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A history of financial management at the Asian Development Bank : engineering financial innovation and impact on emerging Asia

Provided in Cooperation with:

Asian Development Bank (ADB), Manila

Reference: Erquiaga, Philip (2016). A history of financial management at the Asian Development Bank : engineering financial innovation and impact on emerging Asia. Mandaluyong City, Metro Manila, Philippines : Asian Development Bank.

This Version is available at:

<http://hdl.handle.net/11159/3364>

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A HISTORY OF FINANCIAL MANAGEMENT AT THE ASIAN DEVELOPMENT BANK

Engineering Financial Innovation and
Impact on an Emerging Asia

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Impact on an Emerging Asia

Philip Erquiaga



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Printed in the Philippines.

ISBN 978-92-9257-661-5 (Print), 978-92-9257-662-2 (PDF)
Publication Stock No. RPT168546

Cataloging-In-Publication Data

Erquiaga, Philip.

A History of Financial Management at the Asian Development Bank: Engineering financial innovation and impact on an emerging Asia
Mandaluyong City, Philippines: Asian Development Bank, 2016.

1. International financial institutions. 2. Multilateral development banks. 3. Development finance.
I. Asian Development Bank.

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Abbreviations

ACCSF	–	Asian Currency Crisis Support Facility
ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
AfDB	–	African Development Bank
AGM	–	Annual General Meeting
ALM	–	asset and liability management
ASC	–	Accounting Standards Codification
ASF	–	Agricultural Special Fund
bps	–	basis point
CCCC	–	callable capital in convertible currencies
CFA	–	channel financing arrangement
CIF	–	Climate Investment Funds
DMC	–	developing member country
EBRD	–	European Bank for Reconstruction and Development
ECP	–	euro-commercial paper
ELR	–	equity–loan ratio
ERPS	–	exchange risk pooling system
FSL	–	fixed spread loan
GCI	–	general capital increase
GDIF	–	Global Debt Issuance Facility
GNP	–	gross national product
HIPC	–	highly indebted poor country
IADB	–	Inter-American Development Bank
IBRD	–	International Bank for Reconstruction and Development
ICR	–	interest coverage ratio
IDA	–	International Development Association
IMF	–	International Monetary Fund
IOC	–	instrument of contribution
IPA	–	interest payment assistance
JFICT	–	Japan Fund for Information and Communication Technology
JFPR	–	Japan Fund for Poverty Reduction
JSF	–	Japan Special Fund
LBL	–	LIBOR-based loan
LCL	–	local currency loan
LIBOR	–	London interbank offered rate
LLR	–	loan loss reserve
MBL	–	market-based loan
MDB	–	multilateral development bank
MFF	–	multitranches financing facility

MOV	–	maintenance of value
MPSF	–	Multi-Purpose Special Fund
NCR	–	net cash requirement
OCR	–	ordinary capital resources
PMCL	–	pool-based multicurrency loan
RBC	–	risk-based capital
RBL	–	results-based lending
RLR	–	reserves–loan ratio
SDR	–	special drawing right
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund
UK	–	United Kingdom
US	–	United States
VAR	–	value at risk
VSL	–	variable spread loan

NOTE

In this report, “\$” refers to US dollars.

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Foreword

This year 2016 marks the 50th anniversary of the Asian Development Bank (ADB). To commemorate this event, ADB has produced a series of volumes to provide a corporate chronicle over the past 5 decades of how ADB has evolved in partnership with its shareholders and other development partners to deliver financial and advisory services to its developing member countries in Asia and Pacific. Organized around key themes and topics, the *ADB Through the Decades* series as it is called, documents ADB's past work in such areas as strategic, operational, financial, and institutional developments.

The series synthesizes materials from many different sources, building from ADB's annual reports. These notes serve as archival background documents for ADB's commemorative 50-year history book to be launched in 2017. Together, the history book and these decade notes provide the first comprehensive corporate narrative on ADB's history since the previous ADB history book, "A Bank for Half the World" was published in 1986.

Over the past 50 years, ADB has demonstrated a strong corporate identity as a multilateral development bank with an Asian character and global outreach. More significantly, the leadership of ADB has undertaken profound changes for the Bank to stay relevant and responsive in serving the changing needs and expectations of its developing member countries. This spirit of change and innovation shall continue to drive ADB in the years ahead.

Reflecting on our history will give us a better insight for our work in the future. I hope that the *ADB Through the Decades* series become a key reference for ADB staff as well as other stakeholders from member countries, academic institutions, development partners, and civil society organizations.



TAKEHIKO NAKAO

December 2016

I. Introduction

To the casual observer, the multilateral development bank (MDB) may appear paradoxical. On the one hand, its development remit is clear. Its main objective is to assist economic and social development by providing loans, largely to sovereign entities, on terms not readily available from the commercial market. On the other hand, the same institution issues debt, like other banks, and must meet commercial standards of solvency and creditworthiness to access funding on sufficiently advantageous terms to remain relevant to the development process. In the case of the Asian Development Bank (ADB), for example, it is bound by its founding statutes to follow “sound banking principles in its operations.”¹

ADB is an international development finance institution whose vision is of an Asia and Pacific region free of poverty. It was established in 1966 through the Agreement Establishing the Asian Development Bank (the Charter) (footnote 1). ADB is owned by 67 members, 48 of which are in Asia and the Pacific. It provides financial assistance to its developing member countries (DMCs), primarily through loans to sovereign and nonsovereign entities operating in DMCs, technical assistance (TA), grants, guarantees, and equity investments. These instruments of assistance are financed from ordinary capital resources (OCR), special funds, and trust funds. Historically, OCR and Special Funds have been managed independently. Trust funds are generally financed by contributions from developed member countries and do not constitute part of ADB’s balance sheet, though they are administered by ADB as trustee. ADB also engages in policy dialogue and offers advisory services to its members.

Funding for OCR operations comes from three sources: (i) borrowings on the capital markets (bonds, private

placements, and short-term instruments); (ii) paid-in capital provided by shareholders; and (iii) accumulated retained income (reserves). Borrowed funds, together with equity, are used to support OCR lending and investment activities and other general operations.

Sovereign lending is priced on a “cost pass-through” basis, which means that the cost of funding the loans plus a contractual spread (basically, administrative costs) is passed on to borrowers. The ability of ADB to access low-cost borrowed funds on the capital markets is of critical importance to its intermediary role in providing long-term development assistance to sovereign borrowers at pricing lower than commercial rates generally available to these borrowers.² Continued access to low-cost borrowed funds depends on market perceptions of ADB’s financial strength, which it derives from the support it receives from its shareholders and the effectiveness of its financial policies and practices. Shareholder support is reflected through the capital subscriptions of its nonborrowing members and the enviable record of its borrowing members in meeting their debt service obligations.

ADB supplements its direct assistance through external resource mobilization. For example, it often mobilizes official and other concessional, commercial, and export credit agency sources of financing and support to maximize the development impact of its assistance. Cofinancing for ADB projects can be in the form of external loans, grants for TA and components of loan projects, equity, and credit enhancement products such as guarantees and syndications.

ADB published its first financial statement in 1967. As part of its good governance, the annual financial statements of

¹ ADB. 1966. *Agreement Establishing the Asian Development Bank*. Article 14 (xiv). Manila.

² ADB applies market-based pricing principles for its loans to nonsovereign entities.

ADB is audited by an internationally recognized auditing firm and in accordance with the Article 28 of the Charter, the Board of Governors approves the audited annual financial statements.

As a major international financial institution, ADB has consistently followed best practice standards for reporting its financial statements. For external financial reporting, ADB conforms with the accounting principles generally accepted in the United States (US GAAP). Starting in 2001, ADB also voluntarily presented Management's Discussion and Analysis (MD&A), a supplementary report in the financial statements, to better present ADB's financial operations and management. ADB Management believes that the standardized US GAAP financial statements referred to as statutory reporting may not fully reflect the overall economic value of ADB's financial position. Hence, ADB currently also includes management reporting in the MD&A where operating income, which excludes the impact of the fair value adjustments associated with financial instruments from the results of operations is presented as the key measure to manage ADB's financial position, make financial management decisions, and monitor financial ratios and parameters.

From its earliest days, financial management at ADB has been characterized by innovation, prudence, and a close alignment with the overall strategic objectives of the institution. Over the 50 years of its operations, ADB has evolved into a mature development banking institution, with strong financial infrastructure and the highest credit rating. In part, this maturation process has been driven by the need to fund its operations through borrowings in the international capital markets, where perceived prudence and maturity of management have a direct bearing on the cost of funds. But it has also been driven by a desire by shareholders, Management, and staff to introduce and apply internationally acknowledged best practices to its financial management activities.

In the 5 decades since its establishment, ADB's financial policies and operational practices have received many enhancements. The most significant of these current policies and practices are evidence of ADB's institutional maturity. They are the bedrock of ADB's effectiveness in intermediating resources for development, and are briefly summarized in this report.

II. Overview of Current Financial Management Policies and Practices

ADB's main objective is to promote economic and social development by intermediating resources between the global capital markets and ADB's DMCs. In meeting this objective, ADB must balance the interests of three distinct stakeholders: shareholders (particularly donor members), bondholders, and borrowers. The financial management framework is the platform for balancing the interests of each of these stakeholders.

The financial management framework is a set of policies and practices that governs management of ADB's financial operations, including lending, borrowing, liquidity management, capital adequacy, risk management, and others. While the spectrum of these policies and practices is wide, the primary focus of the framework is on the management of capital (particularly equity capital, i.e., usable paid-in capital, ordinary reserves, special reserves, and surplus).³ Capital is the ultimate source of solvency for any lending institution, providing the support needed to absorb potential losses arising from operations. At any point in time, a financial institution must maintain and manage a sufficient level of capital on its books to absorb potential losses, and the financial markets place great emphasis on capital management in determining the creditworthiness of lending institutions. In an institution like ADB, capital is also a key determinant of the level of loans, guarantees, and equity investments it may provide, as well as the level of borrowings it may undertake.

The broadest definition of capital used by ADB is OCR, which comprises the authorized and subscribed capital stock (shareholder capital, both paid-in and callable); resources raised through borrowings; funds received in

repayment of loans or guarantees and from divestment of equity investments; income derived from loans, guarantees, and equity investments; and other funds or income received by ADB that are not part of the Special Funds resources. OCR are the largest part of ADB's resource base.

As with all lending institutions, ADB's paramount concern is to ensure a sufficient level of capital, particularly equity capital, to support its operations. In large measure, ADB enjoys an AAA credit rating⁴ because of its strong capital position and its conservative capital management practices. An AAA rating allows ADB to borrow funds at some of the lowest rates available in the international capital markets. Sovereign borrowers have enjoyed the lowest possible pricing on long-term loans funded through these borrowings because of ADB's cost pass-through pricing policy. To retain this rating, ADB must maintain an adequate amount of capital and ensure its capital is protected from market fluctuations in interest rates and foreign exchange values that might compromise its value.

ADB's asset and liability management (ALM) policy provides overall direction and perspective to the financial management framework. It links the general principles of financial management contained in the Charter with individual financial policy papers. It provides an outline of financial management objectives that guide individual policy papers, enabling ADB to develop a complete, transparent, and consistent set of financial policies with discipline and little ambiguity. As stated by ADB:

The objectives of the asset and liability management are to safeguard ADB's net worth and capital adequacy, promote steady growth in ADB's risk-

³ Usable paid-in capital is defined as the sum of paid-in capital less subscription installments not yet due and net notional maintenance of value (MOV) obligations less demand promissory notes, restricted cash, and set-aside capital. Ordinary reserves represent cumulative net income from prior years retained in the OCR. Special reserves include commissions on loans and guarantee fees set aside pursuant to Article 17 of the Charter, which states that the special reserves will be kept for meeting the liabilities of ADB and that they will be held in such liquid form as the Board of Directors may decide. Surplus represents funds for future use to be determined by the Board of Governors. It is a tool for managing potential uses of excess net income.

⁴ In 1971, ADB received its first credit rating by Standard & Poor's. Moody's followed in 1975 and Fitch in 2000.

bearing capacity, and define financial policies to undertake acceptable financial risks. The aim is to provide resources for developmental lending at the lowest and most stable funding cost to borrowers, along with the most reasonable lending terms, while safeguarding ADB's financial strength.⁵

In this regard, the ALM policy seeks to ensure that (i) net worth is protected from foreign exchange rate risks, (ii) net interest margin is protected from fluctuations in interest rates, and (iii) sufficient liquidity is always on hand to meet the needs of ADB operations. These objectives, and the policies and practices followed to ensure that they are met, provide the credibility ADB enjoys when borrowing on the global capital markets.

Since its inception, ADB has faced a consistent set of challenges in the management of its assets and liabilities. These include credit risk associated with its borrowers, concentration of its lending exposure, interest rate exposure, foreign exchange exposure, liquidity risk exposure, counterparty risk exposure, and operational risk exposure. The linkage between these risk exposures, at transaction and portfolio levels, and the ALM policy is through management of ADB's capital. Risk management establishes the methodology to quantify and measure capital required for its risk exposures while ALM ensures that sufficient capital (a capital adequacy ratio) is maintained at or above a predetermined prudential level through net worth and net income management.

While the Charter provides broad principles to guide financial management within ADB, the ALM policy refines these principles as they refer to limits on lending, borrowing, and equity investments. As ADB has matured as a financial institution, the products it has offered to borrowers and the tools available for managing its risk exposures and capital adequacy have become more sophisticated. Yet the fundamental objectives of managing capital, ensuring appropriate risk-bearing capacity, and protecting its assets and liabilities, have remained the same. This evolution in policies, practices, and approaches will be outlined in the following pages, by decade of operations, following a review of current policies and

practices governing capital adequacy management, risk management, lending, borrowing, liquidity management, and Special Funds operations.

A. Capital and Capital Adequacy

As of 31 December 2014, the total authorized capital was 10,638,933 shares valued at \$154.09 billion. Most of the authorized capital has been subscribed (10,567,394 shares valued at \$153.05 billion). Subscribed capital is comprised of a paid-in portion and a callable portion. Unlike commercial entities, only a small part of subscribed capital is actually paid in to ADB. The vast majority of subscribed capital is callable, and only subject to call to meet ADB's obligations arising from borrowings or guarantees under OCR. Currently, the paid-in portion of subscribed capital amounts to \$7.68 billion, while the callable portion amounts to \$145.37 billion. No call has ever been made on ADB's callable capital.

The quantity and management of capital resources are key considerations in assessing ADB's creditworthiness. This periodic assessment has resulted in regular increases to ADB's capital subscriptions to ensure prudent and sustainable operational growth. Since 1966, OCR have had five general capital increases (GCIs), with an average increase in paid-in capital of about \$1.1 billion per general capital increase.

Yet, how much capital, particularly equity capital, is appropriate for an institution like ADB? To answer that question, ADB has devoted much effort to analyzing the main risks to its portfolio of assets and liabilities, and by extension, its net worth. The most significant risk ADB faces is the potential for default, or extended nonaccrual status, on a large portion of its loan portfolio. ADB measures credit risk in terms of both expected and unexpected losses.⁶ For expected losses, it holds loan loss reserves (LLRs) and provisions. For unexpected losses, ADB relies on its income-generating capacity and capital, which is a financial institution's ultimate protection against unexpected losses that may arise from credit and other risks.

⁵ ADB. 2014. *Financial Report 2014: Management's Discussion and Analysis and Annual Financial Statements*. Manila p. 25.

⁶ Expected loss is a part of the cost of doing business. In many commercial institutions, this is priced into the cost of loans. Unexpected loss is the volatility, or standard deviation, of loss around expected loss.

Table 1 General Capital Increases and Capital Composition (Authorized Capital Stock), 1966–2009^{1,2}

	Initial Subscription	Composite Rates	Special Capital Increases	GCI I	GCI II	GCI III	GCI IV	GCI V
Date of Adoption	22 Aug 1966	various	various	30 Nov 1971	29 Oct 1976	25 April 1983	22 May 1994	29 Apr 2009
Board of Governors' Resolution Number		various	various	46	104	158	232	336
Capital Increase								
% Increase	0	n.a.	n.a.	150	135	105	100	200
Number of new shares	110,000	207,293	123,971	165,000	414,800	754,750	1,770,497	7,092,622
Composition of Capital (in Percentage)								
Callable	50%	various	various	80%	90%	95%	98%	96%
Paid-in	50%	various	various	20%	10%	5%	2%	4%
Composition of Capital (in SDR Million)								
Callable	550	1,852	1,019	1,320	3,733	7,170	17,351	68,089
Paid-in	550	221	221	330	415	377	354	2,837
Components of Capital								
Convertible Currency	50%	various	various	40%	40%	40%	40%	40%
National Currency	50%	various	various	60%	60%	60%	60%	60%

GCI = general capital increase, n.a. = not applicable, SDR = special drawing rights.

¹ The authorized capital stock of ADB has a par value of \$10,000 in terms of the US dollars of the weight and fineness in effect on 31 January 1966. Pending ADB's selection of the appropriate successor to the 1966 dollar, the par value of each share is SDR10,000 for financial reporting purposes. The US dollar exchange rate at 30 June 2016 was \$1.39587.

² Rates correspond to shares given to new members while special capital increases are shares given to selected existing members. Source: Asian Development Bank.

The focus of a development institution like ADB on income-generating capacity may seem counterintuitive. Yet net income management, together with the aggregate level of equity capital, has a direct impact on ADB's risk bearing capacity and its pace of operational growth.

ADB has two principal earning assets—its loans and its investment assets funded by equity capital. As ADB allocates its borrowings to loans, and applies a thin margin to the cost of borrowings in pricing its loans, the bulk of net income is generated by the investment of equity capital. Paid-in equity is fixed, while reserves can be built through the allocation of net income (essentially, retained earnings). ADB has ex-ante control over its reserves, and since reserves form a significant part of equity capital,

capital adequacy planning has historically focused on the level of reserves to its principal risk asset (loans). Income can be allocated to reserves which, together with equity, reinforces the capital base and establishes prudential levels of lending and borrowing.

For much of ADB's first 50 years of operations, its income and reserves policy⁷ was at the core of its capital adequacy. The targets set for key financial indicators embedded in this policy, i.e., the interest coverage ratio (ICR)⁸ and the reserves-loan ratio (RLR),⁹ were not only seen as conservative and appropriate in meeting ADB's capital management objectives, but were also comparable with the key indicators of other institutions such as the International Bank for Reconstruction and Development

⁷ ADB. 1997. *Review of the Bank's Income and Reserves Policy*. Manila.

⁸ Income before interest expense relative to interest expense. The ratio helps determine the ability of income to cover the cost of ADB borrowings.

⁹ Reserves relative to outstanding loans. The ratio indicates the extent to which ADB is covered for possible bad and doubtful debts, i.e., possible defaults in repayments by borrowers.

(IBRD) and the Inter-American Development Bank (IADB). The major credit rating agencies also considered them prudent. These key indicators, which were periodically subjected to modeling under different assumptions and time horizons, have been replaced by enhanced and more dynamic approaches and indicators aimed at addressing the financial challenges of the 21st century.

ADB uses sophisticated stress testing and simulation analysis to assess the adequacy of its capital to absorb unexpected losses. This approach has two objectives: (i) to measure ADB's ability to absorb income losses resulting from a credit shock, thereby reducing the probability that it would have to rely on shareholder support, i.e., additional paid-in capital or a capital call; and (ii) to evaluate ADB's ability to generate sufficient income to support loan growth, and in turn future income, after a credit shock.

The stress tests are computationally intensive. Credit losses for a wide range of scenarios are repeatedly and randomly simulated. A single total portfolio loss number is produced for each scenario. By running thousands of different scenarios of portfolio losses, the resulting histogram of these losses becomes the simulated loss distribution of the portfolio resulting from default risk. Expected and unexpected losses are then derived from this simulated distribution, allowing ADB to assess the impact of credit shocks on its capital by modeling its current, primary metric of capital adequacy, the equity-loan ratio (ELR).

ADB is aware that its assistance becomes more important during periods of financial crisis, when some DMCs may find their access to other sources of funds limited. These scenarios are also evaluated in the stress testing. Throughout 2014, stress tests indicated that ADB had adequate capital to absorb the losses of a severe credit shock and to continue its development lending. In addition, the three major international credit rating agencies reaffirmed ADB's AAA credit rating in 2014.

B. Risk Management

ADB faces financial, operational, and other organizational risks in its operations. Management of these risks is key to preserving and protecting its balance sheet from exposures that could erode its financial integrity and

solvency. Risk management at ADB is built on three pillars: governance, policies, and processes. Governance begins with the Board of Directors, which plays a key role in reviewing and approving risk policies that set ADB's risk tolerance levels. ADB also has an independent risk management group responsible for independently quantifying and monitoring risk, and regularly convenes various management-level committees that oversee ADB-wide risk and propose remedial actions for approval by Management and the Board. One of these is the Risk Committee, which provides high-level oversight of ADB's risks and recommends risk policies and actions to the President.

Policies and processes measure, monitor, and manage risk exposures, particularly financial risk exposures, at the transactional and portfolio levels. Financial risk includes credit risk, market (interest rate) risk, and liquidity risk. ADB monitors the credit profile of transactions in the operations portfolio relative to limits and concentrations, conducts detailed and ex-ante risk assessments of new nonsovereign transactions, and takes an active role in the resolution of distressed transactions, when necessary. It monitors and restricts market and credit risk in treasury operations, such as the credit quality of issuers and counterparties and interest rate risk in the liquid asset and borrowing portfolios, and monitors and manages foreign exchange risk exposure. In addition, ADB has developed an operational risk management framework that focuses on establishing strict protocols and procedures at the transaction level, often enforced through a series of checks and cross-checks.

Credit and Market Risk

ADB is exposed to credit risk, or the risk of loss that could result if a borrower or counterparty defaults or its creditworthiness deteriorates. This risk affects its sovereign, nonsovereign, and treasury portfolios. Credit risk may be exacerbated by a concentration of exposure in a specific country, industry sector, instrument, or individual borrower. It affects ADB's net worth in different ways, depending on the composition and size of the individual portfolios. The sovereign lending portfolio includes sovereign loans and guarantees, and constitutes about 91% of OCR operations, while the nonsovereign portfolio includes nonsovereign loans and guarantees, publicly traded equity, and private equity, and constitutes about 9% of OCR operations. In both cases, the health of the borrower (or investee) is the main credit risk. The liquid

asset portfolio, on the other hand, includes fixed-income securities, cash and cash equivalent instruments, and derivatives. Here, the health of the issuer and transaction counterparties is the main credit risk.

ADB ensures that it can weather potential credit losses through appropriate LLRs and by maintaining conservative equity levels. In the case of its sovereign loans, outright loss of principal is a negligible risk. Historically, when countries have fallen into arrears on loans from multilateral development banks (MDBs), they have eventually returned those loans to accrual status. This has given MDBs preferred creditor status among sovereign borrowers. ADB has never had to write off a sovereign loan funded from OCR, and as a result, credit risk on the sovereign portfolio is often defined as the risk of protracted arrears on loan obligations.

ADB charges provisions against income for specific transactions considered “impaired.”¹⁰ These provisions are based on projections of future repayment capacity. In addition, ADB establishes LLRs within equity for the average loss that ADB could incur in the course of lending. For sovereign lending, the LLR is based on the historical default experience of sovereign borrowers to MDBs. The sum of the provisions and LLR represents ADB’s expected loss for sovereign operations and forms an important component of the capital adequacy assessment.

Nonsovereign credit risk is the risk that a borrower will default on a loan or guarantee obligation for which ADB does not have recourse to a sovereign entity. This risk is considered significant because of uncertain economic circumstances in some DMCs and because ADB’s exposure is concentrated in the energy and finance sectors. ADB’s investment and risk committees play key roles in managing risks to the nonsovereign portfolio. For example, the Investment Committee reviews all new nonsovereign transactions for creditworthiness and pricing. The Risk Committee monitors aggregate portfolio risks, and individual transactions experiencing deterioration in

creditworthiness. The Risk Committee also endorses changes to policy on portfolio risk and management, and approves provisions for impaired transactions.

Once a nonsovereign transaction is approved, its exposure is reviewed at least annually, and more frequently if the exposure is deemed vulnerable to default or has defaulted. In each review, ADB assesses whether the risk profile has changed, takes necessary actions to mitigate risks, and confirms or adjusts the risk rating and updates the valuation of equity investments. This includes assessing whether impairments are temporary or more permanent in nature. ADB will provide specific provisions for impaired loans, in accordance with its provisioning policy. As in the case of sovereign lending, ADB establishes specific provisions in net income for known or probable losses in loans or guarantee transactions, and collective provisions for unidentified probable losses that exist in loan transactions rated below investment grade. Additionally, ADB establishes LLRs within equity for the average loss that ADB would expect to incur in the course of lending for credit transactions that are rated investment grade and for the undisbursed portions of credit transactions rated worse than investment grade.¹¹ The sum of the specific provision, collective provision, and LLR represents ADB’s expected loss for nonsovereign operations.

Credit risk to the treasury portfolio relates to issuer or counterparty default risks. Issuer default is the risk that an issuer of a bond held in ADB’s liquid asset portfolio will default on its interest or principal payments, while counterparty default is the risk that a counterparty will not meet its contractual obligations to ADB. To mitigate issuer and counterparty credit risks, ADB transacts only with institutions rated by reputable international rating agencies. Further, the liquid asset portfolio is largely invested in conservative assets, such as money market instruments and government securities, where default risk is low. ADB has established exposure limits for its corporate investments, depository relationships, and other investments.

¹⁰ ADB determines that a sovereign loan is impaired and therefore subject to provisioning when the principal or interest is in arrears for 1 year. In the case of nonsovereign loans, impairment occurs when the principal or interest are in arrears for 6 months. If the present value of expected future cash flows discounted at the loan’s effective interest rate is less than the carrying value of the loan, a valuation allowance is established with a corresponding charge to provision for loan losses.

¹¹ The collective provision and LLR are based on historical default data from Moody’s Investors Service, which is mapped to ADB’s portfolio. ADB tests these external data annually to determine if they correspond to ADB’s actual loss experience. Estimates may be adjusted on the basis of this back testing.

Market risk is the risk of loss on financial instruments resulting from changes in market prices. Market risk includes equity price risk within the nonsovereign portfolio, interest rate risk affecting the liquid asset portfolio, and foreign exchange risk affecting the overall portfolio. Interest rate risk in the loan portfolio is hedged as the basis for borrowers' interest payments are matched to ADB's borrowing expenses under the "cost pass-through" approach. Therefore, the borrower must assume or hedge the risk of fluctuating interest rates, whereas ADB's margins remain largely constant.

Interest rate risk to the liquidity portfolio is managed by employing various quantitative methods. ADB marks all positions to market, monitors various interest rate risk metrics, and employs stress testing and scenario analysis. The interest rate risk metrics employed include duration¹² and interest rate value at risk (VAR).¹³ ADB uses duration and VAR to measure interest rate risk across the entire liquid asset portfolio, with particular attention to its core liquidity portfolio, which is the most exposed to interest rate risk.

ADB strives to minimize its exposure to exchange rate risk in its operations and liquidity portfolios by matching the currency of its assets with the currencies of its liabilities and equity. Borrowed funds or funds to be invested may only be converted into other currencies provided that they are fully hedged through cross-currency swaps or forward exchange agreements. However, because of its multicurrency operations, ADB is exposed to fluctuations in reported US dollar results because of currency translation adjustments.

Liquidity Risk

Liquidity risk is the risk that ADB may be unable to raise funds to meet its financial and operational commitments. ADB maintains a core level of liquidity (its liquid asset portfolio) to safeguard against a liquidity shortfall in case its access to the capital markets is temporarily restricted. The overriding objective of ADB's liquidity policy is to enable ADB to obtain the most cost-efficient funding under both normal and stressed situations, and manage liquidity optimally to achieve its development mission.

The exact amount of liquidity to hold is a concept that has evolved over time. The current liquidity policy defines the prudential minimum liquidity level as 45% of the 3-year net cash requirements (NCRs). This represents the minimum amount of liquidity necessary for ADB to continue operations even if access to capital markets is temporarily restricted. Maintaining the prudential minimum liquidity level is designed to enable ADB to cover normal NCRs for 18 months under normal and stressed situations without borrowing. The liquidity levels and cash requirements are monitored on an ongoing basis, with quarterly review by the Board of Directors. The new policy allows for a discretionary liquidity portfolio to maintain a debt-funded sub-portfolio of liquid assets that will be excluded from the NCRs and prudential minimum liquidity calculations, and is intended to provide greater flexibility in the timing of individual funding transactions.

C. Lending and Borrowing

By Charter restriction, ADB limits the total amount of outstanding loans and guarantees, as well as outstanding equity investments including undisbursed commitments, to the total amount of ADB's unimpaired subscribed capital, reserves, and surplus, excluding special reserves or any other reserves that are not available for ordinary operations. Known as the one-to-one lending ratio, this restriction has also been a primary determinant of the timing of GCIs.

The Charter also restricts borrowing levels. Gross outstanding borrowings may not exceed the sum of callable capital from nonborrowing members, paid-in capital, and reserves (including surplus). In the early years of its existence, ADB restricted borrowings to the callable capital subscribed by members whose currencies are convertible, though this restriction was eased over time.

As of 31 December 2014, the headroom for lending was \$107.96 billion and for borrowings \$53.06 billion.

¹² Duration is the estimated percentage change in the portfolio's value in response to a 1% parallel change in interest rates.

¹³ Interest rate VAR is a measure of possible loss at a given confidence level in a given time frame because of changes in interest rates. ADB uses a 95% confidence level and a 1-year horizon.

Loan Products and Pricing

The lending products offered by ADB to sovereign and nonsovereign borrowers in the DMCs have evolved significantly over the last 50 years of its operations, but two principles have remained constant. These are the notions of cost pass-through pricing for loans to borrowers, and the expressed objective of allocating the most efficient borrowing, based on cost and maturity, to fund the loans.

Since 2001, the primary lending facility for OCR sovereign operations has been loans based on the London interbank offered rate (LIBOR). Before 2001, ADB's loan products were comprised of pool-based single currency loans, market-based loans (MBLs), and fixed-rate multicurrency loans. With the introduction of LIBOR-based loans (LBLs), these were no longer offered.

The LBL provides borrowers with a product that helps them meet project needs and manage their external debt effectively. The LBL has met the demand of borrowers for a high degree of flexibility in managing interest rate and exchange rate risks, while exposing ADB to low intermediation risk. LBLs and loans approved under special programs (such as the Countercyclical Support Facility [CSF]) are priced at a floating lending rate that carries a funding cost margin over or under the 6-month LIBOR and an effective contractual spread. The lending rate is reset every 6 months on each interest reset date and can be converted into a fixed rate at the request of the borrower.

ADB has also offered local currency loans (LCLs) to nonsovereign borrowers since November 2002. This product was extended to sovereign borrowers in August 2005. LCLs may also be made on a floating rate basis, and typically reset every 6 months. The cost-base rate of an LCL is based on back-to-back or pool-based funding.

The LBL represents a substantial step forward in the evolution of product offerings over time. Pool-based lending products took a completely different approach to pricing. Lending rates for pool-based single currency loans, for example, were based on the previous semester's average cost of borrowing. Interest rates for MBLs were either fixed or floating, but did not contain the concept of rebates and surcharges to the borrower for the actual cost of ADB funding relative to the LIBOR—a characteristic

that exists under the LBL. The floating rates of MBLs were determined based on the 6-month LIBOR, with reset dates of 15 March and 15 September or 15 June and 15 December.

Borrowing Policies and Strategy

ADB leverages its equity by borrowing in the international capital markets, raising resources to fund its development finance operations. Through its borrowing and liability management strategy, ADB has sought to (i) ensure the availability of long-term funds for lending operations, (ii) fund the liquidity portfolio, and (iii) minimize the cost of borrowing for ADB and its member countries. It seeks to establish and maintain its flexibility to raise funds in targeted currencies and maturities at the lowest possible price, using all tools at its disposal, including bond issues, private placements, commercial paper, derivatives, structured notes, and others.

To achieve these objectives, ADB adopts a multifaceted strategy. First, it attempts to maintain a borrowing presence in the major capital markets and, where possible, increase the size of its public bond transactions by floating benchmark issues. Benchmark status improves the liquidity of its bonds in the secondary markets, broadens the distribution of its bonds, and favorably aligns its funding and trading spreads with those of other supranational borrowers. ADB also tries to focus borrowings in longer maturities to minimize fluctuations in its lending rates and to ensure a reasonable maturity relationship between borrowings and loans.

Second, ADB tries to expand its investor base by borrowing in the private placement markets of various currencies. It has established a long history of offering debt instruments that appeal to the specific currency and maturity requirements of selected investors. Third, it seeks to tap new markets, particularly if such operations would contribute to the development of capital markets in Asia and the Pacific. ADB has been a pivotal force in opening Asian markets to supranational bonds traded regionally, and has become an active issuer in local currencies in Asia. Fourth, it utilizes swap markets where cost-efficient arbitrage can significantly lower the cost of target currencies and transform structured financing into "plain vanilla" fixed rate liabilities. And fifth, it uses short-term bridge financing should temporary deficiencies in disbursement or debt-service currencies arise and if

market conditions are not attractive for bond issues of longer maturities.

ADB's borrowing practices have incorporated numerous innovations over the last 50 years. New borrowing products have been introduced, new markets established, and new risk management tools utilized. This has been important to establishing ADB's name recognition in the global capital markets, giving it the flexibility required to raise resources in the targeted currencies, maturities, and pricing required.

D. Liquid Asset Management

The liquidity (liquid asset) portfolio helps ensure the uninterrupted availability of funds to meet loan disbursements, debt servicing, and other cash requirements; provides a liquidity buffer in the event of financial stress; and contributes to ADB's earning base. ADB's Investment Authority governs ADB's investment in liquid assets. The primary objective of its investments, as stated in the Investment Authority, is to maintain the security and liquidity of funds invested. Subject to these two parameters, ADB seeks to maximize the total return on its investments. ADB does not switch currencies to maximize returns on investments, and investments are generally made in the same currencies in which they are received.

At the end of 2014, ADB held liquid investments in 24 currencies. Liquid investments are held in government or government-related debt instruments, time deposits, and other unconditional obligations of banks and financial institutions. To a limited extent, they are also held in corporate bonds that are rated at least A-. Historically, ADB has also invested in AAA-rated mortgage-backed securities and AAA-rated asset-backed securities. Interest rate and currency swaps may be used for income enhancement and hedging activities, as well as covered forward investments and securities lending transactions and repurchase agreements.

Investments are held in five portfolios—core liquidity, operational cash, cash cushion, discretionary liquidity, and ad hoc—all of which have different risk profiles and performance benchmarks. The core liquidity portfolio is invested to ensure that the primary objective of a liquidity

buffer is met. Cash inflows and outflows are minimized to maximize the total return relative to a defined level of risk. From a financial management perspective, the portfolio is considered to be funded by equity, and the average duration of the major currencies in the portfolio was about 2.4 years as of 31 December 2014.

The operational cash portfolio, designed to meet NCRs over a 1-month horizon, is also funded by equity and invested in short-term highly liquid money market instruments. The cash cushion portfolio holds the proceeds of ADB's borrowing transactions pending disbursement. It is invested in short-term instruments and aims to maximize the spread earned between the borrowing cost and the investment income. The discretionary liquidity portfolio is used to support medium-term funding needs and comprises borrowing proceeds held to provide flexibility in executing the funding program over the medium term. This facilitates opportunistic borrowing ahead of cash-flow needs, and bolsters ADB access to short-term funding through a continuous presence in the market.

E. Special Funds

ADB is authorized by its Charter to establish and administer Special Funds resources, which support loans made on highly concessional terms to DMCs with low per capita gross national product (GNP) and debt repayment capacity. Special Funds mainly comprise the Asian Development Fund (ADF), but include a variety of other resources as well—the Technical Assistance Special Fund (TASF), the Japan Special Fund (JSF), the Asian Development Bank Institute, the Regional Cooperation and Integration Fund, the Climate Change Fund, the Asia Pacific Disaster Response Fund, and the Financial Sector Development Partnership Special Fund. These Special Funds resources are provided through member contributions, and have been held, used, and committed entirely independent from OCR by Charter restriction. In particular, ADB's OCR may not be charged with, or used to discharge, losses or liabilities that arise from Special Funds operations. Financial statements for each Special Fund are prepared in accordance with the United States (US) Generally Accepted Accounting Principles except for the ADF, for which special purpose financial statements are prepared.

The ADF is ADB's concessional financing window, providing resources to DMCs that have per capita gross national income below the ADB operational cutoff and limited or low creditworthiness. It supports activities that promote poverty reduction and improvement in the quality of life of ADB's poorer DMCs, and is an important instrument of multilateral cooperation for achieving poverty reduction through equitable and sustainable development. Cofinancing from bilateral and multilateral development partners often complements ADF resources.

Unlike OCR, the ADF does not leverage the contributions made by donors through borrowings in the international capital markets. This is because it does not have an independent legal identity as a separate window of ADB operations. Therefore, the ADF has always relied on resources provided by donors or internally generated funds. Over the 42 years of its existence, resource mobilization to fund the ADF development agenda has proven challenging, as economic circumstances among its donor partners have occasionally introduced constraints. Since its inception in 1973, ADF resources have been replenished 10 times. Donor contributions, the most significant source of ADF financing, provided funds for the ADF I–XI totaling \$31.7 billion equivalent and averaging \$2.9 billion per replenishment. Funds from ADF internal resources include loan reflows, liquidity drawdown, and investment income, and totaled \$24.2 billion at year-end 2014. Other resources mainly consist of (i) OCR net income transfers, and (ii) savings and cancellations of

loans and grants. OCR net income transfers to the ADF during the ADF VII–XI totaled \$1.7 billion.

Total financial resources available for commitment increased at an average of 6.6% per year in nominal terms from 1973 to 2016 (end of current replenishment period). In real financial terms, ADF financial resources have grown by about 4.7% per year. According to financial statements as of 30 June 2014, ADF assets primarily included outstanding loans totaling \$29.1 billion equivalent and \$7.5 billion in liquidity. Equity totaled \$33.5 billion, comprised of donor contributions, transfers from OCR and the TASF, set-aside resources, surplus, and other comprehensive losses.

At the inception of the ADF, loans were denominated in US dollars but have been denominated in special drawing rights (SDR) since 1982. Thus, most outstanding ADF loans and undisbursed balances are in SDR. Since their introduction in 2005, grants under the ADF have been denominated in US dollars. ADB adopted a new ADF currency management framework in 2005, wherein currencies retained in ADF liquidity have been shifted from donors' national currencies to the four currencies that constitute the SDR to meet its lending commitments in SDR.

This is the current financial management framework of ADB. The succeeding sections explain the evolution of this framework.

**Table 2 Asian Development Fund Financial Resources by Replenishment, as of 31 December 2015
(\$ million)**

Replenishment Period	Donor Contributions ^a	Reflows-Based Resources ^a	Other Resources				Total
			OCR Net Income Transfer	Loan Savings and Cancellations ^b	Others ^c	Total Other Resources	
ADF I 1973–1975	710	0	0	0	61	61	771
ADF II 1976–1978	761	0	0	0	61	61	822
ADF III 1979–1982	2,141	0	0	0	141	141	2,282
ADF IV 1983–1986	3,260	0	0	0	153	153	3,413
ADF V 1987–1990	3,569	0	0	0	462	462	4,031
ADF VI 1992–1995	4,072	603	0	0	498	498	5,173
ADF VII 1997–2000	2,688	2,231	230	0	0	230	5,149
ADF VIII 2001–2004	2,926	3,005	350	690	0	1,040	6,971
ADF IX 2005–2008	3,188	3,688	160	1,133	0	1,293	8,169
ADF X 2009–2012	3,890	7,337	480	1,018	0	1,498	12,725
ADF XI 2013–2016	4,455	7,844	480	671	0	1,151	13,450
Total	31,660	24,708	1,700	3,512	1,376	6,588	62,956

ADF = Asian Development Fund, OCR = ordinary capital resources.

^a At exchange rates specified in the relevant Board of Governors' Resolutions net of the allocation to the Technical Assistance Special Fund.

^b Actual for the respective replenishment.

^c Include set-aside resources net of allocation to the Technical Assistance Special Fund.

Source: Asian Development Bank.

III. The First Decade: 1966–1976

Takeshi Watanabe (1966–1972), Shiro Inoue (1973–1976)

The first decade of ADB operations was set against a backdrop of turbulent political and economic events. Intense armed conflict engulfed a significant part of Southeast Asia, and political upheavals were evident elsewhere in the region. Dramatic shifts in monetary standards altered currency convertibility expectations. And unprecedented volatility in the price of oil impacted terms of trade and the outlook for direct foreign investment throughout Asia. The relevance of and need for a new regional financial institution dedicated to the economic and social development of the region were never more pronounced.

ADB's origins grew out of the First Ministerial Conference on Asian Economic Cooperation, held under the auspices of the Economic Commission for Asia and the Far East in Manila in December 1963. Following a series of meetings, reports, and resolutions, a draft Agreement Establishing the Asian Development Bank was signed in November–December 1965 at a conference of plenipotentiaries from 31 countries following the second ministerial conference, also held in Manila. The Agreement entered into force on 22 August 1966 with the ratification or acceptance by 15 signatories (including 10 regional countries in accordance with the terms of the Agreement). The inaugural meeting of the Board of Governors was held in Tokyo in November 1966.

From its earliest days, ADB has been governed by conservative financial management practices. The Articles of Agreement provided for an authorized capital stock of \$1 billion, of which \$500 million was callable. At the inaugural meeting of the Board of Governors, the total authorized capital was increased from \$1 billion to \$1.1 billion to accommodate new membership, and an increase in subscription of several other members.

The Articles required that half of the paid-in capital be paid in gold or convertible currency and the balance in the currency of the member (the so-called 6.2 (b) resources, after the corresponding provision in the Charter). These payments were due in five equal annual installments. Article 6.3 of the Charter provided members with the option of paying the Article 6.2 (b) portion of their capital subscriptions in the form of noninterest-bearing promissory notes. Some members paid their local currency contributions in cash, which helped to expand the resources available for investment—reinforcing the capital base at an early stage.

These capital resources were invested very conservatively, an approach to investment that has typified ADB operations in years hence. About 54% was invested in government securities of developed member countries having maturities not more than 3 years after the date of purchase and 47% in time deposits of commercial banks in member countries maturing within 2 years. In the first decade of its operations, ADB's investment operations remained restricted to these asset classes, though the relative share of the investment portfolio in each asset class fluctuated depending on relative yield levels and opportunities arising for capital gains. The deposit placements with commercial banks were particularly valuable from a strategic perspective in the early years, as they helped initiate relationships that would promote ADB's role as an important international financial institution, especially in its borrowing activities.

This early period was characterized by rising money market rates in many of ADB's developed member countries, particularly the US. Because of the short maturity profile of its investments, this helped to boost net income significantly for the new institution. A solid foundation was being put in place for ADB to promote its credibility and capacity as a borrower in the international capital markets.

A. Capital Resources

The fifth and final installments of subscriptions to ADB's original paid-in capital fell due in 1970. With ADB lending expected to increase throughout 1971–1975, the Board of Governors authorized an increase of 150% in capital stock in November 1971, with a proportional amount of the increase available to members for subscription based on existing capital subscriptions (first general capital increase [GCI I]). Twenty percent of this increase would be paid-in and 80% callable, with the paid-in portion due in three equal annual installments (final payment due in 1975).

In evaluating the need for additional capital to fund the desired expansion of operations over 1971–1975, the Board of Directors took into account the current OCR interest rate, the commitment charge, the coverage of commitments by resources, the scope for raising funds through borrowings in light of capital market conditions, the return on investment of surplus funds, the adequacy of ADB reserves, and the annual income position of ADB.

B. Borrowings

Article 21(i) of the Charter allows ADB to resort to borrowings to augment its OCR. ADB initiated its borrowing program in 1967, with preparatory work aimed at enabling it to borrow in the US. This consisted of efforts to secure the requisite qualifications for ADB bonds to be treated as eligible investments for regulated investors in various states of the US, and involved legislation in some states and administrative rulings in others. In addition, ADB learned from the experience of other international institutions borrowing in the US market, and decided to appoint managing underwriters for future US dollar bond issues at an early date. It did this in September 1967 with the appointment of Kuhn, Loeb & Co. and First Boston Corporation as its managing underwriters for US dollar bond issues. In due course, ADB also initiated preparatory steps for bond issues in European and other markets.

On 11 January 1968, and consistent with the focus on conservative financial management, the Board of Directors adopted a resolution relating to limitations on borrowings, which stated that:

... borrowing by the Bank for inclusion in its ordinary capital resources shall be so limited that no new borrowing will be made or guarantee chargeable to such resources will be given if the amount so to be borrowed or the amount so to be guaranteed, when added to the aggregate amount then outstanding of such borrowing plus the amount then outstanding so guaranteed, would exceed the amount of the callable capital stock of the Bank subscribed by members whose currencies are deemed convertible by the Bank after consultation with the IMF pursuant to Article 23 of the Bank's Articles of Agreement.¹⁴

Known as the callable capital in convertible currencies (CCCC) limitation, this restriction was aimed at providing further assurance of security to early investors in ADB bonds and would remain a guiding principle well into the 1980s. Even though the obligations of member countries for their callable capital commitments constituted resources of ADB, it acknowledged that callable capital in reality constituted potential claims against ADB members, which were themselves subject to credit evaluation. While ADB recognized that it would be a generalization to conclude that members whose currencies were not convertible would be less likely to meet a call on capital, it was nevertheless deemed financially prudent at the time, and consistent with the borrowing strategy, to limit borrowings to the callable capital of convertible currency members only. Indeed, for several of the early years, ADB restricted borrowings through internal policy to a prudential limit of no more than 75% of CCCC. This became known as the “gearing ratio”, and was intended to protect its borrowing covenants from potential foreign exchange rate volatility, delays in member country capital subscriptions, and uncertainties in projected loan disbursements affecting annual levels of borrowings.

¹⁴ ADB. 1968. *Resolutions of the Board of Directors of the Asian Development Bank*. Manila.

In September 1969, ADB issued its first bond, a 60 million deutsche mark, 15-year callable public bond issue floated in the Federal Republic of Germany. The issue was intended to familiarize investors with ADB and its operations, and to this end, a large syndicate of 69 banks in 13 countries was formed, headed by Deutsche Bank. The bonds were subsequently listed on the stock exchanges of Frankfurt and Dusseldorf in Germany and Vienna, Austria. This was followed in April 1970 by a 130 million Austrian schilling 12-year issue in the domestic Austrian market and a ¥6 billion issue in Japan in November. The yen issue was particularly significant for an international organization based in Asia as (i) it was ADB's first bond issue in Asia, and (ii) it was the first time yen bonds were sold to the public in Japan by any foreign entity (including international organizations). ADB had begun to distinguish itself for its developmental role in the capital markets of Asia.

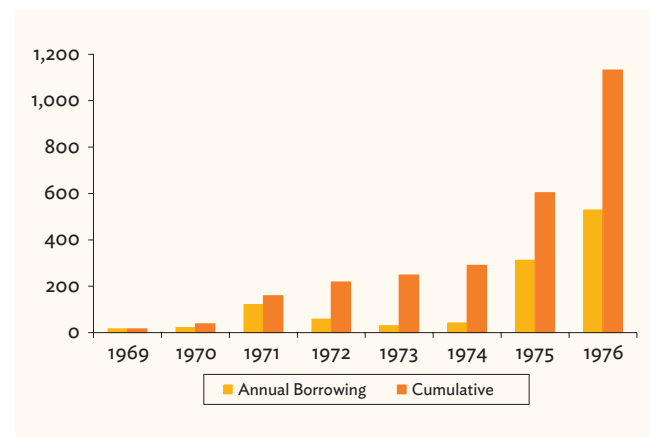
Concurrent to these fundraising efforts, ADB continued to secure the necessary legislative approvals in various states of the US to enable it to issue bonds to regulated investors under as favorable treatment as then enjoyed by IBRD and IADB. These efforts came to fruition in April 1971 when ADB issued its first public bond in the US capital markets. The issue was divided into two parts: a \$25 million 25-year bond and \$25 million 5-year bond. The 25-year bonds were subject to a sinking fund provision aimed at retiring 50% of the issue before maturity, which helped deepen the investor appetite for these long-dated securities. It was particularly significant that a relatively new international organization could successfully issue bonds in these long-dated maturities, attesting to ADB's growing credibility.

In the following 5 years, ADB moved to deepen its presence further in the international capital markets. It raised funds through public issues, private placements, or direct borrowings in various European markets (Austria, Belgium, Germany, Italy, Luxembourg, the Netherlands, and Switzerland); Asia (Japan); North America (the US); and the Middle East (Kuwait, Saudi Arabia, and the United Arab Emirates).

Notwithstanding these successful initiatives, 1973–1975 proved particularly challenging for ADB as a debt issuer. Surging inflation associated with the 1973 oil price crisis and turmoil in the international monetary regime exacerbated inflation pressures in western industrialized economies, leading to a general increase in interest rates and borrowing

costs. As ADB was increasingly tapping the capital markets to fund its operations, such increases in borrowing costs had a pronounced impact on ADB's borrowing program and on policies relating to lending rates and liquidity. Only with the tax cuts and fiscal stimulus measures introduced in 1975 did the stagflation (slow growth with rising inflation) of 1973–1975 abate, creating conditions for a significant expansion of borrowing activities. Figure 1 presents ADB's borrowings in 1969–1976.

Figure 1 Asian Development Bank Borrowings, 1969–1976 (\$ million)



Source: Asian Development Bank.

C. Financial Management during Economic and Monetary Turmoil

The oil price shock of 1973 had a pronounced impact on development prospects in Asia and the Pacific, with oil-exporting nations enjoying immense revenue inflows, while non-oil exporting nations were subjected to rising fuel costs, lower prices on non-oil commodity exports, and declining demand in the industrialized economies. The subsequent period of stagflation in major western economies had an impact on global trade prospects, exacerbating the recession of 1973–1975. Oil producers, flush with revenue, used long-standing relationships with international commercial banks to deposit oil proceeds. The commercial banks in turn lent these deposits aggressively to developing economies, in some cases to finance oil importation. Unfortunately, the need to

produce earning assets from these substantial deposit inflows frequently outweighed sound credit practices, evidenced subsequently by the emerging market debt crisis that began in Mexico in August 1982.

The oil shock was one of several disruptions that affected the global economy during the period. The oil crisis had been preceded by major turmoil within the global monetary system. In August 1971, the US temporarily suspended full convertibility of the US dollar into gold for foreign treasuries and central banks. Many countries, including some ADB members, subsequently allowed their currencies to float and most such currencies appreciated in value relative to the US dollar. Subsequently, a Group of Ten nations was formed to undertake consultations and negotiations aimed at achieving lasting reform in international monetary arrangements. This group decided to establish exchange rates in the form of par values or central rates, agreeing to provide margins of 2.25% for exchange rate fluctuation on either side of such rates. In December 1971, executive directors of the International Monetary Fund agreed to establish a temporary regime under which a member might permit exchange rates for its currency to move within margins of 2.25% on either side of the par value or the new exchange value of its currency, resulting from the agreed realignment of exchange rates.

Concurrently, representatives of the US agreed to propose to the US Congress a suitable means for devaluing the US dollar in terms of gold to \$38 per ounce. On 8 May 1972, the US formally devalued the US dollar, establishing a new par value with the IMF at \$38 per ounce of fine gold. And effective 23 June 1972, the United Kingdom (UK) allowed the pound sterling to float. As a consequence, some member currencies that were pegged to the pound sterling also floated.

The US decision to take the US off the gold standard in 1971 was important, both for the global economy and for ADB operations. Oil (and many non-oil commodities) were priced in US dollars, and the devaluation of the US dollar following

the decision on the gold standard had a direct and negative impact on revenue generation prospects for oil producers, setting the stage for subsequent upward adjustments to oil prices. Taken together, the gold standard decision (with the subsequent devaluation of the US dollar) and the oil crisis of 1973 had pronounced economic repercussions for the global economy, including Asia. Global economic growth dropped from 6.9% in 1973 to 2.1% in 1974 and 1.4% in 1975. Growth in global trade also declined from 12.0% in 1973 to negative levels of -5.4% in 1974 and -7.3% in 1975. And global foreign direct investment, which had grown steadily over the previous 40 years, fell by nearly 50% from 1973 to 1974. In 1976, global foreign direct investment fell by -21% compared with the previous year.

The turmoil in monetary markets had an immediate impact on ADB, starting with its financial reporting. ADB's capital is defined in the Charter (Article 4, para. 1) in terms of US dollars of the weight and fineness in effect on 31 January 1966 (0.888671 gram of fine gold).¹⁵ From 31 January 1966, at the time of its establishment, ADB maintained its accounts in US dollars at this rate in fine gold. Variations in foreign exchange values to ADB's unit of account were regularly settled between ADB and the members whose currencies were affected, under the maintenance of value (MOV) provisions of Article 25 of the Charter.¹⁶ Following the introduction of the new exchange rate regime in 1971-1972, ADB continued to maintain its books on the basis of prevailing par values, provisional rates, and parity rates for its member countries. ADB's financial statements, prepared on this basis, did not reflect variations from such rates in foreign exchange markets, which occurred for some currencies as a result of the December 1971 agreement.

Given the perceived temporary nature of the new regime and the continued applicability of central rates for the currencies of several members, on 31 August 1972 the Board of Directors adopted a policy on exchange rates to be used for the translation of currencies and MOV under Article 25. Briefly, where a member currency had

¹⁵ ADB. 1966. *Agreement Establishing the Asian Development Bank*. Article 4. Manila.

¹⁶ Article 25 provides that whenever the par value in the IMF of the currency of a member is reduced or increased in terms of the US dollar defined in Article 4 of the Charter, or in the opinion of ADB, after consultation with the IMF, the foreign exchange value of a member's currency has depreciated or appreciated to a significant extent, there will be a settlement of amounts of its currency between the member and ADB to maintain the value of such currency held by ADB.

a par value, central rate, provisional rate, or some other rate previously adopted by ADB for translation purposes, and where foreign exchange transactions in the territory of the concerned member were generally conducted on the basis of such rate, ADB would use that rate for translation purposes. MOV adjustments would be made under Article 25 whenever there was a change in such rate, and settlement of MOV obligations on the basis of this adjustment would be effected within a reasonable time. For translation and MOV adjustment purposes for all other member currencies, ADB would use an exchange rate which, in its opinion and after consultation with the IMF, represented from time to time a realistic foreign exchange value of such currency.

In the case of DMCs with nonconvertible currencies, ADB, if requested by them, would agree to defer action relating to translation of their currencies and MOV adjustment on the basis of the realistic foreign exchange values of their currencies, provided that arrangements satisfactory to ADB were made regarding the portions of those currencies required for use by ADB, to avoid any adverse effects that might impact ADB because of this deferment.

Consequent to the devaluation of the US dollar in 1972, and again in the following year, ADB's unit of account from 8 May 1972 to 12 February 1973 was the US dollar with gold content of 0.818513 gram of fine gold, and after 12 February 1973 was the US dollar with gold content of 0.736662 gram of fine gold. Since ADB's capital was defined in the Charter at a different weight and fineness of gold (0.888671 gram of fine gold), the capital stock of ADB was restated in terms of its unit of account (US dollar) by an increase of 8.57% in 1972 and by a further increase of 11.11% in 1973. The effect of this restatement of the capital stock, and of the translation of other currencies in terms of ADB's unit of account, was a net charge of \$5,769,477 in 1972 and of \$7,410,568 in 1973 against ADB's ordinary reserve.

For the balance of the first decade, uncertainties relating to a more permanent regime for valuation of ADB's unit of account, together with attendant MOV obligations, cast a shadow over reporting of ADB's financial statements. One reason behind the importance attached to this issue was the need for an accurate assessment of account values as they related to financial performance. Equally important was the notion that ADB should treat its members

equitably and fairly, particularly regarding monies at risk with respect to shareholder contributions. Equitable treatment of shareholder contributions was enshrined in the Charter through Article 25 on MOV. The temporary arrangements outlined above came to an abrupt end with the Second Amendment to the Articles of Agreement of the IMF in 1978.

The turmoil of the period also elicited a significant policy response from ADB relating to its net income and reserves management. In the early years, reviews of ADB's financial practices were undertaken periodically, and were particularly pertinent to the assessment of ADB resource adequacy leading into the GCI. In addition to providing an opportunity to reiterate the importance of financial prudence and supervision, the reviews provided a forum for discussion of issues that had begun to divide shareholders.

While some donor countries, sensitive to their own budgetary constraints, argued that ADB was mature enough to operate without further injections of interest-free paid-in capital, many borrowing members (and some nonborrowing members) argued that further paid-in capital was required, particularly to enhance the level of net income. As paid-in capital was an interest-free resource, upon which neither dividends nor taxes were payable, income could be generated on a cost-free basis from this resource.

Income accrued on two principal earning assets: loans and liquid asset investments. These assets were funded through borrowings and equity. If a higher proportion of loans or investment assets was funded through cost-free equity rather than borrowings, net income from those assets would be higher. This was a particularly important issue to borrowing members of ADB as net income (at the time) was used only to increase reserves and strengthen liquidity, which in turn enabled ADB to keep its lending rate at a lower level than would otherwise be the case. From a credit perspective, reserves provided comfort to both creditors and shareholders against potential impairment caused by losses arising from expanding loan operations. Therefore, net income, as a source of additional reserves, emerged as an important topic during discussions of the first GCI in 1971.

Notwithstanding calls for higher paid-in capital, some major shareholders felt instead that ADB borrowings

needed to be used more aggressively as a complement to capital,¹⁷ a view that eventually prevailed in the first GCI discussions and beyond. The Charter recognized that ADB effectiveness lay in its intermediation of resources from the capital markets, as it could significantly increase its operational profile by leveraging its equity through these borrowings. Further, equity alone would be unable to fund the projected expansion in ADB's lending program at the time. With ADB becoming a trusted issuer of debt on the global capital markets, borrowings were seen as an increasingly important source of funding ADB's projected expansion in loan operations. This was particularly pertinent in light of the higher lending program envisioned in the years following the oil price shock.

Borrowings, however, impacted net income through financial expenses. The adequacy of projected net income in generating reserves and liquidity, relative to financial expenses associated with borrowings, would be measured through an ICR. The ICR became a key financial indicator following the 1971 review of ADB's resource position leading into the first GCI. This ratio measured ADB's ability to meet debt obligations out of earnings, as well as its ability to weather unforeseen shifts in its receipts and expenditures. At the time, it was considered prudent to maintain a minimum level of 1.5, which was consistent with requirements in most US states applying to fixed-income investments by fiduciary investors.

Similarly, the RLR measured the adequacy of reserves against possible defaults. The aim of the reserves policy was to ensure an appropriate relationship between reserves and the exposure in its loan portfolio—the main source of credit risk to the institution.¹⁸ An appropriate RLR would ensure that no call on capital would be required as a result of a credit event.

Therefore, a close relationship existed between net income, reserves, capital, and lending operations. Net income from loans and investment assets (after the financial expense associated with borrowings) added to reserves. Reserves supplemented capital, which in turn reinforced solvency and determined appropriate levels of lending volume and pricing. At the time, ADB's lending rate was fixed on commitment, and for the life of the loan, on the basis of long-term financial projections aimed at ensuring that ADB would generate sufficient income to meet its decisive financial indicators in the long run. As long as net income was on a rising trend, and therefore supplementing reserve levels, ADB could defer substantial increases in lending rates.

By 1974, however, circumstances had changed dramatically. The oil price shock, uncertainty in monetary standards, a slowdown in the economic growth of major industrialized economies, a shortage of food grains, and accelerating inflation (along with higher interest rates) in western economies, had adversely affected development prospects in a large part of Asia and the Pacific. These circumstances increased pressure for an overall review of the financial framework. Consequently, in 1974, ADB initiated its first comprehensive review of financial policies.

Through the review, shareholders acknowledged the adverse global economic environment facing Asia and the efforts made by ADB to increase the level of its assistance to DMCs to help address these challenges. However, it also recognized the need to arrest the declining trend projected for its annual net income and ordinary reserve levels. This declining trend was in large measure¹⁹ a consequence of the anticipated increase in borrowings needed to fund additional assistance to the DMCs, and the higher interest rate environment in which those borrowings would need to be undertaken.²⁰ Higher investment returns would offset

¹⁷ After extensive negotiations, shareholders agreed that only 20% of the agreed capital increase under the GCI I would be in the form of paid-in capital, as opposed to 50% in the original capitalization.

¹⁸ The Charter restricts the total amount of outstanding loans and guarantees, as well as outstanding equity investments including undisbursed commitments, to the total amount of ADB's unimpaired subscribed capital, reserves, and surplus, excluding special reserves or any other reserves that are not available for ordinary operations. This provided a cap on lending headroom that proved essential to modeling the RLR under different scenarios.

¹⁹ Significantly higher administrative expenses were anticipated as well.

²⁰ It was recognized that borrowing in low-interest rate markets at the time, such as Austria, Belgium, and Switzerland, would have helped reduce borrowing costs somewhat, but opportunities to raise substantial funding in these markets were limited. It was also recognized that opportunities for lower cost borrowings, in significant size, could arise in US dollars or national currencies from the oil-exporting countries, and ADB proceeded to continue issuance of debt in those markets on a selective basis.

increased borrowing costs to a degree, but not sufficiently to arrest the declining net income trend projected. Indeed, projections at the time anticipated a drop in ICR from 2.27 in 1974 to 1.07 by 1980. Similarly, the RLR was anticipated to drop from 0.23 at the end of 1973 to 0.10 by the end of 1980.

The financial policy review of 1974 concluded that, unless appropriate policy changes were made, the anticipated drop in net income would seriously jeopardize ADB's financial soundness and its creditworthiness in the international capital markets. ADB would be operating at a negative spread of 0.75% per annum, comparing the then current lending rate of 7.5% per annum with the anticipated borrowing cost of 8.3% per annum. The policy response of ADB was two-pronged.

The first prong was a significant increase in the lending rate for OCR operations. Set originally at 6.875% per annum, the rate was increased to 7.50% per annum in May 1970 and 8.25% per annum in September 1974 as a result of the review. In February 1975, the rate was increased further to 8.75% per annum, and for borrowers with per capita GNP higher than \$850 at the end of 1972, to 9.50% per annum. Given that interest rates had been trending upward for several years, while the lending rate had remained more

or less static (through a blend of selective long- and short-term historical borrowings at low interest rates), the increase was considered a necessary precaution to maintain a positive spread between loan income and funding cost, particularly as borrowings were anticipated to grow over the medium term.

The second prong was a decrease in immediate borrowing requirements by reducing the liquidity level. Liquidity is of critical importance as it enables ADB to continue to service its debts, meet its disbursement commitments, and continue lending even if capital market access were to be limited. In a worst case scenario where all borrowings are interrupted, liquidity would provide the cash requirements necessary until subscribed capital could be called to meet debt service needs.

Initially, the liquidity requirement was set at cumulative resources available (outstanding borrowings, freely usable paid-in capital, and the ordinary reserve), covering 100% of cumulative loan commitments. A review of this Liquidity Policy was undertaken in 1972, as the resultant level of liquidity was considered excessive in light of slower than anticipated OCR loans at the time. As noted earlier, liquidity has a cost of carry associated with it to the degree it is funded through debt, which needs to be recovered through investment return, loan charges, and lending rates. Given ADB's success in introducing its borrowing program to the international capital markets, and the lag between loan approvals and disbursements, such a high level of liquidity was no longer deemed appropriate.

As a result, a partial coverage ratio based on cash flow, rather than stock, was introduced. It was determined that liquid holdings should equal at least two-thirds of the projected loan disbursements for the following 3 years. By 1974, this too was considered excessive, and the liquidity ratio was simplified further by maintaining liquid resources at a minimum year-end level equal to the next 2 years' loan disbursements, instead of two-thirds of the next 3 years' disbursements. Such a reduction in liquidity would result in lower borrowing levels over the near term, but would have significant and positive ramifications for the net income outlook moving forward. At the same time, it was decided to cash the promissory notes of Japan and nonregional members relating to their original capital subscriptions in two equal annual installments.

Table 3 Comparison of the Average Cost of Outstanding Borrowings and Average Interest on Disbursed and Outstanding Loans (%)

Year	Average Cost of Outstanding Borrowings	Average Interest on Disbursed and Outstanding Loans	Spread
1971	7.44	6.88	(0.56)
1972	7.46	6.97	(0.49)
1973	7.49	7.08	(0.41)
1974	7.43	7.30	(0.13)
1975	7.84	7.41	(0.43)
1976	8.14	7.52	(0.62)
1977	8.11	7.68	(0.43)
1978	7.65	7.74	0.09
1979	7.59	8.00	0.41
1980	7.93	8.03	0.10

(-) = negative.

Source: Asian Development Bank.

The combination of these steps, and the increase in the lending rate, would result in a significant improvement in the projected financial indicators for the balance of the first decade of operations. By 1976, ADB had adopted a reserve target of 15% of outstanding loans as a complement to its revised lending rate policy. In the years hence, ADB's approach was aimed at maintaining reserves in excess of this level, and the actual RLR increased from 18% in 1976 to 33% in 1982 and 37% in 1985.

D. Special Funds

In the case of Special Funds operations, a similar evolution in financial management was occurring. In the early years, contributions to Special Funds operations were largely tied to procurement of goods or services provided by the contributory member. In May 1967, the US government had offered up to \$250,000 for TA activities. This was followed by offers of TA funding from the governments of Canada and the UK, tied to the procurement of Canadian and UK goods or services; and in December of that year, the Board of Directors authorized the establishment of a consolidated account for TA resources available under Article 19 (ii) of the Charter.

In September 1968, the Board adopted the Special Funds Rules and Regulations,²¹ which made provisions for an Agricultural Special Fund (ASF), a Multi-Purpose Special Fund (MPSF), a TASF, and other such Special Funds that might be established in the future. Further contributions to the TASF were received from developed member countries during that year. In December, the Government of Japan contributed ¥7.2 billion to the establishment of the ASF, which was to be used to finance special operations pertaining to agricultural development, primarily in Southeast Asia, and related to the procurement of goods or services supplied from Japan. Similarly, in December, the Government of Canada contributed \$25 million to the MPSF, to be provided in equal installments over 5 years, also to be tied to Canadian procurement.

In the last quarter of 1968, ADB began considering provision for set-aside resources for special loan operations, and in

February 1969 the Board of Directors recommended to the Board of Governors that 10% of the unimpaired paid-in capital be so set aside, pursuant to Article 6.2 (a) of the Charter. This precedent would have a lasting impact on future ADB capitalization efforts.

Lending on concessional terms from the Special Funds resources began in June of the following year. Increasingly, new contributions to Special Funds were being offered on significantly liberalized terms with respect to procurement. The Government of Japan had established the practice of making annual contributions to Special Funds, and was increasingly liberalizing the terms of its contributions. Concurrently, administration of various contributions with differing terms and conditions was growing in complexity, and concerns were raised that this might compromise the full benefit of liberalization.

With resource utilization rising, it had become evident that mobilization of additional resources was necessary. In addition, it was recognized that the disadvantages of tied procurement could be reduced if contributions were sufficiently widespread. An increase in resources for the MPSF was recommended at the time of the GCI in 1971, with an additional 10% of Article 6.2 (a) paid-in capital set aside. The total set-aside then amounted to about \$24.5 million. In addition, other member countries continued to make contributions to the MPSF and the TASF.

Nevertheless, resource inflows were unable to keep pace with the substantial growth in Special Funds loan commitments. Concessional loan commitments had risen from \$22.0 million in 1969 to \$94.3 million in 1972. By the end of 1972, the margin between available resources and cumulative loan approvals had dropped to about \$20 million.

Under these circumstances, the Board of Directors committed itself to examine resource needs and mobilization, including terms of usage. Preliminary proposals for restructuring the Special Funds included a single, multi-lateral, and unified fund on uniform and liberal terms and conditions. It was envisioned that the resources for this fund would be pooled and made available to ADB for use as required under its concessional lending program.

²¹ ADB. 1968. *A Set Aside of Bank Capital for Special Funds Purposes*. Manila.

Further, resources for the fund would be mobilized and replenished at regular intervals and on an organized basis. This would mean that the ASF would be terminated and resources from the ASF and MPSF combined.

In November 1972, ADB appointed Sir John Chadwick as special advisor to the President to assist in establishing an effective resource mobilization effort for Special Funds, including the possibility of larger set-asides of paid-in capital. Significant progress was achieved in the following year, as steps were initiated to wind up the ASF, and various donors agreed to transfer contributions from the ASF to the MPSF. At the 6th Annual General Meeting (AGM) held in 1973, the Board of Governors agreed to the principle of establishing an ADF conceived as a pool of reciprocally untied resources contributed initially by developed member countries and replenished periodically. ADB would draw resources from the ADF to finance concessional loans under policies and procedures approved periodically by the Board of Directors.

Under the chair of special advisor J. Chadwick, various meetings were held in 1973, from which emerged a resource mobilization scheme that the Board of Governors approved in November 1973. This authorized ADB to accept initial contributions from developed member countries in a total amount of \$525 million, to be provided in two stages over 2 years. The ADF would come into existence after commitments under the first stage became effective. The initial contribution amount identified was designed to cover funding needs for the 3-year period ending 31 December 1975.

Notwithstanding these efforts, and additional contributions of various developed member countries, it became evident that available Special Funds resources would be insufficient to meet operational demands in 1973. Consequently, at the 6th AGM the Board of Governors agreed, for a third time, to authorize setting aside additional amounts from OCR and to transfer these to the MPSF. This amounted to 10% of capital paid in by members under Article 6.2 (a) since the time of the previous set-aside in 1971, and 10% of the convertible currency portion of capital paid in by members under Article 6.2 (b), yielding about \$27.9 million in additional resources.

In 1974, the ADF became a reality with the effectiveness of first stage contributions. There were now two Special Funds: the MPSF established in 1968 and the ADF, which became operational in June 1974. Loans became standardized at 40-year maturities and a 1% per annum service charge to ADB's poorest DMCs. Eventually, and in an effort to unify resources, most contributors to the MPSF would agree to transfer proceeds to the ADF. At the same time, in 1975, the Board of Governors authorized a transfer of all set-aside resources from the MPSF to the ADF.

Special Fund resource shortfalls would become a recurrent feature in subsequent years. However, the efforts to initiate a regular replenishment process for Special Funds proved crucial for the expansion of concessional operations moving forward. At the end of 1974, total concessional loan commitments (net of cancellations) stood at \$491.9 million, leaving only \$68.6 million for additional commitments at the beginning of 1975. This was in contrast to a lending program for the year initially set at \$250 million. While second stage contributions were received in part during 1975, not all contributions expected in 1975 were received, and as a consequence, ADB was required to scale back its concessional lending for that year. At the 8th AGM in 1975, the Board of Governors took note of the need for early replenishment of the ADF.

It was in this environment that J. Chadwick helped engineer a replenishment target of \$830 million in 1975. This was embodied in Resolution 92, approved by the Board of Governors in December 1975, containing individual amounts specified and specific terms and conditions. This would provide concessional loan funding for 1976–1978. While subsequent revisions in the allocations for New Zealand and the US would reduce the overall replenishment to \$809 million, first installment contribution commitments received by the end of June 1976 were sufficient to trigger effectiveness of the replenishment. Unfortunately, the likelihood of a shortage of resources toward the end of 1976 resulted in the deferment of some concessional loan projects earmarked for that year. The first decade of ADB's operations concluded with mounting pressure to bring the second installment of the replenishment into effect sooner than anticipated.

IV. The Second Decade: 1977–1986

Taroichi Yoshida (1976–1981), Masao Fujioka (1981–1989)

The second decade of ADB operations commenced as armed conflict in Southeast Asia was winding down for the first time in nearly 30 years. In addition, tax cuts introduced in the US in May 1975, together with additional fiscal stimulus measures, provided the foundation for a recovery from the 1973–1975 recession. Growth prospects were improving globally, including in Asia and the Pacific.

The second decade of operations was characterized by further expansion of OCR and Special Funds operations and an increase in the resource base required to support these operations. Two GCIs occurred during this period as well as an expansion of borrowing presence. Special Funds resources were replenished and consolidated.

A. Capital Resources

ADB's capital stock underwent major expansion during the period. At the 8th AGM in 1975, the Board of Governors took note of the continued growth in ADB's OCR operations, and of the need to meet increased resource requirements, including an increase in ADB's capital stock. In 1976, the Board of Directors completed a review of the projected lending program for 1977–1981 and concluded, after examining provisions in the Charter regarding outstanding loan commitments and the need to maintain a prudent relationship between ADB borrowings and the subscribed callable capital in convertible currencies, which a capital increase was required.

Consequently, the Board of Directors recommended a 135% increase in subscribed capital (GCI II) before the end of 1977, with 10% of this paid in through four equal annual installments commencing in 1978, 40% in convertible currency, and 60% in national currency. At the end of 1976, the total authorized capital stock was \$3.70 billion, inclusive of resources raised through the first GCI and special increases by individual members. By 30 September

1977, with subscriptions received under the second GCI, authorized capital stock stood at \$8.71 billion. Subscribed capital amounted to \$6.96 billion, of which \$1.51 billion was paid-in and \$5.45 billion was callable.

As of 31 December 1980, 40 members had made subscriptions amounting to \$4.91 billion under the GCI II. Authorized capital stock stood at \$9.20 billion, of which the subscribed portion amounted to \$8.82 billion. OCR operations had continued to grow, and the Board of Governors requested the Board of Directors to study ADB's future resource requirements again. A report submitted for consideration to the AGM the following year reviewed resource requirements and confirmed the need for a third OCR replenishment (GCI III). During the process, a variety of financial policy issues were subjected to scrutiny, and it was not until 1983 that the Board of Governors adopted Resolution 134 recommending a 105% increase in subscribed capital to cover resource needs over 1983–1987. Of this increase, the Board resolved that 5% should be in the form of paid-in capital, of which 40% should be in convertible currency and 60% in the national currency of the subscribing member.

Including the additional shares authorized for the GCI III, ADB's authorized capital stock as of 31 December 1983 amounted to \$15.46 billion, and its subscribed capital amounted to \$11.51 billion. Given changes in capital valuation arising from movements in foreign exchange rates, GCI subscriptions, new membership, and special capital subscriptions, ADB's authorized capital stock amounted to \$19.66 billion by the end of 1986, while the subscribed capital amounted to \$19.47 billion.

Maintenance of value issues continued to engage ADB during this period. Pursuant to the decision taken on 31 August 1972, ADB adopted new exchange rates in respect to the currencies of member countries for translation in its accounts and for purposes of the MOV of such currencies held by ADB. While settlement of

amounts receivable from, or payable to, member countries were made during the early years of the second decade of ADB operations, this process was disrupted in 1978. As noted earlier, ADB's capital stock is defined in Article 4 of the Charter as being "in terms of the USD of the weight and fineness in effect on 31 January 1966" (footnote 15). Following the massive disruptions to the international monetary system in the early 1970s, the capital stock had been translated into the current US dollar, as ADB's unit of account, on the basis of its par value in terms of gold, which from 1973 until 31 March 1978 was \$1.20635 per 1966 dollar. However, on 1 April 1978, the Second Amendment to the Articles of Agreement of the IMF came into effect, from which point currencies no longer had par values in terms of gold. ADB was forced into a lengthy and protracted period of analysis regarding the implications of this development to the valuation of its capital stock.

Beginning in 1978, ADB's capital stock was valued in its financial statements in terms of special drawing rights (SDR), on the basis that each share of ADB capital had a value of SDR10,000 and was expressed in current US dollars at the rate for SDR as of year-end, as computed by the IMF. This was intended to be an interim measure for translation reporting in ADB's accounts and for calculation of MOV, but for the balance of the second decade of its operations, further action on settlement of MOV obligations was held in abeyance pending a comprehensive decision on the valuation of ADB's capital.

B. Financial Policy

Coincident to its increase in capital stock over the period, ADB was engaged in further comprehensive reviews of its financial policies. Much of this review process was motivated by a desire to ensure that ADB's financial management remained effective and efficient, particularly in light of its expanding lending program and the sizeable capital contributions being requested of the shareholders. This included reviews of its income and reserves policy, liquidity policy, and borrowing policy.

In October 1976, an ADB consultant, D.H. Macdonald, undertook a study of the continued relevance of ADB's key financial indicators. Known as the Macdonald Report, findings were incorporated into a review of financial policies undertaken in 1977. This review made recommendations regarding various objectives and indicators, including the terms of loans, liquidity policy, borrowing levels, and maturities.

The 1977 review concluded that it was essential to maintain an upward trajectory for net income and reserves, and the ICR and RLR were confirmed as appropriate indicators. Net income needed to cover all estimated current obligations and to enable a build-up in reserves, which in turn would enhance risk bearing and borrowing capacity. In addition, the contribution of cost-free capital (in the form of paid-in capital) to ADB's income and reserves had been steadily declining.²² This called for a policy on net income conducive to the build-up of reserves, but also reflective of ADB's growing reliance on borrowings to fund its pipeline of lending operations.

Among the enhancements introduced with the review was a reduction in the ICR from 1.50 to 1.25. This was deemed sound because of the perceived stability of revenues of development banks compared with commercial institutions and because neither paid-in capital nor net income allocated to reserves were expected to pay dividends. It would also provide more flexibility to the borrowing program in financing increased lending operations. Similarly, it was decided that the minimum liquidity target should be the higher of either 50% of the undisbursed loan balances or the projected gross disbursements for the next 1.5 years. In 1978, the minimum liquidity ratio was dropped further from 50% to 40% of undisbursed loan balances.

It was recommended that the borrowing requirement resulting from this liquidity policy should be considered yearly in a 3-year rolling program and that borrowings should ensure that minimum liquidity levels be met. Further, it was deemed prudent to increase the average

²² Of the original capital subscription to ADB, the share of paid-in capital was 50%. Under the GCI I, this had fallen to 20%, and in the GCI II it was 10%. By the end of 1971, paid-in capital was 50% of the subscribed capital of ADB, but by the end of 1976, it was down to 33%. At the time, paid-in capital was projected to be 19% of subscribed capital by the end of 1981.

life of funded debt to 6.0–6.5 years from the current level of 5.0–6.0 years. To ensure this, it was suggested that new borrowings in the next 5 years should target an average life of 8.0–8.5 years (not including its existing 2-year revolving bond facility).

Following similar reviews of liquidity policy on an annual basis in subsequent years, it was decided in 1982 that a Financial Policy Division, headed by a financial advisor, be established to take charge of financial policy reviews and coordination of capital increases, Special Fund replenishments, and other financial issues.

In that same year, ADB contracted the services of an independent consultant, I. Freidman, to undertake a further study of existing financial policies. His work, which was completed in April 1983, was considered during a major review of financial policy undertaken later in that year. This review revalidated and retained the existing policies on income and reserves, liquidity, and borrowings, though it was agreed to consider the eventual removal of the bond covenants relating to restrictions on borrowings amounting to 100% of CCCC. It was also agreed to maintain a liquidity target without a direct link to projected disbursements in the future, instead retaining the link to undisbursed loan balances.

C. Loan Products and Pricing

The lending rate policy went through a similar review during the second decade of ADB operations. Historically, the lending rate had been fixed at the time of loan commitment for the entire life of the loan, based on long-term financial projections associated with ADB's capacity to meet its key financial ratios. A variety of shortcomings was associated with this approach. First, a significant funding lag risk existed, given that, under ADB's partial liquidity coverage policy, the bulk of funding of each loan under the fixed rate system would occur near the time of loan disbursements, which typically would take 10 years to complete. Second, the impact of the funding lag risk would be more pronounced in periods of high interest rate volatility, and interest rate volatility had increased over the first decade of ADB operations. Third, a substantial maturity mismatch risk existed. If, because of funding conditions in the capital markets, the maturities of borrowings raised were shorter than the maturities of

the loans themselves, the resulting cash requirements would need to be refinanced. It was entirely possible that the resultant refinanced borrowings could have funding costs exceeding the lending rates fixed at the time of commitment.

ADB had limited options to control and manage these risks. Increasing the liquidity coverage as a percentage of loans committed would increase the cost of carry for ADB, eventually resulting in pressure on loan rates and fees. Given the development nature of its operations, ADB loans tended to carry a longer average life than its borrowings, which in turn were subject to the terms and conditions imposed by investors, and subject to change. In addition, a hardening of lending terms aimed at reducing ADB's exposure to maturity risks was not viewed as appropriate, as ADB loans tended to finance projects with a long payback period, whose benefits accrued over the long term.

In consequence to the various factors circumscribing ADB's ability to address the risks associated with the fixed lending rate scheme, ADB's lending rate emerging from the long-term financial projections tended to be set conservatively to ensure that ADB would generate sufficient income to meet its decisive financial indicators over the long run. For projections, borrowing costs were generally determined as the average of a 24-month period, centered on the date of loan determination. Unfortunately, this sometimes meant that the lending rate spread relative to the actual cost of borrowing was higher than needed to recover net administrative expenses. Borrowing members felt that ADB's lending rate was unnecessarily high, and this sentiment was exacerbated in 1981 when the lending spread was increased from 30 to 40 basis points (bps) to cover administrative costs and the cost of carry on liquidity.

In setting lending rate levels, ADB was mindful of the need to ensure some comparability with levels set by the World Bank. However, the World Bank was facing similar challenges in setting appropriate rate levels. In July 1982, the World Bank shifted from a fixed rate lending scheme to a variable pooled rate scheme. The IADB made a similar shift in 1983. The World Bank's pool-based variable lending rate system allowed it to offer nominal rates to borrowers lower than what ADB could under its fixed rate system. In 1983, ADB embarked on a detailed examination of its OCR lending rate system and in 1984 and 1985, the Board

of Directors undertook a series of studies focusing on the income risks associated with the fixed-at-commitment system and examined a number of alternatives. In October 1985, the Board of Directors approved a new pool-based multicurrency loan (PMCL) system, similar to that adopted by the World Bank.

Under the PMCL system, the lending rate would be determined by adding a variable spread (initially 0.50% per annum) to the average cost of a pool of ADB borrowings to be established on 1 July 1986. All ADB borrowings settled on or after 1 July 1986 would make their way into the pool, with maturing and/or redeemed bonds being removed. The lending rate would be adjusted every 6 months (1 January and 1 July) rather than being fixed for the life of the loan. The new lending rate system would apply from 1 July 1986 to all ordinary operations approved on or after that date. At the option of borrowers, it would also apply to loans approved from 24 September 1985 to 30 June 1986.

The introduction of PMCL was a key development in ADB's financial management, as it significantly reduced income risk, enabling ADB to recover both financial and administrative expenses and substantially reducing the funding lag and maturity mismatch risk in the fixed rate system. It provided greater funding flexibility than existed under the old system and proved beneficial to borrowers by introducing a more realistic and transparent lending rate regime. Borrowers under the new system would not be asked to pay more than necessary to cover all ADB costs.

By directly linking loans with the pool of borrowings used to fund such loans, and adding a thin margin to recover administrative expenses, ADB was acknowledging that the loan portfolio would not have a principal role in generating net income. Instead, it was envisioned that under the new lending rate system, net income would be generated in large part from ADB's investment (liquid) assets, which were principally, though not wholly, funded with cost-free equity.

Not all income risk was removed by the introduction of the new lending rate system. The possibility of incurring a negative spread on the yield of its funded investments and the prospect of loan losses still existed. There was also the risk that undisbursed fixed rate loans approved before 1 July 1986 might need to be financed at rates higher than

the applicable fixed rates. The World Bank faced similar risks, and used a combination of commitment charges, lending rate spreads, and a front-end fee to reduce these risks. As ADB's lending spread was now variable, the spread and a commitment fee were deemed sufficient to cover such risks. ADB maintained that were its lending spread to be fixed, however, introduction of a front-end fee might be necessary.

While the introduction of the PMCL system provided borrowers with a more transparent framework for lending rate determination, they remained fully exposed to exchange rate volatility on those loans. The Charter notes that for direct loans made, participated in, or guaranteed by ADB as part of its ordinary operations, the loan contract will provide that all payments be made in the currencies loaned. ADB assumed no currency risk exposure on its lending.

Where loans were made with funds borrowed by ADB, the total amount of principal outstanding and payable to ADB in a specific currency would never exceed the total amount of the principal outstanding of borrowings made by ADB in that same currency. Loans would be repayable in the currencies, and in the same amounts, withdrawn from the loan account or used by ADB to purchase another currency for the purpose of such withdrawal. Interest and premium would similarly be payable in the currency in which the principal was repayable. In consequence, all exchange rate risks were passed on to the borrowers. These risks could be significant, particularly in periods of high exchange rate volatility.

In its effort to keep lending rates low, ADB had borrowed heavily in low coupon currencies. However, these currencies were also prone to appreciation against the currencies of the borrowers. In an effort to distribute these risks more equitably across currencies disbursed and repayable under loans financed from ADB's OCR, in August 1981 the Board of Directors approved an exchange risk pooling system (ERPS). All currencies disbursed and outstanding as loans, and the associated exchange risks, would now be pooled and shared pro rata by borrowers throughout the life of the loans. Currencies in the pool would be revalued semimonthly to determine the change in value in terms of US dollars, and the aggregate change in value would be allocated among the loans by recording the corresponding percentage change for each loan.

Therefore, throughout the life of the loan, its repayment obligation would be indexed in terms of the original US dollar equivalent recorded at the time of withdrawals, together with an amount of exchange adjustment representing the pro-rata share of the composite exchange risk in the pool.

The introduction of the ERPS did not eliminate the exchange rate risk to the borrowers. ADB still retained the right to determine the currencies of its borrowings, disbursements, and recalls; and borrowers remained exposed to the volatility of such currencies relative to their own. But it did allow a more equitable sharing of such risks among the borrowers.

D. Borrowings

During the second decade of its operations, ADB continued its evolution into a sophisticated and savvy borrower on the international capital markets. The four principal elements of its borrowing strategy under the new variable rate pool-based lending system were (i) ensuring the continued availability of funds by making a continuous and systematic effort to develop its borrowing capabilities in the major capital markets; (ii) minimizing borrowing costs with a view to keeping the lending rate as low as possible; (iii) minimizing fluctuations in the lending rate over time; and (iv) ensuring a reasonable maturity relationship between ADB's loans and borrowings. Importantly, while ADB's cumulative borrowings to date had been raised in low coupon currencies, it recognized the need to maintain a regular presence in high coupon currencies as well. The new lending rate system would allow ADB to shorten the maturities of its borrowings when warranted by market conditions (i.e., reduce the impact of expensive borrowings when interest rates were high, or when yield curves were very positively sloped).

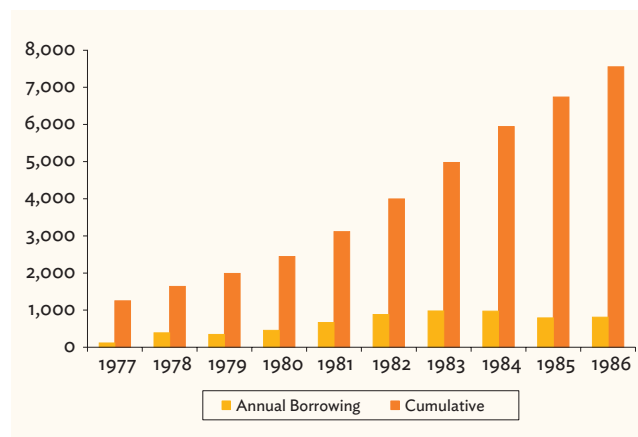
Borrowings expanded significantly over the second decade of operations. Terms of ADB borrowings during the period reflected not only market dynamics, but also the advantageous pricing and maturities associated with an entity that was becoming recognized on the international capital markets as a highly creditworthy borrower. ADB was exploring new funding opportunities, wherever they arose. In September 1978, for example, ADB issued its

first external yen bond in the international capital markets outside Japan and the US, offering ¥15 billion 10-year bonds at 5.75% annual interest. The bonds were listed on the Luxembourg and Singapore exchanges.

In 1979, with long-term funding on favorable terms becoming increasingly difficult to secure in the international capital markets, ADB was able, for the first time, to tap the long-term syndicated loan market in Japan. This first direct borrowing from private sources of long-term funds in the Japanese syndicated loan market was for a 20-year maturity, at 8.30% semiannual yield, and sourced from a syndicate of banks, trust banks, and insurance companies. The loan demonstrated ADB's growing capacity to exploit cost-effective funding opportunities in nontraditional markets. It also helped to push the average maturity of borrowings in the year, weighted by amount, from 9.35 years in 1978 to 10.25 years in 1979. ADB followed this issue with another long-term syndicated loan in Japan the following year. This was ADB's largest borrowing in the private capital markets in Japan to date. Figure 2 shows ADB's borrowings from 1977 to 1986.

The Japanese market proved to be a major source of funding during this period, notwithstanding significant borrowings in the Dutch, German, Kuwaiti, Saudi, Swiss, and the US markets as well. This included public bonds as well as syndicated loans from long-term investors, and

Figure 2 Asian Development Bank Borrowings, 1977–1986 (\$ million)



Source: Asian Development Bank.

euro yen issues. The Japanese market provided particularly favorable terms for longer dated borrowings, reflecting high levels of liquidity among Japanese investors at the time and solid name recognition of ADB.

With the success of ADB's debt issuance programs in various markets, its reputation as a borrower of the highest credit standing expanded further. By 1982, it had grown sufficiently that it became evident the CCCC restriction, first introduced in 1968, was no longer required by the capital markets. From the following year forward, the restriction was removed from new bonds issued by ADB. This helped provide ADB's financial managers with needed flexibility in undertaking borrowing operations, particularly in exploiting attractive funding opportunities as they arose in the markets.

The year 1983 proved eventful for ADB's borrowing operations. In March, the Board of Directors authorized ADB to undertake borrowings involving currency liability swap transactions as a way of increasing ADB's access to low-cost funds. Currency and interest rate swaps were tools that were increasingly utilized in the international capital markets to exploit the comparative price advantages of borrowers issuing in domestic or global markets. In addition to helping to obtain relatively favorable borrowing terms, these tools helped ADB to diversify the currencies and markets of its borrowings and would eventually become a common feature of ADB's borrowing program. During the year, ADB made its first public offering in the eurodollar market. Of the \$100 million proceeds raised from the eurodollar market, \$84.9 million was utilized in two currency liability swap transactions involving Swiss francs. ADB also continued its fundraising efforts in the Japanese capital markets.

Over the next 3 years, ADB followed a strategic and opportunistic approach to its borrowing operations—focused on retaining a presence in various markets while exploiting cost advantages in others. In February 1984, it undertook its first pound sterling borrowing and in August it issued its first zero-coupon bond in the eurodollar market. Its 7% per annum, 15-year public bond issue was the longest maturity for a Samurai bond at the time, and demonstrated ADB's coming of age in that market. In the following year, it floated its first ever public bond issue denominated in a foreign national

currency (yen) in the New York capital market, tapping into an important new source of funds. As in previous years, ADB continued to explore long-term funding opportunities in low-coupon currencies such as the Swiss franc (including its first floating rate borrowings) and the Japanese market.

E. Liquid Asset Management

Funds raised through borrowings, capital injection, and retained earnings continued to be invested in a highly conservative manner. In the early years of the second decade, investment instruments were largely comprised of short-dated time deposits and certificates of deposit of commercial banks resident in member countries, and debt issued by, or guaranteed by, nonborrowing member countries. While opportunities to enhance yield on investments by “playing the yield curve” (extending or shortening investment maturities or taking a view on the shape of the yield curve) were available, they were not aggressively exploited.

Throughout the 1970s, ADB investment officers labored under rudimentary information technology infrastructure, conservative investment restrictions, and time zone differences. Often, investment officers would send out telexes to banks requesting quotations for time deposits and certificates of deposit, which would arrive as firm quotes the following morning. Depository banks would price these to reflect overnight interest rate risk, which meant that quotes received the next morning were not always optimal for ADB.

This changed in the early 1980s. In September 1982, the Board of Directors approved revised investment guidelines that were designed to improve ADB's flexibility in balancing liquidity and income objectives. These revisions included allowing ADB to invest in a wider range of obligations, extending the permissible maximum maturity of investment securities, limiting ADB's investments in each of several classes of investments, extending general limitations of the investment maturity and range of depository bank-related investments, and providing more flexible guidelines for investments in bank obligations. In October 1984, the Board approved certain amendments to the maximum maturity provisions of the investment

guidelines to give ADB flexibility in protecting the investment return on its extended long-term borrowings from future interest rate movement and to invest in floating rate notes, without encroaching on relevant limitations in the existing investment guidelines.

In addition to the enhanced investment parameters, new information technology was introduced. Telerate and Reuters systems were installed, followed in later years by Bloomberg terminals. Investment officers would now often return to work in late Asian hours to discuss and execute transactions during New York business hours. When the rally in bond markets began in mid-1982, ADB was well positioned to purchase the government securities of different maturity ranges and sizes. ADB held large positions in yen, European, Australian, and Canadian currencies, among other smaller currency holdings, but its largest bets were in US dollars. The Mexican debt crisis, which emerged at around the same time, had weighed heavily on commercial bank credits and helped fuel the bond market rally. ADB strategically positioned itself to exploit this rally in bond markets, only to reverse this strategy (particularly for US dollar securities) months before the collapse of securities prices during the bear market of February–May 1984. It continued this tactical positioning in and out of securities for the balance of the decade in what was to presage far more active portfolio management approach in the years ahead.

F. Special Funds

In the case of the Special Funds, administration of the early funds, the MPSF and ASF, had been complicated since contributions to those funds by individual donors had been made voluntarily at the initiative of the countries involved and were often tied to procurement in those countries. The ADF I, totaling \$486.1 million, was intended to finance the concessional lending program for the 3-year period ending 31 December 1975 and introduced a more standardized approach to terms and replenishments. The ADF II covered the period 1976–1978 and was originally set at \$830 million, though subsequently lowered to \$809 million.

Throughout 1977, negotiations continued over a second replenishment of the ADF (ADF III), designed to cover

the period 1979–1982. Considerable focus was placed on projections of concessional lending growth over the period and on the resource position of Special Funds. Because individual contributions to the MPSF and the ADF had been made in the national currencies of the respective contributors, MOV obligations did not apply. As a result, the total value of resources for these funds fluctuated with changes in interest rates. In 1977, exchange rate fluctuations resulted in an increase in Special Funds resources of \$116 million. Nevertheless, total resources of the ADF and MPSF at the end of 1977 were \$1.28 billion, relative to cumulative commitments (after allowing for foreign exchange adjustments, cancellation, and repayments) of \$1.19 billion, leaving a balance of uncommitted resources of only \$93 million. Clearly the case for a timely replenishment of the ADF was becoming more pronounced.

In 1978, negotiations over the ADF III came to fruition, with the Board of Governors adopting Resolution 121 authorizing ADB to receive contributions to the ADF III amounting in aggregate to \$2.15 billion covering the period 1979–1982. The resolution called for a basic replenishment of \$2 billion in line with effort-sharing arrangements agreed in connection with the ADF II, but also authorized ADB to receive up to \$150 million (or higher amount, as could be approved by the Board of Directors) in supplementary contributions, which would not affect the relative effort-sharing arrangements of future replenishments.

Also in 1978, lending policies were reviewed and borrowing members were classified using per capita GNP. Group A countries enjoyed full access to the ADF (OCR in exceptional cases). Group B countries enjoyed modest access of not more than 15% of total ADF lending during period 1979–1982, and Group C did not have access to the ADF.

A persistent complication to the ADF replenishment process was the budgetary procedures and calendars in donor countries with respect to the timing of contributions. Resolution 121 provided that contributions by donor countries were to be made by depositing with ADB unqualified instruments of contribution. However, in exceptional circumstances, where an unqualified commitment could not be given by a donor country because of its legislative practice, the bank could accept a qualified

instrument from that donor stating that payment of all installments of its contribution except the first would be subject to budgetary appropriation, but containing an undertaking that the donor would seek the necessary budgetary appropriation for the remaining installments over the ADF III replenishment period. This was included in the resolution to acknowledge the legislative practice in the US.

Further, the resolution envisioned that the release of funds for loan commitments over the replenishment period would occur progressively in a manner that would meet ADB's operational requirements from year to year while preserving the principle of reciprocity between donors making unqualified and qualified contributions. Thus, while the first tranche of each unqualified contribution would be required to become available for loan commitments on the date the relevant instrument of contribution became effective, the release of the second, third, and fourth tranches of such contributions could only occur if each qualified contribution had previously become unqualified, and available for loan commitments, to the extent respectively of one-fourth, one-half, and three-fourths of the total amount of such contribution.

These provisions were significant in that, at various times in subsequent years, the legislative and/or budgetary process pertaining to the qualified contributions of some of the major ADF donor countries was delayed—leading to consequent delays in ADB's ability to access the second, third, and/or fourth tranches of unqualified contributions, and therefore causing shortfalls in the anticipated funding levels for the ADF. Over time, these funding disruptions were resolved with the appropriate legislative and/or budgetary approvals in the donor countries involved, but they proved a challenge for ADB in mobilizing sufficient resources to fund discrete ADF financing pipelines in the years ahead.

By 1981, based on estimations of future needs and resources, discussions commenced for a third replenishment (ADF IV) covering 1983–1986. During the year, the Board of Directors also focused on improving arrangements for the mobilization and replenishment of TA resources, including a request for an annual review by the Board of Directors of the utilization of contributions and future resource requirements. New TASF regulations were

approved and additional voluntary contributions received. Contributors were also invited to accept the goal of making TASF contributions on a completely untied basis and to move toward this goal as soon as possible. To this end, it was decided that all contributions to the TASF made from 1983 onward would be made available for procurement from at least all DMCs, as well as from the contributor country.

Negotiations for the ADF IV were completed in 1982, under the chairmanship of Sir John Chadwick, special advisor to the President. While an initial replenishment target of \$4.1 billion was broadly supported in principle, economic and financial conditions in donor countries made revision to this target necessary. In consequence, the donor countries agreed on a replenishment of \$3.20 billion, while a further \$9.5 million was agreed to be provided by four DMCs (Hong Kong, China; Indonesia; the Republic of Korea; and Taipei, China).

Among the challenges faced during the periodic replenishment efforts was the issue of foreign exchange fluctuation. ADB denominated ADF loans in US dollars. This caused difficulties and uncertainties in matching ADF loan commitments with ADF resources, because ADF resources (consisting of various currencies) fluctuated in value relative to the US dollar. In 1982, the Board of Directors decided that, in order to reduce fluctuations between ADF resources and loan commitments and thereby reduce the valuation difficulties, ADF loans to be negotiated after 1 January 1983 would be denominated in terms of SDR. In time, this would lead to a significant realignment of the currency composition of resources held in the ADF account.

By 1986, negotiations had been completed for a fourth replenishment of the ADF (ADF V) in the amount of \$3.6 billion. It was agreed to set aside \$72 million of this amount to be allocated to the TASF for TA to the poorer DMCs and for regional TA.

Another avenue for mobilizing donor grant resources, which first emerged in 1980, was channel financing arrangements (CFAs). Given the resource constraints associated with the TASF and the ADF, CFAs became increasingly important over the subsequent years as a source of externally provided grant funds to support TA and to finance the soft components of loans. Under the

CFAs, ADB acted as administrator of the funds provided by donors (the funds did not become part of ADB's own resources) and applied all its guidelines and procedures regarding the recruitment of consultants, procurement, disbursement, and project supervision. The donor provided untied grant funds and indicated its preference of sectors and recipient countries in the use of the funds. ADB became responsible for project preparation, processing, and administration; and provided the donor with regular financial statements and progress reports on the use of the funds.

The main advantage of CFAs was that funding for a number of individual TA projects could be provided under a single agreement—reducing the need for detailed negotiations on a case-by-case basis and thus fostering greater administrative efficiency. In the subsequent 20 years of operations, ADB would enter into CFAs with 12 bilateral donors and finance 140 TA grants from these vehicles, in the amount of about \$66 million.

V. The Third Decade: 1987–1996

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In its third decade of operations, ADB introduced numerous enhancements to its financial management practices. As a priority, ADB remained committed to providing borrowers with greater flexibility in managing the most cost-competitive financing ADB could provide, while preserving the strength of ADB's key financial ratios. ADB also introduced enhancements designed to strengthen resource mobilization and income generation capacity.

A. Financial Policy

Following the financial review of 1983, in which the foundation for introducing the PMCL system was laid, the next major policy review occurred in 1986–1987. The comprehensive review reinforced the importance of a rising trend in net income and the value of the ICR and RLR as key financial indicators.

The review acknowledged that while the ICR no longer enjoyed the same importance in determining ADB's loan charges under the PMCL as under the previous fixed rate system,²³ the capital markets still considered the ICR a crucial indicator of net income adequacy and financial performance. Given that other multilateral development banks (MDBs) had set a minimum level of 1.25 for ICR, the review concluded that the ICR should not fall substantially below 1.25. At the time of the review, ADB's ICR was significantly higher than that of the IBRD and the IADB. This was because these institutions were more highly leveraged than ADB, i.e., the capital ratio (ratio of cost-free funds to total earning assets)²⁴ was higher at ADB. It was expected that ADB's ICR would gradually decline as its borrowings increased and the capital ratio declined.

Additionally, the financial review concluded that the minimum RLR of 15%, first adopted in 1975, was sufficient to ensure that any default by a major borrower could be covered by current income and reserves. It was subsequently acknowledged that, given the changing lending environment and associated dimensions of credit risk, and since the projected share of loans outstanding to ADB's largest single borrower was expected to be 20%–25%, the minimum target for the Bank's long term RLR would be similarly set within a range of 20%–25%. The Bank was expected to ensure that, in setting these targets, there would be no perceptible negative trend in ADB's long-term net income outlook. As of 31 December 1988, the ICR stood at 1.68 and the RLR at 34%.

Finally, in reviewing the policy on liquidity, ADB reaffirmed a minimum acceptable level of 40% of undisbursed loan balances projected at the end of the year, though it acknowledged the need for flexibility consistent with the realization of ADB's funding objectives.

As part of its periodic review of loan charges, and acknowledging calls from DMCs to lower the cost of assistance, the Board of Directors approved a reduction in the variable spread added to the average cost of pooled bank borrowings from 0.50% per annum to 0.40% per annum, effective 1 January 1988. For loans approved on or after 1 July 1987, the existing 0.75% per annum commitment charge would no longer be levied on the full undisbursed balance of the loan, but on a progressively increasing part of the loan: 15% in the first year, 45% in the second year, 85% in the third year, and 100% in the fourth year and beyond. This reduction was effectively equivalent to a straight reduction in the commitment charge from 0.75% to 0.50% per annum.

²³ Under the old fixed rate system, the ICR played an important role in income planning by establishing a safety margin to be integrated into loan pricing. Under the new system, ADB's interest income would be automatically adjusted every 6 months to reflect changes in ADB's financial expenses, including the possible cost of carrying liquidity.

²⁴ Sum of disbursed and outstanding loans and liquid assets.

In addition to tighter spreads on loans from ADB, the DMCs aspired to greater control over the management of exchange rate risk associated with those loans. The ERPS was a system of sharing risk. It did not offer borrowers greater control over that risk. ADB still reserved the right to choose the currencies of its funding, of individual loan disbursements and, for the most part, of remittances to be repaid during amortization. As indicated earlier, ADB had issued heavily in low interest rate currencies as a way of keeping the average cost of funds supporting loans relatively low. As ADB would not assume currency risk, these same currencies comprised the bulk of outstanding loans. As of 1991, outstanding loans were disbursed mainly in four major currencies: 54.5% in yen, 22.3% in Swiss francs, 9.6% in deutsche mark, and 10.8% in US dollars. In response to DMC concerns, ADB initiated a study in 1991 of possible improvements to the management of borrowers' foreign exchange exposure on OCR loans. Among the suggestions considered were the possibilities of providing individual borrowers with repayment schedules in the currencies disbursed to them for the remaining maturities of their fixed interest rate loans, and of introducing currency-specific lending in US dollars in addition to the existing multicurrency variable rate loans.

Such efforts came to fruition in June 1992 with a series of changes to ADB's currency management practices for OCR borrowers. For new loans approved from 1 July 1992, OCR borrowers had the choice of either variable interest rate multicurrency loans, which were included in the ERPS and were mainly disbursed in low coupon currencies, or single currency, US dollar loans from a new US dollar variable interest rate facility. In addition, the Board of Directors approved changes in ADB's disbursement and recall practices with respect to all outstanding OCR fixed rate loans to give borrowers more complete information on the currencies they would repay to ADB on each due date.

Under the revised currency management practices, ADB would disburse additional US dollars into the ERPS pool of loans for allocation to the fixed rate loans remaining in the pool, thereby improving the transparency of the applicable lending rates. It was anticipated that once the share of US dollars in the currencies disbursed under ERPS fixed-rate loans had reached the equivalent of about 30%, all fixed rate loans would be removed from the ERPS pool. This would provide the opportunity to fix the currency

obligations under these loans and to provide borrowers with schedules of principal repayments by currency. By June 1993, this target had essentially been met and all fixed rate loans were removed from the pool. ADB then began providing borrowers concerned, as well as borrowers whose loans were not earlier included in the ERPS pool, with new amortization schedules based on the relevant pro rata currency obligations as their payments fell due. It was anticipated that these changes would help borrowers better manage their debt service.

B. Capital and Capital Adequacy

Around the same time, preparatory work was undertaken to assess the need for another capital increase (GCI IV). This was conducted on various fronts. In March 1991, the Board of Directors approved a working paper evaluating ADB's OCR operational program for 1991–1998 for submission to the Board of Governors for consideration at the 24th AGM. In the past, ADB's borrowing levels had been restricted, by covenants in some of its bond documentation, to the callable capital subscribed by specific member countries whose currencies were convertible (CCCC limitation). As a result of decisions following the financial policy reviews of 1983, the CCCC limitation was eventually removed, and by 1991 only one such borrowing remained outstanding. Upon the maturity of this borrowing in June 1993, the CCCC limitation would cease, and ADB's borrowing capacity would increase substantially. In consequence, both ADB's borrowing capacity and its lending limit (contained in Article 12.1 of the Charter) were extensively reviewed in connection with the GCI IV. It was recognized that once the borrowing capacity or the lending limit was reached, ADB would be unable to continue its OCR lending operations unless there was a further capital increase.

Credit and concentration risk to the portfolio, particularly in connection with capital adequacy, was another concern of the shareholders regarding the timing of a capital increase. An interdepartmental working group had been formed to review country and concentration risk to the loan portfolio and make recommendations. This included an assessment of the need to adopt an explicit policy framework for private sector operations that would minimize the potential risk

Table 4 Concentrations of Loans Outstanding, as of 31 December 1983 (in \$ thousands)

Country	Amount	Percentage ^a
Korea	758,395	24
Philippines	686,657	22
Thailand	506,252	16
Total Loans	3,105,670	

^a Percentage of total loans outstanding.
Source: Asian Development Bank.

impact of such operations to the overall OCR portfolio. Further, the liquidity policy was re-examined, considering alternative approaches to determining appropriate minimum levels, such as adopting a cash flow approach rather than the existing approach of using the year-end undisbursed balance of loans as an indicator. ADB continued to review its income management policies and major financial indicators, principally the ICR and the RLR.

Intensive study of the policy framework continued for another year. In April 1993, the Board of Directors considered a major financial policy review paper, based on work undertaken during the previous year. Significant enhancements were approved, including those relating to country risk, private sector risk, sanctions, nonaccrual policies, loan loss provisioning, liquidity policy, and income management policy. These issues were of particular importance to the capital replenishment agenda, as they directly affected ADB's capital adequacy and risk-bearing capacity.

The Board of Directors recognized the need to balance deliberate action to create a more diversified portfolio, through country lending limits for example, against ADB's primary role in providing development assistance to its borrowing member countries. It determined that ADB should consider and manage, within given limitations, appropriate portfolio diversification when formulating its annual lending programs with the objective of reducing concentration risk (having only fixed ceilings was not considered practical). In this connection, it instructed ADB to strengthen and systematize ADB's country risk assessment and management systems.

Regarding rescheduling arrangements for delinquent private sector loans, procedures were set forth specifying

when such arrangements could be submitted to the Board of Directors on a no-objection basis, and when these arrangements required full Board discussion. Sanction policies were further detailed, with specific steps mandated when the interest or principal on public sector loans were overdue by 30, 60, and 90 days, including suspension of new loan commitments (after 60 days) and suspension of disbursements (after 90 days). All public sector loans for both OCR and the ADF and all private sector loans would be placed on nonaccrual status when the interest or principal on such loans was overdue by 6 months.

In the case of loan loss provisioning, whenever there would be doubts as to the ultimate collectability of the principal of OCR and ADF public sector loans, specific loss provisions would be made after payment obligations to ADB with respect to a borrower's interest or principal were in arrears for 1 year. ADB would continue to make specific loss provisions for private sector loans and equity investments, as determined by Management, after quarterly reviews of the portfolio. On the remainder of the private sector portfolio, ADB would make general loan loss provisions at a rate to be determined periodically by the Board of Directors.

Finally, the existing approach of holding 40% of undisbursed loan balances at the end of the year in liquid assets was reaffirmed as the operative approach in determining minimum liquidity levels, but this would be supplemented with a cash flow approach aimed at ensuring that ADB's planned liquidity level at the end of the year was neither excessive nor insufficient in covering future cash flows. Importantly, ADB's borrowing activities would be allowed sufficient flexibility to exploit advantageous borrowing opportunities that could arise, even if such action would result in liquidity being above the minimum liquidity level in some years. ADB would maintain its ICR target at no less than 1.25.

In the case of the RLR, however, some adjustments were agreed. First, it was acknowledged that a general deterioration in economic conditions could occur quite rapidly following a credit event, affecting a number of ADB borrowers. It was no longer deemed appropriate to continue to link the RLR to the risk exposure of the largest borrower's share of loans to the overall portfolio. The presumption of default by such a borrower, resulting

in the need for an immediate and total write-off of all its outstanding loans,²⁵ was now considered too pessimistic. A more probable scenario would be one where one or more borrowers could encounter protracted payment difficulties, resulting in their loans falling into nonaccrual status. If this were to occur, ADB's portfolio would then be comprised of nonaccruing loans requiring a higher level of reserves protection, and the remaining low-risk performing loans requiring a lower level of reserves protection. Following various income simulations, it was determined that an RLR of not less than 25% would provide sufficient reserves to cover both nonaccruing loans and performing loans, while retaining income generation capacity, so a target of not less than 25% RLR was established.

This work laid the foundation for eventual approval by the Board of Governors, in 1994, of the GCI IV. The increase amounted to 100% of capital, or \$25.84 billion divided into 1,770,497 shares, each having a par value of \$10,000 in terms of the weight and fineness in gold in effect on 31 January 1966. Subscriptions would consist of a 2% paid-in portion and 98% in callable shares. Of the paid-in portion, 40% would be in convertible currency and 60% in the national currency of the subscribing member. Including the additional shares authorized under the GCI IV, ADB's authorized capital amounted to \$50.78 billion as of 31 December 1994.

With the capital increase and related policy enhancements relating to portfolio risk, the critical income ratios were projected to remain significantly above minimum requirements for the foreseeable future. However, because of the gradual decline in the proportion of cost-free funds relative to total earning assets and low interest rates prevailing, ADB's RLR was projected to decline gradually over the next 5 years. Actions were called for to manage this decline. ADB began to consider alternative ways of immunizing the RLR from exchange rate fluctuations, such as aligning the currencies of its reserves with those of its loans.

Maintenance of value issues remained unresolved during the period, notwithstanding a decision by the World Bank board of directors, in October 1986, on the future valuation

of its capital and the resumption of Maintenance of value. Article 4, paragraph 1 of the Charter defines the capital stock of the Bank as being "in terms of the USD of the weight and fineness in effected on 31 January 1966" (footnote 15). Historically, the capital stock had been translated into the current US dollar (ADB's unit of account) on the basis of its par value in terms of gold. Between 1973 and 31 March 1978, the rate arrived on this basis was \$1.20635 per 1966 dollar. Beginning on 1 April 1978, however, when the Second Amendment to the Articles of Agreement of the IMF came into effect, currencies no longer had par values in terms of gold.

ADB continued to examine the implications of this on the valuation of its capital stock, and the Board considered two working papers on valuation of ADB's capital and MOV in 1988. During subsequent Board discussions, a proposal was considered to denominate ADB's capital in terms of the current SDR. A third working paper focusing on MOV was submitted to the Board in September of that year for consideration. Pending a decision on this matter, reporting of ADB's capital stock remained valued in terms of SDR, with each share assigned a value of SDR10,000 and expressed in current US dollars on the basis of the rate for the SDR as computed by the IMF at each year end. The mutual obligations of members and ADB relating to the MOV of their currency holdings were measured by the same standard, but settlement of such obligations continued to be held in abeyance.

C. Loan Products

The period was also notable for the introduction of an important new loan product. In its periodic review of borrower preferences, ADB noted that financial intermediaries that relent ADB funds to sub-borrowers had growing demand for market-related lending instruments, i.e., products linked to the LIBOR. It also noted the preference of private sector borrowers for more transparency in interest rates, based on explicit current costs of bank borrowings. ADB's response to these developments was the introduction of a new MBL window that would provide funds at terms prevailing in international capital markets.

²⁵ Sovereign loans by ADB contained cross-default clauses.

The MBL was ADB's third lending window, supplementing the existing PMCL window and the existing pool-based single currency (US dollar) window. While the lending rate on the two existing windows was based on the historic cost of a pool of borrowings applied to all loans covered by the pool, the lending rate on the MBL was based on ADB's current cost of borrowings used to support each such loan. The lending rate was determined by adding a lending spread over a base rate of 6-month LIBOR (0.40% for public sector borrowers of the MBL) and could be either fixed or floating, with the floating rate set semiannually and the fixed rate set at each disbursement date at the equivalent swap rate of 6-month LIBOR plus the lending spread. The lending spread for private sector borrowers was determined on a case-by-case basis, and in both floating and fixed rates, an additional 0.125% would be charged for swap exposure. Borrowers were given a one-time option to convert their floating rate into a fixed rate, or vice versa. Since liquidity in the swap markets was available up to 10 years, and the disbursement profile of MBLs was expected to be about 5 years, ADB was able to offer borrowers maturities of up to 15 years.

While access to the window was available to both private sector borrowers and financial intermediaries in the public sector, the MBL was expected to benefit private sector borrowers primarily. Public sector financial intermediaries were able to access up to \$1 billion from the new window for the first 2 years of operations. In addition to meeting borrower demand for transparency, the MBL rationalized the financial operations of private sector lending on market-related terms by matching assets and liabilities and reducing the volatility of ADB's income. Since the scope of MBL operations was limited and because of the currency preferences of eligible borrowers, the currencies offered under the new window were the yen, Swiss franc, and US dollar.

The new window provided additional flexibility to ADB's borrowers, but it also increased complexity to the management of interest rate risk in ADB. To control the basic sources of this risk, ADB adopted a "match-funded" policy, through which loans and borrowings would have broadly similar terms. With its growing sophistication and reputation in the global capital markets, ADB was able to adjust quickly to these new arrangements.

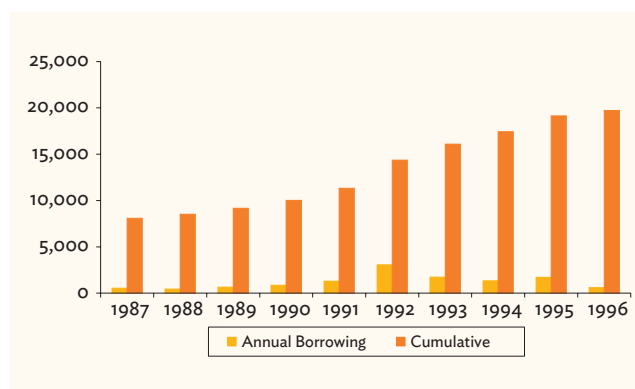
D. Borrowings

Borrowing activities in the third decade of operations continued to reflect the main tenets of ADB's borrowing strategy, namely, securing funds at the lowest cost and longest term in support of its lending operations. In 1986, for example, ADB was able to push out the average maturity of its borrowing, weighted by amount, to 14.4 years (compared with 12.7 years in 1985), reflecting timely and long-dated issuance in the Japanese and US markets. ADB's effective use of derivative (swap) markets enabled it to lower the average cost, weighted by amount and after swaps, to 5.90%.

The use of swap instruments gave ADB tremendous flexibility in focusing on cost-effective funding opportunities across the globe, but it remained a significant borrower in low-coupon currencies and US dollars. Actual annual funding levels were still largely driven by estimations of year-end liquidity, and when these liquidity levels were higher than anticipated (as a result of loan prepayments, cancellations, lower than expected loan commitments, and other factors) the annual borrowing plan would be scaled back accordingly.

In 1990, ADB launched a euro-commercial paper (ECP) program in amounts up to \$500 million, or its equivalent in alternative currencies, as a much-needed way of improving the flexibility of financial management. ECP is a short-dated obligation of not less than 7 days and not more than

Figure 3 Asian Development Bank Borrowings, 1987–1996 (\$ million)



Source: Asian Development Bank.

365 days, and is issued at a discount (face value paid at maturity). In the year of its inauguration, ADB issued six tranches of US dollar-denominated ECP, in an aggregate amount of \$275 million, which were swapped into yen and Swiss francs. The importance of launching an ECP program cannot be overestimated, as it provided greater flexibility in the timing (and pricing) of longer-dated issuance in subsequent years.

In 1991, ADB again demonstrated its market influence by launching various borrowing innovations. In February, it issued a 10-year, ¥20 billion (\$147.6 million equivalent) public bond into the Japanese domestic markets priced at 7.20% per annum. The issue was notable as it was ADB's first dual currency bond (principal payable in yen, while the interest or coupon was payable in Australian dollars) and appealed to Japanese investors reaching for higher coupons. The Australian dollars needed for the coupon payments would be received from a related coupon currency swap transaction under which ADB would be paying yen.

In November of that year, and after considerable effort in securing the necessary authorizations, ADB launched the first ever dragon bond, a US dollar public bond issued in various locations throughout Asia. The \$300 million, 7.50% 7-year bond (swapped into a fixed rate yen liability) was issued simultaneously in Hong Kong, China; Singapore; and Taipei, China. It was instrumental in establishing ADB as an innovative borrower contributing to the development of the capital markets in Asia through targeted issuance designed to leverage regional demand for debt paper from a major and established institutional entity.

ADB followed this with a second dragon bond issue in October 1992, again for \$300 million. This issue was the first borrowing for ADB's newly established pool-based, variable rate, US dollar specific lending window. The following year, ADB issued its first ever dragon yen bond issue, allowing it to diversify its cost-effective sources of yen funding and at the same time, introduce another international currency to the Asian regional bond market.

During this period, ADB continued to focus on enhancing the secondary market liquidity of its bonds through targeted, and sizeable, benchmark issuance in selected

markets. This benchmark status of individual bonds (usually \$500 million equivalent and above in size) would result in narrower issuance spreads on future borrowings, as benchmark issues would enjoy greater secondary market liquidity, meaning that these bonds would trade more actively and in greater size as a result of tighter bid-ask spreads (a strong incentive for investors to hold such bonds in their portfolios). In 1993, ADB issued a 10-year euro-yen bond that achieved benchmark status, and later that year issued a \$500 million eurodollar issue that also achieved benchmark status.

The move toward large benchmark issues accelerated in 1994 and 1995, with the first two US dollar global bonds (bonds issued in several countries at the same time and traded outside the country where the currency is denominated) ever issued by ADB. Each bond carried a principal amount of \$750 million and a 10-year maturity. The second issue achieved pricing flat (equivalent) to the secondary market spread of a comparable World Bank 10-year benchmark global bond issue. As the World Bank has a larger issuance program, and enjoys deep name recognition on a global scale, this was considered a coup of sorts.

ADB's strong name recognition in Asia helped reduce issuance spreads, particularly among Japanese institutional and retail investors. During this time, and as a way of diversifying its sources of funding, ADB entered into three structured yen private placements, each with a principal amount of ¥10 billion. Proceeds of these borrowings were swapped into plain vanilla bullet-maturity liabilities at cost levels well below those available in the public markets. Over subsequent years, these targeted, often highly structured, issues into the Japanese market regularly achieved deep sub-LIBOR funding levels.

E. Liquid Asset Management

Given ADB's loan pricing structure, and its objective of maintaining low and transparent costs to its borrowers, much of the funding raised through borrowing activities was destined to support the loan portfolio. Because of this, the loan portfolio was considered match-funded by its borrowings, and the net income earned on this portfolio was the thin lending spread and fees associated with public

sector loans, and the credit spread and fees associated with private sector loans. ADB's liquidity portfolio was therefore comprised of cost-free capital, reserves and/or retained earnings, and borrowings pending disbursement. The net income earned on ADB's liquidity portfolio was a major constituent to ADB's overall net income.

While key financial ratios remained strong throughout the third decade of operations (ICR at 1.7 and RLR at 40.6% by the end of 1996) and were projected to remain strong, the increasing level of borrowings relative to cost-free capital, and the low interest rates prevailing during the period, reinforced the view that ADB needed to take steps to ensure its net income would remain sufficient moving forward to maintain strong financial indicators. Net income is tied to retained earnings and reserves, and is therefore linked to both the ICR and the RLR. It was also argued that income levels were a key determinant in the timing of GCIs. The higher the levels, the less pronounced the need for an immediate capital raising effort. In this connection, steps were taken in the third decade of operations to significantly expand the tools available for management of ADB's liquidity portfolio.

ADB's primary objective in holding liquid assets is to ensure the uninterrupted availability of funds for its operations and to ensure flexibility in its borrowing decisions, especially when borrowings are temporarily affected by adverse conditions in the capital markets. The liquid asset portfolio is actively managed, with primary consideration being accorded to the security and liquidity of funds invested, and, subject to these considerations, seeking to earn maximum income on these assets.

At the end of 1991, ADB's liquid asset portfolio totaled \$4.16 billion, equivalent to about 43% of undisbursed loan balances. As a consequence of the significant changes in the financial markets that had occurred over the previous decade, and the increasing volatility of interest rates, the Board of Directors approved a comprehensive review of the existing investment guidelines in 1991 with the objective of enhancing the flexibility of ADB in meeting its income objectives while retaining its sound risk management practices.

The existing guidelines were split into two parts: (i) the Investment Authority, dealing with overall investment policy, to be approved by the Board of Directors; and (ii) the investment guidelines, providing detailed guidance and relevant limits to be applied to the actual management of the portfolio, to be approved by Management.

The Investment Authority adopted the use of "duration" as a risk management tool for identifying and managing interest rate risk in the portfolio. Duration provides a measure of the expected change in the price of a security or portfolio of securities given a change in yield; and though never explicitly noted in the previous investment guidelines, was already in use by ADB in measuring and monitoring interest rate risk on individual securities. It would now be used as a measure of risk as well for the entire portfolio. In addition, the new Investment Authority permitted ADB to use exchange-traded financial futures and option contracts to manage exposure risk, to "short"²⁶ securities positions (also as a risk management tool) and to transact in a broader array of cash market securities (such as covered forward investments) than before.

The new Investment Authority was expected to bring significant benefits. Futures and option contracts would allow ADB to change the risk profile of its investment portfolio quickly, without disturbing its cash market security positions, enhance the liquidity of certain higher yielding investments, and lower transaction costs. Covered forward investments were expected to give ADB the ability to exploit certain profit opportunities that occasionally arose in interest rate differentials between markets. The use of such new instruments was expected to be introduced gradually, as the necessary systems, controls, and procedures were put in place. For the balance of the third decade, ADB was engaged in setting these systems and controls in place. By 1996, duration, futures, options, and other tools became available for use in active portfolio management.

By the end of its third decade of operations, life in the Treasurer's Department had changed dramatically. A Financial Policy Division was in place, actively engaged in the resource mobilization effort, and in a coordinated

²⁶ Shorting (also known as short selling or going short) is the practice of selling securities or other financial instruments that it may purchase but does not currently own.

fashion with the funding and investments divisions—leading the effort to identify, maintain, and preserve ADB’s key financial ratios. This effort was seen as a top priority, at the core of retaining ADB’s AAA rating in the capital markets. It underpinned ADB’s ability to raise low, cost-competitive funding that it could then pass on to its DMCs. While work in the department was never a “9 to 5” activity, the kinetic levels in the department rose significantly as ADB became more closely integrated in global markets. As much of ADB’s operations in both funding and investments occurred during European and New York hours, staff in the department often worked late through the night, either in the office or at home, where information technology systems had been installed. Evening market updates and broker calls frequently began at the opening of New York markets, and continued through the Federal Reserve open market activities, usually between 11:30 p.m. and midnight, Manila hours.

The additional flexibility accorded to the liquid asset investment managers did not sit uniformly well within an institution known globally as highly conservative in its financial management practices. These reservations became more pronounced following the bankruptcy of Orange County in 1994 as a result of poorly performing esoteric investments, including structured derivatives, and the collapse of Barings in 1995 on account of rogue derivative trades. While investment managers within ADB continually argued that the derivatives utilized by ADB were “plain vanilla,”²⁷ operated within tight controls and not subject to the types of volatility experienced by Orange County and Barings, the use of derivatives as an investment product came under intense scrutiny in the years ahead.

F. Special Funds

In the case of the Special Funds, the ADF V came into effect in May 1987 when ADB had received sufficient unqualified instruments of contribution from developed member countries in excess of the minimum trigger for effectiveness. By the end of 1988, total ADF V instruments of contribution received amounted to \$3.57 billion, against the authorized amount of \$3.6 billion. Both the US and Canada submitted qualified instruments of contribution,

but were eventually able, through some delay, to secure the necessary legislative approvals and budgetary appropriations.

At the 20th AGM in Osaka in 1987, the Government of Japan proposed entering into a financial arrangement with ADB for the establishment of a Special Fund designed to contribute to accelerating economic growth in the DMCs, and in March 1988, the Board of Directors authorized the establishment of the Japan Special Fund (JSF). The main objective of this fund was to help DMCs restructure their economies to align with the changing global economy and to broaden the scope for new investment. This included support of efforts toward industrialization, natural resource development, human resource development, and technology transfer. Resources would be used to finance or cofinance TA projects in the public and private sectors, on a grant basis, including project preparation, advisory services, and regional activities. Financing or cofinancing, on a grant basis, could be provided for the TA components of public sector development projects financed under ADB loans. Equity investments in private sector development projects were also possible. ADB would act as administrator of the fund, and by the end of 1988 had received amounts totaling ¥4.5 billion (equivalent to about \$35.8 million) from the Government of Japan. Contributions from Japan for the JSF were received annually for the balance of the third decade.

The 4-year period of the ADF V was scheduled to end on 31 December 1990, and though negotiations for a replenishment would normally have commenced in the middle of 1989, they did not, owing to continued favorable exchange rate movements and a relatively comfortable resource situation arising from the ADF’s accumulated surplus and accumulated loan repayments. Instead, negotiations began in the first half of 1990, with a review of three key financial issues pertaining to the ADF.

The first of these related to the possible use of ADF income and loan repayments for loan disbursements, which would result in a lower rate of growth of ADF liquidity. The second pertained to ADB’s policy of deducting a provision for exchange rate fluctuations from total uncommitted resources in determining the availability of ADF loan

²⁷ A plain vanilla refers to the most basic version of financial instrument that is traded in the over-the-counter market between two parties.

resources for commitments. The size of this provision was based principally on the amount of accumulated surplus and accumulated loan repayments, and was growing large. The Board of Directors considered replacing this with a lending limitation policy that would be determined on the basis of the amount and currency mix of undisbursed resources and committed but undisbursed loans. The third issue related to the possibility of making available amounts of future ADF investment income and loan repayments for loan commitments. The availability of these “advance commitment” funds ahead of actual receipt would enable ADF borrowers to benefit from this growing source of funds at the earliest possible date.

By January 1991, a decision on these three major issues had been reached. The Board of Directors concluded that ADB should commence using the ADF investment portfolio for loan disbursements with a view to running down the portfolio gradually over the 5 years from 1991 to 1995. It also determined that the existing policy of maintaining a provision for exchange rate fluctuations in determining the availability of ADF resources for loan commitments should be discontinued. Instead, ADB should adopt an ADF lending limitation policy to reduce the risk of undisbursed resources becoming overcommitted as a result of exchange rate fluctuations. Finally, it determined that 85% of projected ADF investment income and loan repayments during 1991–1995 should be made available as ADF “advance commitment authority,” allowing ADF borrowers to benefit from this growing source of funds as quickly as possible.

With these major policy issues resolved, negotiations over a fifth ADF replenishment (ADF VI) were concluded, and a \$4.2 billion replenishment designed to cover operations over the 4-year period 1992–1995 was agreed. Of the \$4.2 billion agreed, \$140 million would be set aside for allocation to the TASF, primarily for TA to poorer DMCs and for regional TA. During the discussions, strategic priorities relating to poverty reduction, improvement of the environment, the role of women in development, and population issues were also raised. Understandings reached over these priorities, allocation of ADF VI resources, and recommended terms and conditions of the replenishment were set forth in a donors’ report.

Also during the ADF VI negotiations, the donors proposed that the use of OCR income for TA grants should be

expanded beyond the customary allocation of 2% of OCR net income, and in August 1992, the Board of Directors recommended to the Board of Governors that an amount of \$50 million, previously held as surplus after the allocation of OCR net income for 1991, be reallocated to the TASF. The Board of Directors also recommended that an amount to be determined each year by the Board of Directors, based on a review of the net income outlook, be transferred from OCR net income to the TASF in future years.

The ADF VI discussions had defined the ADF lending limitation as a percentage (known as the gearing ratio) of undisbursed resources. By the end of 1991, the ADF lending headroom (difference between the lending limitation and the amount of committed but undisbursed loans) had been fully committed, and loan commitments had been made against about \$21 million of the advance commitment authority of \$603 million (85% of projected ADF investment income and loan repayments for 1 January 1991 to 31 December 1995). This left a balance of the advance commitment authority, which would be supplemented during the ADF VI period by an additional \$1.22 billion of ADF V contributions yet to be released and resources from the ADF VI, amounting to \$4.06 billion at the time.

These resources were sufficient to support ADB’s concessional lending program through the entire ADF VI period. By the end of 1996, however, and considering donor contributions that became available during the year, new loan commitments, and exchange rate movements, the lending headroom was only about \$400 million. During that year, and to supplement ADF non-donor resources, ADB and ADF donors agreed to recommend approval of transfers of OCR net income and surplus to the ADF. Resolution No. 251 was adopted by the Board of Governors on 24 May 1997 to transfer \$230 million held in ADB’s OCR surplus (consisting of \$70 million from the 1994 net income and \$160 million from the 1995 net income) to the ADF.

Ongoing negotiations over a sixth replenishment (ADF VII), covering the 1997–2000 period, focused on additional changes to the planning framework for the management of ADF resources. These changes aimed at increasing the volume of non-donor resources and improving the efficiency of their use, as part of a new

planning framework for financial management of ADF resources. Efforts were also made to broaden the support for the ADF from within the region. Direct consultations were undertaken with developed member countries, nonborrowing DMCs, and higher income borrowing DMCs throughout the region, including Hong Kong, China; the Republic of Korea; Malaysia; Singapore; Taipei, China;

and Thailand—all of which participated in the ADF VII negotiations. A concept of burden sharing emerged among the donors, which emphasized fair and equitable burden sharing in mobilizing donor resources for the ADF. In these discussions, it was agreed that the overall burden share between nonregional and regional donors should move from 55:45 in the ADF VI to parity.

VI. The Fourth Decade: 1997–2006

Mitsuo Sato (1993–1999), Tadao Chino (1999–2005), Haruhiko Kuroda (2005–2013)

ADB entered its fourth decade of operations facing economic and financial circumstances far from benign. Beginning in July 1997, a major financial crisis erupted in East Asia. The crisis first ignited in Thailand, sparked by an overheated real estate market. When the Government of Thailand was forced—in the absence of sufficient foreign exchange to defend its currency—to cut the baht’s peg to the US dollar, the baht collapsed, compromising the country’s ability to service its foreign debt. The crisis quickly metastasized into a broader crisis of confidence throughout Southeast Asia, Japan, and the Republic of Korea, where local currencies similarly slumped. Contagion effects spread throughout global stock markets, as the health of financial institutions and investors with large exposures to the region was openly questioned, and market valuations tumbled on fears of a slump in global demand.

Massive bailout packages, engineered by the IMF with the support of other international financial institutions, including ADB, were launched to provide some degree of capital support and to reassure nervous markets. While these efforts were to help stabilize the crisis, they also generated a significant backlash against the so-called “Washington Consensus” of the IMF and the World Bank. ADB was spared much of this backlash, in part because it was viewed as an Asian institution based in Asia, and therefore not an integral part of the Washington-based group of institutions.

Just as events in Asia were stabilizing, the global economy was hit again, this time by an unprecedented collapse of internet-related stocks. A speculative bubble in information technology stocks (the “dot-com” bubble) had fueled the buying of technology-related equities on many global stock markets during 1997–2000. When the bubble burst in 1999–2001, numerous start-up companies failed, driving global equities lower and leading to another massive collapse in stock market valuations. The resultant crisis of confidence had impact globally, including for the

outlook of renewed foreign direct investment in Asia in the immediate years after 1999.

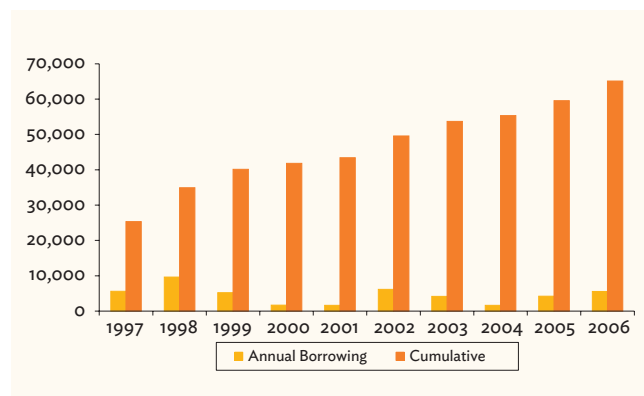
ADB was quick to respond to the emerging crisis in Asia. During 1997, total lending (both OCR and the ADF) jumped nearly 70% from \$5.54 billion to \$9.41 billion, including a huge \$4 billion program loan for financial sector reform in the Republic of Korea. Major financial system support programs were approved, or were in the process of being approved, for Indonesia and Thailand as well. By the end of 1997, cumulative loans outstanding after allowance for possible losses had jumped nearly 17%, from \$16.07 billion in 1996 to \$18.78 billion in 1997, with 73.7% of cumulative approvals now made to the PRC, Indonesia, and the Republic of Korea. Even more startling were OCR loan disbursements for the year, which surged 107% to \$5.30 billion, mainly because of financial sector programs for the Republic of Korea and Thailand.

A. Borrowings

The crisis response had an immediate impact on ADB’s borrowing program. In December 1997, the Board of Directors approved an increase in ADB’s 1997 borrowing program from \$2.6 billion to \$5.6 billion. ADB was able to raise these funds efficiently and on relatively short notice, reflecting the credibility that it had built on the international capital markets. Following approval of the expanded borrowing program, ADB raised \$3 billion through a combination of bridge loans from commercial banks and ECP issuance, bringing total borrowings in 1997 to \$5.58 billion.

As in previous years, issuance of global bonds continued to dominate ADB’s borrowing strategy, and ADB launched its third and largest US dollar global bond in June 1997, with a principal amount of \$1 billion and a 10-year maturity. ADB also launched a 30-year, \$300 million put bond targeted at US domestic institutional investors;

Figure 4 Asian Development Bank Borrowings, 1997–2006 (\$ million)



Source: Asian Development Bank.

and in October, launched its debut European currency bond in the amount of 1.5 billion deutsche mark (\$850 million equivalent) in anticipation of the third stage of the European monetary union approaching on 1 January 1999.

The following year, with OCR loan disbursements jumping another 6% to \$5.6 billion and cumulative loans outstanding after allowance for possible losses amounting to \$24.7 billion, ADB raised a record \$9.6 billion in the capital markets. About \$7.8 billion of this amount was raised in maturities of longer than 1 year, while the remainder was in ECP borrowings. The US dollar pool-based lending window received \$5.7 billion of the funds raised, while \$3.2 billion was used for disbursements under the \$4.0 billion financial sector program loan for the Republic of Korea, and \$741 million was used for the PMCL window. ADB issued its largest global bond issue to date during the year—a \$2 billion 5-year bond. It also issued a 1 billion Australian dollar (\$597 million equivalent) 5-year domestic Australian public bond (ADB's first in the domestic bond market in Australia) and a 3 billion Hong Kong dollar (\$387 million equivalent) multitranche public bond in the domestic market of Hong Kong, China (the largest fixed rate bond issued to that date on the Hong Kong dollar debt market).

Throughout 1999, ADB continued to raise its borrowing presence, issuing two US dollar global benchmark bonds of \$1.2 billion and \$1.0 billion each. It issued a 500 million Australian dollar (\$325 million equivalent) 5-year domestic bond and a 10 billion NT dollar (\$309 million

equivalent) multitranche public bond on the domestic bond market of Taipei, China (the largest ever foreign bond issue in the NT dollar debt market). During the year, it also completed six opportunistic financing transactions and private placements, amounting to about \$1.9 billion.

That same year, ADB introduced a new investment policy that had significant ramifications for liquidity management and, by extension, the borrowing program. The new investment policy subdivided the liquid asset portfolio into sub-portfolios, with the aim of increasing the transparency of investment management and facilitating efforts to achieve higher returns on liquidity—a particularly pressing issue in light of the crisis and its impact on ADB's risk bearing capacity (see section on Capital Adequacy and Risk Management). The bulk of core liquidity would no longer be readily available to meet NCRs, but would be strategically invested to maximize return.

In effect, introduction of the new investment policy meant that the borrowing program would be relied on even more intensively to meet NCRs as they arose. The timeliness of debt issuance, always a priority, now became imperative. In 2001, ADB adopted a selective funding strategy, concentrating on the private placement market where cost-efficient funding could be raised relatively quickly. Under this strategy, it established a \$20 billion Global Debt Issuance Facility (GDIF) to increase its responsiveness to opportunities in the private placement market. The GDIF would allow ADB to issue bonds on short notice and in a currency, size, and structure that met the needs of investors. During the year, ADB issued 15 structured private placements under the GDIF, raising about \$700 million in long-term funds, which were then transformed into fully hedged plain vanilla liabilities through the use of interest rate and currency swaps.

In subsequent years, ADB continued to diversify its funding sources across markets, instruments, and maturities. It maintained a presence in key currency bond markets through regular issuance of benchmark global bonds. It also issued bonds on an opportunistic basis to generate the lowest cost funds possible, particularly through private placements on short notice, and in the size, structure, and maturity required by investors. ADB completed 80 borrowing transactions in 2002, 64 in 2003, 19 in 2004, 64 in 2005, and 51 in 2006. Many of these transactions were in the form of structured private

placements, including dual currency and/or exchange rate-linked coupon notes and callable issues. In line with policy, structured notes were swapped on a fully hedged basis into floating rate US dollar liabilities.

Another development of particular importance during this period was the initiation, in 2004, of local currency borrowings to support the newly introduced local currency financing facility of ADB private sector operations. This was also a major contribution to the development of regional bond markets. Since the onset of the 1997 Asian financial crisis, borrowers, project sponsors, cofinanciers, and host governments had been increasingly focused on hedging currency mismatch risks by borrowing in the same currency as the revenues generated by the project. ADB used its partial credit guarantee product, which could cover local currency debt, including domestic bond issues or long-term loans from local financial institutions, to help meet these aspirations. But for private sector transactions not supported by a counter-guarantee from the host government, ADB imposed a strict limit of \$75 million, or 25% of the project cost, whichever was less, to exposures. The new local currency borrowing program would increase ADB's flexibility and responsiveness in meeting the needs of its clients. Initially offered to private sector borrowers from November 2002, the facility was extended to public sector borrowers in August 2005.

Inaugural issues were launched in the domestic capital markets of Hong Kong, China; India; Malaysia; and Singapore. The Indian rupee and ringgit bonds were the first issues by a foreign and supranational entity in those capital markets, as well as the first issues in those countries rated AAA by the three rating agencies—Fitch Ratings, Moody's Investors Service, and Standard and Poor's. Subsequent issues in 2005 and 2006 were launched in the baht, yuan, and peso markets. Concurrently, ADB continued to focus on building the infrastructure to facilitate debt issuance on an opportunistic basis at relatively short notice. In April 2006, it launched an Asian Medium-Term Note Program in the Malaysian market—the first such program launched by ADB and the first by a supranational in Malaysia. In September of that year, ADB launched a \$10 billion Asian currency note program by issuing notes in the domestic capital markets of Hong Kong, China and Singapore. This was Asia's first multicurrency bond platform since the Asian financial crisis that linked the domestic capital markets in the region under a single

unified framework with a common set of documents under English law.

B. Capital Adequacy and Risk Management

The financial crisis in Asia had a profound impact on ADB's operations and its financial management framework. In time, it led to a complete reassessment of ADB's approach to determining capital adequacy and risk bearing capacity. It also resulted in the introduction of a more comprehensive and quantitative approach for measuring and monitoring risk exposures to ADB's financial statements.

Prior to the onset of the crisis, however, and as the fourth decade of operations dawned in 1997, ADB's financial managers were focused on other priorities. During the year, ADB's income and reserves policy underwent a major review. This was undertaken because, for years, ADB's actual decisive indicators—the ICR and RLR—had consistently exceeded their minimum targets. This was mainly due to high levels of net income associated with fixed rate loans, a long period of high investment return, and relatively slow growth in outstanding loans.

Some members of the Board were concerned by what they interpreted as ADB's overly conservative income policy, which they felt was preventing ADB from reducing its loan charges to match those prevailing at other multilateral development banks (MDBs). The actual decisive indicators of the IBRD and IADB were closely aligned to their targets, largely because both institutions provided waivers of commitment fees and loan charges when their actual income significantly exceeded the minimum income targets. Furthermore, the IBRD transferred about 27% of its income to the International Development Association (IDA). The review of income and reserves policy undertaken in 1997 aimed to reassess the continued validity of ADB's minimum policy for ICR and RLR. It would critically examine the actual ICR and RLR levels in excess of the minimum targets and determine whether (how) ADB should reduce its decisive income indicators to levels closer to the minimum policy.

Given ADB's dependence on borrowing operations to meet obligations arising from past loan commitments and

debt service, maintaining investor confidence in ADB was deemed of paramount importance. Investor confidence would provide the support needed to withstand an unforeseen risk event, which might otherwise compromise ADB's ability to tap the capital markets in sufficient size or acceptable cost. Historically, the most significant challenge to maintaining investor confidence was believed to be the possibility of loan default, though other risks existed as well, including the exchange rate risk affecting the decisive income and capital adequacy indicators, and the interest rate risk to ADB's earning and risk bearing capacities.

The primary objective of ADB's income and reserves policy was to ensure that ADB could absorb unexpected financial shocks with enough margin to inspire continued confidence among investors and to enable ADB, even under conditions of stress, to honor its commitments as a development lender without securing emergency financial assistance from its shareholders through capital infusion or imposition of extraordinary increases in loan charges.

Yet how much margin was sufficient? In the 1997 review, ADB modeled various types of risk events to determine an answer to this question. As the Charter ensures that ADB is not exposed to transaction-related exchange rate risks, the principal exchange rate risk of concern was the impact of exchange rate movements on the RLR, through the different currency compositions of reserves relative to loans. The existing approach called for a medium-term planning cushion of 3% to ensure the RLR would not fall below the minimum target as a result of exchange rate movements. It was proposed that the 3% cushion be eliminated by gradually aligning the currencies in reserves with those of outstanding loans over a 5-year horizon, i.e., by 2001.

Almost all interest rate risk had been eliminated on ADB's loan assets through application of the "cost pass-through approach" under the pool-based lending product, and through the match-funded approach used by the MBL window. Liquid assets were not exposed to interest rate related funding risk either, as they were understood to be funded by interest rate free equity capital (usable paid-in equity, reserves, and surplus). However, net income was at risk, particularly regarding the investment of liquidity.

Since ADB funded NCRs through borrowings and applied a cost pass-through plus modest lending spread approach to sovereign lending, net income on the pool-based and market-based loan products was relatively thin. Instead, ADB derived a large part of its net income from the investment return earned on its equity capital, and this was subject to the interest rate volatility of the capital markets.

To address this net income risk, the review considered reallocating equity capital from interest rate sensitive liquid assets to less interest rate sensitive loan assets, and instead using short duration borrowings to roughly match fund liquid assets. While this may have resulted in more stable net income (asset values moving in alignment with liabilities as interest rates fluctuated), it was not clear that such a move would result in higher income over time. In addition, financial expenses would have become more volatile as a result of increased borrowings of short duration to fund short-dated liquid asset investments—making the ICR more sensitive to interest rate fluctuations. The funding of liquid assets through short duration borrowings could also increase liquidity risk in the event of a large-scale loan default. In the end, the review recommended retention of the existing policy of funding liquidity with equity.

While it was noted that exchange rate and interest rate risks continued to expose parts of the balance sheet and income statements, the review assumed that the most significant risk continued to be country credit risk, exacerbated by the high concentration of lending to a small group of countries.²⁸ Yet by 1997, and based on the experience of the debt crisis of the mid-1980s, the

Table 5 Concentrations of Loans Outstanding

Country	Amount	Percentage ^a
Indonesia	4,463,456	28
India	2,626,729	16
People's Republic of China	2,452,604	15
Total Loans	16,108,929	

^a Percentage of total loans outstanding.
Source: Asian Development Bank.

²⁸ In 1996, the largest borrower from ADB comprised 28% of the overall loan portfolio, while the largest borrower at the IBRD accounted for 12%.

dominant country credit risk was no longer considered to be the possibility of outright sovereign default and write-off, but rather a protracted interruption of debt-service payments. In other words, country credit risk had become more of an income risk than a balance sheet risk. The 1997 review embarked from this assumption in modeling ADB's risk-bearing capacity.

ADB began by acknowledging a basic tenant of prudential banking—that expected losses should be provided for out of ADB's equity through loan loss provisioning and reserves. The role of equity capital was to provide a buffer against unexpected losses.²⁹ Stress tests for different scenarios of loan defaults, interest rate levels, and loan growth rates, etc., provided a framework for determining the adequacy of its capital in meeting the minimum levels of ICR and RLR. The focus of the stress tests was to evaluate ADB's capacity to absorb losses from an unexpected increase in nonaccruals equal to ADB's exposure to its largest borrower. At the time, the share of the largest borrower was 28% of loan income, projected to drop to 26% after a risk event where ADB continued lending operations to other borrowers, notwithstanding the nonaccrual status of its largest borrower. A 26% drop in loan income would translate into a pre-shock ICR of 1.28. However, to ensure that ADB had a residual earning capacity of at least 20 basis points (bps) in the post-shock return on assets, the pre-shock ICR target was set at between 1.28 and 1.31.

The appropriate RLR target to achieve this pre-shock ICR target would depend on the assumed investment return. At an assumed investment return of 5.0% (then current, down from 7.75% assumed in the 1993 review), an RLR of 32.5% would achieve a pre-shock ICR of 1.3. An RLR of 32.5% would allow ADB to recover from the shock, leaving enough earning capacity to generate a post-shock return on assets of 20 bps. The existing RLR target of 25% recommended in the 1993 review would not provide ADB's capacity to absorb nonaccrual of the largest borrower unless the investment return were 6.25% (or loan charges were increased). In effect, a lower RLR target would require higher levels of net income, mainly through higher investment return or higher loan charges.

It therefore became imperative that the income planning framework be reviewed. Annual net income was allocated first to reserves. Subject to this, excess net income was then allocated to the TASF, the ADF, surplus, and to lower lending rates when possible. While the RLR stood at 37.6% in 1996, the RLR and the ICR were anticipated to decline over time in the reference case scenario, notwithstanding any potential financial shocks. This was because of the gradual elimination of fixed-rate loans, the growth of outstanding loans, and the declining share of funding provided by equity as outstanding loans grew. This decline would be accelerated by the use of net income for transfers to TASF and the ADF, as well as to accommodate calls for a reduction in loan charges. However, as the RLR declined closer to the existing target of 25%, higher levels of net income would be required to maintain ADB's risk bearing capacity. With investment return anticipated to be only about 5%, additional net income could only be generated through higher loan charges. Under the scenarios examined at the time, an increase in loan charges of 70 bps would be required by 2002 if the RLR continued to decline to 25% and net income transfers remained as expected.

Only with the introduction of an income planning mechanism to monitor and adjust ADB's risk-bearing capacity in response to changes in market conditions affecting investment return could the current RLR target of 25.0% be retained, even when current investment return warranted a minimum RLR of 32.5%. This would mean setting the minimum net income required given anticipated investment return, and hence, the prudential amount of reserves that would need to be supplemented.

To ensure that prudential levels of reserves were maintained despite lower than anticipated investment returns, it was determined that income planning would use the surplus account as the primary vehicle for adjusting ADB's risk bearing capacity. The surplus account would provide flexibility in the use of excess net income while maintaining the strength of ADB's capital position. In other words, if investment return dropped or loan growth accelerated, the surplus account accumulated prior to these events could be tapped to meet part of the incremental reserve needs. If investment return

²⁹ Expected loss is a part of the cost of doing business, and in commercial institutions is incorporated into loan pricing. It should be managed by providing a LLR and a provision to the income statement. Unexpected loss is the volatility, or standard deviation of loss around expected loss, and is considered the risk of doing business. It should be managed by holding adequate equity capital.

increased and surplus was not needed to increase reserves, the surplus could be used for other purposes, consistent with the Charter. This included transfers to the TASF and/or ADF and, potentially, a lowering of loan charges. Given the importance of adequately funding the surplus, and a prevailing investment return of 5% at that time, it was determined that \$1.5 billion of anticipated excess reserves to be generated over 1997–2001 would not be fully available for transfer on conclusion of the review.

Thus, the review reaffirmed the importance of equity capital in providing the ultimate protection against credit risks through its underlying earning capacity. Since equity capital did not incur interest expense, it could directly offset a possible reduction in future income. The adequacy of equity could be determined in terms of its capacity to generate the minimum net income required to protect ADB from credit risks. As the ratio of equity to loans reflected this earning base, this ratio was used in addition to RLR, but RLR remained the decisive financial indicator as reserves and surplus were under ADB's control and both constituted a significant portion of equity capital. Therefore, ADB would retain its focus on the adequacy of its reserves and surplus.

The review concluded that the RLR target of 25% could be retained, with a medium-term goal of reducing actual RLR from the existing level of 33.6% (end 1997) to 25.0% by 2001. The Board also decided to give priority in the allocation of excess net income annually to the TASF and then to the ADF. It would maintain the current policy on loan charges.

The income and reserves policy review of 1997 was significant because it guided reserve maintenance and income allocation decisions for several years thereafter. Over 1998–2000, ADB undertook conversion of \$300 million equivalent of non-US dollar operating currencies in reserves into US dollars on an annual basis as part of its strategy of aligning the currencies of reserves with those of outstanding loans. Similarly, and in an effort to increase the amount of resources available for TA under the TASF, annual transfers from the surplus account were

made to the TASF yearly from 1998 to 2000 in the amount of \$80 million annually. By the end of 2000, the TASF resources stood at \$899.5 million, comprised of transfers from the surplus account, allocations from the ADF V and VI contributions, direct voluntary contributions to the TASF, and income from investments of ADF liquidity. In 2001, the Board of Directors reintroduced the use of OCR current income for financing of the TASF, and transfers from surplus account to the TASF were discontinued.³⁰

Over 1997–1999, the lending spread used in determining ADB's pool-based lending rate remained at 40 bps. By December 1999, however, it had become evident that a review of ADB's loan charges was required to ensure compliance with the financial management objectives detailed in the 1997 income and reserves policy review, particularly in light of the increased risk to its loan portfolio arising from the financial crisis and a drop in yield on liquid asset investments, from 5.3% in 1997 to 3.9% in 1999. In addition, total operating expenses had increased by 15.5% over the previous year, driven largely by an increase in interest and other financial expenses associated with higher borrowing levels. Total operating expenses accounted for 77.8% of gross income in 1999, compared with 67.7% in 1997. This put additional pressure on net income.

The Board of Directors concluded that the lending spread would be raised by 20 bps, from 0.4% per annum to 0.6%, on all outstanding pool-based loans (both existing and new loans). The increased spread would also apply to new public sector loans under the MBL window. A new front-end fee of 1% per annum would be charged on new loans, with borrowers retaining an option to include this charge in the loan. The commitment fee for new program loans would carry a flat 0.75% annual fee instead of the progressive rate, as before. The commitment fee for new project loans would remain as before. The new loan charge policy would take effect from 1 January 2000.

Given the disruptions occurring to Asia at the time, the Board of Directors approved a new liquidity policy in 2002 aimed at assuring investors of ADB's capacity to meet its cash requirements in the event of a major disruption in cash flows. No longer would the prudential minimum

³⁰ In 2001, the Board of Directors approved the financing of high-priority TA programs out of OCR current income within a rolling 4-year financing framework. The amount of financing required varied between years and was subject to Board approval. In 2003, the Board reverted to the practice of allocating OCR net income to the TASF and financing TA activities through it and other funding resources.

level of liquidity be set at no less than 40% of year-end undisbursed balances, but rather a more dynamic cash flow driven approach was adopted. The prudential minimum level of liquidity to be held at all times during a calendar year would be 40% of the next 3 years' proxy NCRs, which was the sum of net disbursements and debt redemption. Discretionary liquidity would have a ceiling of 50% of the size of prudential minimum liquidity and would be funded by debt without prior authorization of the Board of Directors, while core liquidity would be broadly equivalent to the prudential minimum liquidity and could be funded by equity capital and debt.

During the same year, and in connection with a study of future OCR resource requirements, ADB's lending and borrowing limitations were reviewed relative to a projected 3-year rolling work program for OCR operations. The review took into account the different interpretations of lending and borrowing limitations adopted by other MDBs. It concluded that the financial framework to be adopted in assessing future resource requirements would include a policy limiting ADB's outstanding commitments, i.e., the sum of outstanding disbursed loan and undisbursed loan balances, equity investments, and guarantees, to no more than the sum of the total callable capital, paid-in capital, and reserves (including surplus, but excluding special reserve). In addition, the review introduced a policy limiting ADB's gross outstanding borrowings to no more than the sum of callable capital of nonborrowing member countries, paid-in capital, and reserves (including surplus and special reserves), subject to the Charter limit of 100% of callable capital. The Board of Directors approved these recommendations into policy in March 2003.

In retrospect, the revisions and enhancements to financial policy that occurred over 1997–2003 may be seen as part of an evolutionary process by which state-of-the-art risk management concepts and practices, then being embraced by public and private institutions in the aftermath of the Asian financial crisis, were introduced to ADB's capital adequacy determination process. One of these concepts was the use of default probability models to quantify potential credit losses by credit grades—an

approach advocated by the Basel Committee on Banking Supervision under the New Basel Capital Accord of 2001.

Default probability is the likelihood that a borrower will default (or in the case of ADB, fall into protracted nonaccrual status) over a defined horizon. It is a function of creditworthiness as measured by a borrower's credit rating and is time-dependent, i.e., the longer the time horizon, the higher the cumulative default probability. The expected loss for each borrower is the product of projected exposure, default probability, and loss severity (loss given default). At the portfolio level, the expected loss is the sum of expected losses of all borrowers. This would be the average loss resulting from a default or nonaccrual event. The unexpected loss would be the standard deviation of loss around the average loss, i.e., the volatility of potential loss around the expected loss. The unexpected loss on the portfolio would be calculated using correlations under a variance-covariance matrix approach.

In the years following the Asian financial crisis, ADB's Treasury Department examined various alternative approaches to quantifying the potential credit risk to its loan portfolio, including the application of default probability estimations. For ADB, robust default probability estimations would require an internal rating system, through which data on default experience and rating changes specific to ADB's public sector borrowers could be used to derive default probabilities. These data would necessarily reflect ADB's unique status as a preferred creditor³¹ of public sector borrowers in nonaccrual and default situations. Unfortunately, ADB lacked these historical data. Instead, and pending the introduction of its own internal risk rating system, ADB decided to map ratings available from Standard and Poor's and Moody's Investors Service on ratings used by the IBRD to estimate default probabilities for its borrowers. In time, ADB would introduce its own internal rating system, on which estimates of default probabilities could be derived. But as an interim measure, the use of IBRD, Standard and Poor's, and Moody's Investors Service ratings for determining default probabilities opened the door to a far more robust risk estimation environment.

³¹ Since ADB's loan portfolio is largely comprised of sovereign borrowers, a loan default for ADB would not be equivalent to a loss, as in the case of a commercial loan default. This is because borrowing member countries of MDBs typically accord a preferred creditor status to their MDB loans, meaning that these loans are serviced while loans to commercial lenders are exposed to default. Thus, when assessing credit risks, MDBs generally assume that nonaccrual loans will eventually be repaid.

In February 2004, the Board of Directors approved one of the most significant enhancements to income planning and capital adequacy management in 50 years of ADB operations—the introduction of a risk-based capital (RBC) framework. Like the income and reserves policy it replaced, the RBC framework could be used to assess ADB’s capital and provisioning requirements and assist in determining the adequacy of loan charges and the feasibility of other uses of net income. However, the income and reserves policy mandated fixed levels for its decisive indicators, which were reviewed only when needed. The policy did not account for credit risks to the loan portfolio that could occur rapidly, as they did during the Asian crisis. A more dynamic approach was called for to assess the credit risks to ADB’s loan portfolio annually and measure their impact on a risk-bearing capacity indicator. This is what the RBC framework provided.

In addition, the income and reserves policy approached credit risk from the perspective of assessing the impact of default (or nonaccrual) of the largest borrower (by share of net income), regardless of its creditworthiness. This was considered overly simplistic, as it failed to provide any perspective on the probability of default. The existing policy mandated loan loss provisioning only after a borrower was placed in nonaccrual status. Given the level of loan concentration in ADB’s portfolio, a credit default event could result in a dramatic increase in provisioning requirements which, because of its impact on net income, could require large increases in loan charges to nondefaulting borrowers. A more dynamic approach using ex-ante, credit model-based loan loss provisioning could minimize the risk of inequitable loan pricing shocks to nondefaulting borrowers.

The RBC framework provided a quantitative, and therefore more comprehensive, foundation for estimating credit losses facing ADB. Data on default probability were combined with loss given default and exposure information, to estimate expected and unexpected losses over a 3-year horizon, at a 95% confidence level. Loss severity was defined as the opportunity cost for not

charging interest on interest, and was a function of the duration a borrower was in nonaccrual status.³²

To protect itself against estimated expected losses, ADB would make adequate provision on its income statement for loan losses at all times. However, under its adopted accounting principles, only provisions on loans considered impaired (high probability a creditor will be unable to collect all amounts due) could be passed on to the income statement. The remaining amount of expected loss would be provided for in a LLR account shown on the balance sheet as part of equity. The sum of loss provision and LLR would equal the expected loss on its public loan and guarantee portfolio.

Using data on default correlations, ADB could then estimate the maximum amount of loans that might be in nonaccrual status to determine the unexpected loss on the loan portfolio. A required minimum level of capital was estimated by multiplying the unexpected loss by a factor to give a 99.96% confidence level (assuming normally distributed probabilities), and then multiplying the product by a further factor to account for the possibility of higher levels of loss than predicted by normally distributed probabilities.

Under the RBC framework, equity capital would measure ADB’s ability to meet its “economic capital” requirement, i.e., the capital required to protect it against unexpected losses on its loan and guarantee portfolios. This was consistent with industry best practice. The amount of equity capital,³³ and its relationship to outstanding loans³⁴ (the ELR), was considered a far more direct measure of economic capital adequacy than the ICR and RLR—both considered indirect measures. From this point on, use of the RLR and ICR as key financial indicators was discontinued.

The minimum ELR was based on the unexpected loss adjusted by factors. However, the target ELR was believed to be the level of ELR needed to maintain a minimum level of coverage for unexpected losses over time, and this in

³² Even during the Asian financial crisis, all borrowers continued to service their debt to ADB, though some had rescheduled their debt to commercial lenders.

³³ Defined under the review as useable paid-in capital, ordinary reserve, special reserve, and surplus.

³⁴ Outstanding loans plus the present value of guarantees minus loan loss allowance (LLR and accumulated loan loss provisions).

turn needed to reflect the capacity of equity to generate net income to sustain a major protracted loan default and service ADB's own debt obligations to bondholders. An ELR target of 35% was established to ensure appropriate coverage. As of 31 December 2004, the ELR was 50.5% under pre-Financial Accounting Standard (FAS) 133 accounting, representing ADB's strong equity capital position relative to the credit risk of the loan and guarantee portfolios. As in the case of the RLR, the ELR would be protected from exchange rate fluctuations by periodically aligning the currency composition of equity with that of its loans.

Notwithstanding the focus on country credit risk under the RBC framework, commercial credit risk, market (interest rate and exchange rate) risk, and operational risk also have an impact on ADB's financial performance, and therefore a bearing on ADB's net income and equity capital. Measurement and management of these risks was greatly enhanced during the period following the advent of the financial crisis in Asia.

In 2001, ADB initiated the installation of an advanced treasury risk management that would link the front (trading), middle (risk compliance), and back (settlement) offices of the treasury into a seamless and integrated environment. This would enable more accurate, effective, and efficient risk management of treasury operations, including calculation of advanced risk metrics (e.g., value at risk). Risk guidelines were consolidated and enhanced, risk-adjusted performance measurement was strengthened, and investment benchmarks were reviewed.

Commercial credit risk on the treasury portfolio is the risk of loss resulting from a counterparty not honoring its contractual obligations, and involves issuer risk and transaction counterparty risk. Issuer risk arises from ADB liquid asset investment transactions and is concentrated in debt instruments issued by sovereign governments, agencies, banks, and corporate entities. ADB sets strict credit rating guidelines to control the level of issuer risk. Transaction counterparty risks are managed through restrictions that limit transactions to authorized dealers and

counterparties meeting conservative credit risk guidelines. This covers transactions in the physical, derivative, and swap markets.³⁵ Limits are calculated and monitored on the basis of current and potential exposure. In 2004, ADB enhanced its derivatives collateral management program and executed a credit support annex with several counterparties. This provided a systematized approach for daily marking to market of swap and other exposures, and provided an avenue for collateral calls, transfers, and adjustments between counterparties, in coordination with an external collateral manager.

By December 2004, ADB's Treasury Department had developed an internal country credit risk rating system to assess and rate the creditworthiness of ADB's borrowers independently. This rating system relied on 10 rating buckets to rate borrowers on a scale of 1–10.³⁶ These ratings would be used as inputs to estimate LLR requirements and the adequacy of net income, loan charges, and ADB's equity capital. They would replace external rating agencies used since the introduction of the RBC framework, though the internally generated ratings would still be mapped to IBRD ratings to enable estimates of default probabilities. Indeed, the quantitative model developed by ADB was based in large measure on the model developed at the IBRD.

In November 2005, an independent Risk Management Unit was established to assess enterprise wide risk. Its mandate was to manage the credit risk of the public and nonsovereign loan and guarantee portfolios, as well as ADB's market and treasury-related risks. In 2006, the loan loss provisioning methodology for ADB's nonsovereign operations was revised to incorporate a risk-based model. This extended the concept of expected loss, similar to the concept applied to ADB's sovereign operations approved in 2004, to nonsovereign operations. An internal risk rating system to estimate the probability of default of nonsovereign transactions based on past loan loss experience would be utilized, leveraging tools available in the market. Loan loss provisions made against impaired loans, based on the probability of default, would continue to be recognized on the net income statement,

³⁵ For example, only swap counterparties with a minimum credit rating that have also signed a standardized International Swaps and Derivatives Association Master Agreement are eligible to transact with ADB.

³⁶ Later expanded to 14.

while loans that were not impaired would be provisioned through the LLR in the equity section as an allocation of net income, subject to the approval of the Board of Governors. Provisioning would be recommended by the Risk Management Unit on a quarterly basis.

As with the RLR and ICR, the ELR and stress-tested income projections would become the foundation for income allocation decisions. In subsequent years, this framework would guide decisions by the Board of Governors in allocating net income to ordinary reserves, surplus, the ADF, and the TASF. In addition, it was the quantitative framework for determining amounts allocated to special initiatives, including the Asian Tsunami Fund and the Pakistan Earthquake Fund.

Finally, at the end of the fourth decade of operations, ADB re-evaluated its liquidity policy. This redefined the prudential minimum liquidity as 50% of the next 3 years' proxy NCR, rather than 40% of the next 3 years' proxy NCR, which had been policy up to that point. This potential increase in the prudential liquidity level was deemed prudent to enable ADB to cover normal cash requirements for 18 months under both normal and stressed circumstances, without borrowing. In addition, ADB could continue to raise discretionary liquidity through borrowings to provide flexibility in the funding and debt redemption schedule over time. Implementation of the new policy would be monitored closely to ensure that borrowing needs did not surge unnecessarily and that key financial ratios were not negatively impacted. ADB began a more dynamic process of ongoing monitoring of liquidity levels and NCRs, and quarterly reviews with the Board.

C. Loan Products

The fourth decade also witnessed a complete restructuring of ADB's loan products. As 2001 commenced, ADB offered three lending windows for loans from OCR: (i) the PMCL window, established in July 1986, where loan disbursements were made in a variety of currencies of ADB's choice; (ii) the pool-based single currency loan window in US dollars, established in July 1992; and (iii) the market-based loan window, which provided single currency loans (in US dollar, yen, or Swiss franc at either

fixed or floating rates) to private sector borrowers and to financial intermediaries in the public sector, established in 1994.

On 1 July 2001, ADB inaugurated an LBL window to meet the needs of both its public and private sector borrowers in managing interest rate and exchange rate risks. The new loan window would provide borrowers with their choice of currency and interest rate basis, options to link the repayment schedules to actual disbursements for financial intermediary borrowers, the ability to change the original loan terms (currency and interest rate basis) at any time during the life of the loan, and options to purchase caps or collars (option products to control risk) on a floating rate at any time during the life of the loan. LBL would be offered on all new loans with invitation to negotiate on or after 1 July 2001, and would also be available to borrowers who wished to convert undisbursed amounts of then effective pool-based single currency US dollar loans, if the undisbursed balance constituted at least 40% of the original loan amount as of 30 June 2001. This meant that ADB would no longer offer its borrowers PMCL or market-based loans. The pool-based single currency loan in US dollars would cease to be offered to borrowers from 1 July 2002, at which point ADB would become exclusively a LIBOR-based lender.

The new LBL product offered a fixed spread and pricing relative to a standard market reference (LIBOR). This would allow borrowers to compare the pricing of ADB's loan product directly with that of other lenders. LBLs would be offered on a floating or fixed rate basis, though the product would have a floating rate initially, reset every 6 months on each interest payment date. The fixed spread for public sector borrowers would be ADB's basic lending spread prevailing at the time (60 bps) regardless of the currency of denomination. The spread for private sector borrowers would reflect the credit risk of the individual project or borrower. The existing pool-based charges of 0.75% commitment fee and 1% front-end fee would continue to apply to public sector LBLs, while other loan charges for private sector loans remained unchanged. Currencies of denomination for disbursement and repayment by the borrower included euro, yen, and US dollar.

All costs associated with conversions, interest rate caps, and collars would be passed on to the borrowers at the

rates or costs of corresponding hedges prevailing at the time of executing the conversion. A transaction fee would also apply as a percentage of the principal amount involved. These fees could change during the life of the loan.

A unique characteristic of the LBLs was the introduction of rebates and surcharges. Since the concept of automatic cost pass-through pricing was maintained for the LBLs, any actual sub-LIBOR funding cost margin would be returned to public sector borrowers through a rebate. ADB would calculate the actual average funding cost margin twice a year (on 1 January and 1 July). A surcharge would arise if ADB's actual average funding cost was above the 6-month LIBOR, while a rebate would arise if ADB's actual average funding cost was below the 6-month LIBOR.

In this regard, ADB's long-standing efforts to pursue the objectives of a diversified borrowing strategy were particularly consequential. ADB was by now a well-regarded borrower on the international capital markets, but in particular, in the Japanese institutional and retail markets. As a result, it was often able to access funding on the Japanese markets at deep sub-LIBOR levels, which it could then pass on to its public sector borrowers in the form of rebates.

In 2004, 20 bps of the lending spread were waived on public sector loans outstanding from 1 January 2004 to 30 June 2005 for borrowers that did not have loans in arrears. This was extended in 2005 and 2006. At the same time, the Board of Governors approved the waiver of the entire front-end fee on all new public sector loans approved from 1 January 2004 to 30 June 2005, similarly extended in 2005 and 2006. Prior to that, a 50 bps waiver had applied to all public sector loans approved on or after 1 January 2003. The progressive commitment fee of 75 bps on undisbursed loan balances for public sector project loans and a flat commitment fee of 75 bps for public sector program loans continued to apply until 1 January 2007, at which time all sovereign loans negotiated thereafter would carry a flat commitment fee of 35 bps on the full amount of all undisbursed loan balances.

Further enhancements to lending products were forthcoming. In 2005, ADB established a multitranche financing facility (MFF) designed to allow it to deliver financial resources for a defined program or investment in a series of separate financing tranches over a fixed

period. These tranches could be in the form of loans, guarantees, equity, or any combination of these, based on periodic financing requests submitted by the borrower. In September of that year, ADB started lending without sovereign guarantee to entities that could be considered public sector borrowers, but that were separate from the sovereign or central government (public nonsovereign entities). This could include state-owned enterprises, government agencies, municipalities, and local government units.

D. Liquid Asset Management

In September 1998, a Risk Management Division was established in the Treasury Department to formulate and implement the necessary systems, procedures, and guidelines for portfolio risk management activities within the department. The establishment of the new division was timely, as the Board of Directors approved a new investment strategy and authority the following year.

The new strategy was aimed at optimizing the combination of assets in the portfolio that would maximize the expected portfolio return for a given level of risk. This involved the introduction of higher yielding investment instruments, such as high quality corporate bonds, mortgage-backed securities, and asset-backed securities; extending core portfolio durations; and efficiently restructuring the liquidity portfolio into core and cash segments to maximize overall return while continuing to ensure liquidity requirements. Given the unique trading characteristics of the new asset classes, each would be managed by external asset managers. In addition, portfolio performance would be compared with the return of external performance benchmarks.

The Risk Management Division would play a key role in working with the Investments Division to implement the new investment strategy, which was expected to be implemented by the end of 2000. The new division would undertake performance measurement and monitoring compared with external benchmarks, and administer the selection and monitoring of external asset managers for ADB's liquidity portfolio and for its staff retirement plan. Its responsibilities would be later subsumed into the newly established the Risk Management Unit.

As part of the implementation of the new investment strategy, the OCR liquidity portfolio was segregated into core (prudential), operational cash, cash cushion, and discretionary liquidity portfolios to maximize the efficiency of cash investments. This segmentation of the liquid assets increased the transparency of liquid asset management by separately tracking returns on these portfolios and by clearly tracking the funding cost of the cash cushion portfolio.

The core portfolio was to be funded by equity and was broadly equivalent to the prudential level of liquidity. It was to be invested in a manner consistent with the objective of a liquidity buffer. Cash inflows and outflows would be minimized so that the primary objective of maximizing total return relative to a defined risk tolerance level could be achieved. It maintained an average duration of about 2 years and its performance would be measured against a benchmark of approximately 2.3 year duration. However, with the revision to the liquidity policy in October 2006, the duration for the prudential liquidity portfolio was allowed to be extended up to 4 years to enable greater flexibility to generate a return in positively sloped interest rate environments.

The operational cash portfolio was designed to meet NCRs over a 1-month horizon. It was also funded by equity (i.e., a part of prudential liquidity) and invested in short-term, highly liquid money market instruments. Its performance was to be measured against short-term external benchmarks. The cash cushion portfolio would hold the proceeds of ADB's borrowings pending disbursement and would be invested in short-term instruments. Its performance would also be measured against short-term external benchmarks.

Finally, the discretionary liquidity portfolio was funded by issuing floating rate debt and would be invested in high-quality instruments to maximize the spread between borrowing cost and investment income. The discretionary liquidity portfolio would be used to support medium-term funding needs. It would provide flexibility in executing the funding program over the medium term by permitting borrowing ahead of cash flow needs and bolstering ADB's access to short-term funding through a continuous presence in the markets.

In addition, amounts of \$300 million from the US dollar core portfolio were allocated to investment in each of three separate sub-portfolios: AAA-rated mortgage-backed securities, AAA-rated asset-backed securities, and A-rated corporate bonds. These allocations were assigned to external managers after a thorough and transparent selection process.

With the introduction of the new investment policy, and in particular, the focus on maximizing the return on core liquidity, ADB's cash flow management would undergo a fundamental change. Before introduction of the new investment policy, ADB had considerable flexibility in meeting its cash requirements since the liquidity pool was not segregated and could be drawn down as needed. Now, a large part of the liquidity pool (core portfolio) would no longer be immediately available to meet cash deficits. As a result, timely borrowings would be relied on to meet such deficits, and these borrowings would need to precede anticipated cash outflow requirements to avoid liquidation of any part of the core portfolio in covering these outflows, as this could prove costly in terms of the core portfolio's objective of maximizing return.

Table 6 Year-end Balance of Liquidity Portfolio

	2000	2001	2002	2003	2004	2005	2006
Core	5,027	5,202	6,546	6,174	7,387	7,353	7,764
Cash Cushion	1,461	1,101	1,081	1,394	1,492	450	954
Discretionary				1,756	2,467	3,401	3,831
Operation Cash	967	381	144	2,235	319	934	587
Total	7,455	6,684	7,771	11,559	11,665	12,138	13,136

Note: Includes securities purchased under resale arrangements, securities transferred under repurchase agreements, and unsettled trades. The composition of the liquidity portfolio may shift from year to year as part of ongoing liquidity management.
Source: Asian Development Bank.

As indicated earlier, the main objectives of the borrowing program are to meet NCRs at all times and to minimize costs, because such costs are fully passed on to borrowers. The size of the annual borrowing program was equal to the NCRs, adjusted for any increase or decrease in year-end liquid holdings required to meet the targeted liquidity ratio. In implementing its annual borrowing programs, the size and timing of individual transactions was based on aggregate NCRs for the year and cost efficiency considerations. At times, ADB would borrow in advance of NCRs to take advantage of favorable market conditions, and this could result in excess liquidity and its associated cost of carry.

With the introduction of the cash cushion portfolio, this cost of carry could be segregated, measured, and closely monitored. The size of ADB's annual borrowing program would now more closely approximate the projected NCRs for the year, as targeted liquidity levels (liquidity ratio) would be met through core portfolio holdings instead. Therefore, improved and more accurate projections of evolving NCR became even more critical to borrowing operations. This need was exacerbated by the dramatic expansion of lending following the Asian financial crisis, particularly in program or fast-disbursing loans, which had a disruptive effect on cash management activities within the Treasury Department. Realized levels of new lending and loan disbursements differed significantly from planned levels. This meant that investments made in anticipation of disbursements occurring later in time needed to be liquidated earlier, sometimes on less than favorable terms.

It soon became clear that some strengthening of cash management, designed to accommodate post-crisis volatility and the resultant uncertainty, was needed. Consequently, interdepartmental meetings were convened in 2000 to establish a more rigorous and time-bound system for making disbursement estimates available on a monthly basis. This meant that the operational planning process in ADB would be strengthened to ensure that sufficient and timely information would be available to ensure and improve efficiency in the management of ADB's cash operations.

E. Asset and Liability Management Policy Framework

To this point in ADB's financial management history, specific policies relating to financial management of OCR were defined in individual documents approved by the Board of Directors. Sometimes these documents were not linked or cross-referenced. In 2006, ADB issued a policy statement on ALM of OCR that linked the general principles of financial management contained in the Charter with these individual financial policy papers. It provided an overall view of ALM that would guide individual policy papers, enabling ADB to develop a complete, transparent, and consistent set of financial policies with discipline and little ambiguity. It articulated the growing sophistication of ALM practices under the interdepartmental Asset and Liability Management Committee, and sought to provide technical and operational guidance to the Treasury Department's day-to-day efforts in managing ADB's financial risks.

The policy covered ALM of OCR through management of currency, interest rate, and liquidity risks on sovereign and nonsovereign lending operations. It also covered the management and protection of ADB's net worth (i.e., the sum of ADB assets minus the sum of liabilities, i.e., the reported equity capital) and net income. The policy did not cover transactional or portfolio-level credit risk, which was part of risk management. The linkage between ALM and risk management was ADB's capital adequacy framework. ALM would ensure that the capital adequacy ratio was maintained at or above predetermined prudential levels through net worth and net income management, while risk management would set the methodology for quantifying and measuring capital required for credit, market, and operational risks.

The introduction of an ALM policy was significant, as it acknowledged and provided the framework for addressing emerging complexities in the management of ADB's balance sheet. These complexities were related to the introduction of the LBL product, local currency lending, MFFs, new accounting standards, and the growth of nonsovereign lending. The policy reaffirmed the principle

of transparent and cost pass-through pricing for sovereign lending, and non cost pass-through, market benchmarked pricing for nonsovereign lending. It endorsed the existing practice of managing currency risk by matching assets and liabilities in the same currency. Additionally, interest rate risk would continue to be managed by matching the interest rate characteristics of assets and liabilities. The policy strengthened the capital adequacy measure by including market and operational risks, in addition to credit risk, on the loan portfolio.

The policy recommended the preservation of ADB's net worth and risk-bearing capacity through proactive balance sheet management, including realigning currencies in retained earnings, as approved by the Board. Currency conversions for operational requirements (such as disbursements, equity investments, and debt amortization requirements) could be undertaken by Management and reported quarterly to the Board. Finally, it recommended optimal allocation of equity to appropriate asset classes and proper management of the overall duration of equity in the prudential (core) liquidity portfolio through optimization techniques.

F. Special Funds

In January 1997, donors concluded negotiations over the ADF VII, recommending a replenishment of \$6.3 billion covering 1997–2000. They also recommended new donor contributions amounting to \$2.6 billion and nondonor resources of \$3.3 billion. At the time of the replenishment, loans from the ADF accounted for about 29% of ADB's cumulative lending.

In the 3 years following the replenishment, a variety of enhancements to the management of ADF resources was introduced. In April 1997, ADB approved a new financial planning framework for the management of ADF resources, aimed at enabling more efficient use of nondonor resources and increasing the volume of such resources. In August 1998, it introduced changes to the mobilization and allocation of resources made available through annual loan savings and cancellations in ADF-financed projects.

In December 1998, ADB approved amended terms for new ADF loans. The service charge was redesignated

as an interest charge, which would include a portion to cover administrative expenses. Project loans, i.e., those loans other than quick disbursing program loans, would have a maturity of 32 years including an 8-year grace period. An interest charge of 1.0% per annum during the grace period and 1.5% per annum during the amortization period would apply, and loans would amortize in equal installments. In the case of quick disbursing program loans, these would have a maturity of 24 years including an 8-year grace period, carry an interest charge of 1.0% per annum during the grace period and 1.5% per annum during the amortization period, and amortize in equal installments. The amended loan terms and the interest charge would take effect from 1 January 1999 and apply only to new loans.

In March 1999, ADB established the Asian Currency Crisis Support Facility (ACCSF) as an independent component of the JSF. It was to be administered by ADB, but fully funded by the Government of Japan under the new Miyazawa Initiative, to those countries in the region most severely affected by the Asian financial crisis—Indonesia, the Republic of Korea, Malaysia, the Philippines, and Thailand. Assistance was to support policy dialogue, human resource development, institutional strengthening, and other efforts designed to assist bank and corporate debt restructuring, development of sound financial monitoring, supervision and regulation, public sector and corporate governance, creation of social safety nets, and protection of the environment.

Modalities introduced by the ACCSF were interest payment assistance (IPA), TA grants, and guarantees. Commitment approvals under the modalities needed to occur during the 3 years after approval of the fund (i.e., until 23 March 2002), or as the Government of Japan and ADB might subsequently agree. The Government of Japan funded the IPA and TA components of the ACCSF with ¥12.5 billion (\$104.4 million equivalent) in 1999, and in that year, ADB approved \$99.5 million. This included \$89 million of IPA for two projects in Indonesia enhancing social safety nets and \$10.5 million for 11 TA projects. In March 2000, the Government of Japan contributed an additional ¥15 billion (\$136.6 million equivalent) for the IPA and TA components of the ACCSF, and in that year ADB approved an additional seven TA grants.

The Government of Japan also deposited a promissory note for ¥360 billion (\$3.5 billion equivalent) in the ACCSF custodian account, to be used to meet a call on any guarantees issued under the ACCSF. While some opportunities to use ACCSF guarantees in connection with ADB operations in DMCs emerged, no ACCSF guarantee operations were concluded.

Negotiations for a seventh replenishment of the ADF (ADF VIII) were concluded in September 2000. The replenishment of \$5.65 billion would cover 2001–2004. Twenty-five donors to the replenishment would contribute a total of \$2.91 billion, with the balance of \$2.74 billion being met by commitment authority generated by repayments of earlier loans. Japan offered the largest contribution, at \$1.1 billion. The US would contribute \$412 million and the European donors would make a total contribution of \$859.8 million. Contributions from Asia and the Pacific accounted for almost half of the total replenishment. At the conclusion of negotiations, donors agreed on a set of operational priorities and approaches, including a more robust performance-based allocation system and greater support for strengthening good governance in the region, promoting gender equality, improving the environment, and promoting cooperation among DMCs.

By the end of 2003, ADB had received instruments of contribution from 24 donors for a total of \$2.4 billion. To augment resources available for projected operations, the Board of Governors approved in April 2003 the transfer of \$200 million of 2002 OCR net income to the ADF, and a further \$150 million the following year, thereby augmenting ADF VIII commitment authority. In addition, Management investigated, and the Board approved, the use of loan savings and cancellations to directly increase the commitment authority.

Negotiations over a further replenishment of the ADF were ongoing in 2003 and by August 2004, the ADF IX was authorized by the Board of Governors. This eighth replenishment would cover 2005–2008. Donors recommended a replenishment of \$7.0 billion, of which \$3.3 billion would be in the form of new contributions from donors and \$3.7 billion would be generated from internal resources. Responding to calls for greater concessionary terms to ADF assistance, a new grant program was introduced that could represent up to 21% of its financing

framework, including 3% as priority TA. These grants would be used to ease some of the costs of development assistance in the poorest, highly indebted countries; and would assist post-conflict poor countries in making the transition to peace and stability. They would also be used to combat HIV/AIDS and other infectious diseases.

In October 2005, the Board of Governors approved a currency management framework for ADF loans that was to be implemented from 1 January 2006. The new framework established that while donor contributions would continue to be made in national currencies, US dollars, or special drawing rights (SDR) ADB would convert those contributions, along with ADF loan reflows and the ADF liquidity portfolio, into the currencies comprising the SDR. Furthermore, borrower obligations for new ADF loans would be determined in SDR.

This was an important development, as it introduced a higher degree of transparency to ADB's currency management practices for the ADF. The previous practice of managing ADF resources in as many as 15 currencies was discontinued. Starting in 2008, ADB extended the SDR approach to ADF legacy loans by providing ADF borrowers the option of converting their existing liability (i.e., disbursed and outstanding loan balances) in various currencies into SDR, while the undisbursed portions were to be treated as new loans redenominated in SDR. As of 31 December 2014, 18 of 29 borrowing members had signified their agreement to the conversion. The outstanding balance of their SDR-converted loans amounted to \$10.74 billion.

A significant expansion in trust fund activity was also occurring at this time. In 2001, Japan established the Japan Fund for Information and Communication Technology (JFICT) for a 3-year period, designed to assist Asia and the Pacific in addressing the growing digital divide in the region by pilot-testing ICT-related activities, including the purchase of ICT equipment and services, software development, provision of TA, and development of equity and/or fund investment approaches. ADB would administer the JFICT, financed with an initial contribution of ¥1.3 billion (about \$10.7 million).

In March 2002, the ACCSF was terminated, as scheduled. Upon termination, cumulative contributions amounted to ¥27.5 billion (\$241 million equivalent). The remaining

uncommitted balance in the ACCSF of \$90 million was transferred to the newly established Japan Fund for Poverty Reduction (JFPR). This fund had been established by the Government of Japan in May 2000 in support of ADB's Poverty Reduction Strategy,³⁷ with an initial grant of ¥10 billion (about \$92.6 million equivalent) and an additional ¥7.9 billion (\$65 million equivalent) the following year. The JFPR would provide funding to pilot test new approaches, often in cooperation with nongovernment organizations, which would directly target the poor with a view to scaling up these activities and mainstreaming them into ADB operations.

By the end of 2002, ADB was administering a variety of separate funds aimed at mobilizing donor grants for specific purposes. These included the JSF, the Asian Development Bank Institute, and various trust funds, including the JFPR, JFICT, Japan Scholarship Program, and various channel finance arrangements. None of the trust funds formed any part of ADB's own resources, but were administered by ADB to one degree or another.

The devastating tsunami that hit Asia on 26 December 2004 precipitated an immediate response from ADB. On

11 February 2005, ADB established the Asian Tsunami Fund. ADB contributed \$600 million in establishing the fund, aimed at relief and reconstruction assistance. In addition, Australia contributed \$3.8 million and Luxembourg \$1.0 million. By the end of that year, eight TA projects and grants had been made effective, amounting to \$572 million.

Similarly, ADB initiated a rapid response to the devastation brought about by the 8 October 2005 earthquake in Pakistan. The Pakistan Earthquake Fund was established in November 2005 to address the special needs arising from the earthquake, delivering emergency grant financing for investment projects and TA in support of reconstruction, rehabilitation, and other development activities. ADB initiated the fund with an \$80 million contribution, followed by a commitment of \$12.3 million from Finland, \$5.0 million from Norway, and \$15.0 million from Australia. The Norwegian contribution was part of the debt-for-development swap between Norway and Pakistan, involving conversion of Pakistan's outstanding loan repayment obligations of up to \$20 million equivalent into Norway's contributions to the Pakistan Earthquake Fund.

³⁷ ADB. 1999. *Fighting Poverty in Asia and the Pacific: The Poverty Reduction Strategy of the Asian Development Bank*. Manila.

VII. The Fifth Decade: 2007–2015

Haruhiko Kuroda (2005–2013), Takehiko Nakao (2013–)

By its fifth decade of operations, ADB had a well-established reputation as a mature and conservatively managed financial institution. It had introduced sophisticated tools and methodologies into its policies and practices, designed to ensure that it could withstand a major disruption in the financing and lending environments. In addition, it had developed its profile as a significant, consistent, and reliable issuer of debt instruments in the global capital markets, capable of generating timely and low-cost funding on the basis of its enviable credit rating.

The fifth decade of operations would witness additional market disruptions testing these achievements. The most severe financial crisis to impact the global economy in a generation hit as ADB was further expanding its lending presence in the developing markets of Asia. The collapse of the sub-prime mortgage market and the Lehman Brothers bankruptcy would have far-reaching consequences for the global economy, shaking the very foundations of trust in the international banking community and constraining the availability of credit throughout the world, including in Asia.

A. Capital, Capital Adequacy, and Risk Management

As the fifth decade of its operations commenced, ADB had become an entirely market-based lending institution, offering a LIBOR-linked lending product designed to meet the needs of its borrowers for loans that not only suited project needs, but that also provided a high degree of flexibility in managing interest and exchange rate risks. Additionally, the product exposed ADB to low levels

of intermediation risk. Client response to the LBL was favorable, and lending operations under the product were expanding. In 2007, ADB approved 38 sovereign loans totaling \$7.3 billion and 22 nonsovereign loans totaling \$0.9 billion. This compared with 2006 approvals of 26 sovereign loans amounting to \$5.5 billion and nine nonsovereign loans amounting to \$0.6 billion. In 2007, seven MFFs totaling \$4.0 billion were also approved, compared with eight MFFs totaling \$3.8 billion in 2006.

Intermediation risk was one of several risks by then factored into the RBC framework for determining capital adequacy. The concept of risk adjusting capital for credit and solvency analysis had become broadly accepted among international financial institutions by 2007. The RBC framework adopted by ADB aimed to ensure the same broad objectives previously targeted by the income and reserves policy, i.e., assurance of sufficient capital to protect shareholders and bondholders. Both of these stakeholders required that financial institutions like ADB operate within perceived standards of best practice and market discipline. ADB was aware that there could be no divergence between its view of risk faced in its operations, especially those affecting its risk bearing capacity, and that of the capital markets. Otherwise, it would become increasingly difficult to access funding on cost-effective terms to finance its development operations.

When ADB introduced the RBC framework, it had made clear to the Board of Directors its intention to undertake future enhancements focused on the gradual application of an in-house country risk assessment model and the adoption of Monte Carlo simulation-based modeling³⁸ to replace the statistic-based modeling then used under the RBC framework. Accordingly, in 2006 ADB rolled out an internal risk rating model, and in 2008 introduced Monte

³⁸ This method repeatedly simulates a random process for the credit losses, covering a wide range of scenarios. A single total portfolio loss number is produced for each scenario. Thousands of different scenarios of portfolio losses are run, resulting in a histogram of portfolio losses that becomes the simulated loss distribution of the portfolio due to default risk. The expected and unexpected losses are then derived from this simulated distribution, allowing ADB to assess the impact of credit shocks on its capital by modeling the ELR over a 10-year horizon.

Carlo based simulation analysis, replacing the variance-covariance based modeling techniques used since approval of the RBC framework in 2004.

Monte Carlo simulation analysis provided ADB with the opportunity to move away from the existing practice of assessing capital adequacy through a predetermined ELR target of 35%, which was deemed overly conservative. Monte Carlo analysis would capture both positive and negative changes in the quality of the loan portfolio on a timely basis—to accommodate any potential risks arising from a wide range of plausible credit events. This would give a more complete picture of current risk-bearing capacity, and would become particularly pertinent in light of the deteriorating risk environment associated with the financial crisis.

Under the enhanced methodology, ADB would rely on the output of its credit risk model, i.e., periodic estimates of nonaccrual shock, as an input to an income-based simulation analysis and stress tests in assessing ADB's risk-bearing capacity. In so doing, the special characteristics of MDBs, such as their callable capital structure, preferred creditor status,³⁹ and role as development lender, could more flexibly be tailored into the capital adequacy analysis. The analysis would help to identify more accurately (i) the potential size of nonaccrual shock that ADB might face (given the existing credit risk in its loan portfolio) and the degree of protection that shareholders would require against a call on their capital; (ii) how ADB's financial position might be viewed by the markets following a prolonged nonaccrual shock; and (iii) the threshold level for ADB's ELR, below which ADB's AAA credit rating and investor confidence could be threatened.

The objectives of the simulation analyses introduced by ADB through its 2008 methodological enhancements were (i) to ensure sufficient financial capacity to absorb

income loss due to nonaccrual shock and other remaining risks to ADB's loan portfolio; and (ii) to ensure sufficient income generation capacity to support a post-shock target growth of outstanding loans, then set at 3% per annum, without causing the post-shock ELR to fall below a minimum level over 10 years, this minimum level being determined each year on the basis of the nonaccrual shock measured by the RBC framework.

As market dislocations emerged following the collapse of the subprime mortgage-backed securities market in 2007–2008, the impact on the weighted average risk rating of the ADB loan portfolio was initially relatively modest. However, because some low-risk borrowers were upgraded in 2008, the modest deterioration in the weighted average risk rating understated the impact of the crisis and masked the subsequent economic slowdown in some sovereign borrowers in the region. ADB was still exposed to concentration risk, and during 2008, its exposure to its three largest sovereign borrowers remained constant at 71%.

Under ADB's risk-based capital framework, provisions to offset known or probable losses in specific transactions, and LLRs to offset the average losses that ADB would expect to incur in the course of its lending operations, combined to form ADB's expected loss. Following the onset of the crisis, the expected loss for the sovereign portfolio approximately doubled in 2008. Although expected loss on the sovereign exposure began to stabilize in 2009, it continued to rise for nonsovereign exposure.

ADB's nonsovereign portfolio was particularly at risk as a result of deteriorating macroeconomic conditions in various DMCs. This led to rating downgrades of commercial entities operating in those countries. In addition, concentration risk remained significant for the nonsovereign portfolio. Remedial actions were called for. ADB used a variety of limits to manage concentration

³⁹ Because ADB's loan portfolio is largely comprised of sovereign borrowers, a loan default for ADB would not be equivalent to a loss, as in the case of a commercial loan default. This is because borrowing member countries of MDBs typically accord a "preferred creditor" status to their MDB loans, meaning that these loans are serviced while the loans to commercial lenders are exposed to default. Thus, when assessing credit risks, MDBs generally assume that nonaccrual loans will eventually be repaid. However, the potential for protracted payment arrears would lead to a loss of interest income, which would have a more immediate impact on ADB's reported financial position than a loan write-off, which may never occur. Thus, stress testing ADB's capacity to withstand a protracted loss of income due to nonaccrual shock would be an appropriate risk management tool.

risk,⁴⁰ which actually decreased in 2008 (the three largest country exposures fell from 49% to 42% of the portfolio). To supplement its standard due diligence and limit compliance protocols, ADB increased the frequency and intensity of its monitoring of the nonsovereign portfolio, aimed at proactively identifying any potential deterioration in credit quality.

Issuer and counterparty risk remained in check during the period. At the end of 2008, 92% of the Treasury liquid asset portfolio was rated at least AA–, with a higher proportion invested in AAA institutions than in 2007 as ADB moved to mitigate its exposure to issuers and counterparties vulnerable to deterioration in the crisis. The liquidity portfolio remained, on the whole, invested in conservative assets such as money market instruments and government securities. During 2008, money market instruments decreased in share of the portfolio, and government securities increased, as ADB leveraged upon a market flight to the quality of government obligations during the crisis. In addition, ADB had established conservative exposure limits for its corporate investments, depository relationships, and other asset classes, which proved timely.

Furthermore, ADB was not directly, or materially, impacted by the collapse in credit quality of US mortgage-backed securities. Its exposure to mortgage instruments was small, and concentrated in plain vanilla structures (not the more esoteric subprime instruments). Any losses arising in its mortgage-backed portfolio were more than offset by gains in ADB's higher quality bond investments, whose values increased as investors fled to safer assets with the onset of the crisis.

Notwithstanding the impact of general market turmoil on growth and credit prospects in individual member countries, ADB's capital adequacy, its ultimate protection against unexpected losses arising from various risks affecting its operations, remained strong throughout 2008. The ELR stood at 38% at the end of the year, comfortably exceeding target objectives. Indeed, it is during periods of financial crisis when ADB reaps the rewards of conservative

financial management. Throughout 2009, and for the remainder of the fifth decade of its operations, ADB was able to ensure that its capital adequacy remained strong, evidenced by a reaffirmation of its AAA credit rating by the three major international credit rating agencies.

This was the result, in part, of timely remedial action from ADB in addressing emerging challenges. One area of concern related to net income generation, a key component of the capital adequacy framework. As the crisis response of central bank authorities had flooded the capital markets with liquidity, money market rates (and fixed-income investment returns) collapsed. This had an immediate impact on aggregate sovereign loan income and on the returns associated with ADB's investment of equity, i.e., its liquidity portfolio. In addition, with general credit conditions deteriorating, expected loss (loan loss provisioning and reserves) increased. These circumstances needed to be addressed proactively, and ADB responded by removing loan charge waivers, effectively increasing the spread over the cost of loans to borrowers as a means of boosting income. Further, ADB proactively managed potential sovereign risk exposures, and concentration risk gradually declined over the period, with the share of the sovereign portfolio concentrated in the three largest sovereign borrowers (the PRC, India, and Indonesia) hovering around 63%–67% for the remainder of the fifth decade of operations.

In December 2008, the Board of Directors approved a revised policy on ADB's lending limitation, which limited the total amount of disbursed loans, approved equity investments, and the maximum amount that could be demanded from ADB under its guarantee portfolio, to the total amount of ADB's unimpaired subscribed capital, reserves, and surplus. In addition, the gross outstanding borrowings would not exceed the sum of callable capital from nonborrowing members, paid-in capital, and reserves (including surplus). As of 31 December 2008, headroom for lending was \$29.2 billion and for borrowings, \$8.9 billion, based on the new policy (compared with \$35.5 billion for lending and \$16.4 billion for borrowings as of 31 December 2007).

⁴⁰ The total assistance to a single project must not exceed 25% of the total project cost or \$250.0 million, whichever is lower. This limit ensures that exposure to a single project or obligor does not exceed 5% of the Board-approved ceiling of \$5.0 billion for nonsovereign operations. Furthermore, there are nonsovereign exposure limits for corporate groups, industry subsectors, and countries.

This adjustment to headroom, particularly the decline in additional borrowing capacity, was pertinent as it precipitated a series of studies that year on ADB's operational program and the resources required to support it. Accordingly, ADB prepared two working papers that provided analysis and context in assessing ADB's financial resource position during the implementation period of Strategy 2020, reviewing all possible avenues for further resource mobilization.⁴¹

In 2009, ADB completed its review of OCR requirements and adopted a resolution by ADB's Board of Governors for the fifth GCI (GCI V), which would increase ADB's capital base from \$55 billion to \$165 billion. This was a major supplement of capital resources, though the amount of subscribed capital actually paid in would remain relatively modest. Member commitments and subscriptions under the GCI IV progressively accumulated in subsequent years, and by 31 December 2014, ADB's total authorized capital was 10,638,933 shares valued at \$154.09 billion. Subscribed capital was 10,567,394 shares valued at \$153.05 billion. Of the subscribed capital, \$7.68 billion was paid in (\$6.13 billion of which was received as of 31 December 2014) and \$145.37 billion was callable. Total shareholders' equity on a statutory basis increased from \$15.27 billion as of 31 December 2008 to \$16.93 billion as of 31 December 2014.

B. Loan Products and Pricing

By the beginning of its fifth decade of operations, ADB had transitioned to a full-fledged LIBOR-based lender. Up to June 2001, ADB had offered three windows for loans from OCR to its borrowers: PMCL, pool-based single currency loans, and market-based loans. With the introduction of LIBOR-based lending on 1 July 2001, PMCL and MBL products were no longer offered. Similarly, the pool-based single currency loan product in US dollars ceased to be offered as of 1 July 2002. Effective from January 2004, the PMCL were transformed into pool-based single currency loans in yen. Since November 2002, ADB has offered local currency loans to nonsovereign borrowers, subsequently including sovereign borrowers from August 2005.

With the onset of the subprime mortgage crisis, ADB responded quickly to calls for assistance from its DMCs. It provided record assistance in 2009, amounting to 57 sovereign loans totaling \$10.6 billion. In addition, 10 MFFs totaling \$5.0 billion were approved that same year. In June 2009, ADB established a Countercyclical Support Facility to provide time-bound assistance (in 2009 and 2010, up to \$3.0 billion) to crisis-affected countries. Assistance was aimed at supporting countercyclical development expenditure and/or policy programs of DMCs in the wake of the crisis. Under the facility, five sovereign loans totaling \$2.5 billion were approved and fully disbursed in 2010. The facility carried the same pricing as market-based floating rate loans, but at a 200 bps spread over the base lending rate.

At the same time, issues of net income management and sovereign loan pricing began to emerge. In the years leading up to the crisis, ADB had been relatively accommodating with its sovereign borrowers in regard to loan pricing, responding to DMC requests for lower charges. Its willingness to comply with these requests reflected its strong net income position. Effective from 2000, all sovereign loans without specific provisions in the loan agreements were charged with a lending spread of 60 bps over the base lending rate. In 2004, 20 bps of the lending spread were waived on sovereign loans outstanding from 1 July 2004 to 30 June 2005 for borrowers that did not have loans in arrears. Subsequently, the policy was extended to cover the period up to June 2008 and 2009. In December 2007, the Board of Directors revised the lending rates for all sovereign LBLs negotiated on or after 1 October 2007 by reducing the effective contractual spread to 20 bps over the base lending rate and eliminating the waiver mechanism for such loans.

The impetus behind the revision to loan pricing in 2007 was an earlier move by the IBRD in the same year to reduce and simplify its loan charges significantly. The analysis carried out at the time by ADB indicated that the impact of its revisions over the projected horizon (2007–2012) would be modest under then prevailing business scenarios. At the same time, Management reiterated its commitment to review loan charges annually to ensure they remained appropriate to the prevailing market environment and other factors affecting financial management and capital adequacy.

⁴¹ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

The trend of lower lending spreads also extended to fees charged. In 2004, the Board of Governors approved a waiver of the entire front-end fee on all new sovereign loans approved from 1 January 2004 to 30 June 2005. Subsequently, the policy was extended to cover the period up to June 2008 and then June 2009. In December 2007, the Board of Directors approved the elimination of front-end fees for sovereign LBLs negotiated on or after 1 October 2007.

Commitment fees were similarly adjusted. Before 2007, ADB had applied a progressive commitment fee of 75 bps on undisbursed loan balances for sovereign project loans and a flat commitment fee of 75 bps for sovereign program loans. In October 2006, as part of the enhancement of ADB's loan and debt management products, all sovereign project loans negotiated after 1 January 2007 carried a flat commitment fee of 35 bps on the full amount of undisbursed loan balances. In April 2007, the Board approved a waiver of 10 bps on the commitment charge for undisbursed balances of sovereign project loans negotiated after 1 January 2007,

and 50 bps of the commitment charge on the undisbursed balances of sovereign program loans. The waiver was applicable to all interest periods starting from 1 January 2007 up to and including 30 June 2009. In December 2007, the Board of Directors approved a reduction of the commitment charge from 75 bps for sovereign program loans and 35 bps for sovereign project loans to 15 bps for both sovereign program and project loans negotiated on or after 1 October 2007, eliminating the waiver mechanism for such loans. For nonsovereign loans, ADB continued to charge a commitment fee of about 50–75 bps on the full amount of undisbursed loan balances.

Unfortunately, the prevailing business environment changed radically following the onset of the crisis, and by 2009, the impact of a lower interest rate and investment return outlook were clearly evident. While ADB's financial position remained strong and its capital adequacy was considered adequate, its operating income fell by 41% in 2009, to \$420 million.⁴² This was primarily caused by

Table 7 Statutory Basis Income Statement

Item	2007	2008	2009	2010	2011	2012	2013	2014
Revenue								
Loans	1,442,338	1,357,981	959,833	680,479	649,599	770,000	646,000	605,000
Investments	683,212	677,175	459,367	367,499	365,263	390,000	339,000	305,000
Guarantees	5,049	6,876	9,180	11,322	15,722	18,000	18,000	21,000
Equity	58,897	3,737	24,527	58,425	44,030	39,000	10,000	17,000
Others	18,835	18,685	18,641	24,160	20,439	21,000	22,000	25,000
Total	2,208,331	2,064,454	1,471,548	1,141,885	1,095,053	1,238,000	1,035,000	973,000
Expenses								
Borrowings and Related	1,389,778	1,208,391	741,665	386,048	367,916	520,000	400,000	317,000
Administrative	127,327	141,047	193,638	294,251	315,945	351,000	411,000	352,000
Provision of Losses	579	(3,467)	115,779	(44,713)	(7,395)	7,000	(6,000)	(1,000)
Others	3,315	14,629	5,074	3,544	4,938	9,000	8,000	13,000
Total	1,520,999	1,360,600	1,056,156	639,130	681,404	887,000	813,000	681,000
Adjustments								
Net Realized Gains	22,905	(28,096)	23,278	80,318	190,125	122,000	194,000	288,000
Net Unrealized Gains	14	450,591	(466,215)	42,738	5,683	(331,000)	150,000	(193,000)
Net Income	1,158,952	1,126,349	(27,545)	625,811	609,457	142,000	566,000	387,000

(-) = negative.

Source: Asian Development Bank Annual Reports.

⁴² For 2009, ADB reported a net loss of \$27.5 million on its financial statements. Adjusting this figure to remove unrealized losses related to ASC 815/825 adjustments (\$466 million) and ADB's proportionate share of unrealized gains from equity investment accounted for under the equity method (\$19 million) resulted in operating income of \$420 million.

lower global interest rates and by loan loss provisions for specific private sector loans. Nevertheless, allocable net income⁴³ of \$658 million for the year was allocated to ordinary reserves (\$231 million), surplus (\$247 million), the ADF (\$120 million), the TASF (\$40 million), and various Special Funds.

Financial projections undertaken at the time indicated that with increased lending operations and, in retrospect, optimistic estimations of interest rate yields on investments, operating income would recover to pre-crisis levels by 2012. However, an increasing share of income would be accounted for by nonsovereign operations and equity funded assets, while income from sovereign loans was expected to stagnate given the increasing proportion of new sovereign loan disbursements at the effective contractual spread of 20 bps approved in 2007. Additionally, while projected post-shock ELR at the end of 2009 was comfortably above its minimum target, the projected pre-shock ELR (used in long-term planning) was expected to decrease rapidly toward its minimum level by 2012 as loan exposure grew. In effect, loan growth was anticipated to outpace equity growth in the medium term.

In April 2010, the Board of Directors reversed the trend in declining loan spreads and approved—for all sovereign and sovereign guaranteed LBLs, and local currency loans with sovereign guarantees, negotiated from 1 July 2010 up to and including 30 June 2011—a reduction in the credit of 0.4% to 0.3% for the duration of the loan, resulting in an effective contractual spread⁴⁴ of 0.3% over the base lending rate. For the same type of loans negotiated from 1 July 2011, the credit of 0.4% would be reduced to 0.2% for the duration of the loan, resulting in an effective contractual spread of 0.4% over the base lending rate. The increase in the effective contractual spread was anticipated to reverse the trend in stagnating loan income, cover sovereign administrative expenses over the planning period, strengthen the ELR through the creation of an income buffer, and bring ADB's loan pricing more in line with the IBRD and IADB, which had both raised their loan charges in 2009.

In December 2011, the Board approved the introduction of maturity premiums for all LBLs to sovereign, and sovereign guaranteed, borrowers (other than project design facility loans) as well as local currency loans with sovereign guarantees, where loan negotiations would be completed on or after 1 April 2012.⁴⁵ This comprised a 10 bps per annum premium on loans with an average loan maturity of greater than 13 years and up to 16 years, and a 20 bps per annum premium on loans with an average maturity of greater than 16 years and up to 19 years. ADB also introduced an average maturity limit on new loans not to exceed 19 years.

Maturity premiums were important as they would eliminate the existing de facto subsidies in undifferentiated maturity pricing. They were aimed at improving economic efficiency by encouraging borrowers to select a more cost-benefit driven approach to debt management by ensuring that the maturity and repayment profile of a loan properly reflected the actual cash flow requirements of the underlying project. The maturity premiums would also have a neutral or positive impact on ADB's net income—improving the sustainable level of lending. By 31 December 2014, 107 approved loans totaling \$16.56 billion were subject to maturity premiums.

In December 2013, the Board of Directors approved an additional revision to loan pricing for all LBLs and LCLs negotiated on or after 1 January 2014—reducing the credit of 0.2% to 0.1% for the duration of the loan, resulting in a contractual spread of 0.5% over the base lending rate. The various increases in lending spreads, together with the introduction of maturity premiums, contributed to a stabilization of income prospects, and by 2014 operating income was running at \$571 million, up from \$469 million in 2013.

New lending initiatives also arose during the period, several of which were specifically designed to assist sovereign and nonsovereign borrowers in addressing needs arising from the financial crisis. For example, in October 2011, ADB introduced policy-based lending, which enhanced the program lending policy by mainstreaming programmatic budget support and enhancing the

⁴³ Allocable net income for 2009 was derived by reducing the operating income by guarantee fees (\$9.2 million) that needed to be appropriated to Special Reserves and adding the write-back of LLR requirements (\$247.2 million).

⁴⁴ An effective contractual spread includes a fixed spread of 0.60% net of a permanent credit.

⁴⁵ ADB. 2011. *Review of the Asian Development Bank's Loan Charges and Allocation of 2011 Net Income*. Manila.

crisis response capacity. ADB's policy-based lending consisted of four products, each catering to a different situation in a DMC: (i) stand-alone policy-based lending, (ii) a programmatic approach, (iii) special policy-based lending, and (iv) Countercyclical Support Facility lending.

In addition, ADB's Trade Finance Program was ramped up. The Trade Finance Program started operations in 2004, and consists of three products: (i) a credit guarantee facility, under which ADB issues guarantees to participating international and regional banks to guarantee payment obligations issued by approved DMC and/or local banks in selected DMCs; (ii) a revolving credit facility, under which ADB provides trade-related loans to DMC banks in support of DMC companies' export and import activities; and (iii) a risk participation agreement, under which ADB shares the risk with international banks to support and expand trade in challenging and frontier markets. The credit guarantee and risk participation agreement are unfunded products (ADB funds are not extended on initiation of each transaction), while the revolving credit facility is funded.

The program has proven particularly useful in the post-crisis period by helping to keep open cost-effective trade credit in some DMCs, though market disruptions in those environments may have led to a scaling back, or repricing, of correspondent credit lines from major international trade banks as part of their risk containment strategies. By 2014, the Trade Finance Program supported \$3.82 billion in trade through 53 DMC banks in 13 different countries. Of the trade supported, \$1.78 billion was financed by ADB and \$2.03 billion was cofinanced.

In March 2013, the Board of Directors approved a pilot initiative for results-based lending (RBL), aimed at supporting government-owned sector programs and disbursing ADB financing based on program results. Loan terms under RBL would be the same as for investment projects. One OCR loan for \$100 million was under RBL as of 31 December 2013, and in 2014 ADB approved three OCR loans totaling \$450 million under RBL, while disbursements totaled \$58 million (\$20 million in 2013).

C. Borrowings

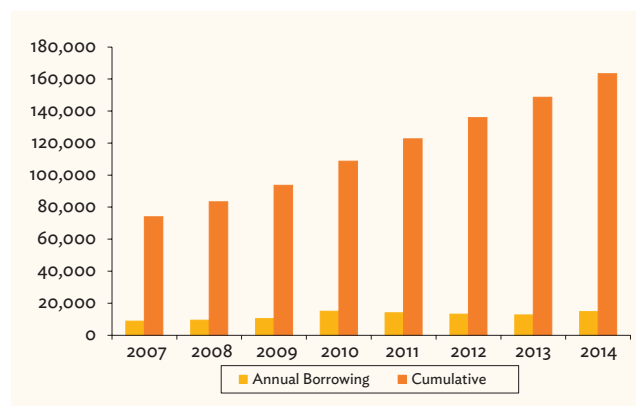
During 2007–2014, ADB completed 596 borrowing transactions raising about \$97 billion in long- and

medium-term funds, or about \$12.1 billion annually, on average. This was a significant increase in the balance of year-end outstanding borrowings over the previous (fourth) decade of operations (table below). The new borrowings were raised in a combination of public issues (including additional global benchmark issues) and private placements; and in a variety of currencies, including the US dollar, yen, euro, South African rand, Turkish lira, Mexican peso, Brazilian real, and others.

ADB also raised funding through numerous local currency bond issues on the Asian markets, including the Hong Kong dollar, Singapore dollar, baht, ringgit, peso, yuan, Australian dollar, and New Zealand dollar. ADB continued to pursue its strategic objective of contributing to the development of regional bond markets and providing the appropriate local currency funding for its borrowers. In 2010, for example, ADB successfully issued its maiden global yuan bond in Hong Kong, China, raising 1.2 million renminbi (\$180 million equivalent), tapping into an expanding investor base in the PRC and the rest of Asia.

Even in situations where market conditions were not favorable for ADB to issue local currency bonds, ADB was active in raising local currency through the swap markets. In 2008, for example, ADB raised about \$200 million equivalent through cross-currency swaps to meet local currency funding requirements in the Indian rupee, rupiah, and peso.

Figure 5 Asian Development Bank Borrowings, 2007–2014 (\$ million)



Source: Asian Development Bank.

The Treasury Department worked closely with the Private Sector Operations Department and the public sector regional departments in tracking local currency financing requirements and, where needed, helping with financial structuring and pricing aspects of projects. In this connection, ADB successfully executed in 2011 a long-dated and highly structured cross-currency swap to finance the disbursement of ADB's first sovereign guaranteed local currency loan denominated in tenge (Kazakhstan's currency).

During the period, ADB remained an active issuer of short-term debt under its ECP program. These transactions helped in not only enhancing its presence in certain markets, but also in meeting short-term cash requirements as they arose.

In January 2010, ADB issued its first Kauri bond under the 5 billion New Zealand dollars (approximately \$3.6 billion equivalent) domestic medium-term note program, a 4-year issue amounting to 225 million New Zealand dollars (\$162 million equivalent). In March of that year, it also launched its first thematic bonds, raising \$638 million through two tranches of water bond issues. These bonds supported projects under the Water Financing Program and highlighted ADB's efforts to address Asia's water sanitation needs. Following the success of this inaugural thematic bond issue, ADB launched its second thematic bond issue during the third quarter, amounting to \$244 million in clean energy bonds, issued in five tranches. These bonds were designed to highlight ADB's efforts in financing renewable energy and energy efficiency projects in Asia and the Pacific, while meeting investor demand for specific topics of interest.

Following the success of its thematic bonds in 2010, ADB issued two water-themed private placements in 2011 totaling \$40 million; and in 2012, water bonds amounting to about \$263 million, and clean energy bonds amounting to about \$343 million. This was followed by about \$234 million in clean energy bonds and \$119 million in water bonds in

2013, and an additional \$284 million equivalent in water bonds in 2014. This brought cumulative thematic bond issuance to date to about \$2.16 billion equivalent.

In April 2014, ADB issued its inaugural euro benchmark bonds totaling 1.5 billion euro (\$2.1 billion equivalent). In August of that year, it also issued its first offshore Indian rupee-linked bonds totaling 3 billion rupees (\$49 million equivalent). And in September, it returned to the Canadian dollar "Maple" market⁴⁶ with a 400 million Canadian dollar (\$364 million equivalent) issue. It also issued a second "Dimsum" bond⁴⁷ amounting to 1 billion renminbi (\$164 million equivalent) in November.

D. Liquid Asset Management

The subprime crisis had a significant impact on ADB's generation of income on its liquid asset holdings. At the onset of the crisis, most holdings were in government and government-related debt instruments, time deposits, and other unconditional obligations of banks and financial institutions. To a limited extent, they were also held in corporate bonds, plain vanilla mortgage-backed securities, and asset-backed securities of high credit quality. The four sub-portfolios of liquid assets—core (prudential) liquidity, operational cash, cash cushion, and discretionary liquidity—all had different risk profiles and performance benchmarks. However, the core portfolio, with the longest duration of assets, was most exposed to interest rate risk during the crisis.

The Treasury Department's investment team responded with conviction to the threats of interest rate volatility and credit risk arising from the crisis. While the duration of the individual portfolios did not materially change in 2008, the value at risk (VAR) on the prudential liquidity portfolio⁴⁸ increased significantly as interest rate volatility surged. Through a combination of shifts in asset composition and subsequent maturity profiles, the investment team was able to reduce the aggregate interest rate and foreign exchange risk on the liquidity portfolio from a VAR of 8.7% in 2008 to 5.3% in 2009.⁴⁹ This risk exposure was reduced

⁴⁶ A Canadian dollar bond sold in Canada by a foreign financial institution.

⁴⁷ A bond issued outside of the PRC, but denominated in yuan.

⁴⁸ The major currencies in this portfolio are the US dollar, yen, euro, pound sterling, Australian dollar, and Canadian dollar. Collectively, these currencies comprise about 95% of the prudential portfolio.

⁴⁹ This translated into a 5.0% probability that the portfolio would lose more than 5.3% (\$517.1 million) of its value over the following year.

Table 8 Year-end Balance of Liquidity Portfolio

Item	2007	2008	2009	2010	2011	2012	2013	2014
Core	9,209	9,605	10,302	12,592	14,400	15,012	15,890	15,261
Cash Cushion	779	2,606	1,954	1,933	2,136	1,412	2,778	2,960
Discretionary	2,550	2,622	1,236	3,090	4,407	7,091	5,981	5,945
Operation Cash	395	298	198	218	196	212	222	232
Other	646	626	501	453	562	603	543	422
Total	13,579	15,757	14,191	18,286	21,701	24,330	25,414	24,820

Note: Includes securities purchased under resale arrangements, securities transferred under repurchase agreements, and unsettled trades. The composition of the liquidity portfolio may shift from year to year as part of ongoing liquidity management.
Source: Asian Development Bank.

further to 4.1% in 2010 and 3.5% in 2011. By 2014, the aggregate VAR of major currencies of the core liquidity portfolio had reached 2.7%.

Further, as volatility in Europe increased following disruptions in the periphery markets of the euro zone, Treasury Department investment managers focused increased attention on defensive management of these exposures. Risk exposure to European credits was monitored by conducting daily surveillance of the rating and fair value of investment positions.

Concurrent with the calculation of VAR as a measure of ADB's interest and foreign exchange exposure on its liquidity portfolio, ADB was also actively employing scenario analysis to more fully understand the depth of its risk exposure. Given the high quality of ADB's investments (lower-yielding government securities enjoying demand value as investors sought out higher quality credits during the crisis), scenario analysis continued to suggest that the liquidity portfolio, as adjusted in response to the crisis, would appreciate under many stressed scenarios.

The dramatic drop in interest rates globally, combined with the measures employed to limit downside risk to the liquid asset portfolio, exacted a toll on investment return. In 2008, investment revenue, which had been increasing steadily since 2004, began to drop, as did the return on investments. In 2009, revenue from investments fell from \$677.2 million the previous year (on a statutory basis) to \$459.4 million. Return on investments (again on a statutory basis) fell to 2.93% (4.68% in 2007). This mirrored a similar drop in the return on the loan portfolio

over the same period, with negative consequences for ADB's net income. The trend toward lower investment return continued through subsequent years, and by 2014 had reached 1.30% (on a statutory basis). Investment revenue in 2014 was running at about \$305 million, down from \$683 million in 2007.

E. Special Funds

Major changes to the management of the Special Funds occurred over the fifth decade of operations. Throughout, demand continued to weigh on the supply of available resources. In May 2007, the Board of Governors approved the transfer of \$40.0 million to the ADF as part of OCR's net income allocation (\$40.0 million was also transferred in 2006). In addition, a total of \$890.8 million from loan savings and cancellations had been included in the commitment authority of the ADF IX. Nonetheless, the resource position of the ADF increasingly justified close examination of a ninth replenishment.

With a replenishment still under discussion, Management's focus turned again to optimizing the efficiency of resource utilization. In July 2007, as an extension of the Board-approved new currency management framework, ADB offered full SDR to ADF legacy loans. This provided ADF borrowers with the option of converting their existing liabilities (i.e., disbursed and outstanding loan balances) in various currencies into SDR, while the undisbursed portions would be treated as new loans. The conversion was intended to shorten the time horizon to achieve the full benefits of the SDR approach. It would reduce the exchange rate volatility associated with legacy ADF loans

and provide a consistent debt portfolio management framework across peer multilateral banks and all ADF loans. This conversion was made available beginning 1 January 2008.

In September 2007, the Board of Directors approved a revised ADF grant framework that limited grant eligibility to ADF-only countries. This was intended to help low-income countries restore or maintain external debt sustainability. High debt distressed countries would receive 100% of ADF funding in grants, while moderate risk countries would receive 50% and low risk countries would only receive loans. To avoid rewarding poor performance, a 20% volume discount would be introduced to the grant portion of ADF resources allocated under the existing country performance assessments. In other words, many countries would experience an increase in the grant portion of their ADF programs, but with a reduced (20% of grant allocation) amount of assistance.

The resources from the 20% volume discount would be transferred to a new hard-term ADF lending facility. The hard-term facility would have a fixed interest rate of 150 bps below the weighted average of the 10-year fixed swap rates of the SDR component currencies plus the OCR lending spread, or the current ADF rate, whichever was higher. The interest rate would be reset every January through a Board information paper, would apply to all hard-term loans approved that year, and would be fixed for the life of the loan. For hard-term ADF loans approved in 2007, the interest rate was set at 3.85%. Other terms were similar to those of regular ADF loans. In general, blend countries with per capita income not exceeding the IDA operational cutoff for more than 2 consecutive years and an active OCR lending program would be eligible to borrow from the new facility. Income generated from the hard-term ADF facility would be used to defray the cost of interest foregone as a result of the shift from loan assistance to grants for certain countries.

In December 2007, the Board of Directors approved a new ADF financial framework intended to enhance the long-term financial capacity of the ADF and

improve prudential financial management practices by establishing tranches within ADF liquid assets to improve liquidity management. It would also help maintain minimum prudential liquidity levels for the ADF. The ADF would now manage its liquidity in two tranches to allow for optimal use of financial resources. The first tranche would ensure that adequate liquidity would be available to meet the expected cash requirements. The second tranche would comprise the prudential minimum liquidity the ADF should hold to meet unexpected demands and any usable liquidity for future commitments. It was understood that the new framework would provide the ADF a higher and more stable commitment authority for future replenishments and ensure that liquidity would be managed in a transparent and efficient manner.

Negotiation efforts to replenish the ADF came to fruition in August 2008, with the Board of Governors adopting a resolution providing for the ninth replenishment of the ADF (ADF X) and the fourth regularized replenishment of the TASF. The ADF X was substantial in size, amounting to SDR7.1 billion (\$11.3 billion)—SDR6.9 billion for the ADF and SDR0.2 billion for the TASF. This would cover ADB's concessional program for the 4-year period from 2009 to 2012. About 37% of the replenishment would be met from new donor contributions of SDR2.6 billion (\$4.2 billion equivalent). Notwithstanding the substantial new donor resources made available under the ADF X, efforts continued to be made to further expand commitment authority through loan savings, cancellations, and other measures.

At around the same time, the ADF donors requested ADB's participation in the Highly Indebted Poor Country (HIPC) debt relief initiative. The IDA and the IMF had launched the HIPC Initiative in 1996 to reduce the excessive debt burden faced by the world's poorest countries. The initiative stipulated a sunset clause⁵⁰ to prevent the HIPC debt relief from becoming a permanent facility and to minimize moral hazard. This sunset clause had been extended several times, with the latest "sunset" attempting to limit its application to countries satisfying the income

⁵⁰ A sunset clause restricts the access of countries that had started IMF- and IDA-supported programs to the HIPC Initiative within a 2-year period. This provision intended that the HIPC initiative would not be a permanent facility. It also limited the time available for build-up of new debt and provided for relief on debt that mostly predated the Initiative (IDA and IMF. 2006 *Heavily Indebted Poor Countries [HIPC] Initiative—Issues Related to the Sunset Clause*. Washington, DC.

and indebtedness criteria using end of 2004 data. At the time, the only ADF borrower qualifying for HIPC debt relief was Afghanistan. While other ADF borrowers had met the HIPC indebtedness criteria, no others qualified for HIPC debt relief at that time.

In March 2008, the Board of Directors considered the Policy for Providing Heavily Indebted Poor Countries Relief from Asian Development Fund Debt and Proposed Debt Relief to Afghanistan.⁵¹ The paper recommended the submission of a resolution to the Board of Governors for ADB to participate in the HIPC debt relief, and to provide Afghanistan with debt relief upon the adoption of the resolution by the Board of Governors.

Under the policy, and upon approval of debt relief for a country by the Board of Directors, the principal amount of the estimated debt relief would be recorded as a reduction of the disbursed and outstanding loans on a provisional basis and charged against ADF income. The estimated principal amount of Afghanistan's ADF debt to be forgiven was about \$81.5 million. The boards of the IDA and IMF would decide when a country had satisfied the conditions for reaching the completion point, whereupon the debt relief would become irrevocable. The accumulated provision for HIPC debt relief would be reduced when debt relief was provided on the loan service payment date.

On 26 January 2010, the executive boards of the IDA and the IMF agreed that Afghanistan had reached the completion point under the HIPC initiative, making debt relief to Afghanistan under the initiative irrevocable. The amount of debt relief, including principal and interest, under ADB loans was revised to \$106 million, which was to be provided through a reduction of Afghanistan's debt service from July 2008 to February 2028. As of December 2014, the ADF had delivered \$16 million under this arrangement, resulting in a balance of \$90 million.

In June 2012, the Board of Directors approved a hardening of lending terms to blend countries. This included, for project and policy-based loans financed from ADF resources, a tenor of 25 years (including a 5-year grace period), a 2.0% per year interest rate throughout the loan

tenor, and equal amortizations. For hard-term ADF loans, the tenor was also set at 25 years (inclusive of a 5-year grace period), and interest remained at 150 bps below the weighted average of the 10-year fixed swap rates of the SDR component currencies plus the OCR lending spread, or the applicable ADF interest rates, whichever was higher, throughout the loan tenor. Amortization would also be in equal installments. The new lending terms were applicable to loans where formal loan negotiations were completed on or after 1 January 2013.

A tenth replenishment of the ADF (ADF XI) and a fifth regular replenishment of the TASF, were approved by the Board of Governors in July 2012. This constituted another substantial replenishment of the ADF, financing ADB's concessional program from 2013 to 2016, and replenishing the TASF. The total replenishment of SDR7.9 billion (\$12.4 billion at Resolution No. 357 exchange rates) consisted of SDR7.7 billion for the ADF XI and SDR0.2 billion for the TASF. About 38% of the replenishment would be financed from new donor contributions totaling \$3.06 billion (\$4.79 billion equivalent). As of 31 December 2014, 30 donors had contributed a total of \$3.43 billion equivalent. About \$1.71 billion (including the allocation to the TASF) had been received and was available for operational commitments. Remaining unpaid contributions under the ADF VIII, ADF IX, ADF X, and ADF XI as of that date totaled \$447 million.

The balance of the ADF commitment authority⁵² available for operations as of 31 December 2014 was \$549 million, compared with \$422 million as of 31 December 2013. In May 2014, the Board of Governors approved the transfer of \$120 million to the ADF as part of the net income allocation for OCR (\$120 million in 2013). An additional \$612 million from loan and grant savings and cancellations was also included in the commitment authority.

Resource mobilization efforts continued on many fronts outside the replenishment process. One area of growth was in trust funds and financing partnership facilities. Initially, trust funds were established through donor-specific channel financing agreements across a

⁵¹ ADB. 2008. *Policy for Providing Heavily Indebted Poor Countries Relief from Asian Development Fund Debt and Proposed Debt Relief to Afghanistan*. Manila.

⁵² The ADF commitment authority is derived from donor contributions, reflow-based resources, and net income transfers from OCR.

wide range of sectors, focused principally on financing TA operations. In time, and as a result of the emerging needs of DMCs for greater consistency and harmonization of development efforts, ADB began establishing some trust funds based on common agreements with development partners and financing through instruments of contribution. These were established under an umbrella facility of sector- and theme-focused financing of TA and grant components of investment projects, under ADB management.

In 2006, for example, ADB approved a Water Financing Partnership Facility to be managed by ADB that sought to raise \$100.0 million by 2008 in support of its water financing program through grants, concessional loans, guarantees, or other forms of assistance under framework agreements. The Asia Pacific Carbon Fund, also established in 2006 and managed by ADB, would acquire future flows of certified emission reduction credits on behalf of participants, in return for upfront cofinancing payments.

The following year, two additional facilities were established: the Clean Energy Financing Partnership Facility and the Regional Cooperation and Integration Financing Partnership Facility (classified as Special Fund). Two new initiatives were established under these facilities: the Asian Clean Energy Fund under the Clean Energy Financing Partnership Facility and the Investment Climate Facilitation Fund under the Regional Cooperation and Integration Financing Partnership Facility. The Clean Energy Fund was a multidonor fund to support TA, grant components of investment projects, and any other activities that could be agreed on between financing partners and ADB. The Investment Climate Facilitation Fund was established to help address the challenges of promoting investment and tackling climate change through energy efficiency. The Investment Climate Facilitation Fund is one of the pillars under the Enhanced Sustainable Development for Asia initiative, which supports the efforts of ADB and its DMCs to overcome these challenges.

In April 2008, the Climate Change Fund was established to facilitate greater investments in DMCs in addressing the causes and consequences of climate change alongside ADB's own assistance in various related sectors. Under ADB's Carbon Market Initiative, the Future Carbon Fund was also established in 2008, complementing the existing Asia Pacific Carbon Fund. This Future Carbon Fund would

provide upfront financing for ADB-supported projects that would continue to generate carbon credits after 2012. Initially targeted at \$100 million in size, the fund could be increased to \$200 million if sufficient demand existed.

In 2009, commitments to new trust funds totaled \$126.0 million and included the establishment of a Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility and a multi-donor Urban Financing Partnership Facility, under which an Urban Environmental Infrastructure Fund was established. In addition, ADB established the ADB Clean Technology Fund and the ADB Strategic Climate Fund, both pools of resources under the Climate Investment Funds (CIF), administered by the World Bank as trustee. The Clean Technology Fund and the Strategic Climate Fund would receive about \$700 million from the CIF.

In 2010, commitments to new trust funds totaled \$147.4 million, including new contributions to the Gender and Development Cooperation Fund and private sector contributions to the Future Carbon Fund. The World Bank, as trustee, made an additional contribution of \$4.7 million from the CIF.

Other special initiatives mirrored these innovations. In 2007, ADB negotiated a loan buy-down mechanism whereby Australia would provide a 4 million Australian dollar grant into a fund managed by ADB to buy down a portion of an ADF loan extended to finance development of a pier in Samoa. The loan buy-down mechanism would be triggered by certain milestones during project implementation. In April 2011, ADB established a project design facility on a pilot basis to support project preparation, particularly detailed engineering designs, through project design advances. Loans approved under the project design facility would carry the standard interest of OCR or the ADF. Payment of interest was deferred until the project design advance is refinanced out of the proceeds of the loan, or other repayment terms take effect.

F. Project Galaxy

As ADB entered the closing years of its fifth decade of operations, issues of resource mobilization persisted, particularly in discussions over ADB's future operational profile. Asia had made great progress in emerging from

the depths of absolute poverty over the 50 years of ADB's operations. Many economies were now classified as middle-income, while others were at the brink of breaking out of low-income status. Nevertheless, levels of absolute poverty remained a challenge throughout the region, exacerbated by growing inequality.

The needs of Asia and the Pacific were changing, as were the menu of products and services offered by ADB to its clients. However, volume limitations on assistance provided, reflecting the constraints of its own balance sheet and the ability or willingness of shareholders to contribute sizeable amounts of additional capital, increasingly bound ADB's operations, particularly its concessional assistance.

Resource constraints also factored into discussions over ADB's continued relevance to a dynamic and emerging region. The Midterm Review of ADB's Strategy 2020 had called for enhancing ADB's lending capacity to pursue its objective of eradicating extreme poverty and reducing vulnerability and inequality.⁵³ However, constraints in both the ADF and OCR were increasingly stretching ADB's financial capacity.

Upon completion of negotiations for the tenth replenishment of the ADF (ADF XI), ADB had committed to develop a long-term strategic vision for the ADF, adjusting and adapting its role, mandate, and financing structure to meet present economic and financial conditions in the region. It was acknowledged that while poverty was still pervasive, extreme poverty had declined and the differences in social and economic indicators of these countries were not as stark as they used to be. In subsequent consultations, donors encouraged ADB to explore how to leverage the ADF, and some even suggested that ADB consider the option of combining the ADF with OCR.

The logic behind a potential merger of the ADF and OCR was straightforward. While ADF equity capital is about double the size of the equity capital of OCR, ADF outstanding loans of \$29.1 billion were only about 54% the size of OCR outstanding loans (\$54.2 billion). This

translated into a mobilization (leverage) ratio of loans and guarantees to equity capital of 3.1 for OCR, but only 0.9 for the ADF. The divergence in mobilization ratios was attributable to the fact that the ADF, which does not have a separate legal identity as a structured special window of ADB, is not able to issue bonds to support its lending. When the ADF was created, this inability to issue debt was not considered problematic as the low creditworthiness of ADF borrowers would have proved to be a constraint in convincing capital market investors to purchase bonds issued by a new entity for lending to these borrowers. This absence of financial leverage was now deemed suboptimal, particularly given the strong track record of regular ADF loan service payments. A leveraged approach was considered more efficient and effective in optimizing the management of concessional financing.

As a major innovation to its operations, the Board approved in early 2015 the so-called "Project Galaxy" aimed at combining ADF lending operations with the OCR balance sheet, and retaining the ADF as a grant-only operation, effective from January 2017. This important innovation would increase OCR equity from \$18.3 billion to \$53 billion. ADB would continue to offer ADF countries concessional lending on the same terms and conditions currently provided, but through its OCR window, while the ADF would provide only grant assistance.

As approved, the donors would agree to transfer ADF loan assets, and part of the liquid assets, to OCR without a change in shareholding structure or voting within ADB. The value of ADF transferred assets would be reflected in the ordinary reserves, and total OCR equity would approximately triple in size. In consequence, ADB's lending, borrowing, and equity investment headroom would increase significantly. The ADF would cease to provide new loans, but would continue as a Special Fund providing grant assistance to eligible DMCs. Future loans to ADF borrowers would continue to be offered at current concessional terms, but through a new OCR concessional lending window. The level of grant assistance and concessional lending would continue to be determined by consensus among the donors.

⁵³ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

The merger of OCR and ADF resources would allow the use of leverage on the combined resources by significantly expanding ADB's equity base. OCR lending and ADB's risk-bearing capacities would be enhanced. Not only would this generate increased income from expanded lending operations and more efficient and effective investment of liquidity, but it would increase OCR net income transfers to support ADF grant operations and reduce the financial burden on donors. Expanded lending would support the transition of ADF-only countries to blend status, and their graduation from blend status to OCR-only status, whereas greater risk-bearing capacity would strengthen ADB preparedness for any natural or economic crisis in the future.

Importantly, the merger would also increase support for private sector operations. ADB has long considered the private sector the principal engine of growth in Asia and the Pacific. However, the size of OCR equity capital had proved to be a constraint in further enhancing its private sector operations under its conservative financial management policies and practices. For example, the Charter allows ADB to use OCR resources to make total equity investments in private enterprises of only up to 10% of its unimpaired paid-in capital, together with reserves and surplus, exclusive of special reserve. This limitation had proved to be an impediment to further expansion of private sector equity investments by ADB. Equity investment headroom was now greatly expanded. In addition, the merger would relieve pressure on ADB's risk-bearing capacity, allowing for an increase in ADB private sector lending operations.

From a risk management perspective, ADF loans transferred to OCR would be subjected to the same credit risk management framework and to appropriation for LLR and loan loss provisioning. The fair market value of the transferred loans would incorporate a credit risk

component, which would be measured by the expected loss of the portfolio, consistent with current practice. Regarding currency composition and exposure, the ADF would be left with only grant operations in US dollars (since their introduction in 2005, grants have been denominated in US dollars). However, SDR-denominated ADF loans transferred to an OCR concessional window would be managed through the existing ALM framework for OCR.

In terms of capital adequacy, ADF borrowers have lower credit ratings, on average, than OCR borrowers. Loans to ADF borrowers would require more equity capital under ADB's capital adequacy framework and a new minimum ELR would need to be determined as a key input to the long-term financial scenario analysis. Simulations undertaken by ADB at the time of approval of the merger out to 2026 suggested a higher minimum ELR of 37%–40%, compared with the current 25% of the existing OCR portfolio. This would depend on different growth trajectories, including for nonsovereign exposures. However, initial indications from a rating agency were that ADB's capital adequacy ratios would improve significantly after the merger. This is mainly due to the substantial increase in equity, decreased concentration risk of the consolidated portfolio, and reduction in single country exposures due to diversification.

As ADB enters its sixth decade of operations, it faces an Asia and Pacific region dramatically different from the Asia and Pacific of the 1960s. ADB has played an important role in the economic and financial transformation of the region. It has also set a standard for responsive, but conservative, financial management among international financial institutions. ADB is embarking on an exciting new decade of operations, where its capacity to engineer innovation and impact for its clients has been tested and proven robust.

A History of Financial Management at the Asian Development Bank

Engineering Financial Innovation and Impact on an Emerging Asia

The Asian Development Bank (ADB) has evolved into a leading development banking institution in the global financial markets during the past half century since it was established. This publication—a good introduction to financial management practices in multilateral development banks—narrates the evolution of ADB’s financial policies, strategies, practices, and approaches by decade of operations. It shows how ADB swiftly responded to changing market conditions and provided funds to its developing members at the lowest possible cost. This publication explains how these practices and products played important roles in shaping ADB’s development mandate, fostered sustainable and steady growth, and paved the way toward an enviable AAA-rating in the capital markets.

About the Asian Development Bank

ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to a large share of the world’s poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



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