

# Capital Position

## A Strong Capital Base Founded on the Strength of the Cooperative Membership

### ■ Capital Resources

The Bank considers it a major management priority to secure a sufficiently high level of capital resources in order to maintain and strengthen its financial position. It does so to ensure the stable return of profits to its members and to enhance its role as the central bank for Japan's agricultural, fisheries and forestry cooperatives, to contribute to those industries and the development of the cooperative banking business, and to align itself with the diverse needs of its customers. The Bank has had the strong membership of the cooperative system as its base, and it has ensured a sufficient capital ratio subject to international standards. Furthermore, the Bank refinanced subordinated loans (about ¥1,400.0 billion) in line with Basel III in fiscal 2013, with the full understanding and support of its members, and has continued to improve the quality of its capital.

As a result, the Bank's total capital ratios for fiscal 2015, on a consolidated and a non-consolidated basis, have both been maintained in the 25% range (Basel III standard).

In the years ahead, the Bank faces a trend of stronger international capital regulations for financial institu-

tions. The center of the Bank's management agenda will henceforth be to strengthen its role as the central bank for the cooperatives, while maintaining its capital at a sufficiently high level, and to ensure stable return of profits to its members.

### ■ Strong Capital Base

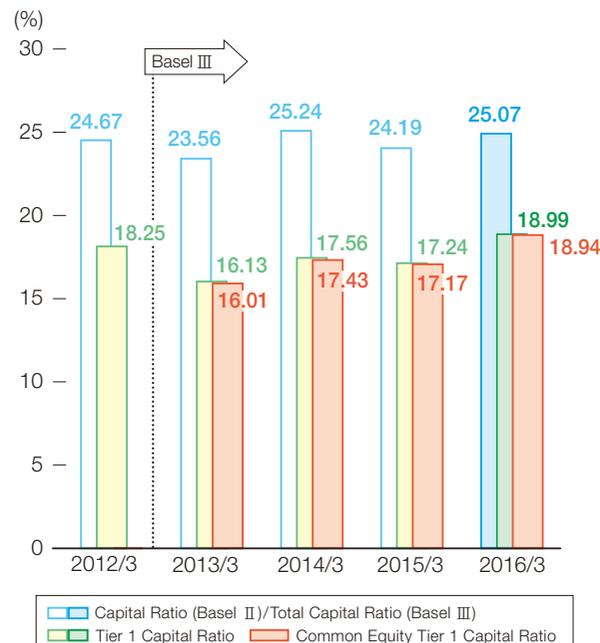
The Bank is rated by the two leading credit rating agencies in the United States—Standard & Poor's and Moody's Investors Service—and has received top-tier ratings among Japanese financial institutions. One of the main factors supporting these ratings is the strong capital base afforded by the membership of the cooperative system.

While major commercial banks in Japan have received injections of public funds to restore financial soundness and to facilitate their ability to extend credit, the Bank, based on its capital adequacy, has not applied for such an injection.

### ■ Features of Regulatory Capital Instruments

Features of regulatory capital instruments can be found in the IR Library of the Bank's website at <http://www.nochubank.or.jp/>.

### Capital Ratio (Consolidated Basis)



# Risk Management

## ■ Approach to Risk Management

Essential components of financial institution management are generation of stable profits and maintenance of an optimal portfolio. Management must also address various types of risks arising from changes in the overall business environment, especially volatility in economic conditions and financial markets. Financial institutions must also maintain a high level of public confidence by providing reliable services and maintaining financial soundness.

As a result of a major capital injection from the members following the financial crisis in 2008 and continued financial improvement since then, along with various steps taken to strengthen the Bank's risk management system, the Bank has been able to maintain a high capital adequacy ratio. In order for the Bank to fully demonstrate its competitive edge and presence and fulfill its role adequately as a financial institution involved in the agricultural, fishery and forestry industries as well as food production and consumption, further reinforce the business base of its cooperative banking business and realize stable returns to its members/member banks through the further evolution of its existing globally diversified investments, the management's task of ceaselessly upgrading its risk management framework remains crucial in maintaining management stability in the face of such changes in the environment as the progress in discussions on the tightening of international financial regulations and the mounting uncertainties in financial markets.

Risk management initiatives by the Bank are stipulated in its Basic Policies for Risk Management. The policies identify the types of risks to be managed and the basic framework for risk management, including organizational structure and methodology. In accordance with the policies, the Bank manages individual risks after assessing the materiality of risks and identifying risks to be managed. The Bank also implements integrated risk management by measuring the overall amount of risk using quantitative methods and comparing it with the Bank's capital resources.

To implement integrated risk management, the Bank has set up the Risk Management Committee. At the

committee, the Bank's management discusses important issues relating to its risk management framework and capital adequacy, and determines respective management frameworks. The committee also ensures that the total risk amount is kept within capital resource limits. The structure also requires that the integrated risk management status (such as capital and risk status, and significant decisions made by the Risk Management Committee) be reported to the Board of Directors on a regular basis. The Bank has also established a number of committees based on the type of risk, i.e. the Portfolio Management Committee (credit risk, market risk and liquidity risk), the Credit Committee, the Food and Agri Finance Committee (credit risk), and the Operational Risk Management Committee (operational risk), to enable the management to discuss and decide what measures are needed to control risks that arise in the execution of management strategy and business policies within an acceptable level. In line with the controls described above, under the risk management framework including economic capital management determined by the Risk Management Committee, and based on the need to carefully maintain a balance among return, capital and risk, in addition to due consideration for liquidity, the Bank has built and operated a forward-looking risk management framework by steadily grasping the trends in international financial regulations and exercising effective restraints.

The Bank has set up a number of divisions to manage individual types of risks, as well as a division responsible for overall risk management. The roles and responsibilities of these divisions are clearly defined in the Bank's policy. The Bank also ensures the maintenance of appropriate internal controls among these divisions.

## ■ Compliance with Basel Banking Regulations

Basel Banking Regulations are international prudential regulation standards established by the Basel Committee on Banking Supervision. They provide for standards including the requirement that the capital adequacy ratio based on the Basel III framework exceed a certain level. The Bank, which properly calculates its Basel III

capital adequacy ratio pursuant to the Notification in Japan, has adopted a calculation method based on the “Foundation Internal Ratings-Based Approach (F-IRB)” for credit risk and “The Standardized Approach (TSA)” for operational risk.

Basel III, introduced incrementally from March 2013, stipulates re-examining and reinforcement of capital regulations while introducing new liquidity regulations, in addition to leverage ratio regulations and liquidity regulations. Of these, from the end of March 2015, the Liquidity Coverage Ratio Regulations (that express the capacity to deal with large financial outflows under short-term stress conditions) as Pillar I, leverage ratio regulations as Pillar III, have been introduced. Furthermore, in December 2015, the Bank was selected as a D-SIB (Domestic Systemically Important Bank) by the Japan authorities.

The Bank has taken appropriate risk management steps including its application to Basel III targets, particularly to the capital adequacy ratio based on Basel III regulations. The Bank will continue to respond in an appropriate manner while keeping a close eye on any new regulatory requirements.

## ■ Risk Appetite

In implementing the Bank’s strategies, such as budget and management plan for attaining its business objectives, Risk Appetite reflects specific views on risk-taking, and defines what types of risk and magnitude of risk the Bank is willing to accept. Under Risk Appetite, the level of risk to be managed is also determined by various related indicators, and from both qualitative and quantitative perspectives. The proper setting of Risk Appetite by the Board of Directors is important in order to raise the effectiveness of governance in risk management.

The Bank’s Risk Appetite establishes qualitative indicators in consideration of its basic mission and role as the central bank for cooperatives, as well as quantitative indicators related to profit, capital, risk and other factors. The Bank’s portfolio management strategy (Asset Allocation Policy) for executing globally diversified investments is viewed as the manifestation of Risk Appetite.

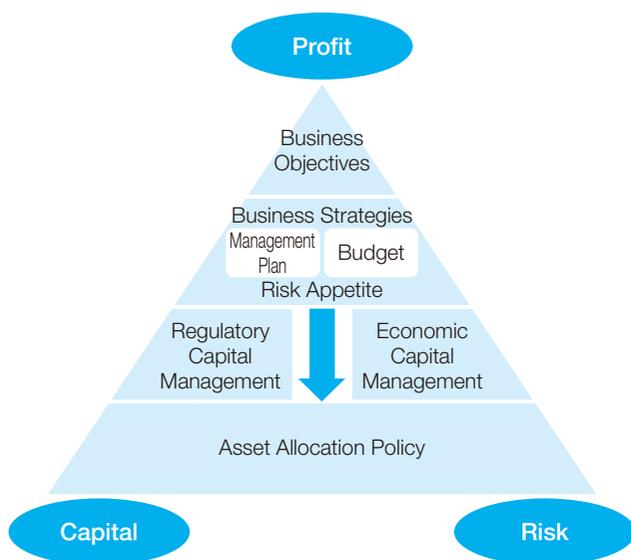
## ■ Internal Capital Adequacy Assessment Process (ICAAP)

To manage profits, capital and risk in a consistent and efficient manner, the Bank conducts the Internal Capital Adequacy Assessment Process (ICAAP), an assessment process based on the International Convergence of Capital Measurement and Capital Standards: a Revised Framework of Basel Banking Regulations. Under the ICAAP, the Bank comprehensively manages its capital resources, from both capital (the numerator of the capital adequacy ratio) and risk asset (the denominator of the capital adequacy ratio) perspectives.

The ICAAP is a process for demonstrating the appropriate management of risks the Bank faces so that it can achieve its business objectives, and a sufficient level of internal capital to cover these risks. The purpose of the ICAAP is not only to understand capital in relation to risk, but to recognize capital adequacy as a “triangular” relationship among profit, capital and risk needed to attain business objectives and strategies. Its aim is to simultaneously achieve high level of soundness and profitability through a proper balance among these three factors.

The ICAAP ascertains consistency between the amount of risk quantitatively recognized based on Risk Appetite and the capital resources managed internally. This process is achieved through two different types of frameworks to maintain capital adequacy: regulatory capital management and economic capital management.

## ICAAP Concept



### • Framework for Maintaining Capital Adequacy

The Bank establishes a budget and management plan consistent with Risk Appetite and manages finances and operations by maintaining a balance between risk and capital. Capital management checkpoints are established in order to ensure that capital adequacy is maintained above a certain level determined by Risk Appetite, even in uncertain economic and financial environments.

The checkpoints provide a framework to ensure that capital adequacy is maintained above a predetermined level regardless of volatility caused by various factors. This is done by monitoring key volatility factors and by discussing countermeasures at an early stage.

Specific checkpoints are determined according to the Bank's risk profiles. Under this mechanism, each checkpoint is determined from two perspectives of regulatory capital management and economic capital management. Appropriate levels of capital are maintained by closely monitoring two major variables: the level of unrealized gains and losses on securities, and measured risk amount.

### • Implementation of Stress Tests

In principle, stress tests are performed together with the implementation of the fiscal year's ICAAP. By preparing strict stress scenarios that factor in specific timelines and the ripple effects of risks covering the Bank's entire

portfolio, the Bank verifies the impact of these stresses on capital adequacy. Based on this, the Bank implements the ICAAP, which includes a review of countermeasure assumptions at times of stress. In addition, the stress analysis of the portfolio is performed separately along with semi-annual budget planning. The impact of major changes in market risk and credit risk that are to be assumed in day-to-day portfolio management is verified by both the regulatory capital management and economic capital management, and this information is used in decision making.

### ■ Integrated Risk Management

Based on the Basic Policies for Risk Management, the Bank stipulates a core risk management framework that manages risk quantitatively and comprehensively in comparison with capital, which represents its financial strength. The core function in this framework is economic capital management.

Under economic capital management, risks to be covered by capital are measured, and the internal capital for this purpose is applied in advance. The amount of risk is controlled so as not to exceed the applied internal capital by monitoring the changes in the amount of risk caused by market fluctuations and additional risk-taking in a timely manner during the fiscal year. The Bank manages economic capital on both a consolidated and a non-consolidated basis.

In the Bank's economic capital management, regardless of the definition used in Basel III for calculating the capital adequacy ratio, Tier 1 capital, which is comprised of basic capital and retained earnings, has been established as capital to provide against risk. Moreover, Tier 2 capital, which consists of subordinated debt, is viewed as a buffer against unexpected stress situations. The Bank categorizes the types of risks to be controlled into market risk, credit risk and operational risk. To maximize the benefit of the globally diversified investment concept, the Bank manages the economic capital on an aggregate basis instead of allocating the capital to each asset class or to each business segment, as the Bank believes such an approach should fit in the business profile of the Bank. In addition, the definition of internal capital applied and the economic capital management framework are deter-

mined by the Board of Directors, while the middle office is responsible for monitoring the fluctuating capital levels and the amount of risk during each fiscal year. These results are reported to management on a timely basis and used for sharing an awareness of the risk environment between the middle office and the front office.

Market risk is measured primarily by Value-at-Risk (VaR), using a method which simulates scenarios such as interest rate and stock price fluctuations, based on past data (historical simulation method), with a 99.50% confidence interval and one-year holding period. Credit risk is mainly measured by VaR, using methods which simulate scenarios such as default, downgrading and greater credit spread, with a 99.50% confidence interval and one-year holding period. On that basis, in order that the correlation between the risks of market and credit are reflected consistently, both are centrally simulated under common historical scenarios to integrate the risk amount. Also, operational risk is measured by VaR, by creating potential risk event scenarios and using statistical methods for measurement, with a 99.90% confidence interval and one-year holding period.

Through these measures, the Bank comprehensively manages risks across the entire business with the goal of further developing its risk management framework.

### ● **Integrated Risk Management Consistent with Financial Management**

The Bank's integrated risk management framework is carried out consistently with its financial management framework to maintain a balance between a sound financial position and adequate profitability. The Bank has particularly established the market risk management infrastructure to enable a prompt response to changes in financial market conditions. The Bank conducts analysis from various perspectives, including static and dynamic interest rate sensitivity analyses toward the impact on profit/loss, and price sensitivity analysis of its assets for the impact on interest rate changes. In addition, as a part of Asset and Liability Management (ALM), the Bank measures the amount of risk, taking into account of price volatilities of bonds and stocks as well as volatilities in foreign currency exchange rates, and conducts scenario simulations under various stress assumptions. Through

the analysis described above, the Bank strives for flexible financial management by understanding the impact of market volatilities on the value of its assets.

### ■ **Credit Risk Management**

Credit risk is the possibility of loss arising from a credit event such as deterioration in the financial condition of a borrower that causes an asset (including off-balance sheet items) to lose value or to be significantly impaired.

For the Bank, transactions involving credit risk are one of the most important sources of earnings from a strategic point of view. The Bank comprehensively manages credit risk both on credit portfolio basis and on an individual credit basis for all credit risk assets. Thus the Bank appropriately manages the amount of credit risk to ensure stable earnings.

#### ● **Credit Risk Management Framework**

The Bank's credit risk management framework comprises four committees (the Risk Management Committee, the Credit Committee, the Portfolio Management Committee and the Food and Agri Finance Committee) that are managed by the directors and general managers involved in risk management. These committees determine the Bank's credit risk management framework as well as its credit investment policies. The front office executes loan transactions and credit investments in accordance with the credit policies and within the credit limits of these policies. The middle office, which is independent of the front office, monitors changes in the credit risk portfolio and reports them to the committees. Feedback is then used for upgrading the risk management framework and for future credit investment planning.

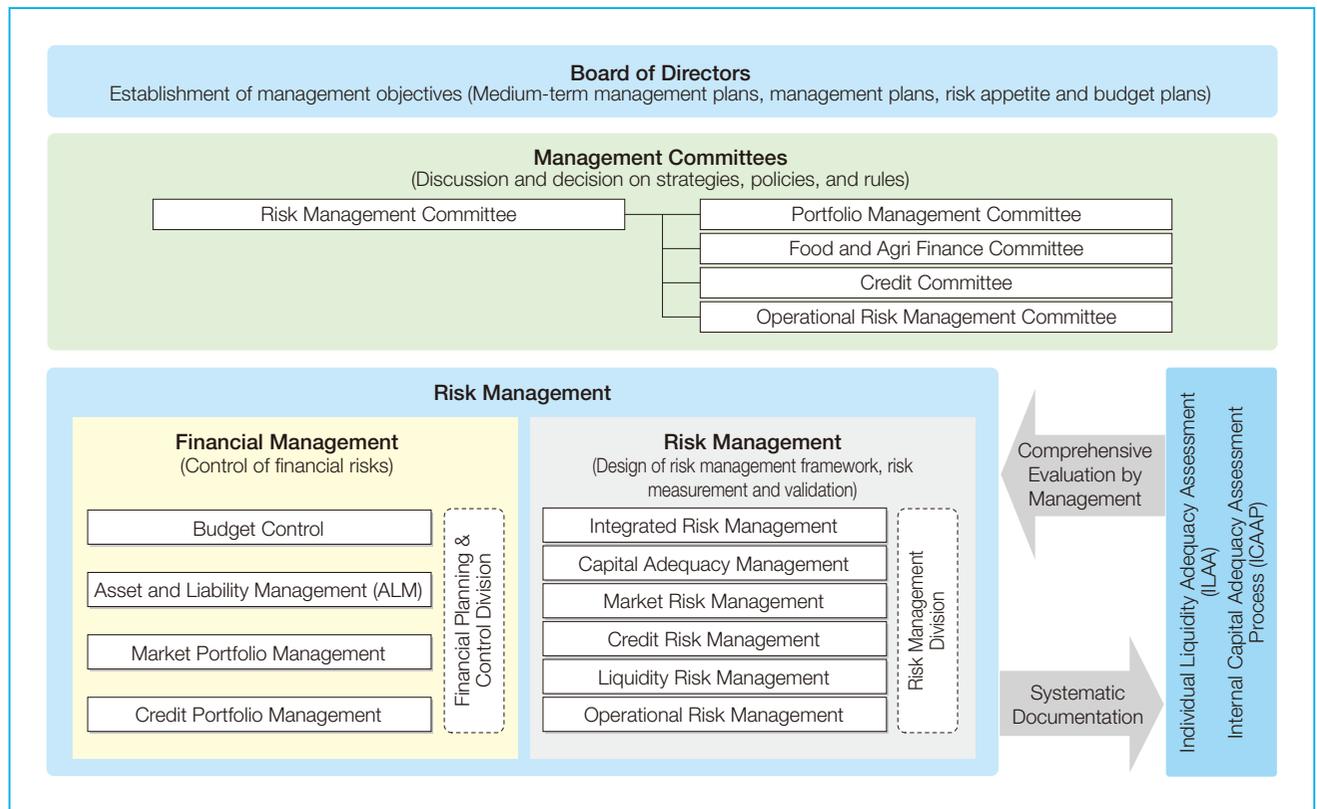
Each of the four committees has a specific role assigned to it by the management. The Risk Management Committee is responsible for deliberation on the basic framework for overall credit risk management, including the Bank's internal rating, self-assessment, economic capital management and credit ceiling for credit overconcentration risk.

The Portfolio Management Committee and the Food and Agri Finance Committee formulate basic strategies and execution policies regarding loans and investments,

and decide on business strategies for important or large transactions. Moreover, the Credit Committee functions as a venue for the discussion of policies about how to deal with the obligations of borrowers whose financial condition has deteriorated. The middle office monitors the credit risk portfolio status and other items. In addition,

the status of credit risk management (such as market overview; important decisions made by the Credit Committee, the Portfolio Management Committee and the Food and Agri Finance Committee; overview of the credit risk portfolio; current approach to risk management) is regularly reported to the Board of Directors.

## Risk Management System



### • Credit Risk Analysis Framework

The Bank has steadily upgraded its credit risk analysis capability for each investment and loan. To perform highly specialized credit analysis according to borrower characteristics for cooperative loans, corporate loans, credit for financial institutions, overseas borrowers, and securitized products, the Bank utilizes its investment and loan knowledge developed over many years and analyzes the borrower's credit by industry and product type.

Senior credit administrators in charge of specific sectors and products research the borrower's background through financial and cash flow analysis. In addition, the Bank has introduced a framework that enables accurate credit decisions to be made by researching

the borrower's industry utilizing the Bank's research capabilities and then comparing the borrower with other companies in the same industry. When evaluating loans to overseas borrowers, the Bank evaluates the creditworthiness of the debtors taking into account risks different from domestic loans such as economic and political conditions. The credit risk on overseas loans is appropriately managed together with the credit review performed by region-specialized senior credit administrators. Structured finance such as those backed by cash flows generated from mortgages and commercial real estate, are subject to due diligence and credit analysis according to the risk profile of each product. The Bank also continuously monitors and reviews the

performance of the underlying assets of these products throughout the maturity of investment.

Under such a framework, the Bank conducts advanced credit risk management, based on stringent analytical standards, proprietary financial and cash flow analysis, and monitoring reviews.

## • The Bank's Internal Rating Framework

### Outline of the Internal Rating Framework and Special Features

In addition to the Bank's traditional lending activities as the financial institution specializing in the agriculture, fishery and forestry industries, the Bank adopts a management strategy of diversified investment and pursues an optimized investment portfolio by diversifying investment assets according to product profile, region and industry. The Bank manages these diverse assets of its portfolio in an integrated and unified manner, and the amount of risk calculated by its credit risk model is controlled so that it is kept within a range of its financial strength, or capital adequacy. Thus the Bank ensures the soundness of its business and maintains profitability.

The Bank's internal rating framework is designed to evaluate and measure the Bank's credit risk portfolio consistently, and is considered as a crucial tool for the integrated management of credit risk. It plays an important role in daily credit risk management and in economic capital management.

### Structure and Application of the Internal Rating Framework

The Bank's internal rating framework comprises three components: the Borrower Rating System and the Loan Recovery Rating System for evaluating exposures to corporate borrowers, as well as the Retail Exposure Internal Rating System for evaluating retail exposure.

Under the Borrower Rating System, the Bank has 15 borrower grades: ten for non-defaulted borrowers and five for defaulted borrowers. Each borrower grade defines the debt repayment capacity of a borrower.

In principle, borrower ratings are evaluated and assigned using a combination of quantitative and qualitative factors. For certain assets such as investment funds, the

Bank assigns its internal ratings by using external ratings as the primary factor, those of Standard & Poor's (S&P) and Moody's Investors Service (Moody's). The Bank clearly maps its internal borrower grades to the scale used by the two credit rating agencies (e.g., the internal grade "1-1" corresponds to the external grade "AAA" and "Aaa"). This mapping is based on the comparison of grades and default probabilities on the same borrowers between the internal ratings and credit rating agencies' ratings.

The Loan Recovery Rating System is used to evaluate the factors affecting the recoverability from defaulting exposure, such as the conservation status of collateral and asset/product characteristics for each project, and the Bank assigns ratings according to the expected default ratios.

The Retail Exposure Internal Rating System estimates Probability of Default (PD), Loss Given Default (LGD), and Exposure at Default (EAD) on an exposure pool basis. The Bank allocates individual retail exposures into eligible retail pools and assigns ratings at the pool level.

The internal rating framework is a fundamental system for the calculation of the capital adequacy ratio, the primary indicator for the financial soundness of a bank. At the same time, in its economic capital management, the Bank applies the same PDs, which were used for calculation of capital adequacy ratio, to measure the amount of credit risk.

In addition, the Bank differentiates interest rates according to the debtor ratings and collateral provided in order to maintain profitability based on the degree of credit risk. Further, when managing credit overconcentration risk, the Bank sets a credit ceiling for each debtor rating.

### Design of the Internal Rating Framework and Validation Procedures

At the Bank, the middle office, which is independent of the front office, designs the internal rating framework based on the characteristics of the credit portfolio and establishes rules concerning the internal rating objectives, each rating grade criteria, evaluation methods and mapping criteria, approval authority, and review and

validation of rating. Validation and monitoring of the internal rating to ensure appropriate implementation is performed on a regular basis.

### • Self-Assessment Based on Internal Rating

The Bank conducts self-assessment on a quarterly basis at the end of March, June, September and December.

The self-assessment process initially classifies debtors in line with the Bank's debtor ratings. There are five debtor classifications: standard, substandard, doubtful, debtors in default, and debtors in bankruptcy.

Subsequently, within each of these classifications, the credit for each individual debtor is classified into four categories (I, II, III and IV) according to its recoverability.

### Relationship among Internal Rating, Self-Assessment, and Exposure Requiring Mandatory Disclosure under the Financial Revitalization Law

Internal Rating	Self-Assessment				Exposure Requiring Mandatory Disclosure under the Financial Revitalization Law	
	Debtor Classification	Asset Category	Definition of Asset Category			
1-1	4	Standard	Category I	Debtors who maintain favorable operating conditions and have no particular financial difficulties. Internal ratings 1-1 to 4 are equivalent to investment grades of credit rating agencies.	Standard	
1-2	5					
2	6					
3	7					
8-1	Substandard	II	Debtors requiring close monitoring going forward		Special attention	
8-2						
8-3						Other substandard debtors
8-4						Debtors under requirement of control
9	Doubtful		III	Debtors who are highly likely to fall into bankruptcy	Doubtful	
10-1	Debtors in default		IV	Debtor who have effectively fallen into bankruptcy, although no facts have emerged to indicate legal or formal bankruptcy	Bankrupt or de facto bankrupt	
10-2	Debtors in bankruptcy			Debtors who are legally and formally bankrupt		

### • Write-Offs and Provisions to Reserves

Write-offs and provisions to reserves for possible loan losses are made according to the criteria set by the Bank for each debtor classification by self-assessment. For exposure to standard debtors and substandard debtors, the Bank makes provisions to general reserves for possible loan losses for each category of borrower based on the expected loss ratio, which is calculated from historical loss data, including losses from defaults. For debtors

under requirement of control with substantial exposure, provisions to specific reserves for possible loan losses are calculated by the Discounted Cash Flow (DCF) method on an individual basis. For exposure to doubtful debtors or lower, provisions to specific reserves for possible loan losses are made, or write-offs are performed, for the necessary amount classified as Category III and IV which are not recovered by collateral or guarantee.

## The Norinchukin Bank's Debtor Classification and Reserves for Possible Loan Losses (As of March 31, 2016) (On a Non-Consolidated Basis)

(Billions of Yen)

Self-Assessment					Reserves for Possible Loan Losses	Claims Disclosed under the Financial Revitalization Law	Risk-Managed Loans (Note 2)
Debtor classification	Category I	Category II	Category III	Category IV			
Debtors in bankruptcy Debtors in default	Portion deemed to be recoverable through collateral or guarantees		Provisions are made to cover the entire amount	Full amount written off or provisions made	Specific reserve for possible loan losses 75.2	Bankrupt or de facto bankrupt 4.8	Loans to borrowers under bankruptcy proceedings 0.2
Doubtful debtors	Portion deemed to be recoverable through collateral or guarantees		Provision ratio: 87.4%			Doubtful 97.6	Delinquent loans 101.3
Substandard debtors	Special attention	Provision ratio of the uncovered portion: 8.8%			General reserve for possible loan losses 16.0 (Note 1)	Special attention 19.9	Loans with principal or interest payments three months or more in arrears —
	(Claims on debtors under requirement of control) Other substandard debtors	Claims on substandard debtors other than "Special Attention"				Standard loans 17,978.4	Restructured loans 19.9
Standard debtors							

Notes: 1. The expected default ratios for computing the provisions to the general reserve for possible loan losses are 0.14% for standard debtors, 2.71% for substandard debtors (excluding claims under requirement of control), and 3.79% for claims under requirement of control.

Notes: 2. The difference between the total of claims disclosed under the Financial Revitalization Law and the total of risk-managed loans is the inclusion of claims other than loans.

### Criteria for Write-Offs and Provisions to Reserves

Debtor Classification		Criteria for Write-Offs and Reserves for Possible Loan Losses	Provision Ratio as of March 31, 2016
Standard		Provisions to general reserves for possible loan losses are made, by multiplying the total credit exposure by the expected loss ratio based on the historical default ratio.	0.16%
Substandard	Other substandard debtors	Initially, categorize debtors into two groups: "debtors under requirement of control" or "other substandard debtors" in accordance with credit quality of debtors. Debtors in the latter group are further classified into sub-categories. Provisions to general reserves for possible loan losses are made, by multiplying the total credit exposure by the expected loss ratio based on the historical default ratio for each group.	2.75%
	Debtors under requirement of control	Applies Discounted Cash Flow (DCF) method to debtors with large exposure if classified as "debtors under requirement of control."	3.79% (Excluding borrowers to whom the DCF method is applied)
Doubtful		Provisions to specific reserves for possible loan losses are made to the necessary amount classified as Category III (amount not likely to be recovered by collateral or guarantee) on an individual borrower basis.	99.00% the unrecoverable portion
Debtors in default		Provisions to specific reserves for possible loan losses are made on an individual borrower basis for the entire amount classified as Category III	The full amount of the unrecoverable portion is written off or provisioned
Debtors in bankruptcy		Write-Offs are performed on an individual borrower basis for the amount classified as Category IV (the amount estimated as uncollectable or unrecoverable), regardless of treatment under criteria in tax law.	

### Credit Costs in Fiscal 2015 (On a Non-Consolidated Basis)

	Billions of Yen
Loan write-offs	2.1
Provisions to general reserve for possible loan losses	(7.2)
Provisions to specific reserve for possible loan losses	(14.3)
Provisions to reserve for specified overseas debts	—
Other	—
Total credit costs	(19.3)

### ● Credit Overconcentration Risk

Credit overconcentration risk is defined as the risk of incurring unexpected huge losses triggered by simultaneous credit event such as default, due to overconcentration of credit exposure to specific groups of borrowers, industries or regions. To mitigate such risk, the Bank has installed credit ceiling systems according to the profile of credit exposures, namely, Country Ceilings (for credit exposure to individual countries or regions), Corporate Ceilings (for credit exposure to corporations), and Bank Ceilings (for credit exposure to financial institutions). Through monitoring on a regular basis, total credit exposure for each ceiling category is grasped and controlled to avoid any overconcentration.

Regarding the Corporate Ceilings, after maximum lending limits are set for each borrower based on the internal debtor ratings, limits are set and lending is managed on a corporate group basis. The Bank Ceiling is precisely managed and credit limits are set for each type of transaction. Regular reviews are also performed on overconcentration of credit exposure of each industry.

### ● Measuring Credit Risk

For credit risk, the Bank adopts economic capital management, which measures the amount of risk using statistical based methods. In calculating credit risk, all of the financial assets in the Bank's portfolio, such as loans, securities and off-balance sheet transactions, are targeted, and after considering the overconcentration risk for corporate group, industry type and region, the Bank runs scenarios involving losses and deterioration of asset value resulting from default, downgrades and expansion of credit spread, etc., and estimates the distribution of potential losses over the year. After the maximum projected loss (VaR) and the expected loss have been established from this loss distribution, the difference (unexpected loss) is recognized and managed as the amount of credit risk.

## ■ Market Risk Management

The Bank deems market risk, such as interest rate risk and equity risk, to be one of the most significant risk factors affecting the Bank's earnings base, along with

credit risk. Through active and appropriate risk-taking supported by a robust risk management framework, the Bank aims to retain a stable level of profit by constructing market portfolio that balances profit, capital and risk.

To ensure the effectiveness of market risk management, the Bank carries out duties among divisions in charge of decision-making (planning) for allocation policies, execution of individual transactions, and monitoring of risk positions. Specifically, the Risk Management Committee is responsible for and discusses overall risk management framework, the Portfolio Management Committee sets market portfolio allocation policies, the front office executes transactions in accordance with the policies, and the middle office measures and monitors the amount of risk. Matters relevant to the market risk portfolio management activities (such as market conditions, major investment decisions made by the Portfolio Management Committee, condition of the market portfolio, and views on near-term market portfolio management) are reported to the Board of Directors on a regular basis.

### ● Market Risk Management Framework

The basic framework for market risk management is to verify the status of the market portfolio, such as the amount of market risk, the risk-return profile of each asset class and the correlation among asset classes, and to manage the risk balance and the level of earnings based on the allocated capital under economic capital management according to the financial position of the Bank, market trends, economic and financial conditions.

Specifically, the risk balance of the market portfolio is controlled based on risk indicators measured by the middle office, such as the amount of aggregate risk, VaR, Basis Point Value (BPV) and correlation data among asset classes.

Moreover, by using an alarm point for losses in each asset class and risk volume increase, as well as VaR taking into account of the impact of short-term market fluctuations, the Bank can quickly detect changes in the market environment and then review its market portfolio management policies expeditiously and flexibly.

The principal market portfolio management process is as described below.

### **Decision Making**

Material decisions on market investments are made at the Board level. The Board of Directors formulates the annual allocation policies. Based on the policies, the Portfolio Management Committee—composed of the Board members involved in market portfolio management—makes decisions, together with general managers, on specific policies related to market investments after discussing them.

Decision-Making on market investments is carried out after examining the investment environment including the financial markets and the economic outlook, current position of the securities portfolio, and Asset and Liability Management (ALM) situation of the Bank. The Portfolio Management Committee holds meetings on a weekly basis, as well as when needed, to respond to changes in market conditions in a flexible manner.

### **Execution**

Based on the investment decisions made by the Portfolio Management Committee, the front office executes securities transactions and risk hedging. The front office is not only responsible for executing transactions efficiently but also monitoring market conditions closely to propose new investment strategies to the Portfolio Management Committee.

### **Monitoring**

The term “monitoring functions” refers to checking whether the execution of transactions made by the front office is compliant with the investment decisions approved by the Portfolio Management Committee, and to measuring the amount of risk in the Bank’s investment portfolio. To maintain an appropriate risk balance among asset classes, various risk indicators as well as risk amount for economic capital management are measured and monitored. The middle office, which is independent of the front office, is responsible for those risk measurements and regularly reports to the Board members about the results of monitoring. Monitoring reports are used to analyze the current situation of the market portfolio and as a data source for discussing the investment strategies in the near future at the Portfolio Management Committee.

### **Measuring Market Risk**

In measuring market risk in economic capital management, all of the financial assets and liabilities in the Bank’s portfolio are targeted, and through simulations of scenarios such as interest rate and stock price fluctuations based on past data (historical simulation method), the distribution of potential losses over the year are estimated. From this loss distribution, the maximum projected loss (VaR) is recognized and managed as the amount of risk.

#### **• Trading Operations**

The Bank’s trading operations that aim to generate profits from short-term market fluctuations are organizationally separated from other front offices. The front office in charge of trading activities executes trades within the approved position and loss limits determined from a risk-return perspective. The middle office, which is independent of the front office, measures the amount of risk including VaR and monitors the status of risk taking by the front office.

The risk involved in trading operations, which is a part of market risk, is managed under the economic capital management framework.

### **VaR Status**

For risk measurements, the Bank uses an internal model approach based on a variance-covariance method with a one-tailed 99% confidence interval and a ten-business day holding period, and measures VaR on a daily basis. The Bank’s model is validated by the middle office that conducts periodical quantitative and qualitative evaluations, as well as the Internal Audit Division and outside experts.

The Bank conducts a back testing to quantitatively validate its internal model, where the VaR (one-day) calculated by the model is compared with the volatilities in daily profit and loss. After an attribution analysis, if it was determined that the discrepancies between the model’s estimates and actual results go beyond a certain level due to the designs of the model, the Bank scrutinizes the relevant model factors and revises the model if necessary. The Bank also performs a series of monthly stress tests assuming extremely volatile market situations, such as the largest interest rate fluctuation in the last five years.

## Glossary of Terms

### VaR (Value at Risk)

VaR is the maximum possible loss over a specified holding period and within a certain confidence interval. The Bank calculates VaR by setting specific holding periods and confidence intervals, and applying the appropriate measurement method to measure the risk.

### BPV (Basis Point Value)

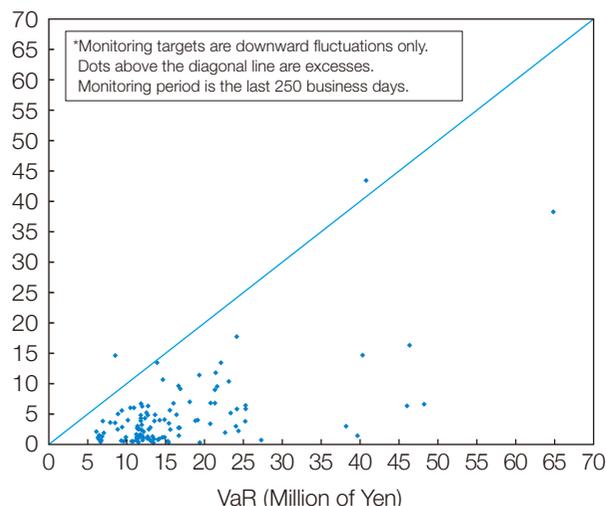
BPV refers to the changes in the value with respect to a 0.01% change in interest rates given the current position. The Bank uses this as the index to indicate the impact of the change assuming a parallel shift in the yield curve.

## Changes in VaR (with a ten-business day holding period) in Trading Divisions

	VaR (Million of Yen)
June 30, 2015	41
September 30, 2015	36
December 31, 2015	41
March 31, 2016	83

## Back Test Status (one-day VaR)

P/L (Million of Yen)



## Liquidity Risk Management

The Bank defines liquidity risk as the following: “The risk towards financial losses incurred from a difficulty in securing funds required for activities of the Bank, or from being forced to procure funds at significantly higher funding costs than normal as a result of a maturity mismatch between investment

and funding procurement, or as a result of an unforeseen fund outflow from the Bank (cash flow risk).” It is also defined as: “The risk towards financial losses arising from being unable to execute transactions in the market due to market turmoil, or from being forced to execute transactions under significantly less favorable conditions than normal occasions (market liquidity risk).” The Bank properly manages liquidity risk based on these definitions.

The appropriate management of cash flow risk is a prerequisite for business continuity and stable portfolio management. Considering the characteristics of the Bank, such as its steady fund procurement structure, which is primarily centered on deposits from its membership, together with its assets of low market liquidity that holds, and examining the funding procurement capability under stressed environments, the Bank takes initiatives to diversify and enhance the varieties of funding instruments, placing emphasis on the stability of cash flows. Cash flow management is conducted on an aggregated basis at the head office in collaboration with relevant branches. For this purpose, various operating limits including currency, funding instruments and individual funding office are established considering the global market situation and these are approved by the Risk Management Committee. Specific cash flow management plan is approved by the Portfolio Management Committee on a quarterly basis, considering the Bank’s investment portfolio projection, its expected funding procurement capacity and regulations concerning liquidity under Basel III. Execution strategies are discussed on a weekly basis according to the predetermined cash flow management plan. The Bank conducts appropriate cash flow management in response to circumstances by constantly monitoring market conditions. The execution status is continuously reviewed on a monthly basis.

Market liquidity risk is considered to be an important factor for investment decisions in order to maintain a flexible asset allocation framework that enables prompt responses to changes in market conditions. Investment strategies are also prepared through assessing the market liquidity (cash-convertibility) of each type of financial

product. Market liquidity risk is applied to the evaluation of stabilities on funding procurement as well. For this reason, the middle office regularly reviews and analyzes the market liquidity of financial products, considering the market size of each asset class and product. The results of these analyses are reported to the Risk Management Committee and the Portfolio Management Committee.

The operational status of liquidity risk management is also regularly reported to the Board of Directors.

### • Individual Liquidity Adequacy Assessment (ILAA)

The Bank conducts Individual Liquidity Adequacy Assessment (ILAA) as a framework for the Board of Directors to periodically assess the appropriateness and adequacy of management of liquidity (cash flow), an element that is as important as capital resources (solvency) for financial institutions to remain in business.

ILAA involves the systematic assessment of the appropriateness of liquidity in terms of the framework for maintaining appropriate liquidity focusing on liquidity risk management, the current status and future outlook of liquidity and the verification results thereof. In the context of “Risk Appetite” referred to above, the liquidity tolerance level is recognized, after which the appropriateness of liquidity risk management supporting the execution of active risk-taking to secure profits is assessed systematically.

## ■ Operational Risk Management

For operational risk management, the Bank has established its basic policies including definitions of the risk, management framework and management processes, which have been approved by the Board of Directors.

### • The Objective of Operational Risk Management

The Bank categorizes and ranks by importance each risk arising from business operations such as processing risk, legal risk and IT systems risk, and handles these risks according to their category and rank. This allows the Bank to allocate the organization’s management resources effectively. The objective of operational risk

management is to minimize the likelihood of risk event occurrence and the estimated losses arising from business operations which per se do not generate profit.

### • Definition of Operational Risk

The Bank defines operational risk as the risk that arises in the course of business operations which per se do not generate profit. Operational risk is different from market risk, credit risk and liquidity risk, or the types of risks the Bank actively takes to generate profits. Operational risk is further broken down into subcategories, such as processing risk, legal risk, IT systems risk, personnel risk, tangible assets risk, information security risk, business continuity risk, reputational risk and regulatory risk.

### • Organizational Structure of Operational Risk Management

Important issues such as the basic policies and annual planning of the Bank’s operational risk management are approved by the Board of Directors and the Risk Management Committee. The Operational Risk Management Committee, comprised of relevant members of the Board as well as the general managers of related divisions, is set under the Board’s supervision, and monitors the current status of the Bank’s operational risk management. The committee also promotes cross-risk as well as cross-divisional approaches towards managing operational risk. Furthermore, the Bank has established a division to be in charge of operational risk management, which is independent of the business lines, as well as divisions to be in charge of individual risks. The Bank has also designated a person to be in charge of operational risk management in each branch and division.

Furthermore, in light of the fact that cyber-attacks are becoming ever more advanced and sophisticated, we are working to development a cyber-security response system, including the establishment of a professional team, Computer Security Incident Response Team (CSIRT), concerned with responding to such incidents when they occur.

## • Basic Approach of Operational Risk Management

The Bank has established policies and procedures to manage and control individual operational risks such as processing risk, legal risk, IT systems risk, personnel risk, tangible assets risk and information security risk, for which the Bank's key management strategy is the prevention of risk event occurrence. The Bank also employs the following common risk management methods in order to identify, analyze, assess, manage and mitigate risks effectively: the operational risk reporting system for collection and analysis of risk events which have come to light, as well as Risk & Control Self-Assessment (RCSA) system for the evaluation of potential risks.

The Bank has been enhancing its ability to counter business continuity risk, for which the Bank's key man-

agement strategy is the mitigation of the impact and effect of risk events following their occurrence, based on lessons learned from the Great East Japan Earthquake. In addition, the Bank augments the effectiveness of its business continuity framework through regular drills which assume scenarios such as the occurrence of an earthquake in the Tokyo metropolitan area, or the outbreak of a pandemic.

Risks other than the above, such as reputational risk and regulatory risk, are defined as risks which should be dealt in accordance with the Bank's business judgment. The Bank strives to take proactive action in order to prevent the occurrence of risk events while continuously monitoring these risks for signs of changes, and endeavors to incorporate those changes in the Bank's management strategy.

## The Main Classifications and Specific Management Methods for Operational Risk

Main Classifications		Specific Risk Management Methods
Risks for which the Bank's key management strategy is the prevention of risk event occurrence	Risk in General	<ul style="list-style-type: none"> <li>• In the operational risk reporting system, a comprehensive and clear reporting standard is established, and information of risk events is collected and analyzed.</li> <li>• With RCSA, processing sections uncover the risks inherent in their own business processes, evaluate the effectiveness of controls and remaining risks, and important matters that require improvement are incorporated into the management plan for the year.</li> <li>• Coordination of the operational risk reporting system and RCSA.</li> </ul>
	Processing Risk	<ul style="list-style-type: none"> <li>• The processing risk management plan is formulated based on the results of the operational risk reporting system and processing risk RCSA, and the progress of the plan is reported to the Bank's management periodically.</li> <li>• Ongoing initiatives such as implementing preventive procedures for specific risk events which have surfaced in the past, updating the current procedure manuals, carrying out self-checking exercises and hosting staff training sessions.</li> <li>• Responding to any major environmental changes in the Bank's business environment due to the adoption of new products and services or organizational restructuring, etc.</li> </ul>
	IT System Risk	<ul style="list-style-type: none"> <li>• An IT system risk management plan is formulated based on the results of IT system risk RCSA, etc., while appropriately handling emerging risks generated by changes in the internal and external environment relating to information security, etc., and progress is reported to the Bank's management periodically.</li> <li>• Information on system failures is collected and analyzed, and future prevention plans are formulated. In addition, in order to meet public demands as a social infrastructure for providing stable financial services, we examine system recovery procedures, assuming the occurrence of a major system failure, ensuring that the impact of such failures is kept to a minimum.</li> </ul>
	Legal Risk	<ul style="list-style-type: none"> <li>• Centralized control and response for litigation for the Bank as a whole.</li> <li>• While appropriately dealing with legal consultations from branch offices, gain an understanding of the existence of risks associated with such laws, regulations and contracts that the Bank should be mindful of, then communicate and teach them to branch offices.</li> </ul>
Risks for which the Bank's key management strategy is the mitigation of the impact and effect of risk events following their occurrence	Business Continuity Risk	<ul style="list-style-type: none"> <li>• Establish a business continuity structure for the Bank and cooperative banking business as a whole.</li> <li>• Taking into account the Great East Japan Earthquake and the power shortages that followed, conduct regular drills in anticipation of a major disaster, and confirm their effectiveness.</li> </ul>

The Bank's current status in operational risk management is reported to the Operational Risk Management Committee and the Board of Directors periodically, and the basic policies for operational risk management are reviewed based on these reports when necessary. In addition, the overall operational risk management framework is subject to thorough internal audit on a regular basis, in order to continuously improve its effectiveness.

#### ● Processing Risk Management

The Bank defines processing risk as the risk of suffering losses caused by improper activities performed in the course of business or by the Bank's directors or employees. To be more precise, processing risk is defined as the risk of suffering losses due to accidents, fraud, or failing to comply with the established procedure manuals; or the risk of inadequate performance of business operations due to faults in the procedure manuals or the lack of a manual itself.

#### ● IT Systems Risk Management

The Bank defines IT systems risk as the risk of suffering losses from computer system crashes, errors, system defects, improper computer use, or from the inadequate operation of system development projects.

#### ● Legal Risk Management

The Bank defines legal risk as the risk of incurring losses or facing transactional problems in the context of a management decision or execution of a business operation by violating the law or by entering into an inappropriate contract.

#### ● Business Continuity Risk Management

The Bank defines business continuity risk as the risk of being incapable of continuing critical businesses in the aftermath of a natural disaster or a major system failure, due to lack of effective countermeasures.

#### ● Measuring Operational Risk

For operational risk, the Bank adopts economic capital management, which measures the amount of risk using statistical methods. The distribution of the amount of

losses expected to arise over the next year is calculated by using potential risk scenarios created in consideration of the business environment and risk events which have come to light and been gathered through the operational risk reporting system. From this loss distribution, the maximum projected loss (VaR) is recognized and managed as the risk amount.

### ■ Risk Management in Group Companies

The associated companies in The Norinchukin Bank Group prepare feasible and effective risk management policies and framework taking into account the Bank's Basic Policies for Risk Management as well as the nature of their own business activities and risk profile. The Bank and each group company confer and decide on a risk management framework for the company, taking into consideration of the characteristics of the risks the company bears.

To ensure adequate risk management and compliance throughout the group, the Bank's department responsible for management of group companies categorizes these companies according to their risk profiles and characteristics. The required risk management frameworks and controls are specified by the Bank in its policies for each category. The risk management of group companies is performed based on those policies. When deemed necessary, meetings between the Bank and group companies are held, in which executive management and working-level managers of the companies attend. Risk management framework and administrative operations of group companies are subject to the Bank's internal audit on a regular basis in order to continuously improve its effectiveness.

In addition, the Bank performs economic capital management on a consolidated basis and ensures that the amount of risk is kept within the allocated capital including consolidated subsidiaries. Among consolidated entities, The Norinchukin Trust & Banking Co., Ltd. and Kyodo Housing Loan Co., Ltd. manage market risk, credit risk, liquidity risk and operational risk. Other consolidated entities manage operational risk.

Based on the efforts described above, the Bank seeks to upgrade its risk management for the entire group.