

- Enhancement of and compliance with Bank policies and guidelines on InfoSec and IT risk management
- Strict observance of procurement process and monitoring of the performance of service providers
- Conduct of internal audit and external assessment of IT operations and security posture
- Conduct of awareness campaigns on information security and data privacy through various briefings, cascading sessions, and other communication channels
- Conduct of risk assessment on the Bank's information assets and processes
- Enhancement and testing of BCP and Disaster Recovery Plan (DRP) for critical banking processes and operations
- Development and testing of Cyber Resiliency Plan through tabletop exercises
- Continued upgrading of IT infrastructure and electronic banking channels
- Implementation of multi-factor authentication for high-risk transactions in e-banking channels
- Development of systems to comply with legal and regulatory requirements and to keep abreast with evolving technologies
- Issuance and posting of the Bank's Data Privacy Statement on the official website and in conspicuous areas in the branches
- Transfer of designation and functions of the Data Protection Officer (DPO) from the RMG to the Legal Services Group
- Attendance of the Bank's DPO, InfoSec and IT personnel to technical and soft skills trainings for the required skills and competence

The Bank employed the services of third-party consultants to assess the level of compliance and help the Bank in achieving certifications for the Payment Card Industry Data Security Standard (PCI DSS) and Integrated Management System (IMS). During these engagements, possible improvements on the Bank's systems and operations have been identified and acted upon to comply with the requirements of the standards. Major improvements include formulation and review of InfoSec and IT related policies and procedures, strengthening of security controls, enhancement of asset management and inventory, among others.