中國銀行
BANK OF CHINA

Bank of China US Branches

Allowance for Loan and Lease Losses Policy

December 2020

Version	Date Changes Made	Author	Description of Changes
2017 v.01	January 2017	Jason Pan	Establish Policy
2017 v.02	December 2017	Jason Pan	Annual Update
2018 v.01	December 2018	Jason Pan	Annual Update
2019 v.01	December 2019	Jason Pan	Annual Update
2020 v.01	December 2020	Jason Pan	Annual Update

Identifying Information	
Title	BOC US Branches Allowance for Loan and Lease Losses Policy
Policy Owner	Risk Management Department
Contact Information	Jason Pan (jpan@bocusa.com)
Effective Date	12/16/2020
Location	I:\Policy Library
Document Type	Policy

Approved by		
Risk Management and Internal Control Committee	See RMICC meeting minutes dated 12/16/2020	
Yong Ma **EVP, Chief Risk Officer**	Signature	12/22/2020 Date
Credit Risk Committee	See CRC meeting minutes dated 12/08/2020	

Reviewed by		
Lei Zhao **SVP, Head of Credit Risk Management**	Signature	12/22/2020 Date
Calvin Cheung **VP, Credit Risk Management**	Signature	12/22/2020 Date

Prepared by		
Jason Pan **VP, Credit Risk Management**	Signature	12/22/2020 Date

Contents

1. Executive Summary

The Allowance for Loan and Lease Losses Policy (the "Policy") provides a framework to appropriately estimate loan loss reserve for Bank of China New York Branch and its satellite branches (collectively "BOC US Branches", "BOCNY", or "Branch") licensed by the Office of the Comptroller of the Currency ("OCC"):

- New York Branch ("NYB")
- Queens Branch ("QNB")
- Chicago Branch ("CHB")
- Los Angeles Branch ("LAB")

This Policy outlines the organization's approach to establishing uncollectible amounts that is used to reduce the book value of loans and leases, including the governance and activities in place to validate the methodology and to execute the calculation of loan loss reserve.

1.1. Rationale

The Allowance for Loan and Lease Losses (the "ALLL") represents the Branch's best estimate of probable incurred loss in the portfolio. Although segmentation may be applied in estimating the ALLL, including collective and individual impairment analysis, the entire allowance is available to absorb charge-offs that are confirmed in the overall portfolio. The allocation of loan loss reserve shall be consistent with the key concepts and requirements included in GAAP and existing ALLL supervisory guidance.

Adequate ALLL is an integral part of the Branch's credit risk management process and an essential mechanism to ensure that the Branch operates in a safe and sound manner. Arriving at an appropriate allowance involves a high degree of management judgment and is inevitably imprecise. Pursuant to regulatory guidance, when the estimate falls within a range, prudent, conservative, but not excessive estimate of incurred losses are appropriate. On a monthly basis, the Branch reviews and adjusts the ALLL to adequately reflect management's best estimate of incurred losses from credit exposures.

1.2. Related Policies and Procedures

- Bank of China US Branches Credit Risk Management Policy
- Bank of China US Branches Allowance for Loan and Lease Losses Methodology

2. Scope

The purpose of the Policy is to establish framework and methodology for establishing an ALLL to cover losses that are probable and estimable on the date of the evaluation and to outline the related first, second and third lines of defense responsibilities for managing ALLL.

The Policy has the following objectives:

- Provide guidance on maintaining the ALLL at an appropriate level;
- Provide guidance on concepts related to measuring incurred credit losses;
- Provide methodologies for identifying and estimating reserve on pools of loans (collective assessment), and individual classified loans (individual assessment);

The ALLL is organized into three tiers to estimate incurred credit losses. Loans and Leases subject to Tier 1 are pooled based on common risk characteristics and undergo an ALLL estimation process using a loan-level loss forecasting model. The process for pooling and measuring incurred losses is performed in accordance with US GAAP section ASC 450-20, Loss Contingencies. This can be thought of as the "baseline estimate" of incurred losses. Tier 2, referred to as the Qualitative Risk Adjustment ("QRA") addresses the risks that the models utilized to estimate the baseline incurred loss estimate (Tier 1) may not be fully reflective of the incurred losses at the estimation date due to such factors as changing economic conditions, changing portfolio composition, concentration risk, model lag or model imprecision. The QRA is used to adjust the general allowance to reflect these known limitations in the baseline models which rely on historical information for calibration. Tier 3 focuses on specific reserves applicable to impaired loans and leases, as impaired loans undergo a separate process for identification and measurement and are distinct from the remaining population of loans and leases.

3. Roles & Responsibilities

3.1. Policy Governance

Risk Management and Internal Control Committee ("RMICC")

The RMICC provides oversight of the Branch's credit risk management framework. The RMICC is responsible for approving the related risk policies, reviewing and discussing reports on credit risk management, assessing the comprehensiveness and effectiveness of BOCNY's credit risk management program, and overseeing the performance of its credit risk professionals. RMICC provides the final approval for the ALLL Methodology and this Policy.

Credit Risk Committee ("CRC")

The CRC reviews and monitors credit risk on a portfolio wide basis and makes recommendations regarding strategy. The CRC oversees the overall asset quality and make recommendations regarding credit strategy, credit risk appetite, credit risk profile(s), credit portfolio(s) including credit risk limits and credit portfolio optimization decisions; and, as required, to suggest courses of action in response to portfolio performance, and market and regulatory conditions. The CRC approves loan reserves methodology and provides the 1st level of approval for the Policy.

Credit Approval Committee ("CAC")

The CAC is a subcommittee of the CRC. The purposes of the CAC is to review and approve the individual credits and loans to support BOCNY's business; oversee the problem credit workout process; maintain a safe and sound loan portfolio; and comply with regulatory standards. The responsibilities of the CAC are to recommend collection strategy of problem credits; review and approve new credits and monitor individual credits, and extension of existing credit limits; review the Watch List credits, approve workout strategy of the problem credit and oversee its implementation; review and approve policy/procedure exceptions, control exception within limit, and report exception to CRC; review Shared National Credit result, external loan review report and approve any rating change proposed by FLUs and/or IRM; and review and approve the special reserve and Workout Plan.

3.2. Policy Implementation

Estimation of the ALLL is facilitated through BOCNY's three lines of defense. The relevant business departments for the Policy are Financial Institutions Department ("FID"), Corporate Banking Department ("CBD"), Trade Services Department ("TSD"), Commodity Business Center ("CBC"), LAB, CHB and QNB. The relevant supporting departments are Operation Service Department ("OSD") and Financial Management Department ("FMD"). Credit Risk Management Department ("CRM") and Internal Audit Department ("IAD") will act as the second and third line of defense respectively in this process.

3.2.1. First Line of Defense

OSD is responsible for the calculation of ALLL on a monthly basis employing the pool loan methodology developed by CRM. This includes the submission of ALLL to FMD for month end close process. FMD is responsible for financial statement quality control and providing loan and lease balance for OSD to reconcile the ALLL balance.

Business departments are responsible for the individual loan analysis for impaired transactions by utilizing one of the three methods prescribed in ASC 310-10; including documenting all assumptions and support of the result. The individual loan analysis should be reviewed and approved by CAC, and be included in the Supervised Asset Plan ("SAP") for periodic review.

3.2.2. Second Line of Defense

CRM is responsible for developing and overseeing ALLL methodology framework of the Branch. These include reviewing and validating the methodology on an annual basis and update the Policy as needed. In addition, CRM reviews and challenges the assumptions and appropriateness from the individual loan analysis from FLUs.

3.2.3. Internal audit

The Internal Audit Department ("IAD"), which is independent of the Branch management, is responsible for independently evaluating and assessing the effectiveness of the control environment established by BOCNY management and this Policy. These include performing regular, independent reviews of activities conducted in accordance with the Policy, and related procedures.

4. ALLL Management

4.1. Appropriate ALLL Level

BOCNY maintains the ALLL at an appropriate level and documents its analysis according to the standards set forth in the 2001 Interagency Policy Statement on the Allowance for Loan and Lease Losses with the following objectives:

- BOCNY's process for determining an appropriate level for the ALLL is based on a comprehensive, well-documented, and consistently applied methodology of its loan portfolio. The methodology considers all significant factors that affect the collectability of the portfolio and supports the credit losses estimated by this process;
- BOCNY has an effective loan review system and controls (including an effective loan classification or credit grading system) that identify, monitor, and address asset quality problems in an accurate and timely manner. To be effective, the Branch's loan review system and controls are responsive to changes in internal and external factors affecting the level of credit risk in the portfolio;
- BOCNY has adequate data capture and reporting systems to supply the information necessary to support and document its estimate of an appropriate ALLL;
- BOCNY evaluates any loss estimation method before they are employed and modifies the method's assumptions, as needed, to ensure that the resulting loss estimates are consistent with the US GAAP. To demonstrate this consistency, the Branch documents its evaluations and conclusions regarding the appropriateness of estimating credit losses with the method or other estimation tools. The Branch also documents and supports any adjustments made to the method or to the output of the method in determining the estimated credit losses;
- BOCNY promptly charges off loans, or portions of loans, that available information confirms to be uncollectible;
- BOCNY periodically validates the ALLL methodology. This validation process includes procedures for a review, by a party who is independent of the Branch's credit approval and ALLL estimation processes, of the ALLL methodology and its application in order to confirm its effectiveness. A party who is independent of these processes could be the internal audit staff, an external auditor (subject to applicable auditor independence standards), or another contracted third party from outside the institution. One party need not perform the entire analysis as the validation can be divided among various independent parties; and
- BOCNY's estimation of credit losses reflects consideration of all significant factors that affect the collectability of the portfolio as of the evaluation date.

4.2. Measurement of Estimated Credit Losses

BOCNY's ALLL methodology begins with the use of its normal loan review processes to identify whether a loan is impaired as defined by the accounting standard. The Branch documents: (1) the method and process for identifying loans to be evaluated under ASC-310-10 and (2) the analysis that resulted in an impairment decision for each loan and the determination of the impairment measurement method to be used.

Once the Branch has determined which of the three available measurement methods to use for an impaired loan under ASC-310-10, FLUs will complete the analysis and maintain the supporting documentation. The three measurement methods prescribe under ASC310-10 are the followings:

- Present value of expected future cash flows method;
- Fair value of collateral method; or
- Observable market price method.

For loans determined to be troubled collateral dependent (i.e., where payment is expected to come solely from the collateral), the fair value of the collateral method must be applied pursuant to regulatory guidance.

For loans not deemed impaired and subject to ASC 310-10, collective assessment is applied pursuant to ASC-450. The loan portfolio will be segmented by common risk characteristics for purposes of estimating incurred losses, employing the methodology developed and maintained in the ALLL methodology.

4.3. Estimation of Credit Losses in Credit Related Accounts

BOCNY evaluates credit losses for off-balance sheet credit exposures at the same time it estimates credit losses for loans. While a similar process is followed to support loss estimates related to off-balance sheet exposures, these estimated credit losses are not recorded in General Reserve but rather in Other Reserve.

When the conditions for accrual of a loss under ASC 450-20 are met, the Branch maintains and reports as a separate liability account, an allowance that is appropriate to cover estimated credit losses on off-balance sheet loan commitments, standby letters of credit, and guarantees.

Off-balance sheet exposures are converted to on-balance sheet equivalent exposure (Exposure at Default or “EAD”) by applying Credit Conversion Factors (“CCF”). The CCF represents the amount expected to be drawn on the unused line or commitment in the event of a default. The reserve factors applied to loans are then applied to the on-balance sheet equivalent risk for off-balance sheet exposures. The following outlines the CCF applied by risk rating (based upon industry observed practice and Basel Standardized Approach guidance):

- 20% CCF for exposures with original maturity of one year or less
- 50% CCF for exposures with an original maturity greater than one year in the Branch’s internal Risk Ratings (“RR”)1-5, 6-accrual
- 75% for RR 6-nonaccrual
- 100% for RR 7 and 8.

5. ALLL Methodology

5.1. ALLL on Pool Loans

BOCNY uses an incurred loss framework to estimate appropriate ALLL. The framework leverages the concept of Probability of Defaults ("PD"), Loss Given Defaults ("LGD") and the Loss Emergence Period ("LEP") adjusted PD to evaluate pool loans for incurred loss.

The credit portfolio of the Branch is segmented into 5 sub-portfolios with similar risk characteristics.

- Commercial Real Estate Mortgage;
- Commercial and Industrial loans;
- Trade Finance;
- Project Finance; and
- Residential Real Estate Mortgage.

Loans graded 1 through 5, as well as 6 – Accrual, are evaluated on a pool basis, using general reserve ratios for each grade of credit.

Risk Rating Mapping and PD Rates

BOCNY currently uses a 1-8 risk rating scale for Non-Financial Institutions and an A-H rating scale for Financial Institutions ("FI"). In the absent of internal Advance Internal Rating Base (AIRB) models, BOCNY maps the internal risk rating to Moody's published Issuer Weighted Global Default Rate for purposes of the ALLL estimation. This mapping method requires a high degree of management judgment; approach to this process should be conservative. Where BOCNY's rating aligns to more than one Moody's rating, the Branch estimated default rate may reflect the average or conservative end of the range of PDs for the mapped ratings.

Loss Emergence Period (PD Horizon)

GAAP requires that reserves be established for incurred losses. A loss is incurred when the borrower has experienced an event that will eventually manifest in a default, and depending upon the collateral coverage and guarantees, a potential write-off. The LEP is defined as the period that it takes, on average, for a borrower to transition from a loss event or series of events to confirmation of the loss through a charge-off.

In accordance with the incurred loss concept, PD rates should be adjusted by the portfolio's appropriate LEP. This can be accomplished by leveraging cumulative default rates published by Moody's for different time horizon and aligned default horizon with the respective portfolio LEP. Applying a PD that is aligned with the default horizon will result in an estimate of the incurred defaults as of the estimation date.

As PD Horizons vary by portfolio characteristics, each of the portfolios should be evaluated separately for appropriate LEP. Considerations should be given to product tenor, the type of client, post origination monitoring practices and Branch's willingness to work with borrowers during times financial weakness.

Collateral and Recoveries (LGD)

LGD is the expected value of the loss that will occur for a credit exposure in the event of a borrower default. LGD is generally measured as a percentage of exposure at default, which is the amount of the exposure expected to be outstanding at the time of default. In absence of Internal LGD model and very limited internal recovery experience, the Branch leverages LGD research from external source and use expert judgment to determine the most accurate LGD, based on the industry observed long term average recovery rate for identifiable collateral types.

5.2. Qualitative Risk Adjustment

The objective of the Qualitative Risk Adjustment (QRA) is to adjust the baseline formulaic reserve for conditions at the estimation date that may not be fully reflected in the historical data or underlying risk management practices, as well as to address general imprecision in the estimate due to limitations on the Branch's ability to empirically estimate PDs, LGDs and LEPs from its own internal data.

SEC Staff Accounting Bulletin No. 102 (SAB 102) as well as Interagency Policy Statement on the ALLL issued in 2006 (SR 06-17) identify a number of factors which could give rise to the need for a qualitative adjustment. Expert judgment is required in interpreting the modeled outcome and the drivers of credit risk, and adjusting the baseline formulaic reserve accordingly. The QRA framework should consider the impact of all factors including but not limited to the ones listed in SAB 102 and SR 06-07 and document the rational for the adjustment. The factors outlined in each of the guidance statements are summarized as follows:

FFEIC Interagency Allowance Guidance (2006)	SAB 102 (SEC) 2001
Changes in lending policies and procedures, including changes in underwriting standards and collection, charge-off, and recovery practices not considered elsewhere in estimating credit losses	Effects of any changes in risk selection and underwriting standards, and other changes in lending policies, procedures, and practices.
Changes in international, national, regional, and local economic and business conditions and developments that affect the collectability of the portfolio, including the condition of various market segments.	National and local economic trends and conditions.
Changes in the nature and volume of the portfolio and in the terms of loans.	Trends in volume and terms of loans.
Changes in the experience, ability, and depth of lending management and other relevant staff.	Experience, ability, and depth of lending management and other relevant staff.

Changes in the volume and severity of past due loans, the volume of nonaccrual loans, and the volume and severity of adversely classified or graded loans.	Levels of and trends in delinquencies and impaired loans.
Changes in the quality of the institution's loan review system.	
Changes in the value of underlying collateral for collateral-dependent loans	
The existence and effect of any concentrations of credit, and changes in the level of such concentrations.	Effects of changes in credit concentrations
The effect of other external factors such as competition and legal and regulatory requirements on the level of estimated credit losses in the institution's existing portfolio	Industry conditions

5.3. Individual Impairment Provision

The assessment of individual impairment provision is applied to all loans risk rated 6-nonaccrual, 7, 8, or deem impaired (e.g.TDR) and follows one of the three ASC-310-10 measurement methods.

- Present value of expected future cash flow method
- Fair value of collateral method
- Observable market price of a loan method

FLUs should utilize the Discount Cash Flow Template (Reference Information 7.2) to conduct the present value of expected future cash flow and fair value of collateral method analysis. When the present value method is used, FLUs should calculate the present value amount based on an estimate of the expected future cash flows of the impaired loan, discounted at the loan's effective interest rate. When the repayment of the loan is relying solely on the underlying collateral, fair value of the collateral method should be used. Factors such as cost of sale, liquidation time and quality of property should be considered.

Alternatively, if the impaired loan has an observable market price, FLUs may use the observable market price method. Pricing quotes should come from multiple reputable sources. Regardless of the method used, assumptions should be documented to support the analysis.

While first line of defense is responsible for the individual loan assessment, second line of defense is responsible for the review and challenge the support and result of the assessment. The assessment result should be approved by both CAC and Head Office (except TDR).

6. Policy Assurance Methods

6.1. Implementation Plan

Policy implementation is the responsibility of the first, second, and third lines of defense as outlined in the Policy Governance section and the RGF.

6.2. Awareness Methods

The Policy will be distributed to key stakeholders via email on an annual basis with key changes summarized. Each recipient will attest to his or her understanding of the Policy using an email response, which will be documented by the CRM and maintained by the LCD. The Policy will also be available in the BOCNY's Policy Library.

6.3. Training Methods

The CRO is responsible for establishing an environment where credit risk professionals have sufficient training and technical expertise. CRM, in partnership with Human Resources Department ("HRD"), will provide training on this Policy and their application annually or as CRM determines is necessary to promote full understanding of the Policy.

6.4. Policy Adherence Monitoring

Each applicable department head is responsible for monitoring and assessing the compliance of its procedures with this Policy. This Policy provides for the regular reporting of risk metrics, as outlined in the Risk Governance Framework. Internal Audit Department will also perform periodic monitoring of compliance through its annual testing program.

6.5. Update Requirements

Along with the requirement for an annual/periodic update, CRM is responsible for taking a proactive role in ensuring this policy remains relevant and comprehensive. This includes the monitoring of internal and external circumstances to determine if and when a policy update may be required in accordance with the Bank's Policy on Policies and Procedures.

CRM should communicate with counterparts to ensure that this Policy appropriately considers emerging risks in other risk disciplines, which may impact this Policy. This communication may take place through attendance at working groups, subcommittee meetings, and through other informal means of communication.

6.6. Consequences of Violating the Policy

Failure to comply with this Policy will be escalated to the CRO and in certain circumstances to the USRMC, which will consider appropriate remedial action. Violations of the Policy are grounds for disciplinary action, adapted to the circumstances of the particular violation and having as a primary objective furtherance of BOCNY's interest in preventing violations and making clear that violations are neither tolerated nor condoned.

6.7. Exceptions and Exemptions

Exceptions to this Policy must be justified in writing, be presented to CRM, and will require the approval of RMICC. The decision to grant a policy exception should be documented along with a discussion of the business reasons for the exception.

Documentation on requests and approvals for exceptions to the Policy must include, at a minimum:

- The nature of the exception requested
- The individual or group that is requesting the exception
- Incremental risk exposure (in frequency and amount when applicable)
- The time period during which the exception is effective
- The business reasons for granting the exception
- Mitigating factors
- Planned remediation and closure of the exception, if an effective period is provided

Responsibility for tracking policy exceptions is the responsibility of the business unit requesting the exception. Exceptions to the Policy will then be aggregated by CRM and levels and trends of exceptions will be reported to the RMICC on a quarterly basis.

7. Reference Information

7.1. External Regulations

Policy Owners should list external regulations that establish a cause for the governing policy or procedure or otherwise informed its development (material drivers). This list needs not be exhaustive of all related regulations, but should include material drivers, as defined above. References to external regulations should contain a short description and, if possible, a link to the document's location.

	Regulation and Supervisory Guidance for ALLL
OCC	Allowance for Loan and Lease Losses (ALLL) (OCC 2006-47, December 2006) https://www.occ.treas.gov/news-issuances/bulletins/2006/bulletin-2006-47.html
OCC	Allowance for Loan and Lease Losses Methodologies and Documentation (OCC 2001-37, July 2001) https://www.occ.treas.gov/news-issuances/bulletins/2001/bulletin-2001-37.html
OCC	Interagency Supervisory Guidance Addressing Certain Issues Related to Troubled Debt Restructurings

7.2. Other Related Policies/Procedures/Guidance

This section lists other Branch policies, procedures, and/or guidance which can be external, (i.e. industry best practice) that are relevant to the procedure. This section also provides a list of guidelines, white papers, work instructions, work papers, and other tools and methodologies that are supplemental to the procedure.

	Other Guidance for ALLL
US GAAP ASC 450-20	https://asc.fasb.org/imageRoot/73/6954873.pdf
ASC 310-10	http://www.fasb.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1175821014426&blobheader=application/pdf
DCF Template	I:\Policy Library