Citibank, N.A. Bangkok Branch

Basel III Pillar 3

Capital and Liquidity Management Disclosure

31 December 2019

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1. Scope of Application

The Capital Requirements Directive, often referred to as Basel III, introduced the need for banks operating under this new legislative framework to publish certain information relating to their risk management and capital adequacy. The disclosure of this information is known as Pillar 3 and is designed to complement the two other pillars of the Basel III, namely the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2). The disclosure has been prepared in accordance with the BOT Notification No. SorNorSor. 4/2556 Re : Disclosure of Information on Capital Fund Maintenance for Commercial Banks which requires foreign banks to disclose information of the branch in Thailand only. Therefore, this disclosure reflects only information of the Bangkok Branch. Citi's capital and global risk management is presented in Citi Annual Report 2019 at http://www.citigroup.com/citi/investor/corporate_governance.html.

In December 2008, Citibank, N.A. Bangkok Branch (hereafter referred to as "the Bank" or "Citibank") adopted the Standardized Approach (SA) for credit and operational risks and the Hybrid Approach between Standardized and Internal Model Approaches for market risk.

2. Capital

2.1 Capital Structure

Capital has historically generated by cash injections from Citibank Head Office and net earnings retained in Thailand. As of December 31, 2019, Citibank recorded total capital of Baht 25,486 million. The detailed capital composition can be found in the "Capital Structure" table.

2.2 Capital Adequacy

Generally, capital is used primarily to support assets in Citibank's businesses and to absorb credit, market and operational risks. The Bank's capital management framework is designed to ensure that Citibank maintains sufficient capital consistent with the Bank's risk profile and all applicable regulatory standards and guidelines. Citibank, N.A., Bangkok Branch is a branch of Citigroup's main global banking entity. As such, it does not have its own Board of Directors as one exists at the parent level. The Country Coordinating Committee (CCC) thus assumes much of the responsibilities of a Board of Directors at the local level. Senior Management oversight of the capital adequacy assessment process lies with the CCC which approves polices concerning capital adequacy and strategies by evaluating business plans and risk levels.

3. Risk Exposure and Assessment

Credit Policy and Procedure Manuals are the doctrines by which the Bank's risk management functions. The objective of these policies is to implement risk management and control practices such that consistent criteria are used to appraise similar risks; leading to prudent management of the overall risk profile, and optimization of risk versus return. The policies and principles for risk and control assessment require that appropriate controls and tools are in place to manage, measure and actively mitigate risks taken by the Bank. The global policies and local programs and procedures contain limits and control framework which set guidelines to ensure that business concentrations are within the Bank's risk and loss tolerance levels.

The Country Senior Management's objectives, budgets, portfolios, and investments must be prudent and reflect their view of risk and reward arising from market conditions and should dynamically adjust these strategies and budgets to fit changing environments. Business concentrations must be managed with the goal of a diversified portfolio and risks undertaken should not be disproportionate to the Bank's capital. Stress testing is a core responsibility which acts as one of the many preventive measures of extreme event risks. Significant stress losses will be escalated to the Country Senior Management.

ICAAP Material Risk Managers must be vigilant in ensuring that they communicate and escalate risk awareness to other parts of the organization that may be impacted by developments in their respective risk domains. All business activity must report into the Compliance/Control, Risk, or Finance systems to ensure they are properly tracked and monitored. Material Risk Managers must periodically review communications with or actions by regulators, any material legal affairs of Citibank, and compliance with applicable laws on all Risk Management related matters. Internal Audit and Control units will test important risks as per their audit plans. Each business unit/function will perform self-assessments of their important risks on a quarterly basis. Any material issues raised by internal control, audit, or other reviews and steps taken to address any such issues should be highlighted to Senior Management.

Internal Audit (IA) has the responsibility to perform the internal, independent audit and control review function for the Bank, covering all businesses, functions, and geographies. Audit results are communicated to appropriate senior management personnel. IA examines and evaluates the adequacy and effectiveness of the Bank system of internal controls and risk management processes and the quality of performance in carrying out assigned responsibilities to achieve the Bank's stated goals and objectives. It also tracks the development and implementation of corrective actions to address significant control weaknesses identified.

4. <u>Risk Categorization</u>

4.1 Credit Risk

4.1.1 Credit Risk Management

<u>*Credit Risk Management Processes*</u>

The credit risk management process at Citibank relies on corporate-wide standards to ensure consistency and integrity, with business-specific policies and practices to ensure applicability and ownership, while keeping in mind at all times, the local regulatory framework under which we operate in.

Risk tolerance is governed by the Bank's credit and product polices as well as Local Operating Procedures (LOP). The policies document the core standards and methodology for identifying, measuring, approving, and reporting risk in the respective businesses and drive escalation of larger exposures and exceptions to higher approval levels. Credit authority levels, delegation processes, approval processes for portfolio classification, product and transaction approval, other types of required approvals, and the appointment of credit officers and their responsibilities are defined in these documents. LOP's were developed locally to incorporate applicable local regulations, market practices, and requirements and are used in conjunction with the credit policies.

For Retail, the Global Consumer Credit and Fraud Risk Policy Manual (GCCFRP) and Local Product Citi Business Credit Policy & Procedure Manual (BCPPM) define how credit risk is managed for the retail portfolios. The GCCFRP and BCPPM document policies that are applicable across the credit cycle (i.e. acquisition, portfolio management, fraud, authorization, collections and risk mitigation). All policies and programs are developed keeping in mind local and US regulations and are governed on the principles of prudence and long-term viability. Product programs need formal approval from country and regional risk management along with business, compliance and legal concurrence. Credit Officers and Senior Credit Officers are independent from the business.

Structure and Responsibilities of Credit Risk Management Units

Credit risk is managed across designated functional units that focus on credit analysis, credit approval, early warning monitoring, remedial management, and portfolio monitoring. The respective credit policies provide guidance on the minimum requirements for each function, thereby ensuring consistent credit risk management standards across the Bank.

Credit Risk Measurement, Monitoring, and Reporting Systems

Each unit follows established processes that quantify and measure credit risk in addition to reporting it independently from the respective business, both in report format and data that is aggregated in bank-wide credit risk systems. Indicators used to measure, monitor, and report risk include but are not limited to the below.

- Portfolio and obligor limits;
- Leading indicators (i.e. applications, approvals, approval rate, approval by score range, and overrides and exceptions to credit acceptance standards);
- Stress test results
- Portfolio profitability measures;
- Cost of credit and non-performing loans; and
- Past due and impairment indicators.

Credit Risk Hedging or Mitigation

Hedging and mitigating credit risk is done through eligible collateral, personal and/or corporate guarantees, and derivatives. Hedges and risk mitigation are subject to the applicable credit policies.

Credit Risk Control limits

Each individual credit exposure is subject to an obligor limit as applicable to the obligor profile which helps maintain a diversified credit portfolio of risk assets. In addition, concentration reporting provides cross section views into the portfolio by name or across names. and

- Tenor exposure reporting.

Past due, Impairment and Provision

Wholesale

An integral part of the monitoring process is the early identification of credit deterioration which, in turn, allows for the proactive workout of the exposure and prompt execution of risk mitigation techniques. Classification is the process of categorizing facilities based on credit quality and/or the ability or willingness of the obligor to honor its commitments. Classification does not necessarily equate to a loss on a facility. It may merely signify that the facility is under pressure due to a variety of causes, and the facility requires special attention to ensure that Citibank does not experience a loss. Classification should thus be viewed as consisting of two levels:

Problem Levels: Classification categories Pass Watch List, Special Mention and Substandard (accrual) generally denote that a facility has a potential or well-defined weakness that requires attention.

- Pass Watch List is considered if a facility exhibits potential weakness but that weakness is mitigated by current and projected financial and operating strength of the obligor.
- Special Mention is considered if there is a potential weakness that deserves management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospect of the facility.
- Substandard facility has a well-defined weakness and could jeopardize repayment capacity.

Loss Levels: Classification categories Substandard (non-accrual), Doubtful and Loss indicate that the likelihood of actual loss is high. Substandard (non-accrual) and Doubtful identifies a potential loss, while Loss identifies an actual loss. In most cases, classification of Substandard (non-accrual) and Doubtful requires an additional reserve build and Loss, an actual write-off. Early identification and proactive management of facilities in the Special Mention and Substandard (accrual) classification can result in lower exposure in the event that the facility continues to deteriorate to Substandard Non-accrual, Doubtful, or Loss.

The equivalent BOT classifications are as follows.

BOT Classification	**Citibank Classification**
Pass	Pass, Pass Watch List
Special Mention	Special Mention, Substandard (Accrual)
Substandard	Substandard (Non-accrual)
Doubtful	Doubtful and past due > 180 days
Doubtful of Loss	Doubtful and past due > 360 days, Loss
Loss	Loss

Retail

Provision for loans has a similar process for monitoring impairment as related to loan delinquency. The Bank applies percentage of BOT minimum requirement at each stage of delinquency and calculating provisions accordingly.

Days past due (DPD) that are used by the Bank to assess the level of individual impairment provision required:

BOT Classification	**Citibank Classification**
Pass	Past (DPD 0-29)
Special Mention	Special Mention (DPD30-89)
Substandard	Substandard (DPD 90-179)
Doubtful	Doubt (DPD 180-364)
Doubtful of Loss	Doubtful of Loss (DPD > 365)

Calculation of general and specific provisions is done in compliance with regulatory guidelines. Classifications are based principally on the days past due. The Bank also factors in future risks from the external environment to enhance reserves if required.

The loss provisioning procedures and quarterly assessment are reviewed and approved by Country Senior Management (Collections Director, Risk Management Director and CFO) with the aim of ensuring adequate reserves at all times.

Starting from January 1, 2020, IFRS/TFRS 9 methodology will be adopted as per the Bank of Thailand notification Sor.Nor.Sor 23/2561. On initial adoptionof TFRS9, as at 1 January, the Branch had an excess provision of loan amount, the excess provision would be recognised in profit or loss on a straight-line basis over 5 years. The excess provision would be treated as general provision. This practice follows the Bank of Thailand's guideline per BOT/For.Nor.Sor.(23)Wor.1603/2562.

4.1.2 Credit risk exposures

Credit Ratings and Credit Quality Grade

In compliance with BOT guidelines and the credit policies, ratings by Moody's Investors Service and Standard & Poor's, where available, are used to rate obligors.

For the purposes of risk-weighting, S&P and Moody's ratings are assigned to an equivalent BOT rating with a corresponding risk weight.

Long-term Credit Quality Grades	S&P	Moody's
1	AAA AA+ AA AA-	Aaa Aa1 Aa2 Aa3
2	A+ A A-	A1 A2 A3
3	BBB+ BBB BBB-	Baa1 Baa2 Baa3
4	BB+ BB BB-	Ba1 Ba2 Ba3
5	B+ B B-	B1 B2 B3
6	CCC+ CCC CCC- CC C D	Caa1 Caa2 Caa3 Ca C

Short-term Credit Quality Grades	S&P	Moody's
1	A-1+ A-1	P-1
2	A-2	P-2
3	A-3	P-3
4	Others[1]	Others

[1] Others: includes Non-prime ratings and B and C credit ratings

4.1.3 Credit risk mitigation

Wholesale

On/Off-Balance Sheet Netting

Cross-product netting and cross-product margining can be achieved through a qualifying master netting agreement that provides for termination, cross-default, and close-out netting across multiple types of financial transactions documented under multiple agreements. Close-out netting occurs when termination values of all transactions documented under a single agreement are calculated and netted to determine a single lump sum close-out amount that is either due to, or by, a counterparty. Determination on whether a margin can function as a legally recognizable risk mitigant against exposure and thereby decrease Citibank's exposure is made on a counterparty by counterparty, agreement by agreement basis, giving consideration to such factors as the place of organization of the counterparty, the insolvency laws applicable, the location of the margin, and the relevant documentation. Margining must be covered by an ISDA, Credit Support Agreement (where appropriate) or equivalent Master Agreements if required by local law and/or as required by Legal.

Collateral Management and Valuation

Collateral and other secured assets should have perfected first priority security interest. This includes physical collateral (evaluated by an approved outside appraiser) as well as cash and financial collateral. All qualifying collateral that is pledged to support direct and contingent risk exposures must be legally enforceable and documented with insurance coverage as applicable. An approved technology system for collateral data collection and aggregation is used to track current collateral values for regulatory capital treatment. Collateral is reviewed annually or more often as deemed appropriate.

The Bank accepts physical collateral such as equipment, inventory, and real estate in addition to cash and financial collateral. Acceptable guarantees are personal, third-party, and corporate guarantees.

Risk from collateral is mitigated by accepting only approved assets. Guarantees are primarily from qualified parties that are related to obligors or acceptable third parties in the form of SBLCs. Citibank does not maintain open positions in credit derivatives markets.

Credit Concentration Risk

Credit concentration risk is mitigated through established limits on specific portfolio characteristics. such as obligor risk ratings, industry classifications, RAC deviations, and banking product types. These limits are regularly reviewed by management and escalated at certain thresholds. While the ICG portfolio can potentially have some exposure concentrations that are monitored in the monthly ICG Large Borrower & Industry Concentrations memo (refer to Appendix 3), the CCB portfolio has a high degree of granularity with small exposures that are individually limited by maximum customer facility limits as mandated by the credit policies as well as the Global Risk Management office.

Retail

The Bank carefully monitors its lending activities with clearly defined and well executed credit policies that weigh long-term viability of credit programs against short term gains. Credit Policies are executed through automated processes that minimize human error and improve turnaround time to customers with regular reviews conducted to ensure that credit performance is within accepted standards.

Risk mitigation is implemented based on event-related contingencies (i.e. unemployment, reductions in income, sickness, death, etc).

There is an established set of measures, procedures, and policies for monitoring the performance of the retail asset portfolios as done through the monthly Portfolio Quality Review (PQR) which covers the following key areas.

- Leading indicators that include macroeconomic indicators, new booking characteristics, test programs, significant credit changes, and portfolios classified as "Performance Exception", and portfolio performance indicators such as delinquencies, net flows, and credit losses. Where applicable, the results are compared against historical performance, plans, and/or benchmarks;
- Monitoring of limits stipulated in approved programs;
- Concentration limits and/or caps for high-risk segments;
- Test Programs tracking;
- Deviation rates and related performance of approved exceptions;
- Reporting Key Risk Indicators (KRI) if benchmarks are triggered and actions taken, where applicable. KRI's include tripwires identified during stress testing;
- Inventory of credit changes made. For significant credit changes, performance against benchmarks is tracked for 12 months; and
- Days past due (DPD) that are used to assess the level of individual impairment provision required.

As part of credit risk mitigation in the retail portfolio, forecasts of portfolio performance over the next 12 months are done as part of the annual budget process. This process includes review of volume growth, expected losses and reserves and related profitability. The process is subject to the independent review by and concurrence of the Regional and Global Risk Management Office. Once approved, they are used as credit benchmarks to monitor portfolio performance in the next financial year.

Large consumer portfolios are also subject to annual business stress testing that puts the major asset product portfolios through a set of generated stress scenarios to determine their loss absorption capacity. This is conducted by the Country Risk Management Office in conjunction with Regional Risk and is ultimately approved by the independent Global Country Risk Management Office (GCRM).

4.2 Market Risk for Trading Book

Market risk is the potential loss resulting from a change in the current economic value of a position due to changes in the associated underlying market risk factors. Market risk can arise in earnings risk from changes in interest rates, foreign exchange rates, and equity and commodity prices as well as in their implied volatilities.

The Bank is fully integrated into the overall Citi risk and control framework, balancing senior management oversight with well-defined independent risk management functions. It is the responsibility of the senior management of Citibank to implement Citi's risk policies and practices, and to respond to the needs and issues in the bank. The Bank's market risk management process is part of the Citibank N.A. risk management process.

In terms of internal controls, Market Risk Manager (MRM), an independent group oversees market and liquidity risk and ensures the approved risk profile is consistent with Citibank's overall risk appetite. Market risk limits are approved by Regional Market Risk Manager based on discussion with business management in view of their business plans and revenue budget for the year.

Limits are monitored on a daily basis and excesses are highlighted to senior management and ratification by the traders whether to hold, reduce or close the position would be discussed together with the concurrence of MRM and the management of the Risk Taking Unit (RTU).

Trading Risk Measurement

The Bank has established limits to define risk tolerance and to keep trading risk exposure under control through several risk measurement parameters as follows:

Factor Sensitivities (FS): The FS are used to measure an instrument's sensitivity to a change in value e.g. DV01, IR Vega, FX Delta, FX Vega etc. MRM ensures that FS are calculated, monitored and an appropriate limit defined to manage the relevant risk in a trading portfolio.

Value-at-Risk (VaR): VaR estimates the potential decline in the value of a position or a portfolio, under normal market conditions, at a 99% confidence level over a 10 day holding, consistent with Basel III framework.

Stress Testing

Stress testing serves as a way in making management aware of the risks and P&L impact of extreme, abnormal movements of market variables and served as early warning triggers. In line with Basel III requirements, stress testing procedures are developed in response to business or market specific concerns and the scenarios are usually idiosyncratic in nature designed to probe the risk of each specific portfolio. Stress tests are applied to all Trading/Accrual portfolios within a specific business, as appropriate.

Back Testing

Back-testing is required by BOT on a periodic basis, in order to assess the adequacy of allocated market risk capital (derived from VaR) as a cushion to absorb losses. It is the comparison of ex-ante VaR to ex-post Profit and Loss (P&L) and excludes fees, commissions and intra-day trading from the P&L.

Capital Charge

For market risk capital charge, Citibank got approval from BOT to use a hybrid model which is a mixture of both Internal Model Approach (IMA) and Standardized Approach (SA).

The IMA is used to calculate capital charge for risk taking activities across all trading positions for all asset classes e.g. Interest Rate Risks, Foreign Exchange Risks etc. based on the VaR.

The SA is used only to calculate the capital charge arising from the funding of trading positions. The capital charge is calculated based on long or short position over a tenor bucket.

4.3 Interest Rate Risk in the Banking Book

Citibank is exposed to various risks associated with the effects of the fluctuations in the prevailing market interest rates on its financial positions and cash flows. Interest rate risk arises in both trading portfolios and non-trading portfolios. Interest rate risk primarily results from the timing differences in the re-pricing of interest-bearing assets and liabilities. It is also related to positions from non-interest bearing liabilities including shareholders' funds and current accounts, as well as from certain fixed rate loans and liabilities.

Interest rate risk is managed by the Treasury Department within limits approved by the Regional Market Risk Manager, including interest rate gap limits. The Country ALCO and Market Risk Manager ensure that it is consistently and fully applied within Citibank.

Asset and liabilities which are contractual in nature are monitored up to the re-pricing tenors. Non-interest bearing and perpetual products, e.g. current/saving accounts, credit cards, ready credit, are monitored for interest rate risk on core and non-core balances.

Interest Rate Risk Measurement

The Bank has established the following interest rate risk measurement and control limits for the Banking Book:

Interest Rate Exposure (IRE): IRE measures the potential pre-tax earnings impact, over a specified reporting period, for the accrual positions, from a defined change in the yield curve. It is a forward-looking measure.

Other comprehensive Income (OCI) Risk: OCI Risk measures the potential impact to the OCI accounts of a specified change in interest rates for the Available-for-Sale (AFS) portfolios. It is measured on a currency-by-currency basis for all portfolios that have significant AFS.

Stress Testing

Stress testing serves as a way in making management aware of the risks and P&L impact of extreme, abnormal movements of market variables and served as early warning triggers.

4.4 Equity Risk

Citibank did not engage in equity transaction during 2019.

4.5 Operational Risk

Operational risk is defined as the risk of loss resulting from inadequacy or failure of a commercial bank's internal control processes, people and systems, or from external events, including legal risk (e.g. prosecutorial or litigation risk or authority-imposed fine as well as any loss stemming from out of court settlement agreement, etc.). However, this type of risk excludes strategic risk and reputational risk (BOT's notification No.SorNorSor. 95/2551).

Source of Operational Risk

There are five Event Types (Categories) used by the Bank for categorizing Operational Risk:

- Clients, Products and Business Practices;
- Execution, Delivery and Process Management;
- Fraud, Theft and Unauthorized Activity;
- Employment Practices and Workplace Environment; and
- Physical Asset and Infrastructure.

The Bank's Risk Appetite Framework covers all quantitative and qualitative risks. The followings are the components of the Bank Risk Appetite Framework:

1. **Quantitative factor** continues to remain aligned with BOT's notification when arriving the minimum operational risk capital requirement using the Standardized Approach (allocate gross income into each business line).

2. **Qualitative factor** are other risks, such as strategic, reputational, legal and compliance risk, are qualitative in nature. The Bank's objective is to ensure that the risks associated with the business strategy are identified, understood, quantified, mitigated, communicated, captured in the Bank risk/ reward assessment, and consistent with the principles of Responsible Finance.

Mitigating Operational Risk

The Bank maintains an ORM Framework with a Governance Structure to ensure effective management of operational risk across Citi. The Governance Structure presents three lines of defense, as follows.

First Line of Defense: The **Business** owns all risks arising from its activities, including its Operational Risk, and is responsible for its management. For example, the operational risks of new product strategies must be understood and addressed. The Business Senior management, in partnership with the Independent Risk, must determine each Business' Key Operational Risks. In-Business Risk Management is responsible for identifying and reporting of Operational Risks as they emerge and communicating these risks to Independent Control Functions in the second line of defense, who can create a comprehensive view of Citi's risks across managed businesses.

Specific examples of programs that are in place to mitigate Operational Risk include the following.

Citibank Thailand's Continuity of Business (CoB) standards support the safety of Citi's personnel and the soundness of its businesses through consistent enterprise-wide CoB risk management practices, including but not limited to risk assessment, recovery planning, testing, and crisis management. It's Citi's objective to ensure Business and Technology senior management engagement in and oversee the CoB practices. Citi is aware that failure to plan for and mitigate the effects of business disruptions could result in financial loss, legal or regulatory repercussions, reputational damage, or even physical harm to staff. This is why Citi's CoB Standards globally are aligned to the Federal Financial Institutions Examination Council (FFIEC) IT Examination Handbook on Business Continuity Planning, the Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System, as well as the International Standards Organization's ISO 22301 and ISO 22313 Standards on Societal Security – Business Continuity Management Systems. In addition, Citi's CoB Testing Standards define the testing required for business, application, and technology recovery strategies (including End User Computing and Third Parties) for the following business disruption scenarios:

- Unavailability of or "Denial of Access" to Primary Premises (includes Unavailability of Staff)
- Unavailability or "Denial of Service" of Technology due to a Data Center or Technology Room Outage
- Unavailability of services provided by External Third-Parties

Citi applies a risk-based approach in defining CoB testing requirements by distinguishing between Business Functions and supporting applications that have been classified as "Franchise Critical" versus all others classified with a subordinate business criticality level. It is also the objective of these standards to establish oversight, at the Citi-level, of the Business processes, to ensure appropriate consistency in practices. In summary, Citi's CoB program is designed to safeguard Citi's staff, business operations, and technology under a diverse set of conditions, including the resolution to ensure effective risk management and the resiliency of Citibank Thailand's continuity of business.

In addition, as the reliance on digital banking technology grows, Citi continues to enhance its Cyber Risk mitigation with an intelligence-led and information-sharing approach to Information Security. Citi brings together experts from its Global Information Security (GIS), Citi Security & Investigative Services (CSIS), and Security Operations Center (SOC) to ensure effective collaboration, information sharing, and strategic intelligence analysis that can support, enhance, and contribute to Citi's information security risk decision-making.

Citi's information security strategy is spearheaded by The Cyber Security Fusion Center (CSFC) located in three cities globally (Warren, NJ, U.S.A. Budapest, Hungary and Singapore) that connects its collective intelligence around the clock with automation, analytics, and most important, human judgment, to support Citi's three strategic objectives:

- Prevent cyber-attacks against Citi and our critical partners by deterring, detecting, predicting, planning for, and preempting threats
- Reduce Citi's vulnerability and risk to cyber-attacks by sharing new knowledge and providing relentless follow-up on priority issues
- Minimize damage and recovery time from cyber-attacks that do occur by serving as a coordinating entity

The CSFC provides real time cyber security support (including timely and actionable intelligence) to each country through daily coordinated regional cyber calls (to share the latest cyber incidents and preventative actions) and provides a forum for local country incident escalation and immediate action to mitigate cyber risk.

Second Line of Defense:- Citi's **Independent Control Functions** establish the second line of defense to oversee and challenge the effectiveness of controls and manage operational risks across Businesses, Regions, and Functions. The Second Line of Defense Control Functions include Risk Management and its Operational Risk Management (ORM) organization, Compliance, Finance, Human Resources, and Legal. Legal and Compliance additionally advise on legal and regulatory issues that affect our risk and control environment and may provide information related to certain emerging risks.

Operational Risk Management oversees the implementation of the ORM Framework for the management of operational risk across Citi. ORM Managers engage with the Business and the respective Chief Risk Officers (CROs) to ensure effective implementation of the ORM Framework by focusing on i) identification, analysis and assessment of operational risks; ii) effective challenge of key control issues and operational risks; and iii) anticipation and mitigation of operational risk events. ORM ensures that validation and verification is established for critical framework elements.

For all products subject to review pursuant to the Citi New or Complex Products, Services and Business Line Policy or any other such new product approval policy or standard, relevant operational risks should be identified and documented where approval is required to ensure that these risks, both initially and ongoing, are properly considered, controlled, and, where needed, approved by Operational Risk Management and/or Independent Risk Management. The objective of the review, tailored as appropriate for the product or service, is to ensure that all relevant risks, including economic, operational, regulatory, reputational, and other franchise risks, are identified, evaluated, determined appropriate for the business and its customers, and that the necessary approvals, controls and accountabilities are in place. The review should include an evaluation designed to determine whether the business has the requisite expertise and resources to successfully execute on the business plan and whether the proposed new business activities pose a high risk to the business or materially alter the businesses existing risk profile with respect to these activities.

Third Line of Defense:- Internal Audit recommends enhancement on an on-going basis and provides independent assessment and evaluation.

Bank management places a very high value on maintaining an effective control environment to mitigate operational risk; therefore, a number of tools have been put in place to mitigate this risk. These tools include Managers Control Assessment (MCA), operational loss reporting, Integrated Corrective Action Plan System ("iCAPS") - which is the Citi system used for tracking issues and their associated CAPs, new product approval process and several escalation mechanisms related to operational risk.

Operational Risk Assessment

The Bank implemented Governance, Risk & Compliance (GRC) Standard and Procedure in Q2, 2019 that aim to achieve greater convergence across the company through common frameworks, assessment methodologies, processes and platforms for managing operational, compliance, conduct, legal and reputational risk and better alignment and transparency between the 1st, 2nd & 3rd Line of Defense. The Manager's Control Assessment (MCA) Standard and Procedure establish a comprehensive self-assessment program, methodology and tools to support managers in mitigation their GRC Risks through consistent :

- Risk and control identification
- Risk and control assessment and monitoring
- Residual risk management

Individual residual risks and aggregated residual risk ratings are automatically derived between Tier 1 to 5, where Tier 1 is the highest risk and Tier 5 is the lowest risk. The MCA Governance Entity Owner (MGE owner) must review the main risk drivers of the MGE Residual Risk Rating and where necessary take steps to manage residual risk down. MGE rating for Thailand was Tier 4 residual risk (low risk) since implementation in Q2, 2019. Control issues have little to no impact on the ability to meet business objectives and are mainly self-identified by management. Corrective action plans are generally short-term and compensating controls are consistently in place. Management has sufficient resources to fully correct all open issues timely.

For all products subject to review pursuant to the Citi New or Complex Products, Services and Business Line Policy or any other such new product approval policy or standard, relevant operational risks should be identified and documented where approval is required to ensure that these risks, both initially and ongoing, are properly considered, controlled.

The Bank currently uses the Standardized Approach (SA-OR) for calculating operational risk capital based on revenue, which is categorized into eight business lines according to the Bank of Thailand.

Bank of Thailand (BOT)'s requirement- Notification No. Sor.Nor.Sor. 95/2551: The calculation of value equivalent to operational risk-weighted asset by using SA-OR can be summarized in the formula below:

$$ERWA_{SA\text{-}OR} = 12.5 \times K_{SA\text{-}OR}$$

$$K_{SA\text{-}OR} = \frac{\sum_{Year1\text{-}3} \max [\sum(GI_{1\text{-}8} \times \beta_{1\text{-}8}),0]}{3}$$

Where

$ERWA_{SA\text{-}OR}$	= Value equivalent to operation risk-weighted asset under SA-OR
$K_{SA\text{-}OR}$	= Minimum capital base for operational risk under SA-OR
$GI_{1\text{-}8}$	= Annual gross income for each of eight business lines
$\beta_{1\text{-}8}$	= Constant risk value under SA-OR which is assigned a different value for each type of eight business lines

To derive operational risk, the Bank has methodology as follows;

1. Allocating gross income for each business line by local GLs with PROD MIS. One GL with PROD MIS can go to only one type of income.
2. Apply beta in below table to each GI which is standardized approach from BOT to derive operational risk for year.

Gross Income type	**Beta**
Corporate Finance	18%
Trading and Sales	18%
Retail Banking	12%
Commercial Banking	15%
Payment and Settlement	18%
Agency Services	15%
Asset Management	12%
Retail Brokerage	12%

3. Calculate average amount of current year and 2 years prior.
4. Compute operational risk weight by multiplying 12.5.

To achieve a qualitative risk appetite, the Bank is committed to effective operational risk management and has a consistent, transparent replicable methodology and framework. Our Framework ensures operational risks are adequately identified, measured, monitored, managed, and reported by all business segments. Citi implemented the Operational Risk Management Policy and related Standards to assist in consistent and effective execution globally.

The Bank's Framework is aimed at achieving:

- Effective management of operational risks by determining that a well-controlled operating environment is in place; and
- Accurate operational risk measurement and quantification of the Bank's operational risk capital.

4.6 Liquidity Risk

Liquidity Risk is the risk that the firm will not be able to efficiently meet both expected and unexpected current and future cash flow and collateral needs without adversely affecting either daily operations or the financial condition of the firm.

Thailand ALCO and Country Treasurer monitor the liquidity to maintain the flexibility required to meet financial commitments. Management of liquidity is performed on a daily basis and is monitored by the Local Markets Treasury team which includes liquidity planning and the use of ratios, limits, triggers, and stress testing with the addition of management of the transfer pricing system. To mitigate the risk associated with intraday volatility, the escalation triggers for intraday liquidity monitoring have been established. Any failure to meet the minimum funding requirement will be escalated to seniors/ALCO together with the corrective action. In addition, 5 days cash flow forecast has been provided on a daily basis to estimate short-term cash inflows/outflows. A series of standard firm wide liquidity ratios has been established to monitor the structural elements of the Bank's liquidity.

4.7 Strategic Risk

Strategic risk is the immediate and potential impact on earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to external and internal changes. This risk is a function of the compatibility of the Bank's strategic goals, the business strategies developed to achieve those goals, the resources deployed against these goals, and the quality of implementation.

Strong governance processes and controls around the approval of new products, activities, complex transactions, structures and core processes help mitigate such risks.

4.8 Reputation Risk

Reputation risk is defined as the risk to current or potential earnings or capital arising from changes in the business environment, improper implementation of decisions, or adverse perception of the image of the firm on the part of customers, counterparties, shareholders, investors, or regulators. As a service-based company, this risk is material and closely related to franchise risk. Part of the assessment process of all products and lines of business is a specific assessment of reputation risk impacting the franchise's reputational position. Among other things, the suitability and appropriateness of products offered and the intrinsic sophistication of clients in understanding the risk factors behind the same are considered. There are specified rules of conduct in both the wholesale and retail segments that ensure that the reputational and regulatory risks of the franchise are kept in mind at all times.

Mitigations for reputation risk exist across the franchise at numerous levels and functions. The Bank has a comprehensive grievance addressing mechanism where there is an escalation process to ensure that all complaints are handled with an unbiased and objective approach.
Citi's corporate reputation is a valuable corporate asset and the way information is communicated to the media and the public has an impact on its reputation. Importance is given to ensuring fair and accurate reporting of the company's business to all external stakeholders and audiences. As an internal control for reputational risk management, Citi has a strict Public Disclosure and Communication Policy that details the guidelines for speaking to the media and the sharing of

company and product information. Only authorized spokespersons can speak on behalf of or about Citi with the media, investors, securities analysts, or government officials. External communication is reviewed to ensure clarity and consistency as well as transparency. For cases where there is possible impact on Citi's reputation, senior management and Public Affairs work closely together to negate any potential impact. Internally, Public Affairs is the key guardian of Citi's reputation and there is an escalation policy in place that ensures Public Affairs is kept informed of any potential negative impact arising from internal business decisions, staff behavior, customer complaints, business partner relationships, or regulatory actions.

5. Key Internal Governance Committees / Forums

Strong governance is driven through the involvement of senior management in various governance meetings. The key meetings are detailed below:

Committee	Role of Committee	Committee Members	Frequency
Country Coordinating Committee (CCC)	A high level strategic committee in which senior managers of all businesses and functions are brought together to raise and discuss issues, including legal, compliance, regulatory, risk, control, or public relations that could affect the franchise. It also provides a clearinghouse for the escalation process up to region and corporate management.	CCO, All Business Heads, CBM, Heads of global functions (Finance, Risk, Legal, Compliance, ORM, HR, O&T, CSIS, IA, Government Affairs, Public Affairs)	Monthly
Business Risk Compliance & Control Committee (BRCC)	The purpose of the BRCC Committee is to provide a Senior Management forum to discuss significant risk, control, compliance and legal issues and events that can have a significant regulatory, reputational or financial impact towards meeting business objectives. Note: Local Regulatory Reporting Governance was merged with BRCC starting 2019.	CCO, CBM, CFO, O&T Head, Risk, All Business Heads, Legal, ORM, Compliance, HR, Government Affairs, IA, CSIS	Quarterly
Asset & Liability Committee (ALCO)	Responsible for the overall Balance Sheet & liquidity management of the franchise, including transfer pricing mechanism across the businesses.	CCO, Country Treasurer, CFO, Country Risk Management Country Officer, Market Risk Manager, Corporate Treasury, and key Business heads	At least quarterly
Country Third Party Risk Steering Committee (CTPM- SC)	The Country Third Party Risk Steering Committee's primary purpose is to ensure effective implementation, execution and prescribed governance of Third Party Management Policy & Standards within the country and businesses and drive sustainable management practices that are commensurate with the level of risk and complexity of all third party relationships.	CCO, Country Third Party Risk Manager, Country O&T Head, CCCO, Country ERC Head, Country Finance Officer, , CHRO, Country Legal Counsel, Country ORM Head, Country CBORC	No Less than Quarterly

Committee	Role of Committee	Committee Members	Frequency
AML Governance & Business Risk Committee (GBRC)	The purpose of the AML Thailand GBRC is to provide a governance structure for (i) the identification, assessment, monitoring, control and reporting of Bank Secrecy Act ("BSA"), anti-money laundering ("AML"), and economic sanctions (including, but not limited to, the Office of Foreign Assets Control sanctions) ("Sanctions") risks and (ii) the implementation, evaluation and enhancement of policies and procedures relating to compliance with relevant BSA/AML/Sanctions and country-specific rules and regulations (the "AML and Sanctions Program"). The objective is to maintain oversight of and implement enhancements to a globally standardized governance model that represents an integrated, consistent, and proactive AML and Sanctions risk management framework for program execution, risk assessment and issue escalation with the goal of preventing money laundering, sanctions violation and terrorist financing.	CCO, CBM, AMLCO, ORM, Compliance, O&T Head, Risk, Legal, Business Head (CCB, TTS, RB, CIB, Markets and Card) CBOC and Regional AML M&I FIU	Bi-monthly
Risk Management Country Forum (RMCF)	A forum for all the in-country / respective country risk management heads to provide an update for their respective businesses, deal with franchise level risk matters related to their businesses, provide risk management partnership to the CCO to ensure timely escalation and resolution of franchise level risk issues and foster best practices and knowledge sharing among all the in-country risk managers. Risk Management Country Officer (RMCO) serves as the single point of contact for all franchise level risk matters in the country.	CCO, CFO, ORM, RMCO, Consumer Risk Head, FIRM, GI&RC, Citi Commercial Bank Risk Management, Market Risk Management	Quarterly

Committee	Role of Committee	Committee Members	Frequency
Regulatory Change Management (RCM)	Review & discuss regulatory, legislative, tax & labor-associated law updates by the Compliance, Legal, Finance & HR respectively to ensure that at the country level there is broad awareness and oversight of the new and changed regulations as well as impacts associating with KRR or business including controls and methods of assessments.	Citi Country Compliance Country Legal Counsel, Compliance, Legal, AML, Compliance Testing, Country HR, Finance, Tax, ICG IBCO, GCB IBCO	Monthly
Legal Entity Management Committee (LEMC)	Bring senior managers of all businesses and functions together to raise and discuss issues important to each Legal Vehicle and support a consistent view of the Citi to regulators, minimize reputational risk, and monitor that legal entities within Thailand jurisdictions are operated as approved and in accordance with applicable laws and Citi Legal Entity Management Policy.	CFO, CCO, CBM, Country Treasurer, Country Counsel, Local Markets Treasury Head, Controller, Compliance, Tax, Product and Control Heads, H R, ORM	Semi-Annual
Accounts Review Forum (ARF)	To provide senior oversight, monitoring and guidance on the overall Balance Sheet Control framework and issues and help resolve account related issues.	O&T Head, CFO, ERC, Controller, ORM, Risk, BSS	Monthly
Consumer Credit Committee	To review credit trends across products, breaches with respect to tripwires, risk policy changes and collections strategies.	CBM, CRM, O&T Head, Collections Head, Sales & Distribution Head, Product Business Heads, Risk Policy Heads	Quarterly

Table 1 : Capital of Foreign Banks Branches

Unit : Million Baht

Item	Dec-19	Jun-19
1. Assets required to be maintained under Section 32	**25,800**	**21,743**
2. Sum of net capital for maintenance of assets under Section 32 and net balance of inter-office accounts (2.1+2.2)	**37,528**	**29,542**
2.1 Capital for maintenance of assets under Section 32	25,800	21,743
2.2 Net balance of inter-office accounts which the branch is the debtor (the creditor) to the head office and other branches located in other countries, the parent company and subsidiaries of the head office	11,728	7,799
3. Total regulatory capital (3.1 - 3.2)	**25,487**	**21,365**
3.1 Total regulatory capital before deductions (The lowest amount among item 1 item 2 and item 2.1)	25,800	21,743
3.2 Deductions	**313**	**378**

Table 2 Minimum capital requirement for credit risk classified by type of assets under the SA

Unit : Million Baht

Minimum capital requirement for credit risk classified by type of assets under the SA*	Dec-19	Jun-19
Performing claims		
1. Claims on sovereigns and central banks, multilateral development banks (MDBs),	144	176
2. Claims on financial institutions, non-central government public sector entities (PSEs) treated as claims on financial institutions, and securities firms	3,291	3,328
3. Claims on corporates, non-central government public sector entities (PSEs) treated as claims on corporate	3,876	3,861
4. Claims on retail portfolios	5,576	4,987
5. Claims on housing loans	6	7
6. Other assets	365	240
Non-performing claims	1	1
First-to-default credit derivatives and Securitisation		
Total minimum capital requirement for credit risk under the SA	**13,260**	**12,600**

Minimum capital requirement for market risk for positions in the trading book by Internal Model Approach

Unit : Million Baht

Minimum capital requirement for market risk (positions in the trading book)*	Dec-19	Jun-19
Internal model approach	454	719
Total minimum capital requirement for market risk	**454**	**719**

Minimum capital requirement for operational risk (SA)

Unit : Million Baht

Minimum capital requirement for operational risk*	Dec-19	Jun-19
Calculate by Standardised Approach	3,410	3,294
Total minimum capital requirement for operational risk	**3,410**	**3,294**

Total risk-weighted capital ratio and Tier 1 risk-weighted capital ratio

Unit : %

Ratio	Dec-19		Jun-19	
	Capital Adequecy Ratio	Minimum Adequecy Ratio*	Capital Adequecy Ratio	Minimum Adequecy Ratio*
1. Total capital to risk-weighted assets	16.37	11.00	14.15	11.00
2. Tier 1 capital to risk-weighted assets **	0	0	0	0

* Include conservation buffer 2.5% for 4-year accumulation since Jan 2016

** Disclosure only Bank that locally registered

Unit : Million Baht

Item	Dec-19	Dec-18
1. On-balance sheet assets (1.1 + 1.2 + 1.3 + 1.4)	**232,761**	**197,898**
1.1 Net loans [1/]	142,861	121,549
1.2 Net investment in debt securities [2/]	61,502	58,914
1.3 Deposits (including accrued interest receivables)	3,420	2,345
1.4 Derivative Assets	24,977	15,090
2. Off-balance sheet items [3/] (2.1 + 2.2 + 2.3)	**3,083,187**	**3,349,119**
2.1 Aval of bills, guarantees, and letter of credits	5,796	6,945
2.2 OTC derivatives	2,795,258	3,116,075
2.3 Undrawn committed line	282,133	226,099

[1/] Including accrued interest receivables and net of deferred incomes, allowances for doubtful accounts and allowances for revaluation from debt restructuring and including net loans of interbank and money market.

[2/] Exluding accrued interest receivables and net of allowances for revaluation of securities and allowances for impairment of securities.

[3/] Before multiplying credit conversion factor

Table 4 Outstanding amounts of on-balance sheet assets and off-balance sheet items before adjusted credit risk mitigation classified by country or geographic area of debtor

December 2019

Unit : Million Baht

Country or geographic area of debtor	On-balance sheet assets					Off-balance sheet items[3/]			
	Total	Net loans[1/]	Net investment in debt securities[2/]	Deposits (including accrued interest receivables)	Derivative Assets	**Total**	Aval of bills, guarantees, and letter of credits	OTC derivatives	Undrawn committed line
1. Thailand	**191,176**	106,455	61,502	3,411	19,807	**2,608,345**	5,304	2,321,328	281,713
2. Asia Pacific (exclude Thailand)	**36,755**	36,392	0	1	362	**70,346**	481	69,864	0
3. North America and Latin America	**3,833**	14	0	8	3,812	**194,003**	7	193,995	0
4. Africa and Middle East	**0**	0	0	0	0	**0**	0	0	0
5. Europe	**996**	0	0	0	996	**210,494**	3	210,071	420
Total	**232,761**	142,861	61,502	3,420	24,977	**3,083,187**	5,796	2,795,258	282,133

December 2018

Unit : Million Baht

Country or geographic area of debtor	On-balance sheet assets					Off-balance sheet items[3/]			
	Total	Net loans[1/]	Net investment in debt securities[2/]	Deposits (including accrued interest receivables)	Derivative Assets	**Total**	Aval of bills, guarantees, and letter of credits	OTC derivatives	Undrawn committed line
1. Thailand	**174,446**	101,306	58,914	2,158	12,068	**2,816,179**	5,803	2,584,278	226,098
2. Asia Pacific (exclude Thailand)	**20,636**	20,201	0	1	434	**201,771**	166	201,605	0
3. North America and Latin America	**1,870**	30	0	184	1,656	**196,622**	729	195,892	1
4. Africa and Middle East	**12**	12	0	0	0	**0**	0	0	0
5. Europe	**934**	0	0	2	932	**134,547**	247	134,300	0
Total	**197,898**	121,549	52,196	2,345	15,090	**3,349,119**	6,945	3,116,075	226,099

[1/] Including accrued interest receivables and net of deferred incomes, allowances for doubtful accounts and allowances for revaluation from debt restructuring and including net loans of interbank and money market

[2/] Excluding accrued interest receivables and net of allowances for revaluation of securities and allowances for impairment of securities

[3/] Before multiplying credit conversion factor

Table 5 Outstanding amounts of on-balance sheet assets and off balance sheet items before credit risk mitigation classified by residual maturity

Unit : Million Baht

Item	Dec-19		
	Maturity not exceeding 1 year	Maturity exceeding 1 year	**Total**
1. On-balance sheet assets (1.1 + 1.2 + 1.3 + 1.4)	**185,892**	**46,869**	**232,761**
1.1 Net loans [1/]	138,153	4,708	**142,861**
1.2 Net investment in debt securities [2/]	36,546	24,956	**61,502**
1.3 Deposits (including accrued interest receivables)	3,087	333	**3,420**
1.4 Derivative Assets	8,106	16,871	**24,977**
2. Off-balance sheet items [3/] (2.1 + 2.2 + 2.3)	**1,867,807**	**1,215,381**	**3,083,187**
2.1 Aval of bills, guarantees, and letter of credits	1,769	4,026	**5,796**
2.2 OTC derivatives	1,586,443	1,208,815	**2,795,258**
2.3 Undrawn committed line	279,594	2,539	**282,133**

Unit : Million Baht

Item	Dec-18		
	Maturity not exceeding 1 year	Maturity exceeding 1 year	**Total**
1. On-balance sheet assets (1.1 + 1.2 + 1.3)	**152,611**	**45,287**	**197,898**
1.1 Net loans [1/]	115,804	5,745	**121,549**
1.2 Net investment in debt securities [2/]	27,939	30,975	**58,914**
1.3 Deposits (including accrued interest receivables)	2,343	2	**2,345**
1.4 Derivative Assets	6,525	8,565	**15,090**
2. Off-balance sheet items [3/] (2.1 + 2.2 + 2.3)	**1,834,195**	**1,514,924**	**3,349,119**
2.1 Aval of bills, guarantees, and letter of credits	2,310	4,635	**6,945**
2.2 OTC derivatives	1,608,178	1,507,897	**3,116,075**
2.3 Undrawn committed line	223,707	2,392	**226,099**

[1/] Including accrued interest receivables and net of deferred incomes, allowances for doubtful accounts and allowances for revaluation from debt restructuring and including net loans of interbank and money market

[2/] Excluding accrued interest receivables and net of allowances for revaluation of securities and allowances for impairment of securities

[3/] Before multiplying credit conversion factor

Table 6 Outstanding amounts of net loans and investment in debt securities before adjusted by credit risk mitigation classified by country on geographical area of debtor and asset classification as prescribed by the Bank of Thailand

Dec-19

Unit : Million Baht

Country or geographic area of debtor	Net loans[1/]						Net investment in debt securities[2/]
	Normal	Special mentioned	Substandard	Doubtful	Doubtful loss	Total	
1. Thailand	104,122	2,328	0	0	5	106,455	61,502
2. Asia Pacific (exclude Thailand)	36,392	0	0	0	0	36,392	0
3. North America and Latin Amer	14	0	0	0	0	14	0
4. Africa and Middle East	0	0	0	0	0	0	0
5. Europe	0	0	0	0	0	0	0
Total	140,528	2,328	0	0	5	142,861	61,502

Dec-18

Unit : Million Baht

Country or geographic area of debtor	Net loans[1/]						Net investment in debt securities[2/]
	Normal	Special mentioned	Substandard	Doubtful	Doubtful loss	Total	
1. Thailand	98,866	2,435	0	0	5	101,306	58,914
2. Asia Pacific (exclude Thailand)	20,201	0	0		0	20,201	0
3. North America and Latin Amer	30	0	0	0	0	0	0
4. Africa and Middle East	12	0	0	0	0	0	0
5. Europe	0	0	0	0	0	0	0
Total	119,109	2,435	0	0	5	121,507	58,914

1/ Including accrued interest receivables and net of deferred incomes, allowances for doubtful accounts and allowances for revaluation from debt restructuring and including net loans of interbank and money market

2/ Excluding accrued interest receivables and net of allowances for revaluation of securities and allowances for impairment of securities

Table 7 Provisions (General provision and Specific provision) and bad debt written-off during period for loan including accrued interest receivables and investment in debt securities classified by country or geographic area

Unit : Million Baht

Country or geographic area of debtor	Dec-19 Loan including accrued interest receivables[1/]			Dec-19 Specific provision for Investment in debt securities	Dec-18 Loan including accrued interest receivables[1/]			Dec-18 Specific provision for Investment in debt securities
	General provision	Specific provision	Bad debt written-off during period		General provision	Specific provision	Bad debt written-off during period	
1. Thailand		4,083	2,283	40		3,922	2,108	6
2. Asia Pacific (exclude Thailand)		372	0	0		208	0	0
3. North America and Latin America		0	0	0		1	0	0
4. Africa and Middle East		0	0	0		0	0	0
5. Europe		0	0	0		0	0	0
Total	-	4,455	2,283	40	0	4,131	2,108	6

1/ including specific provision and bad debt written-off during the period of loan and interest recievable for interbank and money market

Table 8 Outstanding amount of loans including accrued interest receivables and net of deferred incomes before adjusted by credit risk mitigation classified by type of business

Dec-19

Unit : Million Baht

Type of business	Normal	Special mentioned	Substandard	Doubtful	Doubtful loss	**Total**
- Agriculture and mining	36	0	0	0	0	**36**
- Manufacturing and commerce	20,587	308	0	0	659	**21,554**
- Real estate business and construction	115	0	0	0	0	**115**
- Public utilities and services	2,562	75	0	0	0	**2,637**
- Housing loans	133	0	0	0	0	**133**
- Credit card	45,810	1,044	700	12	51	**47,618**
- Other Loans	20,705	1,052	801	84	80	**22,723**
- Interbank and money market items	47,110	0	0	0	0	**47,110**
- Leasing service	2,666	0	0	0	0	**2,666**
- Other Financial service	2,621	0	0	0	0	**2,621**
- Others	105	0	0	0	0	**105**
Total	**142,449**	**2,480**	**1,501**	**96**	**790**	**147,316**

Dec-18

Unit : Million Baht

Type of business	Normal	Special mentioned	Substandard	Doubtful	Doubtful loss	**Total**
- Agriculture and mining	120	0	0	0	0	**120**
- Manufacturing and commerce	20,245	357	0	0	659	**21,261**
- Real estate business and construction	89	0	0	0	0	**89**
- Public utilities and services	1,428	450	0	0	0	**1,878**
- Housing loans	192	4	0	0	0	**196**
- Credit card	41,220	853	565	21	55	**42,714**
- Other Loans	19,755	951	751	82	86	**21,625**
- Interbank and money market items	31,220	0	0	0	0	**31,220**
- Leasing service	4,547	0	0	0	0	**4,547**
- Other Financial service	1,921	0	0	0	0	**1,921**
- Others	109	0	0	0	0	**109**
Total	**120,846**	**2,615**	**1,316**	**103**	**800**	**125,680**

* Including outstanding amounts of loans and interest receivable receivables of interbank and money market

Table 9 Provisions (General provision and Specific provision) and bad debt written-off during period for loan including accrued interest receivables* classified by types of business

Unit : Million Baht

Type of business	Dec-19			Dec-18		
	General provision1/	Specific provision	Bad debt written-off during period	General provision1/	Specific provision	Bad debt written-off during period
- Agriculture and mining		1			2	
- Manufacturing and commerce		1,077	0		1,070	94
- Real estate business and construction		2			2	
- Public utilities and services		53			42	
- Housing loans		0			0	
- Credit Card		1,289	1,138		1,112	944
- Other Loans		1,454	1,144		1,457	1,070
- Interbank and money market items		471			316	
- Leasing Service		53			91	
- Other Financial Service		53			37	
- Others		2			2	
Total	-	**4,455**	**2,282**	-	**4,131**	**2,108**

* including outstanding amount of loans including accrued interest receivables of interbank and money market

1/ in aggregate amount

Table 10 Reconciliation of change in provisions (General provision and Specific provision) for loans including accrued interest receivables*

Unit : Million Baht

Items	Dec-19			Dec-18		
	General provision	Specific provision	**Total**	General provision	Specific provision	**Total**
Provisions at the beginning of the period		4,131	**4,131**		3,909	**3,909**
Bad debts written-off during the period		2,283	**2,283**		2,108	**2,108**
Increase or Decreases of provisions during the period		2,607	**2,607**		2,330	**2,330**
Other provisions (provisions for losses from foreign exchange, provisions for merger and sale of business)		0	**0**		0	**0**
Provisions at the end of the period	-	4,455	**4,455**		4,131	**4,131**

* including outstanding amount of loans including accrued interest receivables of interbank and money market

Table 11 Outstanding amounts of on-balance sheet assets and off-balance sheet items* classified by type of assets under the SA

Unit : Million Baht

Type of asset	Dec-19			Dec-18		
	On balance sheet assets	Off balance sheet item	**Total**	On balance sheet assets	Off balance sheet item	**Total**
1. Performing claims						
1.1 Claims on sovereigns and central banks, multilateral development banks (MDBs), and non-central government public sector entities (PSEs) treated as claims on sovereigns	64,604	1,653	66,257	60,439	409	60,848
1.2 Claims on financial institutions, non-central government public sector entities (PSEs) treated as claims on financial institutions, and securities firms	48,886	40,990	89,876	33,358	19,987	53,345
1.3 Claims on corporates, non-central government public sector entities (PSEs) treated as claims on corporate	29,549	6,606	36,155	29,829	6,697	36,526
1.4 claims on retail portfolios	67,592	0	67,592	61,763	0	61,763
1.5 Housing loans	133	0	133	196	0	196
1.6 Other assets	29,349	0	29,349	19,707	0	19,707
2. Non-performing claims	5	0	5	5	0	5
3. First-to-default credit derivatives and Securitisation						
Total	**240,117**	**49,249**	**289,366**	**205,297**	**27,093**	**232,390**

* After multiplying with credit conversion factor and net with Specific provision

Table 12 Outstanding amounts of on-balance sheet and credit equivalent amount of off-balance sheet after recognized credit risk mitigation for each type of assets, classified by risk weight under the Standardized Approach

Unit : Million Baht

Type of asset	December 2019													
	Rated outstanding amount							Unrated outstanding amount						
Risk weight (%)	0	20	35	50	75	100	150	0	20	35	50	75	100	150
Performing claims														
1. Claims on sovereigns and central banks, multilateral development banks (MDBs), and non-central governement public sector entities (PSEs) treated as claims on sovereigns	53,972	425	-	-	-	1,228	-							
2. Claims on financial institutions , non-central governement public sector entities (PSEs) treated as claims on financial institutions, and securities firms	-	56,496	-	15,673	-	10,781	-							
3. Claims on corporates , non-central governement public sector entities (PSEs) treated as claims on corporate	-	46	-	152	-	545	-		775		2		34,448	
4. Claims on retail portfolios												67,592		
5. Claims on housing loans										104		28		
6. Other assets								1,054					28,295	
Risk weight (%)														
Non-performing claims														5
Capital deduction items prescribed by the Bank of Thailand														

Unit : Million Baht

Type of asset	December 2018													
	Rated outstanding amount							Unrated outstanding amount						
Risk weight (%)	0	20	35	50	75	100	150	0	20	35	50	75	100	150
Performing claims														
1. Claims on sovereigns and central banks, multilateral development banks (MDBs), and non-central governement public sector entities (PSEs) treated as claims on sovereigns	53,795	-	-	-	-	334	-							
2. Claims on financial institutions , non-central governement public sector entities (PSEs) treated as claims on financial institutions, and securities firms	-	28,978	-	6,387	-	6,855	-		237				-	
3. Claims on corporates , non-central governement public sector entities (PSEs) treated as claims on corporate	-	38	-	146	-	34,279	-		604				1,203	
4. Claims on retail portfolios												61,751		
5. Claims on housing loans										167		29		
6. Other assets						93		15,938	4				3,672	
Risk weight (%)														
Non-performing claims														5
Capital deduction items prescribed by the Bank of Thailand														

Table 13 Net credit exposure under the Standardized Approach covered by collateral classified by type of assets and collateral

Unit : Million Baht

Type of asset	December 2019		December 2018	
	Eligible financial collateral[1/]	Guarantee and credit derivatives	Eligible financial collateral[1/]	Guarantee and credit derivatives
Performing assets				
1. Claims on sovereigns and central banks, multilateral development banks (MDBs), and non-central governement public sector entities (PSEs) treated as claims on	-	-	-	-
2. Claims on financial institutions , non-central governement public sector entities (PSEs) treated asclaims on financial institutions, and securities firms	6,925	-	10,889	-
3. Claims on corporates , non-central governement public sector entities (PSEs) treated as claims on corporate	187	-	254	-
4. Claims on retail portfolios	-	-	12	-
5. Claims on housing loans	-	-	-	-
6. Other assets	-	-	-	-
Non performing assets	-	-	-	-
Total	7,112	-	11,155	-

[1/] Eligible financial collateral that the Bank of Thailand allows to use for risk mitigation. Commercial banks applying the comprehensive approach shall disclose the value after haircut. Only cash and cash equivalent pledged by counterparties were used to mitigate credit risk.

For conservatism, the Bank applied gross mark to market gains from OTC derivatives with netting agreements per BOT requirements to compute credit risk.

Table 14 Minimum capital requirement for each type of market risk under the Standardized Approach

Unit : Million Baht

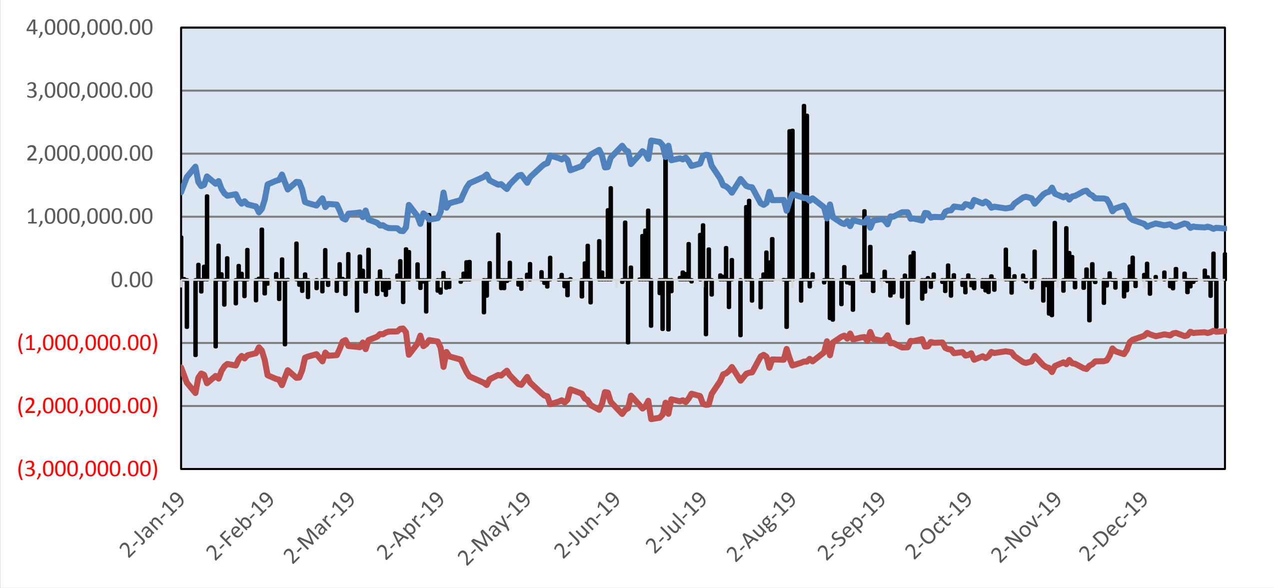
Minimum capital requirement for market risk under the standardised approach	Dec 2019	Jun 2019
Interest rate risk	0	0
Equity position risk	0	0
Foreign exchange rate risk	0	0
Commodity risk	0	0
Total minimum capital requirement	0	0

Table 15 Market risk under Internal Model Approach

Unit: Million Baht

Type of Market Risk	Dec-2019	Jun-2019
Interest rate risk		
Maximum VaR during the reporting period	61	66
Average VaR during the reporting period	36	45
Minimum VaR during the reporting period	25	24
VaR at the end of the period	25	55
Equitiy position risk		
Maximum VaR during the reporting period	-	-
Average VaR during the reporting period	-	-
Minimum VaR during the reporting period	-	-
VaR at the end of the period	-	-
Foreign exchange rate risk		
Maximum VaR during the reporting period	14	30
Average VaR during the reporting period	5	5
Minimum VaR during the reporting period	2	0
VaR at the end of the period	2	2
Commodity risk		
Maximum VaR during the reporting period	-	-
Average VaR during the reporting period	-	-
Minimum VaR during the reporting period	-	-
VaR at the end of the period	-	-
Total market risk		
Maximum VaR during the reporting period	62	68
Average VaR during the reporting period	36	46
Minimum VaR during the reporting period	25	24
VaR at the end of the period	25	55

Table 16 Back-testing result



* Commercial banks are allowed to disclose the information in form of "Graph"
** Together with an analysis of outliners from Backtesting

Backtesting Outliners

P&L date (T)	VaR (in THB MM) (T - 1)	Hypo P&L (in THB MM) (T)	Explanation
1-Apr-19	30.32	32.78	This is a positive VAR back testing break. Offshore THB LIBOR from 3M to 7Y tenors increased by 1.03 to 5.50 bps with a positive $272K DV01, resulting to a gain of $935K.
20-Jun-19	61.28	62.61	This is a positive VAR back testing break.The gain mainly due to lower Onshore THB LIBOR rate from 3M to 10Y tenors by -3 to -8 bps with a negative DV01 position, and lower THB government bonds yield
2-Aug-19	38.33	73.01	This is a positive VAR back testing break.The gain mainly due to lower THB government bonds yield by -12bps in 13Y and -9bps in 9Y
5-Aug-19	41.89	73.12	This is a positive VAR back testing break.The gain mainly due to lower THB government bonds yield by -7bps in 9Y and -6bps in 4Y
7-Aug-19	39.86	85.06	This is a positive VAR back testing break.The gain mainly due to lower THB LIBOR rate by 6bps to 15bps in 3M to 10Y tenor.
8-Aug-19	39.94	80.26	This is a positive VAR back testing break.The gain mainly due to lower THB government bonds yield by -2bps to -7bps in <4Y tenor, and -13bps in 27Y

Table 17 Equity exposures in the banking book

Unit : Million Baht

Equity exposures	December 2019	December 2018
1. 1. Equity exposures 1. Equities listed and publicly traded in the Stock Exchange - Book value - Fair value 1.2 Other equities 2. Gains (losses) of sale of equities in the reporting period 3. Net revaluation surplus(deficit) from valuation of AFS equity 4. Minimum capital requirements for equity exposures classified by the calculation methods - SA - IRB 5. Equity values for commercial banks applying IRB which the Bank of Thailand allows to use	N/A	N/A

Table 18 The effect of changes in interest rates to net earnings in the banking book

Unit : Million Baht

Currency	December 2019	December 2018
	Effect to net earnings	Effect to net earnings
THB	-348	-389
USD	18	14
EURO	0	0
Others	0	0
Total effect	-330	-375

Percentage changes in interest rates of 100 bps

Table 19 : Disclosure of capital information in transitional period under the Basel III

				Unit : Baht million
Value of capital, inclusions, adjustments and deductions for the period of December 31, 2019				Net amount of item to be included in or deducted from capital under the Basel III
In case of foreign bank branch [1/]				
2.1	Registered Capital		25,800	
2.2	less	deduction from capital of foreign bank branch	313	0
Total capital of foreign bank branch			25,487	

1 Refer to the Notification of the Bank of Thailand Re: Capital Components of Foreign Banks Branches

The deduction from capital of foreign bank branch will started year 2014 onward

Table 20 Liquidity Coverage Ratio (LCR)

Unit : Million Baht

	Average Q4'2019	Average Q4'2018
(1) Total high-quality liquid assets (HQLA)	**52,882**	**43,074**
(2) Total net cash outflows within the 30-day time horizon	**13,790**	**10,860**
(3) LCR* (%)	**384%**	**396%**
Minimum LCR as specified by the Bank of Thailand (%)	*90%*	*80%*

LCR* in Item (3) is not necessarily equal to the total high-quality liquid assets (Item (1)) divided by the total net cash outflows within the 30-day time horizon (Item (2))

Commercial banks are required to maintain the liquidity coverage ratio in accordance with the guidelines as specified by the Bank of Thailand. The LCR is expected to encourage commercial banks to have robust and adequate liquidity position so that they can survive short-term severe liquidity stress. The minimum LCR, which is the ratio of high-quality liquid assets to total net cash outflows within the 30-day time horizon, of 60% was introduced on 1 January 2016, and increased by 10% each year until it reaches 100% in 2020.

The average LCR for the 4th quarter of 2019 of the "Bank" was 384%, which was 294% higher than the minimum LCR as specified by the Bank of Thailand. This average figure was calculated from the ratio as of the end of each month which was 436% at October, 402% at November and 314% at December. The LCR consists of 2 main components, namely:

1) **High-quality liquid assets (HQLA)** include unencumbered high-quality assets with low risk and low volatility that can be easily monetized without any significant changes to their values, even in times of liquidity stress. The value of each type of HQLA is after the application of both haircuts and any applicable caps as specified by the Bank of Thailand.
The average HQLA of the "Bank" during the last quarter of 2019 was 52,882 million Baht which was Level 1 assets, namely government bonds and cash. On this, the "Bank" holds several types of high-quality liquid assets to ensure the diversification of the stock of HQLA.

2) **The amount of net cash outflows** is equal to expected cash outflows within the 30-day time horizon minus expected cash inflows within the 30-day time horizon under liquidity stress scenarios; but the expected cash inflows must not exceed 75% of the expected cash outflows.
The average net COF of the "Bank" for the 4th quarter of 2019 was 13,790 million Baht, which was the average of net cash outflows within the 30-day time horizon as at the end of October - December. The expected cash outflows on which the "Bank" focuses under the severe liquidity stress scenarios are Deposits run-off at the run-off rates as specified by the Bank of Thailand. On the other hand, expected cash inflows are mostly from loan repayments from high-quality counterparties and customers, to which the inflow rates as specified by the Bank of Thailand have been assigned.

In addition, the "Bank" also regularly examines its liquidity gaps and funding concentrations, which is part of the assessment and analysis of liquidity risk, to ensure that it has adequate liquidity to support the business. And, as the "Bank" has developed risk-monitoring tools in accordance with the internal policy and business directions so that the "Bank" can better manage its liquidity positions.

Table 21 LCR Comparison

Unit : %

	Average 2019	Average 2018
3rd quarter	**420%**	**400%**
4th quarter	**384%**	**396%**