Risk management is evolving into a more diverse and complex field as financial markets are liberalized and internationalized. Banks, forced to encounter risks in the normal course of operations, must face these risks to generate revenues. Accordingly, rigorous risk management to sustain financial soundness is of utmost importance to banks.

At Sakura Bank, risk management is a top-priority managerial issue and an area in which we continue to enhance our capabilities on an ongoing basis. We manage credit, market and liquidity risk comprehensively within the greater frameworks of "ROE management" and "balance sheet management." Our operating plans accommodate considerations for risk management both at the planning and implementation stages. We also consider it important to manage operational, information technology, legal and other types of risks, and are taking steps to strengthen our systems and staffing in these areas as well.

# **Credit Risk**

Credit risk is the possibility that deterioration in a borrower's financial condition will lead to default. In our lending operations, we aim to manage credit risk at appropriate levels. We seek to match the returns to the risks with the objective of contributing to the growth of the client company or individual consumer, and ultimately to benefit industry, the local community and the general public.

In our lending practices, we use a range of quantitative and gualitative analyses to discern the borrower's true repayment and growth prospects. Where applicable, we conduct cash flow and other financial analyses, assessments of industry trends, evaluations of research and development capabilities, analyses of competitiveness and product positioning, and assessments of management competence and capabilities. We start by verifying and confirming the use of the funds and collateral, and plan a repayment schedule. Then we examine the potential loan in terms of its fit to our credit policy, the customer's cash flow to meet the repayment schedule, the trade-off between the risk and the returns, and other strict criteria. As a rule, all borrowers are subject to a quantitative credit risk analysis that culminates in the assignment of a credit rating, which allows us to quantify the overall risk of our loan portfolio.

To maintain financial soundness and profitability as well as to seek higher yields, we give careful consideration to diversification of our loan portfolio. Risks are spread over different clientele types to avoid a concentration in any one customer, country, region or industry group. We also attempt to select those loans that produce the highest profit for the least risk.



We are reorganizing and improving our lending operations in step with the implementation of the company/group structure. As part of this, we are introducing new loan products individually tailored to specific needs. At the same time, we are redesigning credit application and approval processes to both speed up our customer response and strengthen our credit controls. We have introduced electronic credit application and approval processes, branchspecific portfolio databases and other sophisticated information technologies that reinforce and streamline auditing and compliance processes. These changes ensure that strict credit controls are implemented even as we provide a more personalized, market-driven response.

### **Credit Rating System**

Credit ratings are assigned to a borrower or security to indicate the degree of default risk presented by that entity relative to other entities. The credit rating system used at Sakura Bank, summarized in the accompanying chart, is applied to both domestic and foreign borrowers. The system incorporates both statistical and qualitative analyses of the borrower's finances and operations, providing 10 possible rankings. The higher the ratings number, the lower the assessed quality of the borrower. This system also corresponds to the classification systems used in the selfassessment of assets and to the long-term ratings assessed by external rating agencies. The Bank uses this rating system to manage credit risk, to determine

Credit Rating	Degree of Credit Risk		Self-Assessment/ Borrower Categories
1	Essentially No Risk	Low Credit Risk	
2	Very Limited Risk	••••••	
3	Limited Risk		
4	Better than Average		Normal
5	Average		
6	Permissible		
7	Worse than Average		
8	Preventative Management Required		Caution
9	Careful		Possible Bankruptcy
10	Management Required	More Credit Risk	Virtual Bankruptcy/ Legal Bankruptcy

appropriate loan pricing and to sustain and improve the creditworthiness of the Bank's portfolio.

## **Market Risk**

The potential for fluctuations in interest rates, exchange rates and other market factors to impact the price of financial instruments and cause losses is termed the market risk. We manage market risk by establishing a basic risk control policy that is revised semiannually by the Executive Committee. The policy determines risk-taking authority, sets risk limits and specifies procedures for the market risk management process and the assumption of responsibility for it. Specifically, it sets out (1) limits for positions, risks and losses, (2) monitoring frequency and stress tests, and (3) warning lines.

The Bank manages its global exposure on an integrated basis, measuring the cumulative risk of its trading account and the market risk and interest rate risk borne by all the assets and liabilities of the banking account. A department that is independent of revenue-generating sections calculates and reports position, and risk, profit and loss levels, providing a good measure of internal checks and balances. In October 1996, we were the first among Japan's city banks to establish a Corporate Risk Management Division specializing in bank-wide risk management that reports directly to management and is independent of revenue generating divisions. This division manages the market risk exposure of the entire bank, including overseas operations, on a daily basis and reports to the ALM Committee regularly.

To assess market risk, we utilize sophisticated statistical techniques based on the value at risk (VaR) model recommended by the Bank for International Settlements (BIS). These calculations determine in advance the maximum risk exposure and the required risk capital to maintain market risk within well-defined limits. The VaR analysis includes Monte Carlo simulations and is calculated on the basis of one year of market data with the assumptions of a twoweek holding period and a 99% confidence interval, as stipulated by BIS standards. In fiscal 1998, the VaR of the Bank's trading account, calculated with the internal model, ranged from a maximum of  $\pm$ 6.3 billion to a minimum of  $\pm$ 1.9 billion. The average was  $\pm$ 3.7 billion. We continue to enhance the rigorousness of these models by analyzing the relationship of the VaR with the actual profit and loss using a statistical procedure known as back testing.

In addition to managing market risk globally, we quantify credit risk on a comparable basis. As a further measure, we quantify our combined exposure to market risk and credit risk. This allows us to control our exposure within the scope of our capital and to work to enhance returns on equity through ROE management. See pages 53 to 54 for a discussion of ROE management.

#### **Trading Account**

The trading account is the account used by the Bank for operations intended to create profits from short-term arbitrage trading in interest-bearing instruments, currencies and marketable securities. The trading account securities are stated at market value, which is the arms-length, fair-market value. Listed securities are stated at the last posted price on the exchange. Non-listed securities are stated at the market prices posted by brokers or other vendors or at prices calculated using the theoretical pricing method.

To provide an objective method of determining the value of each product, the manual used in the Bank requires disclosure of the (1) basic data and source, (2) time of data acquisition, (3) method used to calculate the yield curve from the basic data, (4) procedures used to modify basic data, and (5) valuation method (current discount method, option pricing models, etcetera). These valuation methods are also authenticated for fairness and appropriateness by the risk management section. As a further precaution, basic data is retained for a set period of time to permit verifications of the valuations.

# ALM System

The Bank has established a comprehensive asset-liability management (ALM) system with the objective of centralizing the control of the interest rate and liquidity risks inherent in its own deposit taking and lending operations. The strategic management of positions\* using interest rate forecasting has successfully contributed to a stable increase in profitability. To respond quickly to changes in market conditions, ALM decision-making is conducted by the directors in charge, who report to the ALM Committee, which is chaired by the president of the Bank. In monthly meetings, the ALM Committee receives reports and inquires about trends in markets, deposit taking, lending and the funding gap. It is part of a risk management system directly linked to top management. The Corporate Treasury Division implements the daily ALM functions, centrally managing deposit and loan interest rate and liquidity risks. As necessary, it oversees the raising of funds from the markets or the placement of funds in yen-denominated securities as well as the use of derivatives, such as interest rate swaps, to adjust the Bank's exposure to the interest rate risk of the foregoing instruments. It draws on a full range of sophisticated and multifaceted analytical tools and indicators, including VaR analyses, market interest rate sensitivity analyses (delta values), gap analyses, earnings at risk (EaR) analyses and profit and loss simulations.

\*Position in this context refers to the status of assets and liabilities viewed from the perspective of interest rate and liquidity risk.

# **Liquidity Risk**

Sakura Bank manages its balance sheets so that it does not have to rely too heavily upon market based procurement using such instruments as the call money and negotiable certificates of deposit provided by institutional investors. Its task is made somewhat easier by its formidable yen fund-raising ability, underpinned by one of the largest branch networks and customer bases in Japan. Specifically, we have established a system for comprehensively managing foreign currency and yen denominated liquidity risks. As part of this system, the ALM Committee sets objectives for yen and foreign currency balance sheet management based on (1) an accurate grasp of fundraising capabilities; (2) the formulation of appropriate lending targets that takes this into account; and (3) the carrying out of business in accordance with plans.

The Corporate Risk Management Division, Foreign Exchange and International Treasury Division, International Banking Division and other operating divisions conduct a variety of precautionary operations while they gather and analyze market information used as the basis for ALM Committee decisions. They also implement the various measures and policies. These may include liquidity management according to trends in funding premiums, the adjustment of asset and liability durations, and measures to enhance the efficiency of currency denominated fund raising.

In daily risk management, we avoid cumulative increases in liquidity risk by setting limits on the funding gap arising from unsecured fund-raising. In addition, we are prepared for contingencies with bank-wide action plans that can be swiftly implemented. Our preparations include the establishment of rules for changes in limits in accordance with the Bank's creditworthiness, as indicated by ratings, and a control structure for emergency situations.

We are also well prepared to manage foreign currency liquidity risk. We maintain sizable holdings of highly liquid marketable securities, such as U.S. treasuries, and have pre-arranged emergency borrowing facilities so that we are able to cope with turbulent market conditions.

# Market Risk of Long-Term Securities Portfolio

A portion of the securities held by the Bank is held on a longterm basis as strategic investments to promote customer relations. Market risk is defined as fluctuations of value in the portfolio. Since these securities are not held for trading, we believe that the cost method, which is currently employed, of valuing these securities is appropriate and best reflects the long-term intent of the portfolio. As of the balance sheet date, this portfolio stood at approximately ¥3,300 billion. The Bank recognizes the impact of the fluctuation on the balance sheet and is working on methods to manage this impact.

Currently, the securities held as long-term strategic investments are treated as a portfolio and the market risk of the securities is measured with the VaR model. A portion of capital is allocated to cover the value at risk as part of the ROE management process, and the portfolio is managed within the set limits. These figures are included as part of the Bank's entire risk exposure amount, along with the market and credit risk of the other components, so that total risk exposure can be maintained at levels appropriate to capital holdings.

As a measure to boost our risk management capabilities for these securities, we established the Equity Management Department in June 1999. This office is focusing exclusively on managing our portfolio of long-term securities.

We anticipate that the valuation method for these securities will be switched to the market value method at some point in the future and are preparing for a smooth transition by augmenting our risk management capabilities.

# **Country Risk**

Country risk is the risk that political, social or economic changes in a country or region will result in defaults. Although country risk is most closely identified with the fallout of the South American debt crisis of the 1980s, the recent Asian currency crisis that began in Thailand in July 1997 and the August 1998 Russian economic crisis are further examples.

At Sakura Bank, we manage country risk in an integrated manner, restraining total exposure to a set proportion of capital. We pursue a balanced portfolio to avoid over-concentration of credit in any one country or region, and have set individual country lending guidelines that account for the risk of each country to minimize the effect of unforeseen circumstances on the Bank.

Measures to prevent risks from escalating are growing in importance as economic globalization accelerates the pace at which countries are thrown into crisis and distress spreads to other countries. As a result, we have formed a section charged with the task of tracking country risk on an ongoing basis. It analyzes the information and records it in databases. Based on this information, we set strict credit limit guidelines for countries with worsening risk conditions and downgrade or freeze credit for countries with pronounced difficulties. We have also established a variety of proactive systems and procedures to recoup the credit extended to these countries, which form part of our total efforts to prevent losses due to country risk before they can occur.

#### **Operational Risk**

In April 1999, Japan's Financial Supervisory Agency published a financial auditing manual that calls for "a system emphasizing self management and risk management based on the principle of self-regulation." Sakura Bank has already put in place a range of measures to control operational risk, such as "Measures to Maintain and Upgrade Operating Standards," "Preventative Measures for Operational Incidents," and "Preservation of the Public Confidence," as well as our "Guidelines for Appropriate Business Conduct." In accord with this emphasis, our domestic credit departments send inspectors on "head office audits" throughout the branch network two or more times each year, and we are expanding this to two or more times annually for overseas branches, subsidiaries and affiliates. In addition to this, each department and branch manager is charged with conducting monthly department or branch inspections. There are also department or branch inspections when managers are changed. On top of these inspections, special inspections are carried out as warranted, providing the finishing touches to a system with ample restraint features.

We are further reinforcing and expanding our audit system for traditional business lines as well as for new service areas, such as investment trust products, and for new delivery channels, such as the Internet-based Sakura Browser Banking service. This involves securing experienced staff and building up the inspection departments to sufficient size to provide a proactive and effective response to the oversight function.

The audits encompass office processes and management systems, placing emphasis on such aspects as risk management, operational control, compliance and asset quality, or on the ROCA approach to determining how well risks inherent in these operations are being managed. In addition to the standard categories applied across the organization from the head office to the branches, we also inspect items that are specific to each department or branch or that arise in the course of conducting the "head office audit." This makes for a flexible, timely auditing system that is complete in both quantitative and qualitative respects.

Our intention is to continue to build up our auditing system so that it embraces the "best practices" for the industry in addition to covering the minimum standards suggested in the financial auditing manual.

# **Information Technology Risk**

The potential impact of computerized system failure is growing as services become more diverse and complex and the number and scope of transactions utilizing computer networks expand. We believe that awareness and countermeasures to prevent system breakdowns, malfunctions, and anomalies arising from defects, as well as improper use of the system, should be pursued at every level of our organization. Accordingly, we conduct periodic independent internal audits that encompass all aspects of information technology from planning through to development, management and application by end-users.

We have taken thorough measures to ensure the stable operation of our system. As a precaution against

large-scale disasters, we have built a back-up system center in the Kansai area in addition to our main center in the Kanto region. This system allows us to continue operating without interruption if our main system center is ever incapacitated. Both centers feature various safety features, including independent power-generating systems and multiple, redundant telecommunications lines.

# Compliance

# Background

With the aim of instilling a high standard of corporate ethics and self-discipline, thereby earning and maintaining the trust of its customers, in December 1996 the Bank published a Code of Conduct that outlines its principles of conduct and standards of conduct for Bank employees. This code forms the basis of the Bank's Compliance Code, which was established in April 1999 and currently governs the Bank's responses to compliance issues.

#### **Compliance System**

To reinforce awareness of its current internal regulatory framework, in April 1999 the Board of Directors of the Bank formulated a concrete Compliance Program. Under this program, compliance activities are supervised by the Ethics Committee, which was established in November 1996 and its overseen by the Legal Division. The Legal Division's responsibilities include (1) ensuring the legality of management decisions by examining items before the Board of Directors or the Executive Committee in advance, (2) offering advisory services and guidance to ensure the legality of divisional and branch marketing activities and (3) ensuring the legality of new financial products in consideration of customers.

The Bank has also assigned compliance officers to all of its major branches and offices and has contracted highly reputed external lawyers in each area of its operations to serve in an advisory capacity, with the aim of preventing the occurrence and/or ensuring the early resolution of compliance-related problems.

The Bank's Board of Auditors, which operates independently of the Board of Directors, audits the business activities of the directors, considering the compliance enforcement efforts. The Year 2000 (Y2K) issue refers to the danger that computer systems may improperly process computations involving calendar dates after the beginning of the year 2000 because the programs they employ recognize years using only the last two digits instead of the full four digits, resulting in system errors.

The Bank regards Y2K compliance as a priority management concern and began to implement measures to cope with the issue in July 1996, focusing on the modification of core systems and steps to prevent predictable problems, as well as on the formulation of contingency plans to minimize risk in the event of unforseeable difficulties.

Responsibility for the Bank's overall Y2K compliance effort resides with the Year 2000 Committee. The directors of the Board responsible to the Planning Division and Systems and Operations Planning Division serve as chairman and vice-chairman, respectively, with membership comprising general managers of relevant divisions. The Committee formulates specific measures for dealing with the Y2K issue and monitors implementation. It has also been granted the authority to accelerate responses as necessary. The Committee reports to the Board of Directors monthly on the Bank's Y2K compliance efforts. The Bank has also formed the Year 2000 Council, which falls under the authority of the Year 2000 Committee and is responsible for actual day-to-day initiation and implementation of measures. Of particular importance, the Council is responsible for formulating and advancing contingency plans. To this end, it has also appointed a general manager within the Planning Division to be in charge of crisis management on a full-time basis.



The Bank completed testing and modification of banking systems for deposits, remittances loans and other core banking operations, non-core systems and internal computer networks as of in June 1999. Tests were also conducted to confirm problem-free operation using certain dates expected to cause Y2K problems. Successful final tests to confirm the effectiveness of modifications, involving most core and noncore systems, were subsequently conducted using actual system parameters from Golden Week 1998—a period of approximately one week, beginning April 29, within which fall several national holidays—and the January 1999 New Year's holiday. Tests involving the systems of overseas subsidiaries, affiliates and offices were also completed in June 1999.

The Bank estimates the total cost of its Y2K compliance program at approximately ¥7.8 billion, of which ¥6.0 billion has already been allocated. This is the total amount estimated for modification and testing of the majority of the computer systems of the Bank and its subsidiaries and affiliates around the world; specifically, it covers expenditures related to the replacement of older equipment as part of Y2K compliance efforts, the modification of operating systems and other externally sourced software and programs developed by the Bank itself, and tests conducted to ensure the effectiveness of Y2K measures. This amount also includes costs associated with measures implemented to ensure equipment, telecommunications systems and other devices and systems employing microchips, as well as for measures to ensure Y2K compliance for the Bank's various electronic banking services. The Bank will prioritize additional funds and personnel resources on an as-needed basis.

The Bank is aware that the risks associated with the Y2K issue are not limited to its own computer systems, but also involve the potential impact on the Bank of problems in other sectors, including the social infrastructure, financial networks, the systems of its customers and a host of other external factors. Accordingly, the Bank has formulated a contingency plan to minimize the impact of problems caused by such external factors, should they occur. Specifically, the plan involves implementing a series of tests of customers' electronic banking service links with the Bank using the Bank's internal systems and tests related to the transmission and reception of data using magnetic tape and other media. The plan also encompasses the preparation of a manual designed to ensure uninterrupted services and/or restore services should an unexpected problem develop in a crucial area of the Bank's operations. The first draft of the contingency plan was submitted in March 1999 and the final version completed in June 1999. The Bank will continue to rehearse responses outlined in the plan and take steps to further minimize external risks, ensuring preparedness for the arrival of the year 2000.

This document describes that the Bank is using its best efforts to minimize risks in respect of the Y2K issue. Please note, however, that this document does not give any warranty as to the countermeasures taken or being taken by the Bank.