

ADB

# ERD Working Paper

ECONOMICS AND RESEARCH DEPARTMENT

## SERIES

### No. 63

Developing the Market  
for Local Currency Bonds  
by Foreign Issuers:  
Lessons from Asia

Tobias C. Hoschka

February 2005

Asian Development Bank



Asian Development Bank  
6 ADB Avenue, Mandaluyong City  
P.O. Box 789  
0980 Manila, Philippines  
<http://www.adb.org/Economics>  
ISSN: 1655-5252



Printed in the Philippines

ERD Working Paper No. 63

# **Developing the Market for Local Currency Bonds by Foreign Issuers: Lessons from Asia**

**TOBIAS C. HOSCHKA**

February 2005

*Tobias Hoschka is a Treasury Specialist in the Treasury Department, Asian Development Bank. The author would like to thank Richard Werner, Patricia McKean, and Jonathan Batten on the country case studies, and Jim Turnbull for useful comments and suggestions.*

Asian Development Bank  
P.O. Box 789  
0980 Manila  
Philippines

©2005 by Asian Development Bank  
February 2005  
ISSN 1655-5252

The views expressed in this paper  
are those of the author(s) and do not  
necessarily reflect the views or policies  
of the Asian Development Bank.

## **FOREWORD**

The ERD Working Paper Series is a forum for ongoing and recently completed research and policy studies undertaken in the Asian Development Bank or on its behalf. The Series is a quick-disseminating, informal publication meant to stimulate discussion and elicit feedback. Papers published under this Series could subsequently be revised for publication as articles in professional journals or chapters in books.

## CONTENTS

Abbreviations	vii
Abstract	ix
I. INTRODUCTION	1
II. THE RECORD: LOCAL CURRENCY BOND ISSUANCE BY FOREIGN ISSUERS IN SELECTED ASIA-PACIFIC ECONOMIES	4
A. Bond Markets, Policy and Infrastructure Environment at the Time of LCBFI Launch	4
B. Scale and Type of Local Currency Bond Issuance since Launch	7
C. Assessment of the Development Strategies Adopted	15
III. ASSESSMENT: BENEFITS AND POTENTIAL ISSUES OF LCBFI	22
A. Microeconomic Benefits	22
B. Macroeconomic Benefits	24
C. Potential Issues	25
IV. CONCLUSIONS	25
REFERENCES	26

## **ABBREVIATIONS**

ADB	Asian Development Bank
AFMA	Australian Financial Markets Association
CDs	certificates of deposit
CMU	Central Moneymarkets Unit
EBRD	European Bank for Reconstruction and Development
EFN	Exchange Fund Note
GDP	gross domestic product
HKD	Hong Kong dollar
IBRD	International Bank for Reconstruction and Development
LCBFI	local currency bond issuance by foreign issuers
MAS	Monetary Authority of Singapore
MDB	multilateral development bank
MNC	multinational company
Mof	Ministry of Finance
NIB	Nordic Investment Bank
PRC	People's Republic of China
RTGS	Real Time Gross Settlement
SGS	Singapore Government Securities
SIMEX	Singapore International Monetary Exchange

## **ABSTRACT**

This paper surveys the experience of countries in the East Asian region that have introduced local currency bonds by foreign issuers. The countries that are examined include Australia; Hong Kong, China; Japan; Republic of Korea; and Singapore. It is suggested that there are sound reasons for many countries to develop the market for foreign issuers. Benefits and potential issues are analyzed, development policies are reviewed, and concrete policy options are discussed for those countries that are currently considering opening their domestic markets to foreign issuers.

## I. INTRODUCTION

Since the Asian financial crisis, East Asian countries have taken important steps at both national and regional levels to develop local currency bond markets. The objectives of these efforts are (i) to reduce the risks associated with excessive reliance on short-term external financing; (ii) to provide an alternative vehicle for channelling domestic savings into productive investment and reduce dependence on bank lending; and (iii) to support economic and financial integration in East Asia.

The results of these efforts have been impressive: Table 1 shows that total local currency bonds outstanding in East Asia have tripled from \$356 billion in 1997 to \$1.2 trillion in 2003, an annual growth rate of 22.5 percent. Growth was particularly impressive in Thailand at 35 percent, 25 percent in People's Republic of China (PRC), and 23 percent in Republic of Korea (Korea). Measured as a percentage of gross domestic product (GDP), East Asian local currency bond market growth was equally impressive. At the end of 1997, local currency bonds outstanding as a percentage of East Asia's combined GDP was 19 percent. This increased to 44 percent by the end of 2003. The rapid growth of bond markets was led by government bonds, which grew at an annual rate of 27 percent (see Table 2). Corporate and financial bond growth was slower at annual rates of 18 and 20 percent, respectively.<sup>1</sup>

While bond markets have developed quite rapidly across virtually all countries in East Asia, local currency bond issuance by foreign issuers (LCBFI) is concentrated in a small number of advanced countries, namely the existing financial centers of Hong Kong, China; Singapore; as well as the developed countries of Australia and Japan. While Korea allowed LCBFI in 1995, there has been little issue activity since then. Table 2 illustrates that LCBFI is still very limited in most East Asian economies. This is in contrast to the more developed economies where foreign issuance has become a regular feature of domestic bond markets.

Several issues arise in the context of LCBFI: What are the benefits of allowing foreign issuers to issue bonds locally both from a macro and microeconomic perspective? Are there macroeconomic concerns that need to be addressed? What strategy should be pursued to target the development of the LCBFI market? This paper aims to address these key questions in the context of five country case studies in East Asia.

Section II looks at the track record of introducing LCBFI in five economies in the region: Australia; Hong Kong, China; Japan; Korea; and Singapore. It analyzes the economic situation at the time of introduction of LCBFI and the scale and type of LCBFI, and provides an assessment of the development strategies adopted to encourage LCBFI development. Section III provides an assessment of the benefits and potential issues of LCBFI in the context of the country case studies. Finally, Section IV concludes.

---

<sup>1</sup> See ADB's *Asian Bond Monitor* (ADB 2004) for more details on Asian bond market development.



**TABLE 1**  
**SIZE OF EAST ASIAN LOCAL CURRENCY BOND MARKETS, 1997 AND 2003**

	1997		2003	
	SIZE (\$ BILLION)	PERCENT OF GDP	SIZE (\$ BILLION)	PERCENT OF GDP
PRC	116.4	12.9	440.4	31.3
Indonesia	45.1 <sup>1</sup>	29.1 <sup>1</sup>	64.4	26.4
Korea	130.3	25.1	445.7	73.6
Malaysia	57.0	56.4	98.8	95.3
Philippines	18.5	22.4	25.0	31.6
Singapore	23.8	24.9	67.2	73.6
Thailand	9.6	6.1	58.4	40.7
Viet Nam <sup>2</sup>	—	—	2.9	7.4
East Asia	355.5	19.1	1,202.8	44.3
Japan	4,421.9	110.8	8,201.7	176.7
Hong Kong, China	45.8	26.4	71.8	45.7
US	11,997.5	144.5	17,644.8	160.3
EU15	7,094.7	85.8	10,357.3	98.6

<sup>1</sup>Refers to 1999.

<sup>2</sup>Refers to government bonds only.

Sources: All economies: *Asian Bond Monitor* (ADB 2004); for PRC, Korea, Malaysia, Philippines, Thailand: Bank for International Settlements *International Financial Statistics* Table 16A and local currency portion of Table 11; for US and EU15: Bank for International Settlements *International Financial Statistics* Table 16A; for Hong Kong, China: Hong Kong Monetary Authority; for Indonesia: Bank Indonesia and Surabaya Stock Exchange; for Singapore: Monetary Authority of Singapore; for Viet Nam: Ministry of Finance.

**TABLE 2**  
**SIZE OF INDIVIDUAL EAST ASIAN LOCAL CURRENCY BOND MARKETS**

	ANNUAL GROWTH RATE	AMOUNT IN 2003	
	1997–2003	\$ BILLION	PERCENTAGE OF GDP
PRC	24.8	440.4	31.3
Government	27.3	287.4	20.4
Corporate	11.6	12.2	0.9
Financial Institutions	22.0	140.8	10.0
LCBFI	—	—	—
Indonesia <sup>1</sup>	9.3	64.4	26.4
Government	8.1	58.9	24.2
Corporate and Financial Institutions	28.8	5.5	2.3
LCBFI	—	—	—
Korea	22.7	445.7	73.6
Government	30.3	124.3	20.5
Corporate	19.8	157.3	26.0
Financial Institutions	21.2	164.1	27.1
LCBFI	n.a.	0.3	0.05
Malaysia	9.6	98.8	95.3
Government	13.0	40.4	38.9
Corporate	13.7	44.9	43.3
Financial Institutions	-3.6	13.5	13.0
LCBFI	—	—	—
Philippines	5.2	25.0	31.6
Government	4.5	24.0	30.3
Corporate	50.6	1.0	1.3
Financial Institutions	—	—	—
LCBFI	—	—	—
Singapore	18.9	67.2	73.6
Government	19.0	37.1	40.6
Corporate and Financial Institutions	18.8	30.1	33.0
LCBFI	n.a.	1.2	1.3
Thailand	35.2	58.4	40.7
Government	116.3	30.7	21.4
Corporate	13.5	19.3	13.5
Financial Institutions	83.0	8.4	5.8
LCBFI	—	—	—
Viet Nam	—	2.9	7.4
Government	—	2.9	7.4
Corporate	—	—	—
Financial Institutions	—	—	—
LCBFI	—	—	—

<sup>1</sup>Earliest available data are for 1999. Growth rate is computed over 1999–2003.

Sources: *Asian Bond Monitor* (ADB 2004); Bank for International Settlements *International Financial Statistics* Tables 16A, 16B, and local currency portion of Table 11; Indonesia: Bank Indonesia and Surabaya Stock Exchange; Singapore: Monetary Authority of Singapore; Viet Nam: Ministry of Finance.

## II. THE RECORD: LOCAL CURRENCY BOND ISSUANCE BY FOREIGN ISSUERS IN SELECTED ASIA-PACIFIC ECONOMIES

### A. Bond Markets, Policy and Infrastructure Environment at the Time of LCBFI Launch

#### (i) Japan

A brief chronological discussion of the introduction of local currency bonds by foreign issuers in the Asian region must begin with Japan. The first such bonds—quickly dubbed “Samurai bonds”—were issued in 1970 by the Asian Development Bank (ADB). At the time, the local bond market was still at a nascent stage: the government bond market was hardly in existence (total amount of bonds issued in the primary market amounted to only ¥6,300 billion in fiscal year 1970) as the first Japanese government bonds were issued only in November 1965. There was no complete benchmark yield curve. Exchange rates were fixed to the US dollar. Capital flows were restricted and remained tightly regulated until 1980. Under Ministry of Finance (MoF) auspices, the *Kisaikai* (Bond Notation Committee composed of major city banks) set the guidelines for Samurai bonds, governed the eligibility standards for bond issuers (*Tekisai Kijun*) and the capital adequacy requirements (*Zaimu Seigen Joku*) for nonsecured corporate bonds, as well as other related criteria.

The eligibility standards for issuing Samurai bonds were not relaxed until April 1985, at the same time as those relating to Euroyen bonds issued by foreigners. In reviewing applications from potential samurai issuers, the MoF took into consideration the trend of the Japanese capital account balance and the liquidity in the Japanese economy. For the actual issuance of Samurai bonds, the MoF set a quota per quarter year, and employed a queue system. Borrowers, if they agreed upon the terms of underwriting, entered the quota by rotation from the top of the queue. The close regulatory control of the MoF, including over market entry, was not abolished until 1998.

Until 1991, over 20 years after the first Samurai issuance, the Japanese economy and resource allocation was tightly controlled through the Bank of Japan’s window guidance credit control and allocation mechanism. For years, banks remained key players in the bond markets, underwriting between 60 and 90 percent of government, guaranteed, or local government bonds issuances. They also tended to subscribe to about a quarter of Samurai bonds (and corporate bonds) because the Japanese market lacked a sufficient investor base, although this practice was abandoned in 1992.<sup>2</sup> The bond market structure was therefore one in which banks were both subscribers and underwriters. Nevertheless, banks were initially not allowed to trade in bonds. This was deregulated only in 1983, when the MoF also authorized them to sell government bonds over the counter. Until 1985, bond futures were not traded. Foreign securities companies were not admitted as members of the Tokyo Stock Exchange until 1985. Settlement rules proscribed liquidity severely: until 1987, only three settlement days per month were scheduled.

It is thus clear that the introduction of local currency bonds issued by foreign issuers occurred at a relatively early stage in the evolution of Japan’s financial system, significantly in advance of deeper structural reforms toward less government intervention.

---

<sup>2</sup> The samurai market had its own selling system of block purchase by banking syndication. Banks would form syndicates for samurai bonds issued by sovereign entities and international organizations and absorb 25 percent of the issue amount. See Nikkei (1992).

## **(ii) Hong Kong, China**

After Japan, the next domicile of local currency debt issuance by foreign issuers was Hong Kong, China, when in September 1977 Chase Manhattan Bank issued Negotiable Certificates of Deposit (CDs) amounting to HKD100 million with a 5-year maturity. This was the forerunner to the Hong Kong dollar (HKD) corporate debt market. During the 1980s, international banks issued increasing amounts of CDs in Hong Kong, China to secure medium term funding, both for corporate borrowers as well as for project lending (short dated funding was available through the Commercial Paper market).<sup>3</sup> The first multilateral development bank (MDB) foreign bond issue took place in 1989. This was undertaken by the International Bank for Reconstruction and Development (IBRD), which launched one issue each year from 1989 to 1992, after the administrative government granted tax exemption on interest and capital gains for supranational bonds. The ADB became the second MDB issuer in 1992, launching a 7-year bond.<sup>4</sup>

At that time, all trading was still over the counter (OTC), no formal market-making system had developed, and liquidity was modest. It was a dealers' market. The corporate bond market remained embryonic at the time, as bank financing dominated. There was a complete absence of a risk-free benchmark yield curve. Indeed, there hardly was a government bond market, as the administrative government was not a regular issuer in the market. Nor were there any computerized clearing and settlements systems in the 1980s. Volumes were initially very low. The fees adopted in the market were driven by existing practice elsewhere (the euromarkets). Furthermore, the regulations for debt issues, in particular prospectus requirements, were not supportive of the bond market's development. Other obstacles included a poorly developed investor base for fixed income products and, as importantly, small and inefficient derivatives markets limiting hedging opportunities.

The Hong Kong dollar bond market received a major boost with the introduction of the Exchange Fund programme in 1990, which had the explicit aim to develop the bond markets. Central to the development of the Exchange Fund program was the presence of an efficient centralized clearing system, the Central Moneymarkets Unit (CMU), which was set up in March 1990, at the same time that the Exchange Fund program was introduced with the aim of developing Hong Kong, China's financial market infrastructure.

## **(iii) Australia**

Given the state of its economic development, Australia should probably be considered a latecomer to LCBFI. The first foreign issuer of Australian dollar bonds, dubbed "Kangaroo" bonds, was Credit Local de France in 1991. At the time, the Australian economy resembled the continental European economies more than that of the United Kingdom or United States, in the sense that bank finance was predominant. Relative to GDP, Australia's domestic credit provided by the banking

---

<sup>3</sup> In July 1980, Banque Paribas launched the first fixed-rate bond issue for HKD70 million with a maturity of 18 months. This was followed by Arab Banking Corporation, CITIC, and Toyo Communications in 1985; CITIC in 1986; BNP Paribas in 1987; and Bank of Communications and Qantas Airways in 1988.

<sup>4</sup> ADB's issue provided a major fillip to the market as it was the first issue with a maturity exceeding the date for the handover of Hong Kong sovereignty from the British government to the PRC government. By demonstrating confidence post handover, this transaction underpinned the development of the longer end of the curve.

sector was over 90 percent, stock market capitalization about 100 percent, and domestic securities less than 50 percent. The introduction of LCBFI also occurred many years before the significant regulatory reforms that were implemented in Australia in the late 1990s. However, at the time of the introduction of the first Kangaroo bonds, a number of self-regulatory organizations were already in place and the market infrastructure was relatively advanced. For instance, the Australian Financial Markets Association is the national industry body representing almost 200 organizations that participate in the Australian OTC wholesale financial markets. It was formed in 1986 to streamline market practices and establish trading standards in OTC markets, which included trading in foreign exchange, interest rate products, financial derivatives, repurchase agreements, commodities, equity, and electricity derivatives.

#### **(iv) Korea**

In Korea, the first local currency bonds by foreign residents called “Arirang” bonds were issued by ADB, International Bank for Reconstruction and Development, and European Bank for Reconstruction and Development (EBRD) from 1995 to 1997. Total issuance, however, has remained limited. Since 1999, foreign subsidiaries of *chaebols* have been entering the market. Bonds issued by Indonesian chaebol subsidiaries now account for the bulk of Arirang bonds. Such issuance appears to minimize their cost of funding for Indonesian ventures. This way they seem to be able to capitalize on information imperfection, in the form of a reputation advantage for their issuance in their home market, whose proceeds are then swapped into Indonesian currency and used for investments there. Since the Indonesian subsidiaries of Korean firms are likely to have difficulty in accessing local debt and banking markets, this is an example where an advanced financial market can support the competitiveness of domestic firms abroad.

#### **(v) Singapore**

Singapore allowed LCBFI even more recently, when the Monetary Authority of Singapore (MAS) permitted foreign borrowers to issue debt denominated in Singapore dollars (SGD) in August 1998 although they were required to swap the proceeds immediately out of the Singapore dollar for use outside the country. The International Finance Corporation became the first foreign issuer in the Singapore corporate debt market in 1998, launching a SGD300 million 3-year bond issue. Prior to August 1998, foreign issuers were prevented from borrowing in the local corporate bond market by the government’s policy on noninternationalization of the Singapore dollar. Government bond issuance had not previously been aimed at developing large liquid lines in key benchmark maturities. Hence at the time of launch there was little secondary market liquidity in government bonds due to the absence of a sizeable free float, and there was no benchmark bond yield. In terms of liquidity management and hedging, the repo market was immature thereby making it more difficult and costly for primary dealers and investors to finance bond inventories and hedge SGD bond positions. The swap market was undeveloped and illiquid. With the lack of depth in repo and futures and an illiquid swap market, there were very few hedging opportunities to support either the demand or supply sides of the market.

With Singapore property companies the dominant issuers, there was no broad range of issuers on offer and the investor base remained similarly concentrated. Issue sizes were small which,

combined with the buy-and-hold nature of the investors, resulted in an illiquid secondary corporate bond market. A further disadvantage was that trading in the OTC market lacked not only liquidity but also transparency.

In conclusion, it is clear that the introduction of local currency bonds issued by foreign issuers occurred in virtually all cases at a time when the bond markets were hardly developed; the market infrastructure was in its infancy (no benchmark yields, nil or few derivatives and swap markets, nil or few indigenous rating agencies, dominant OTC trading, no market-making); the regulatory environment remained stringent; and government intervention was prevalent. In all cases, a few, illiquid issues started the markets, after policy decisions were taken to pave the way for such issues.

The Asian experience demonstrates that LCBFI can be established—and successfully, at that, as is seen in the next section—even in what would appear to be an adverse environment, where economies remained tightly controlled and not deregulated.

## B. Scale and Type of Local Currency Bond Issuance since Launch

### (i) Japan

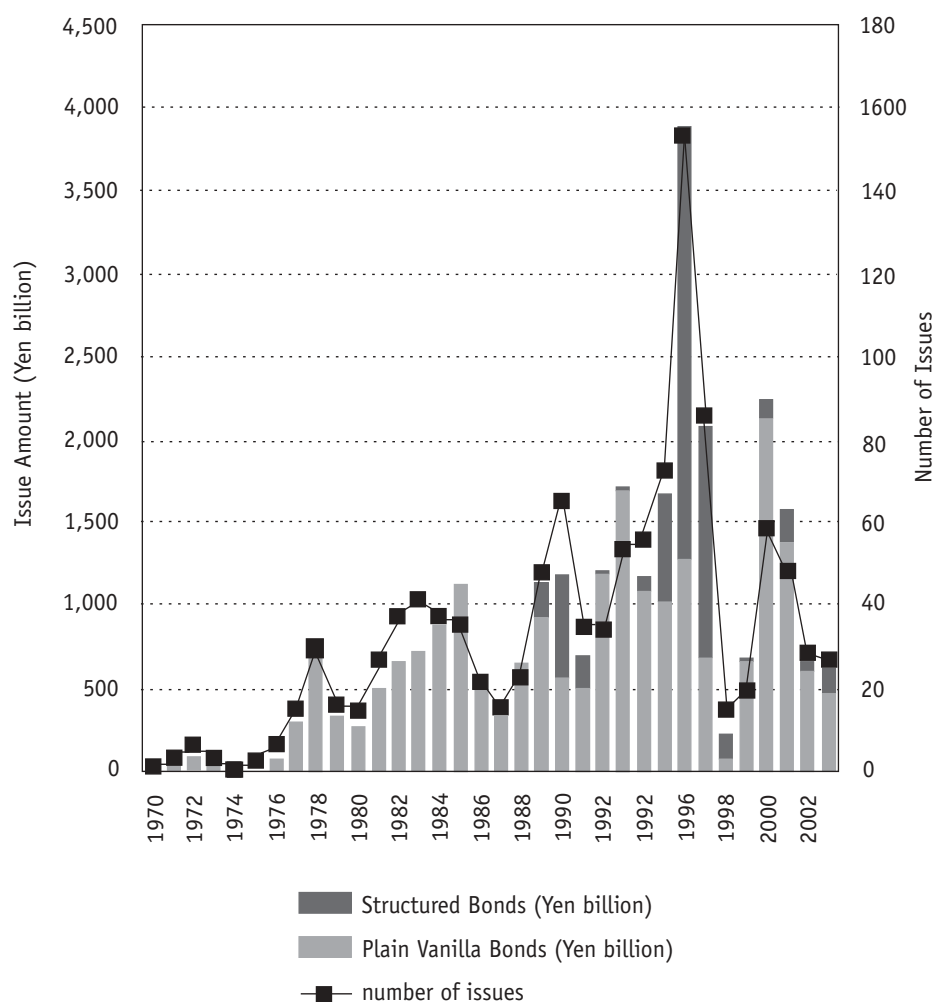
In Japan, the Samurai bond market grew rapidly from its modest origins in 1970. In the first 10 years, over 100 issues took place, raising over Y2 trillion (see Table 3 and Figure 1).

**TABLE 3**  
**THE FIRST TEN YEARS OF LCBFI IN JAPAN: YEN-DENOMINATED FOREIGN BONDS ISSUED IN TOKYO MARKET, 1970-1980, (IN ¥ BILLIONS)**

ISSUER	PUBLIC OFFERINGS		PRIVATE PLACEMENTS		TOTAL		
	NUMBER OF ISSUES	AMOUNT	NUMBER OF ISSUES	AMOUNT	NUMBER OF ISSUES	AMOUNT	PERCENT
International Institutions	24	474	4	38	28	512	22.9
Foreign Governments	57	1160	9	82	66	1242	55.7
Foreign Local Governments	8	124	0	0	8	124	5.6
Government Institutions	11	183	13	128	24	311	13.9
Private Sector	1	20	3	23	4	43	1.9
TOTAL	101	1961	29	271	130	2232	

Source: The Industrial Bank of Japan.

**FIGURE 1**  
**AMOUNT AND NUMBER OF ISSUES OF SAMURAI BONDS, 1970-2002**



Source: Nomura Securities.

Over time, the product range also became more sophisticated to suit investors' needs (see Box 1). Domestically, the largest group of Samurai investors were institutional investors, including various banks, life insurance companies, other types of insurance companies, credit unions, credit cooperatives, and agricultural cooperatives. Other investors were individual investors and enterprises. The amount purchased by the banking system and institutional investors at the inception of the Samurai market formed the major part of the issues whereas the ratio of retail investors was initially quite low.

**Box 1**  
**PRODUCT INNOVATIONS IN THE SAMURAI MARKET**

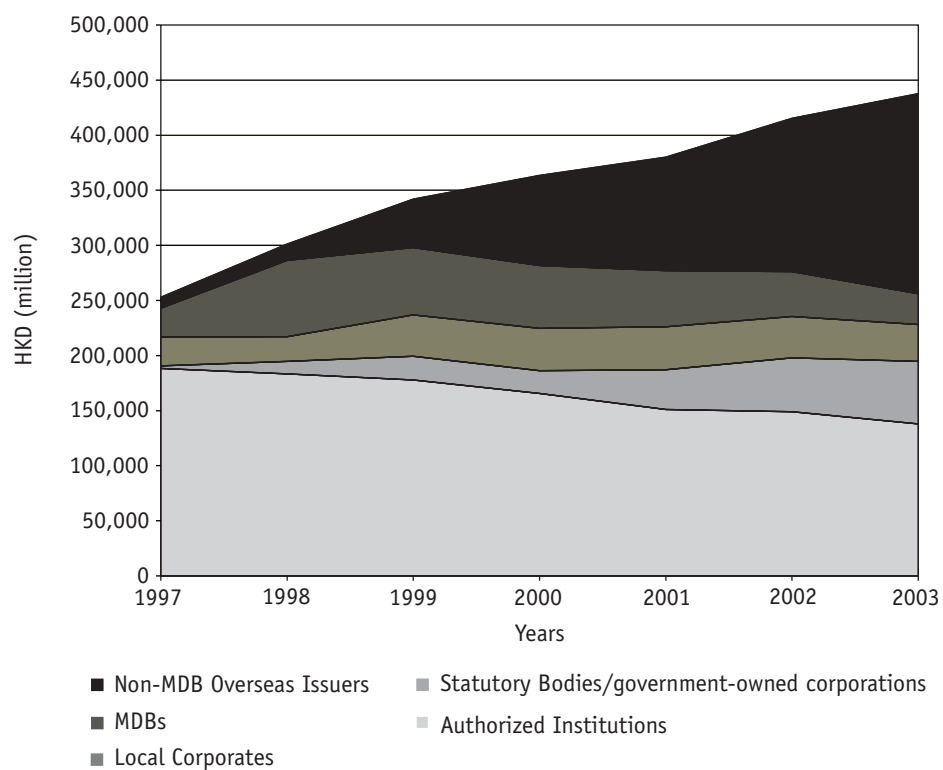
Over time, the product range in the Samurai market has become more sophisticated to suit investors' needs. The level of innovation has remained high, with the continuous introduction of new types of LCBFI, such as dual currency bonds, with the principal denominated in foreign currencies, but yen-denominated coupons (introduced between 1995 and 1999 and offered to retail investors in an environment of a weak yen and low yen yields). In 1996, this type accounted for almost half of Samurai volume. "Knock-in" dual currency bonds were pioneered in 1998, specifying that redemption would be in yen unless the dollar-yen rate fell to or below a trigger value during the life of the bond. "Power reverse dual currency" bonds have been offered since 2000 in an environment of close to zero short-term yen rates. They offer a high fixed coupon for an initial period, followed by variable interest rates that are proportionate to the ratio of the current dollar-yen rate to a reference rate set at launch, with coupons consequently increasing in case of yen appreciation and vice versa. In effect, institutional investors are offered more leveraged coupons, thereby taking on a higher level of foreign exchange exposure risk. Other innovative structures include so-called "Survival" bonds (reverse FRN) and Nikkei-linked bonds (already authorized by the Ministry of Finance, but so far not issued).

**(ii) Hong Kong, China**

The Hong Kong LCBFI market started in 1977, but has gained significant scale only over since 1996 or so. Figure 2 shows the substantial growth of the market with outstanding LCBFI issues accounting for 38 percent of all outstanding bonds in the HKD market (excluding Exchange Fund Notes [EFN]). Figure 3 indicates that LCBFI account for around 50 percent of all new issues (excluding EFNs) over the last years.

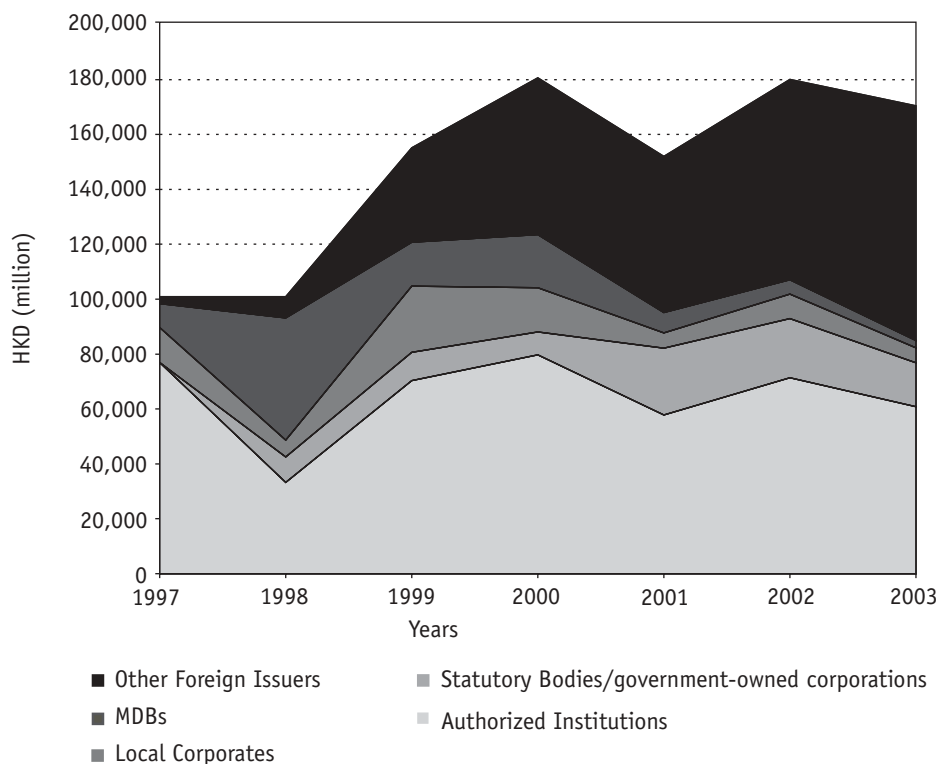


**FIGURE 2**  
**OUTSTANDING BOND ISSUES IN HKD MARKET**



Source: Hong Kong Monetary Authority.

**FIGURE 3**  
**NEW ISSUES OF HKD DEBT SECURITIES BY ISSUER TYPE**



Source: Hong Kong Monetary Authority.

### (iii) Australia

Despite their relative late launch, outstanding Australian Kangaroo bonds amount to A\$35.7 billion in 2004. This corresponds to around 20 percent of all outstanding bonds in Australia. Some 40 percent of bonds were issued by the public sector, and 60 percent by the private sector (see Table 4). Financial intermediaries dominate (82 percent), with banks the single largest sector. Most of these institutions are from the United States and 75 percent have a credit rating of at least AA.

**TABLE 4**  
**KANGAROO BONDS MARKET SUMMARY, JUNE 2004**

Amount Outstanding (A\$ million)	Public sector issuers	14.2
	Private sector issuers	21.4
Issuers by Industry	Banks	37
	Diversified financial services	13
	Utilities	11
	Real estate	3
	Other	4
Issuers by Region (percent)	United States	54
	European Union	28
	United Kingdom	14
	New Zealand	4

Source: Reserve Bank of Australia.

Foreign issuers in Australia tap the market when cross-currency swap spreads offer attractive arbitrage opportunities: after a two-year absence, nonresident issuers returned to the Australian bond market in mid-2003. While these issuers' total Australian dollar borrowings typically represent a small share of their overall borrowings (around 5 percent in the case of supranationals, for example) they are an important source of local currency credit diversification for domestic investors.

The increase in issue activity over the last two years can be attributed to a fall in the relative cost of raising funds in Australian dollars. This cost is driven by corporate bond spreads and cross-currency swap spreads (since issuers typically swap out). Corporate bond spreads have started to fall quite drastically in early 2003 from around 60 basis points over government securities to an average of 20 basis points since then. This tightening of corporate bond spreads can be explained by a shortage of government securities (since the Australian government has reduced borrowing activities due to its fiscal surplus) and by the high credit ratings of issuers that allow investors to view such issues as a close substitute to government securities.

Cross-currency swap spreads have been driven by the increased volume of Australian issuers tapping overseas markets, i.e., borrowing in foreign currency and swapping into Australian dollars (Box 2 provides an overview of swap market dynamics). Record foreign currency bond issuance by Australian entities in 2004 has pushed up the cost of converting foreign currency to Australian dollars and made it cheaper for foreign issuers to do the opposite.<sup>5</sup> At least partly as a result of the record offshore issuance by Australian issuers, the basis swap spread has increased from around 2 basis points late 2002 to almost 12 basis points by mid-2004, making local currency issuance by foreign issuers more cost-efficient.

<sup>5</sup> The strong offshore demand for Australian dollar bonds was driven by the relatively high interest rates and the expected appreciation of the Australian dollar. Three quarters of the offshore bond issues were by non-Australian issuers, and around two thirds of the bonds were sold to Japanese retail investors (so-called "Uridashi" bonds).

(iv) **Korea**

The LCBFI market in Korea has so far remained an insignificant component of the domestic corporate bond market. There have been 30 issues since inception, with an average maturity of 2.4 years and an average issue size of WN45 million (about US\$40m). The market has total current outstanding bonds of only US\$300million equivalent and is thus by far the smallest of the five economies studied. The LCBFI remain dominated by the foreign subsidiaries of chaebols. According to the Reuters Fixed Income Database, apart from the three MDB issues (EBRD, IBRD, ADB), the remaining bonds were all issued by subsidiaries of Korean chaebols and were largely BBB-rated. Five of these had put features and two were privately placed.

**Box 2**  
**SWAP MARKETS IN ACTION: THE AUSTRALIAN EXAMPLE**

The LCBFI market is critically dependent on the availability of well-developed and liquid swap markets. Foreign issuers that raise local currency for domestic purposes typically issue fixed-rate bonds and swap the proceeds into floating-rate liabilities as part of their asset-liability management to reduce interest rate risks.

Foreign issuers that tap local currency markets but do not require local currency for their operations need to swap bond proceeds into a currency of their choice. A cross-currency swap transforms the currency denomination of a debt obligation, for example, from Australian dollars into US dollars. Similar to the United States Internal Revenue Service, borrowers make regular payments in the US dollar floating rate and receive the Australian dollar fixed interest rate to service the underlying bond liabilities. In addition, at the outset of the bond and at the same time as the bonds are issued, the foreign issuer undertakes a principal exchange of the Australian dollar bond proceeds against the equivalent amount in US dollars at the prevailing spot exchange rate. This principal exchange is reversed at the end of the swap at a pre-determined exchange rate.

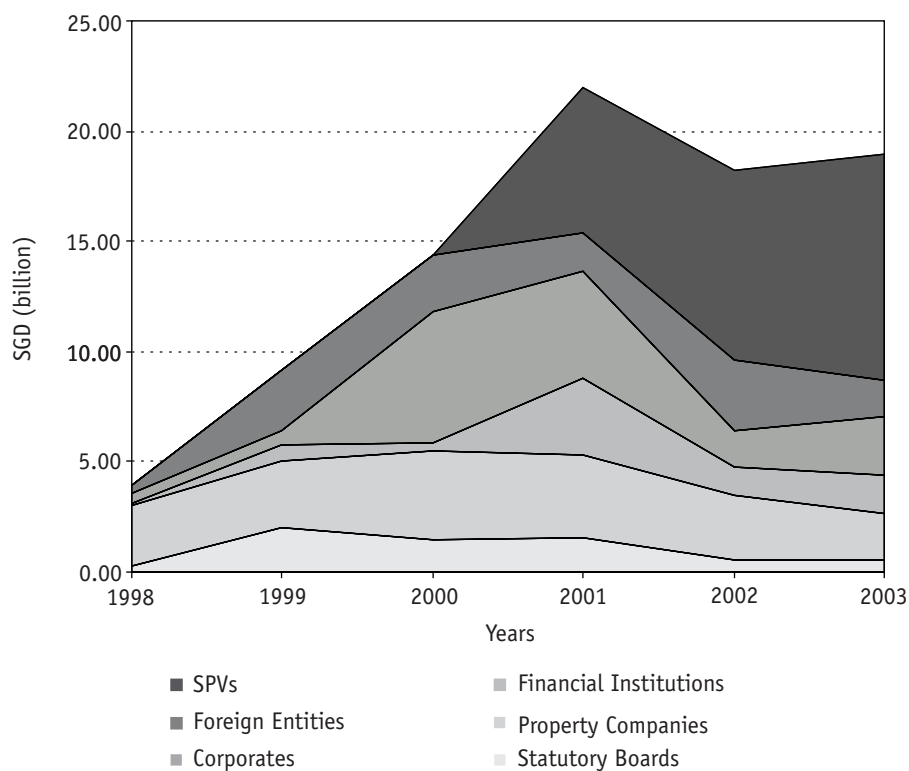
The Australian market is a good example to demonstrate the dynamics and interdependencies of swap and bond markets regarding LCBFI. Historically, there has been more demand for swaps where the counterparty pays an Australian dollar interest rate and receives US dollar interest rate than the other way around. As a result, the counterparty paying the Australian dollars generally has to pay a small premium (the “basis swap spread”) over the Australian floating rate (in addition to demand and supply by issuers, the basis swap curve is also influenced by currency expectations). Thus, the higher the basis swap spread, the more attractive it is to for foreign issuers to issue local currency bonds. On the other hand, if basis swaps become negative, it becomes more cost-efficient for Australian issuers to issue offshore and swap back into Australian dollars. Over the last two years, the dynamics of the basis swap curve have been a key factor determining both LCBFI activity as well as offshore issuance by local investors. Thus, it is important to understand that introducing LCBFI will open the door to local companies raising funds in overseas markets. The end result of such “two-way traffic” in the cross-currency swap market is lower funding costs for both local as well as foreign issuers.

Source: Reserve Bank of Australia.

## (v) Singapore

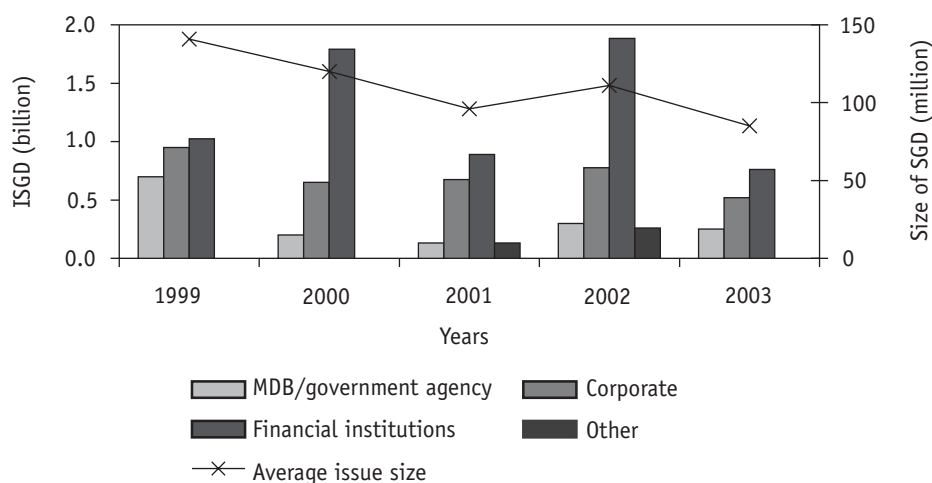
The more recent Singapore market for LCBFI has quickly grown to an annual issuance volume of around SGD2-3 billion, accounting for about 20 percent of annual issues (Figure 4). Since August 1998, a total of SGD15 billion has been raised in the LCBFI market in Singapore. As can be seen from Figure 5, financial institutions have become the dominant issuers and the initially important role of MDBs and government agencies has receded since.

**FIGURE 4**  
**SGD BOND ISSUANCE BY ISSUER TYPE**



Source: Monetary Authority of Singapore.

**FIGURE 5**  
**SGD BOND ISSUANCE BY FOREIGN ISSUERS**



Source: Monetary Authority of Singapore.

### C. Assessment of the Development Strategies Adopted

In most countries, the first and foremost step to establish LCBFI has been the purposeful government policy decision to create such markets. This was followed by active support and development policies to foster their growth. In this section, we discuss the different strategies that were adopted by governments to develop the LCBFI market.

The first step in encouraging foreign issuance activity is typically to attract supranational issuers to the market, especially MDBs, such as the ADB, IBRD, or International Finance Corporation. In many Asian countries, ADB was the first or among the first to issue local currency bonds. The MDBs serve a valuable function in opening local currency markets because they can increase the volume of outstanding bonds, while offering virtually no credit risk (in 2001, for example, the AAA-rated Samurai bonds by IBRD and EBRD carried lower yields than Japanese government bonds). When there was a dearth of blue chip borrowers, as even in Japan in the early 1990s, the MDBs, especially the ADB and IBRD, acted to revitalize the high-grade bond market. Often, they issued innovative bonds, such as the ADB's 1993 Samurai bond issue, with a maturity of 20 years, at the time the longest in the market. In 1989, the World Bank set up a scheme of guarantees of Samurai bonds, issued by developing countries. In 1993, the ADB issued Samurai bonds in Hong Kong, China; Singapore; and Taipei, China for the first time, encouraged by the yen's strength (these were termed "Dragon bonds"). This initiative was aimed to encourage Asian investors to hold yen assets.

Market participants are generally of the view that it is essential to have MDB issuers act as pioneers in the early stages of the local bond market's development, as these borrowers:

- (i) are well-known issuers in international capital markets;
- (ii) have virtually no credit risk;

- (iii) provide risk diversification for local investors; and
- (iv) bring the presence of local bond markets to the attention of international investors.

Since MDBs manage their funding program on a global basis, competitive funding costs are essential. Typically, MDBs swap bond proceeds into floating-rate liabilities based on US-dollar LIBOR. The MDBs would thus only issue local currency bonds if the after-swap funding cost is competitive with that of other markets. Box 3 lists the requirements that MDBs typically have when issuing local currency bonds.

**Box 3**  
**MDB REQUIREMENTS FOR ISSUING LOCAL CURRENCY BONDS**

Supranationals such as MDBs typically have a number of requirements to be able to issue local currency bonds. These requirements stem partly from the MDBs' Charter or Articles of Association, and partly from funding cost targets that typically require issuance at very competitive terms and conditions. Requirements typically include the following:

- (i) **Tax exemptions:** Confirmation that interest payments by the MDB and its paying agents will be exempted from withholding taxes. This requirement is based on the fact that MDBs are granted tax-free status in their member countries.
- (ii) **Domestic rating exemptions:** Since MDBs are typically rated by all three major international rating agencies, securing an additional domestic rating adds little additional value for investors.
- (iii) **Broad investor access:** The ability of all major domestic institutional investors, including insurance companies and pension or provident funds to invest in the MDB bonds increases the distribution and liquidity of bonds, and thus lowers funding costs.
- (iv) **Risk weighting:** Risk weightings of MDB bonds should be no more than 20 percent in line with current Bank for International Settlement guidelines ("Basle 1"). Under the new "Basle 2" guidelines this risk weighting will be reduced to 0 percent.
- (v) **Reserve Eligibility:** Similar to government bonds, MDB bonds may be eligible to be counted against statutory reserve and liquidity requirements imposed on financial institutions. This privilege will make it easier for MDBs to achieve their target level of funding costs.

Other development policies have included sequential deregulatory steps that provided a regular and gradual stimulation of the local currency bond market for foreign issuers.

**(i) Japan**

Again, referring to the country case with the longest history, since 1979, the Japanese MoF has gradually allowed foreign corporations to issue unsecured bonds (beginning with Roebuck's five-year, noncollateralized Samurai corporate issue). Since 1984, further liberalization steps were taken, including a reduction in the required minimum credit rating (from double-A to single A); abolition of an issue ceiling for issues by industrial country sovereigns and international agencies; simplification of issuing procedures for triple A-rated issuers; and from 1986, freeing the issuance of private placements of Samurai bonds by foreign public entities from virtually all restrictions.

In 1988, MoF allowed foreign governments and international institutions to issue yen-denominated Floating Rate Notes by public offering on the Tokyo Stock Exchange for the first time. In 1988, MoF allowed foreign corporations to issue by private placement. The ceiling on a borrower's issuing volume (previously set at a third of a borrower's annual borrowing) was revised and Japanese corporations were allowed to purchase these bonds through private placements (before, only institutional investors could purchase Samurai bonds issued by private placement). In 1991, the minimum rating requirement for foreign governments, central banks, and foreign government-guaranteed institutions was lowered to triple-B, while development policy introduced Japanese government guarantees on bond issuance of emerging market sovereigns (Miyazawa Initiative). In 1996, rating requirements were abolished completely. As a result of the deregulation, the private sector share of the Samurai bond market increased: in 2001 private sector institutions issued about 58 percent of all Samurai bonds.

Another major policy initiative to develop the Samurai market was favorable tax treatment. Until 1988, the principal buyers of Samurai bonds were foreign investors who were estimated to hold around half of all outstanding issues because Samurai bonds were exempted from withholding tax.

## **(ii) Hong Kong, China**

The experience in Hong Kong, China was also characterized by significant government-led initiatives to stimulate the growth of the market for local currency debt by foreign issuers. A milestone was the Exchange Fund Bills program of March 1990, which served as proxy for government debt, providing a reliable, "risk-free", benchmark yield curve for HKD debt. A yield curve was established gradually through the issuance of longer-dated Exchange Fund Bills between 1993 and 1996. By 1996, risk-free benchmarks were issued with tenors up to 10 years, and provided the basis for establishing a yield curve.

As an endorsement of the role of the Exchange Fund Note program in providing a continuous, reliable benchmark yield curve off which other issues would be priced, the World Bank launched the first 3-year bond issue priced over EFNs two weeks after the inaugural 3-year EFN issue, with bonds being priced at a narrow premium to the three-year EFNs. By end-1993 MDBs were becoming increasingly frequent issuers, with a total of six issues launched in 1993 alone. Demand for MDB paper was at least partly driven by regulatory incentives that were provided in the 1990s when MDB paper was made eligible at the discount window, ensuring that banks were keen buyers of these issues. When this privilege was rescinded in September 1998 as part of the government's effort to strengthen the currency board in the face of the Asian financial crisis, MDB issuance became significantly less frequent.

The Exchange Fund program also contributed to growth in the derivatives market. Net daily turnover in OTC foreign exchange derivatives in Hong Kong, China rose by 92 percent in the three years to April 1998 and continued to grow by 14 percent in the ensuing three years to reach USD1.5 billion, largely due to the 42 percent increase in currency swaps. At the same time there was evidence of increasing use of HKD interest rate derivatives between 1995 and 1998 as a result of the high volatility in HKD interest rates caused by the Asian crisis. This trend continued in the three years to 2001 with HKD interest rate derivative transactions increasing by 110 percent due to hedging of interest rate risks associated with greater activity in the debt market and promotion of option-embedded financial products.



Other development policies included the listing of EFNs on the Stock Exchange of Hong Kong (to increase transparency) in 1998, and the posting of official reference prices and yields for benchmark EFNs on Reuters by the Hong Kong Monetary Authority in 2002. Critical to the early development of the Hong Kong bond market was the establishment of an efficient centralized clearing system, the Central Moneymarkets Unit (CMU), which was also set up in March 1990, together with the Exchange Fund program. The latter initiative enhanced Hong Kong's financial market infrastructure, as links with Euroclear and Cedel for HKD-denominated debt helped to promote these bond issues to offshore investors. In December 1996 an interface between the CMU and the Real Time Gross Settlement interbank payment system was established, which enabled the CMU system to provide its members with real-time and end-of-day Delivery versus Payment, significantly reducing settlement risk. Linkages with other Central Securities Depositories in the Asian and Pacific region followed between 1997 and 1999 with Australia, Korea, and New Zealand as well as establishing a "one-stop" debt securities clearing, settlement, and custody platform for Asian investors, placing the CMU at the forefront of cross-border securities trading in the Asian time zone. It is clear that by providing such linkages, access by international investors to trading and settling local currency issues has been made much easier.

### **(iii) Australia**

In Australia it would appear that initially there was no overall development strategy by the government to target foreign bond issuance. The reason for this different emphasis during the first introduction of LCBFI may lie in the situation of the balance of payments. Japan introduced LCBFI soon after it developed a significant trade surplus and hence became a net creditor in the late 1960s. While Hong Kong, China has maintained no significant trade surplus in the past 20 years, it has accumulated significant foreign exchange reserves. Singapore introduced LCBFI in 1998, just when its trade balance surged into surplus. Even in Australia's case, the first LCBFI coincided with a trade surplus in 1991. However, Australia did not have a persistent need to recycle current account surpluses, and therefore did not have to worry about the currency implications of being a creditor nation. More recently, however, government policy has been become targeted at attracting highly rated foreign issuers. This stems from the fact that such issues can be viewed as substitutes for government securities. Moreover, since the Australian government has been reducing its issuance program due to persistent fiscal surpluses, it was keen to ensure that other highly rated issuers enter the market to meet investor demands for high-quality, local currency bonds. Thus, the Reserve Bank of Australia broadened the eligibility criteria for market operations at the margin, to include a wider range of bonds issued by foreign governments and supranationals.<sup>6</sup>

### **(iv) Korea**

In the case of Korea, the current government has vowed to continue reform of the domestic financial system with the explicit objective of ensuring that Korea (by 2010) is an international financial center on par with Hong Kong, China and Singapore. One critical feature of such a plan will be to develop the LCBFI market. Given that there have been virtually no issues by foreign issuers over

---

<sup>6</sup> All of these eligible issuers are AAA-rated and include the MDBs as well as other agencies such as KfW, Nordic Investment Bank, as well as some German Landesbanken, and one sovereign (Republic of Austria).

the last years, except for the three issues by MDBs between 1995 and 1997, the government has been studying the reasons for this phenomenon. While one reason is the lack of favorable cross-currency swap spreads, market participants have pointed out that extensive regulatory requirements may have contributed to deterring LCBFI. These include extensive disclosure requirements (most of which require Korean language documentation), onerous approval requirements in case proposed bond terms deviate from standard terms and conditions, and the requirement that foreign issuers need to get credit ratings from at least two out of the three local rating agencies. These extensive regulatory requirements have made it difficult for foreign issuers to tap the Korean market when a window of opportunity arises in the cross-currency swap market. Recently, the government has therefore begun to address some of these regulatory issues. The regulation that limited foreign issuers to an issue size of up to KRW5 billion was lifted in July 2004. Foreign issuers may be exempted from the current requirement to publish financial statements according to Korean accounting standards, and changes to the withholding tax treatment are currently under consideration. It remains to be seen whether these measures will be sufficient to jump-start the nascent Arirang bond market.

#### (v) Singapore

The market for local currency bonds issued by foreign issuers in Singapore started with the decision by MAS to introduce such bonds in August 1998. This decision occurred after careful consideration and the authorities proceeded carefully, adopting a step-by-step approach. Easing the policy of noninternationalization of the Singapore dollar was a critical success factor in opening the local bond market to foreign issuers (Table 5 sets out the liberalization steps).

**TABLE 5**  
**MEASURES TO EASE TO THE POLICY OF NONINTERNATIONALIZATION OF THE SINGAPORE DOLLAR**

DATE	OBJECTIVE	EVENT
13-Aug-98	Foster development of the capital markets	Notice to Banks MAS 621 replaced by MAS Notice 757.
	Supply side: increase international participation in SGD capital markets	Relaxation of rules to permit bond issuance by foreign entities where the proceeds are to be used outside Singapore, i.e., retain policy that bond proceeds must be swapped out of SGD at the time of launch.
	Enhance liquidity in Singapore government securities market	Allow nonresidents to engage in Singapore dollar repurchase agreements in SGS subject to SGD 20 million MAS consultation limit.
26-Nov-99		MAS Notice 757 revised.
	Demand side: enhance portfolio diversification opportunities	Relaxation of credit rating requirement for foreign issuers (single-A) to allow all sovereigns (rated or unrated), all rated foreign corporates, and unrated foreign corporates provided the investor base is restricted to "sophisticated" investors.
	Extend hedging alternatives	Banks permitted to freely transact in Singapore dollar OTC interest rate derivatives such as interest rate

(continued next page)

TABLE 5 (CONTINUED)

DATE	OBJECTIVE	EVENT
		swaps, forward rate agreements, interest rate options and swaptions without MAS consultation. <sup>7</sup> However banks are required to submit monthly reports detailing all interest rate derivative transactions in excess of SGD5 million with non-Singapore counterparties.
	Facilitate trading and deepen bond market liquidity	SGD20 million MAS consultation limit for Singapore dollar repurchase agreements in SGS by nonresidents lifted.
06-Dec-00		MAS Notice 757 revised.
	Broaden investor base for SGD assets	Banks permitted to lend SGD to nonresidents for investment purposes in Singapore. Banks can also extend SGD credit facilities to nonresidents to fund offshore activities as long as the SGD proceeds are swapped to foreign currency.
	Extend hedging facilities	Banks allowed to transact in SGD currency options with other banks and financial institutions in Singapore that are regulated under MAS Notice 757 or its equivalent.
20-Mar-02		MAS Notice 757 revised.
	Improve bond market liquidity	Exempt all individuals and nonfinancial entities (including corporate treasury centers) from SGD lending restrictions of the noninternationalization policy.
	Further deepen hedging opportunities	Allow nonresident financial entities to: transact freely in asset swaps, cross-currency swaps, and cross-currency repos, <sup>8</sup> lend any amount of SGD-denominated securities in exchange for both SGD and foreign currency denominated collateral, <sup>9</sup> transact freely in SGD foreign exchange options with nonresident entities. <sup>10</sup>
May-04		MAS Policy 757 renamed "Lending of SGD to Non-Resident Financial Institutions."
	Increase flexibility of nonfinancial foreign issuers	Nonresident, nonfinancial issuers of SGD bonds no longer required to swap/convert the SGD proceeds into foreign currency before remitting abroad.

<sup>7</sup> In September 1999, the Singapore International Monetary Exchange had introduced the SGD 3-month interest rate futures contract with participation open to residents and nonresidents.

<sup>8</sup> Previously such transactions were treated as forms of SGD lending.

<sup>9</sup> Previously, lending of SGD securities in excess of SGD5 million had to be fully collateralized by SGD collateral.

<sup>10</sup> Previously, financial institutions had to obtain documentary proof showing that SGD foreign exchange option transactions with nonresident entities were for hedging purposes.

In Singapore's case, MDBs and government agencies have not been particularly active borrowers within the category of foreign issuers, possibly due to the availability of high-quality local credits. Rather, foreign financial institutions have become increasingly frequent issuers, accounting for almost 50 percent of issuance in 2003.

In November 1999, the MAS relaxed the requirement for a minimum issue size of SGD100 million and the average size of issues launched by foreign borrowers quickly fell below SGD100 million. This could be explained by the fact that sophisticated foreign issuers are comfortable launching transactions as small as SGD10 million off Euro Medium Term Note programs.

Tax incentives were also directed to facilitate issuance by foreign borrowers. Thus, in the 1999 budget it was announced that where certain foreign issuers swap the proceeds of a SGD bond issue into a foreign currency with an approved Singapore counterparty, payments under the cross-currency swap will be tax-exempt. In addition, in March 1999 the Singapore government announced a tax incentive scheme to attract financial institutions to boost their local debt teams and base bond origination, trading, and distribution in Singapore under the "Approved Bond Intermediary" scheme. The scheme (which was later folded into the "Financial Sector Incentive" scheme) provides for highly advantageous tax rates for approved institutions and has contributed to international banks building up their Singapore debt teams—an important condition to attract international issuers to the local market.

In summary, measures designed to successfully develop LCBFI markets typically include the following:

- (i) regulatory change to allow LCBFI and broad publication of government intentions;
- (ii) attracting MDBs and other supranationals to issue in the local market by providing regulatory and tax incentives, thus sending a signal to the global market, that the domestic market is "open for business" for foreign issuers;
- (iii) providing a conducive regulatory environment in terms of disclosure and documentation requirements;
- (iv) regulatory flexibility to approve product innovations that meet investor and issuer demands;
- (v) establishing links to international settlement and clearing systems, thus facilitating the purchase of LCBFI by international investors through their own familiar intermediaries.

### III. ASSESSMENT: BENEFITS AND POTENTIAL ISSUES OF LCBFI

The development of LCBFI markets has a number of advantages, both from a microeconomic and macroeconomic perspective. Microeconomic issues are first discussed as they form the basis for the macroeconomic discussions. Potential issues related to LCBFI, in particular regarding exchange rate impact and possible crowding out, are then examined.

#### A. Microeconomic Benefits

Regarding microeconomic benefits of developing the LCBFI market, four main beneficiaries can be identified: domestic and foreign issuers, as well as domestic and foreign investors. Clearly, a national government is concerned with the benefits that accrue to local issuers and investors, and not foreign ones. This section therefore takes the domestic policy lens. It is important to realize, however, that domestic and foreign players are *interdependent*, i.e., unless a “win-win” situation arises for both groups, transactions will not proceed and markets will not develop, and thus ultimately it is the local players who lose out in the process.

Regarding foreign issuers, there are issuers that raise local currency funds for their operations in the host country, and those that tap the local market only if it offers efficient funding opportunities after swapping out the proceeds into another currency. The first type of issuer is typically a local subsidiary of a multinational company (MNC). The impact of issuing a local currency bond is really no different from any other local company raising funds, and there is therefore no reason not to allow such issues. In fact, in most countries, local currency bond issues by subsidiaries of MNCs have been allowed years before foreign issuers were allowed to swap out proceeds. The benefits of allowing MNC subsidiaries to issue local currency bonds rather than forcing them to import capital are clear: MNC subsidiaries provide diversification opportunities for local investors, are often highly rated, and deepen the local corporate bond market. There is little risk of “crowding out” in the capital market by such issues; in fact there may be a “crowding in” effect, as MNCs may be more accustomed to issuing bonds than local corporates and thus set an example for other local corporates.<sup>11</sup>

Foreign issuers that tap the local market and then convert the proceeds into a currency of choice bring a different set of benefits to the local market: first, as was mentioned in the earlier discussion of cross-currency swap markets, the existence of a swap market has significant potential benefits for local players when hedging offshore borrowings. Unless an active and liquid swap market exists, currency exposures resulting from international borrowings are hard to hedge and can lead to significant currency mismatches (see Box 4). Developing the LCBFI market can thus help to reduce funding costs for local issuers that want to tap overseas markets for their funding needs, for example to raise funding in larger size or longer tenors than are available in the local market. Such local companies require counterparties to hedge the currency risk associated with offshore borrowing, which foreign issuers tapping the local currency market will readily provide. Thus, developing the LCBFI market offers local companies the opportunity to borrow offshore and hedge currency risks by entering cross-currency swaps with foreign issuers, an important

---

<sup>11</sup> The first “Sukuk” or Islamic bond issue in Malaysia, for example, was undertaken by the local Shell subsidiary in the early 1990s, setting off a string of issuances by other local corporates.

improvement over past practices of leaving such borrowings unhedged, which had contributed to the severity of the Asian financial crisis.

**Box 4**  
**WHY CURRENCY MISMATCHES MATTER**

In a recent publication, Goldstein and Turner (2004) analyze the issue of currency mismatches in emerging markets.<sup>1</sup> Currency mismatches occur when assets and liabilities are denominated in different currencies such that net worth and/or net income are sensitive to changes in the exchange rate. Borrowers in many emerging markets have at times faced currency mismatches on a massive scale. Foreign-currency denominated liabilities have frequently financed local-currency activities, and too often, the stock of foreign currency-denominated assets has been comparatively limited. In such cases, a large and unexpected depreciation of the domestic currency can destroy much of the net worth of firms and households and initiate a wave of insolvencies, a financial crisis, and a deep fall in economic output.

The authors cite extensive empirical evidence that in virtually all of the financial crises in emerging markets in the 1990s, currency mismatches had played an important role. They further observe that the largest output falls have occurred in those emerging economies with large currency mismatches. But currency mismatches not only contribute to causing financial crises, they also make crisis management much more difficult since they constrain the willingness of the monetary authority to reduce interest rates in a recession (for fear of initiating a large fall in the currency that would bring with it large-scale insolvencies). The mismatching also produces a “fear of floating” on the part of emerging economies, sometimes inducing them to make currency-regime choices that are not in their own long-term interest.

So why do borrowers opt to enter into such currency mismatches in the first place? Currency mismatches typically occur when borrowers tap overseas markets, either because there are insufficient local financial resources available, tenors in the local market are too short, or borrowing offshore offers lower interest rates. While borrowers from developed economies are typically able to borrow internationally in their domestic currency (or enter a fully-hedged transaction if borrowing in a foreign currency), borrowers from emerging markets are often unable to do so. In recent research, Eichengreen et al.<sup>2</sup> refer to borrowing internationally in foreign currency on an unhedged basis as “original sin” and attribute countries’ inability to borrow in their domestic currency from international investors to imperfections in international capital markets. In contrast, Goldstein and Turner argue that countries can reduce the extent of currency mismatches by developing local capital markets, thus reducing the need to borrow offshore, and by strengthening the local macroeconomic and institutional framework, thus attracting international investors to lend in local currency. Interestingly, there is general agreement among all authors that no country has been able to reduce the extent of “original sin” without first developing a deep and liquid domestic bond market.

Another set of benefits of actively developing the LCBFI market accrues to investors, both international and domestic. Foreign investors are typically attracted by the high-quality issuer names that typically issue LCBFI. These include not only MDBs and other supranationals, but also large and highly rated banks, and even sovereign governments and their associated agencies. Once international investors develop coverage of certain local currency markets, they are more likely to start looking at the local issuers as well. Thus, an important benefit for the local issuers is that they are more likely to be able to borrow from international investors in local currencies, once the LCBFI market is developed and international investors have become regular investors in local currency bonds.

Thus, an important “side-effect” of introducing LCBFI is the fact that local issuers will eventually be able to avoid the kind of currency mismatches that they incur when restricted to borrowing from foreign investors in foreign currencies.

Further, LCBFI has important diversification advantages for local investors, as local investors are often overexposed to local issuers whose credit default risk tends to be highly correlated. Foreign issuers typically have credit default risks that display only low degrees of correlation with local events and can therefore significantly improve risk-adjusted returns for local investors and increase the resilience of local investors’ portfolios to local and systemic credit risks. Thus, LCBFI is often highly sought after by local investors, especially when local investors are limited in their ability to diversify their portfolio internationally due to regulatory or capital account restrictions.

## **B. Macroeconomic Benefits**

The previous section has shown that developing the LCBFI market can help to reduce currency mismatches in a number of ways for local corporate issuers, as foreign issuers provide a natural counterpart for local companies borrowing offshore. On a macro level, LCBFI can also help reduce the currency risks that some of the East Asian countries currently face and that are caused by the large current account surpluses in the region. Throughout history, creditor nations have tended to lend to overseas borrowers in the currency of the lender. In contrast, the leading net creditor nations today, which are largely in East Asia, have been extending loans in US dollars, instead of their own currencies. This situation is at least partly attributable to the legacy of the Bretton-Woods system, which used the US dollar as the anchor currency. Unusually, in terms of monetary history, this leaves the creditors open to substantial currency risk. This risk is exacerbated in an era where the outstanding balance of foreign government bonds held by East Asian central banks has reached record amounts, and where leading international policymakers are calling for a devaluation of the world’s leading currencies against the currencies of the East Asian creditor nations. Needless to mention, such dollar devaluation would result in significant losses on the outstanding overseas loans.

In this situation it is advisable to encourage the lending by East Asian investors in their local currencies to foreign entities. A step in this direction would be the introduction and expansion of local currency bonds by foreign issuers. Local currency bonds by foreign issuers allow foreign investment without currency risk—the benefits enjoyed by most creditor nations (such as the United Kingdom and the United States) in the past. In addition, for countries that have significant current account surpluses, the introduction of LCBFI markets has positive implications for the balance of payments as such transactions are booked as capital outflows. Thus, LCBFI helps to reduce the current account surplus through capital account outflows by partially recycling such surpluses, while at the same time shifting currency risk from creditor to debtor.

In countries where the government is running a fiscal surplus, foreign bonds by highly rated issuers, if sufficiently liquid, can substitute as benchmark issues at the margin when the government reduces its borrowing program, as the example of Australia has illustrated where foreign issuers play an important role in meeting local investor demands for highly rated credits.

## C. Potential Issues

Policymakers have two primary concerns when considering the LCBFI market: first, that such issues may lead to “crowding out” of local issuers including the government. Second, that swap-driven issuance may have an adverse impact on exchange rate volatility or even lead to depreciation pressure on the exchange rate. Each issue is discussed in turn.

Concerning potential “crowding out”, it is clear from the country case studies that such concerns are unfounded. Foreign and local issuance often goes hand in hand. Specifically, in Australia, for example, foreign issuers offer high credit-rated alternatives otherwise lacking in the market. Similarly, in Hong Kong, China and in Singapore, foreign issuers bring additional diversity to the local bond market that is missing given the low issuance volume of the government and the small base of local issuers. Thus, foreign issuers fulfill an important role in meeting local investors’ demand for highly rated, low-risk bonds, thereby acting as substitutes rather than complements. In Japan, foreign issuers have also played an important role in stepping up issue activity—at least partly encouraged by government policy—when local issue activity was low. Given today’s size of the Japanese bond market (the second-largest in the world), LCBFI, even though playing an important role, is minute compared to total outstanding bonds, accounting for a mere 0.8 percent. Crowding out is therefore clearly not an issue.

Regarding possible effects on the exchange rate when large issues get swapped into another currency in one large outflow, this issue may be relevant for markets where foreign exchange trading is low.

In Korea, for example, there have been some concerns that the exchange rate may be affected by swapping transactions. However, with daily market volume in the exchange rate market at \$20 billion equivalent and issue sizes of LCBFI of, say \$100 million, this would seem highly unlikely. In addition, of course, given that there is significant upward pressure on most East Asian exchange rates at the moment, LCBFI—if it were to have any impact at all—would actually contribute to reducing such pressures. Market participants believe that even in the smaller economies that may have downside pressure on the exchange rate, markets can easily absorb swapping transactions without any adverse impact on the exchange rate. It should be added, of course, that since LCBFI issue volume is ultimately under the control of the government, it can regulate the issuance flow and increase or decrease the volume as required by market considerations.

Thus, in summary, in most cases there would be little reason for policy concern caused by LCBFI. Given that the government can retain regulatory control, a step-by-step approach can be implemented that allows regulators to gradually build up issuance volume and monitor the impact on key policy variables. Should it perceive adverse effects (contrary to our expectations) issuance volume can always be adjusted.

## IV. CONCLUSIONS

This paper reviews the experience of five East Asian economies that have permitted local currency bond issuance by foreign issuers. Japan first introduced Samurai bond issues in 1970 and since then the Samurai market has become an important part of the Japanese bond market with total outstanding bonds of Y7,000 billion (\$68 billion equivalent) in 2004. Hong Kong, China was the second market



in East Asia to allow nonresidents to issue local currency bonds in 1977. Since then LCBFI has grown substantially and in 2003 such issues accounted for 23 percent of all local bond issues in the territory. Australia was a relative latecomer to the LCBFI market, only permitting foreign issuers to enter the market in 1990. Since then, and especially over the last few years, LCBFI has taken off rapidly. Today, about 20 percent of all outstanding bonds in Australia are issued by nonresidents. Korea liberalized entry by foreign issuers in 1995. However, after the issue of three supranationals between 1995 and 1997, issue activity has remained marginal, partly due to cumbersome regulatory requirements. In Singapore, entry was liberalized in 1998 and issue activity has picked up steadily with LCBFI accounting for between 10-20 percent of annual issuance volume over the last four years.

The paper has argued that LCBFI has a number of economic benefits. These include microeconomic benefits for local as well as foreign investors and issuers that result in a “win-win” situation for all parties involved. Macroeconomic benefits include the fact that by introducing LCBFI, countries are able to raise funds from international investors without associated currency risk.

From the analysis in the paper, a number of policy conclusions emerge for countries that are considering opening their markets to foreign issuers. First, it is clear that the introduction of foreign issuers occurred at a time when the local bond market was at a relatively early stage of development. Thus, there is no need to wait for the local market to reach an advanced stage of development before allowing foreign issuers to enter the market. Second, the development of the LCBFI market needs to be strategically driven by the government. Government policy and the chosen regulatory approach and incentives provided play a key role in developing the market. At the same time, government can retain effective control over the LCBFI market if considered necessary. Third, the potential issues that are sometimes associated with permitting foreign issuers into the local market, such as an adverse impact on the foreign exchange regime or possible “crowding out”, did not play an important role in the countries studied. Given the relatively small size of the LCBFI market, it is argued that foreign and local issuers have a complementary rather than a competing role to play in developing the local currency bond market.

## REFERENCES

- Asian Development Bank, 2004. *Asian Bond Monitor*. Manila, Philippines.
- Bank for International Settlements, various years. *International Financial Statistics*. Basel, Switzerland.
- Goldstein M., and P. Turner, 2004, *Controlling Currency Mismatches in Emerging Markets*. Institute for International Economics, Washington D.C.
- Eichengreen, B., R. Hausmann, and U. Panizza, 2003. “The Mystery of Original Sin.” In B. Eichengreen and R. Hausmann, eds., *Debt Denomination and Financial Instability in Emerging Market Economics*. University of Chicago Press. Forthcoming in February 2005.
- Nikkei, 1992. “Bank Jettison Samurai Bond Quota.” 24 April. Tokyo.

# PUBLICATIONS FROM THE ECONOMICS AND RESEARCH DEPARTMENT

## ERD WORKING PAPER SERIES (WPS)

(Published in-house; Available through ADB Office of External Relations; Free of Charge)

- |   |   |
|---|---|
| <p>No. 1 Capitalizing on Globalization<br/>—<i>Barry Eichengreen, January 2002</i></p> <p>No. 2 Policy-based Lending and Poverty Reduction: An Overview of Processes, Assessment and Options<br/>—<i>Richard Bolt and Manabu Fujimura, January 2002</i></p> <p>No. 3 The Automotive Supply Chain: Global Trends and Asian Perspectives<br/>—<i>Francisco Veloso and Rajiv Kumar, January 2002</i></p> <p>No. 4 International Competitiveness of Asian Firms: An Analytical Framework<br/>—<i>Rajiv Kumar and Doren Chadee, February 2002</i></p> <p>No. 5 The International Competitiveness of Asian Economies in the Apparel Commodity Chain<br/>—<i>Gary Gereffi, February 2002</i></p> <p>No. 6 Monetary and Financial Cooperation in East Asia—The Chiang Mai Initiative and Beyond<br/>—<i>Pradumna B. Rana, February 2002</i></p> <p>No. 7 Probing Beneath Cross-national Averages: Poverty, Inequality, and Growth in the Philippines<br/>—<i>Arsenio M. Balisacan and Ernesto M. Pernia, March 2002</i></p> <p>No. 8 Poverty, Growth, and Inequality in Thailand<br/>—<i>Anil B. Deolalikar, April 2002</i></p> <p>No. 9 Microfinance in Northeast Thailand: Who Benefits and How Much?<br/>—<i>Brett E. Coleman, April 2002</i></p> <p>No. 10 Poverty Reduction and the Role of Institutions in Developing Asia<br/>—<i>Anil B. Deolalikar, Alex B. Brillantes, Jr., Raghav Gaiha, Ernesto M. Pernia, Mary Racelis with the assistance of Marita Concepcion Castro-Guevara, Liza L. Lim, Pilipinas F. Quising, May 2002</i></p> <p>No. 11 The European Social Model: Lessons for Developing Countries<br/>—<i>Assar Lindbeck, May 2002</i></p> <p>No. 12 Costs and Benefits of a Common Currency for ASEAN<br/>—<i>Srinivasa Madhur, May 2002</i></p> <p>No. 13 Monetary Cooperation in East Asia: A Survey<br/>—<i>Raul Fabella, May 2002</i></p> <p>No. 14 Toward A Political Economy Approach to Policy-based Lending<br/>—<i>George Abonyi, May 2002</i></p> <p>No. 15 A Framework for Establishing Priorities in a Country Poverty Reduction Strategy<br/>—<i>Ron Duncan and Steve Pollard, June 2002</i></p> | <p>No. 16 The Role of Infrastructure in Land-use Dynamics and Rice Production in Viet Nam's Mekong River Delta<br/>—<i>Christopher Edmonds, July 2002</i></p> <p>No. 17 Effect of Decentralization Strategy on Macroeconomic Stability in Thailand<br/>—<i>Kanokpan Lao-Araya, August 2002</i></p> <p>No. 18 Poverty and Patterns of Growth<br/>—<i>Rana Hasan and M. G. Quibria, August 2002</i></p> <p>No. 19 Why are Some Countries Richer than Others? A Reassessment of Mankiw-Romer-Weil's Test of the Neoclassical Growth Model<br/>—<i>Jesus Felipe and John McCombie, August 2002</i></p> <p>No. 20 Modernization and Son Preference in People's Republic of China<br/>—<i>Robin Burgess and Juzhong Zhuang, September 2002</i></p> <p>No. 21 The Doha Agenda and Development: A View from the Uruguay Round<br/>—<i>J. Michael Finger, September 2002</i></p> <p>No. 22 Conceptual Issues in the Role of Education Decentralization in Promoting Effective Schooling in Asian Developing Countries<br/>—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 23 Promoting Effective Schooling through Education Decentralization in Bangladesh, Indonesia, and Philippines<br/>—<i>Jere R. Behrman, Anil B. Deolalikar, and Lee-Ying Son, September 2002</i></p> <p>No. 24 Financial Opening under the WTO Agreement in Selected Asian Countries: Progress and Issues<br/>—<i>Yun-Hwan Kim, September 2002</i></p> <p>No. 25 Revisiting Growth and Poverty Reduction in Indonesia: What Do Subnational Data Show?<br/>—<i>Arsenio M. Balisacan, Ernesto M. Pernia, and Abuzar Asra, October 2002</i></p> <p>No. 26 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?<br/>—<i>Juzhong Zhuang and J. Malcolm Dowling, October 2002</i></p> <p>No. 27 Digital Divide: Determinants and Policies with Special Reference to Asia<br/>—<i>M. G. Quibria, Shamsun N. Ahmed, Ted Tschang, and Mari-Len Reyes-Macasaquit, October 2002</i></p> <p>No. 28 Regional Cooperation in Asia: Long-term Progress, Recent Retrogression, and the Way Forward<br/>—<i>Ramgopal Agarwala and Brahm Prakash, October 2002</i></p> |
|---|---|

- No. 29 How can Cambodia, Lao PDR, Myanmar, and Viet Nam Cope with Revenue Lost Due to AFTA Tariff Reductions?  
—*Kanokpan Lao-Araya*  
November 2002
- No. 30 Asian Regionalism and Its Effects on Trade in the 1980s and 1990s  
—*Ramon Clarete, Christopher Edmonds, and Jessica Seddon Wallack*  
November 2002
- No. 31 New Economy and the Effects of Industrial Structures on International Equity Market Correlations  
—*Cyn-Young Park and Jaejoon Woo*  
December 2002
- No. 32 Leading Indicators of Business Cycles in Malaysia and the Philippines  
—*Wenda Zhang and Juzhong Zhuang*  
December 2002
- No. 33 Technological Spillovers from Foreign Direct Investment—A Survey  
—*Emma Xiaoqin Fan*  
December 2002
- No. 34 Economic Openness and Regional Development in the Philippines  
—*Ernesto M. Pernia and Pilipinas F. Quising*  
January 2003
- No. 35 Bond Market Development in East Asia: Issues and Challenges  
—*Raul Fabella and Srinivasa Madhur*  
January 2003
- No. 36 Environment Statistics in Central Asia: Progress and Prospects  
—*Robert Ballance and Bishnu D. Pant*  
March 2003
- No. 37 Electricity Demand in the People's Republic of China: Investment Requirement and Environmental Impact  
—*Bo Q. Lin*  
March 2003
- No. 38 Foreign Direct Investment in Developing Asia: Trends, Effects, and Likely Issues for the Forthcoming WTO Negotiations  
—*Douglas H. Brooks, Emma Xiaoqin Fan, and Lea R. Sumulong*  
April 2003
- No. 39 The Political Economy of Good Governance for Poverty Alleviation Policies  
—*Narayan Lakshman*  
April 2003
- No. 40 The Puzzle of Social Capital  
A Critical Review  
—*M. G. Quibria*  
May 2003
- No. 41 Industrial Structure, Technical Change, and the Role of Government in Development of the Electronics and Information Industry in Taipei, China  
—*Yeo Lin*  
May 2003
- No. 42 Economic Growth and Poverty Reduction in Viet Nam  
—*Arsenio M. Balisacan, Ernesto M. Pernia, and Gemma Esther B. Estrada*  
June 2003
- No. 43 Why Has Income Inequality in Thailand Increased? An Analysis Using 1975-1998 Surveys  
—*Taizo Motonishi*  
June 2003
- No. 44 Welfare Impacts of Electricity Generation Sector Reform in the Philippines  
—*Natsuko Toba*  
June 2003
- No. 45 A Review of Commitment Savings Products in Developing Countries  
—*Nava Ashraf, Nathalie Gons, Dean S. Karlan, and Wesley Yin*  
July 2003
- No. 46 Local Government Finance, Private Resources, and Local Credit Markets in Asia  
—*Roberto de Vera and Yun-Hwan Kim*  
October 2003
- No. 47 Excess Investment and Efficiency Loss During Reforms: The Case of Provincial-level Fixed-Asset Investment in People's Republic of China  
—*Duo Qin and Haiyan Song*  
October 2003
- No. 48 Is Export-led Growth Passe? Implications for Developing Asia  
—*Jesus Felipe*  
December 2003
- No. 49 Changing Bank Lending Behavior and Corporate Financing in Asia—Some Research Issues  
—*Emma Xiaoqin Fan and Akiko Terada-Hagiwara*  
December 2003
- No. 50 Is People's Republic of China's Rising Services Sector Leading to Cost Disease?  
—*Duo Qin*  
March 2004
- No. 51 Poverty Estimates in India: Some Key Issues  
—*Savita Sharma*  
May 2004
- No. 52 Restructuring and Regulatory Reform in the Power Sector: Review of Experience and Issues  
—*Peter Choynowski*  
May 2004
- No. 53 Competitiveness, Income Distribution, and Growth in the Philippines: What Does the Long-run Evidence Show?  
—*Jesus Felipe and Grace C. Sipin*  
June 2004
- No. 54 Practices of Poverty Measurement and Poverty Profile of Bangladesh  
—*Faizuddin Ahmed*  
August 2004
- No. 55 Experience of Asian Asset Management Companies: Do They Increase Moral Hazard?  
—Evidence from Thailand  
—*Akiko Terada-Hagiwara and Gloria Pasadilla*  
September 2004
- No. 56 Viet Nam: Foreign Direct Investment and Postcrisis Regional Integration  
—*Vittorio Leproux and Douglas H. Brooks*  
September 2004
- No. 57 Practices of Poverty Measurement and Poverty Profile of Nepal  
—*Devendra Chhetry*  
September 2004
- No. 59 Poverty Measurement and Poverty Estimates in the Philippines: Selected Issues  
—*Virginia Ganac*  
October 2004
- No. 60 Measuring Competitiveness in the World's Smallest Economies: Introducing the SSMECI  
—*Ganeshan Wignaraja and David Joiner*  
November 2004

- No. 61 Foreign Exchange Reserves, Exchange Rate Regimes, and Monetary Policy: Issues in Asia  
—*Akiko Terada-Hagiwara*  
*January 2005*
- No. 62 A Small Macroeconometric Model of the Philippine Economy  
—*Geoffrey Ducanes, Marie Anne Cagas, Duo Qin, Pilipinas Quising, and Nedelyn Magtibay-Ramos*  
*January 2005*
- No. 63 Developing the Market for Local Currency Bonds by Foreign Issuers: Lessons from Asia  
—*Tobias Hoschka*  
*February 2005*

## ERD TECHNICAL NOTE SERIES (TNS)

(Published in-house; Available through ADB Office of External Relations; Free of Charge)

- |       |  |  |
|-------|--|--|
| No. 1 | Contingency Calculations for Environmental Impacts with Unknown Monetary Values<br>— <i>David Dole</i><br><i>February 2002</i>   | — <i>Erik Bloom and Peter Choynowski</i><br><i>May 2003</i>  |
| No. 2 | Integrating Risk into ADB's Economic Analysis of Projects<br>— <i>Nigel Rayner, Anneli Lagman-Martin, and Keith Ward</i><br><i>June 2002</i>                             | No. 7 Strengthening the Economic Analysis of Natural Resource Management Projects<br>— <i>Keith Ward</i><br><i>September 2003</i>  |
| No. 3 | Measuring Willingness to Pay for Electricity<br>— <i>Peter Choynowski</i><br><i>July 2002</i>  | No. 8 Testing Savings Product Innovations Using an Experimental Methodology<br>— <i>Nava Ashraf, Dean S. Karlan, and Wesley Yin</i><br><i>November 2003</i>                  |
| No. 4 | Economic Issues in the Design and Analysis of a Wastewater Treatment Project<br>— <i>David Dole</i><br><i>July 2002</i>  | No. 9 Setting User Charges for Public Services: Policies and Practice at the Asian Development Bank<br>— <i>David Dole</i><br><i>December 2003</i>                           |
| No. 5 | An Analysis and Case Study of the Role of Environmental Economics at the Asian Development Bank<br>— <i>David Dole and Piya Abeygunawardena</i><br><i>September 2002</i> | No. 10 Beyond Cost Recovery: Setting User Charges for Financial, Economic, and Social Goals<br>— <i>David Dole and Ian Bartlett</i><br><i>January 2004</i>                   |
| No. 6 | Economic Analysis of Health Projects: A Case Study in Cambodia   | No. 11 Shadow Exchange Rates for Project Economic Analysis: Toward Improving Practice at the Asian Development Bank<br>— <i>Anneli Lagman-Martin</i><br><i>February 2004</i> |

## ERD POLICY BRIEF SERIES (PBS)

(Published in-house; Available through ADB Office of External Relations; Free of charge)

- |       |  |  |
|-------|--|--|
| No. 1 | Is Growth Good Enough for the Poor?<br>— <i>Ernesto M. Pernia, October 2001</i>  | No. 6 Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia<br>— <i>Indu Bhushan, Sheryl Keller, and Brad Schwartz, March 2002</i> |
| No. 2 | India's Economic Reforms<br>What Has Been Accomplished?<br>What Remains to Be Done?<br>— <i>Arvind Panagariya, November 2001</i>         | No. 7 Causes of the 1997 Asian Financial Crisis: What Can an Early Warning System Model Tell Us?<br>— <i>Juzhong Zhuang and Malcolm Dowling, June 2002</i>                   |
| No. 3 | Unequal Benefits of Growth in Viet Nam<br>— <i>Indu Bhushan, Erik Bloom, and Nguyen Minh Thang, January 2002</i>                         | No. 8 The Role of Preferential Trading Arrangements in Asia<br>— <i>Christopher Edmonds and Jean-Pierre Verbiest, July 2002</i>  |
| No. 4 | Is Volatility Built into Today's World Economy?<br>— <i>J. Malcolm Dowling and J.P. Verbiest, February 2002</i>                          | No. 9 The Doha Round: A Development Perspective<br>— <i>Jean-Pierre Verbiest, Jeffrey Liang, and Lea Sumulong, July 2002</i>   |
| No. 5 | What Else Besides Growth Matters to Poverty Reduction? Philippines<br>— <i>Arsenio M. Balisacan and Ernesto M. Pernia, February 2002</i> |  |

- |  |  |
|--|--|
| <p>No. 10 Is Economic Openness Good for Regional Development and Poverty Reduction? The Philippines<br/>—<i>E. M. Pernia and P. F. Quising</i><br/>October 2002</p> <p>No. 11 Implications of a US Dollar Depreciation for Asian Developing Countries<br/>—<i>Emma Fan</i><br/>July 2002</p> <p>No. 12 Dangers of Deflation<br/>—<i>D. Brooks and P. F. Quising</i><br/>December 2002</p> <p>No. 13 Infrastructure and Poverty Reduction—What is the Connection?<br/>—<i>I. Ali and E. Pernia</i><br/>January 2003</p> <p>No. 14 Infrastructure and Poverty Reduction—Making Markets Work for the Poor<br/>—<i>Xianbin Yao</i><br/>May 2003</p> <p>No. 15 SARS: Economic Impacts and Implications<br/>—<i>Emma Xiaoqin Fan</i><br/>May 2003</p> <p>No. 16 Emerging Tax Issues: Implications of Globalization and Technology<br/>—<i>Kanokpan Lao Araya</i><br/>May 2003</p> <p>No. 17 Pro-Poor Growth: What is It and Why is It Important?<br/>—<i>Ernesto M. Pernia</i><br/>May 2003</p> <p>No. 18 Public–Private Partnership for Competitiveness<br/>—<i>Jesus Felipe</i><br/>June 2003</p> <p>No. 19 Reviving Asian Economic Growth Requires Further Reforms<br/>—<i>Ifzal Ali</i><br/>June 2003</p> <p>No. 20 The Millennium Development Goals and Poverty: Are We Counting the World's Poor Right?<br/>—<i>M. G. Quibria</i><br/>July 2003</p> <p>No. 21 Trade and Poverty: What are the Connections?<br/>—<i>Douglas H. Brooks</i><br/>July 2003</p> | <p>No. 22 Adapting Education to the Global Economy<br/>—<i>Olivier Dupriez</i><br/>September 2003</p> <p>No. 23 Avian Flu: An Economic Assessment for Selected Developing Countries in Asia<br/>—<i>Jean-Pierre Verbiest and Charissa Castillo</i><br/>March 2004</p> <p>No. 25 Purchasing Power Parities and the International Comparison Program in a Globalized World<br/>—<i>Bishnu Pant</i><br/>March 2004</p> <p>No. 26 A Note on Dual/Multiple Exchange Rates<br/>—<i>Emma Xiaoqin Fan</i><br/>May 2004</p> <p>No. 27 Inclusive Growth for Sustainable Poverty Reduction in Developing Asia: The Enabling Role of Infrastructure Development<br/>—<i>Ifzal Ali and Xianbin Yao</i><br/>May 2004</p> <p>No. 28 Higher Oil Prices: Asian Perspectives and Implications for 2004–2005<br/>—<i>Cyn-Young Park</i><br/>June 2004</p> <p>No. 29 Accelerating Agriculture and Rural Development for Inclusive Growth: Policy Implications for Developing Asia<br/>—<i>Richard Bolt</i><br/>July 2004</p> <p>No. 30 Living with Higher Interest Rates: Is Asia Ready?<br/>—<i>Cyn-Young Park</i><br/>August 2004</p> <p>No. 31 Reserve Accumulation, Sterilization, and Policy Dilemma<br/>—<i>Akiko Terada-Hagiwara</i><br/>October 2004</p> <p>32 The Primacy of Reforms in the Emergence of People's Republic of China and India<br/>—<i>Ifzal Ali and Emma Xiaoqin Fan</i><br/>November 2004</p> <p>33 Population Health and Foreign Direct Investment: Does Poor Health Signal Poor Government Effectiveness?<br/>—<i>Ajay Tandon</i><br/>January 2005</p> |
|--|--|

## SERIALS

(Co-published with Oxford University Press; Available commercially through Oxford University Press Offices, Associated Companies, and Agents)

1. Asian Development Outlook (ADO; annual)  
\$36.00 (paperback)
2. Key Indicators of Developing Asian and Pacific Countries (KI; annual)  
\$35.00 (paperback)

## JOURNAL

(Published in-house; Available commercially through ADB Office of External Relations)

1. Asian Development Review (ADR; semiannual)  
\$5.00 per issue; \$8.00 per year (2 issues)

## MONOGRAPH SERIES

(Published in-house; Available through ADB Office of External Relations; Free of charge)

## EDRC REPORT SERIES (ER)

- |        |   |        |  |
|--------|---|--------|--|
| No. 1  | ASEAN and the Asian Development Bank<br>— <i>Seiji Naya, April 1982</i>   | No. 22 | Effects of External Shocks on the Balance of Payments, Policy Responses, and Debt Problems of Asian Developing Countries<br>— <i>Seiji Naya, December 1983</i>                   |
| No. 2  | Development Issues for the Developing East and Southeast Asian Countries and International Cooperation<br>— <i>Seiji Naya and Graham Abbott, April 1982</i>       | No. 23 | Changing Trade Patterns and Policy Issues: The Prospects for East and Southeast Asian Developing Countries<br>— <i>Seiji Naya and Ulrich Hiemenz, February 1984</i>              |
| No. 3  | Aid, Savings, and Growth in the Asian Region<br>— <i>J. Malcolm Dowling and Ulrich Hiemenz, April 1982</i>  | No. 24 | Small-Scale Industries in Asian Economic Development: Problems and Prospects<br>— <i>Seiji Naya, February 1984</i>   |
| No. 4  | Development-oriented Foreign Investment and the Role of ADB<br>— <i>Kiyoshi Kojima, April 1982</i>  | No. 25 | A Study on the External Debt Indicators Applying Logit Analysis<br>— <i>Jungsoo Lee and Clarita Barretto, February 1984</i>  |
| No. 5  | The Multilateral Development Banks and the International Economy's Missing Public Sector<br>— <i>John Lewis, June 1982</i>  | No. 26 | Alternatives to Institutional Credit Programs in the Agricultural Sector of Low-Income Countries<br>— <i>Jennifer Sour, March 1984</i>   |
| No. 6  | Notes on External Debt of DMCs<br>— <i>Evelyn Go, July 1982</i>   | No. 27 | Economic Scene in Asia and Its Special Features<br>— <i>Kedar N. Kohli, November 1984</i>  |
| No. 7  | Grant Element in Bank Loans<br>— <i>Dal Hyun Kim, July 1982</i>   | No. 28 | The Effect of Terms of Trade Changes on the Balance of Payments and Real National Income of Asian Developing Countries<br>— <i>Jungsoo Lee and Lutgarda Labios, January 1985</i> |
| No. 8  | Shadow Exchange Rates and Standard Conversion Factors in Project Evaluation<br>— <i>Peter Warr, September 1982</i>  | No. 29 | Cause and Effect in the World Sugar Market: Some Empirical Findings 1951-1982<br>— <i>Yoshihiro Iwasaki, February 1985</i>   |
| No. 9  | Small and Medium-Scale Manufacturing Establishments in ASEAN Countries: Perspectives and Policy Issues<br>— <i>Mathias Bruch and Ulrich Hiemenz, January 1983</i> | No. 30 | Sources of Balance of Payments Problem in the 1970s: The Asian Experience<br>— <i>Pradumna Rana, February 1985</i>   |
| No. 10 | A Note on the Third Ministerial Meeting of GATT<br>— <i>Jungsoo Lee, January 1983</i>   | No. 31 | India's Manufactured Exports: An Analysis of Supply Sectors<br>— <i>Ifzal Ali, February 1985</i>   |
| No. 11 | Macroeconomic Forecasts for the Republic of China, Hong Kong, and Republic of Korea<br>— <i>J.M. Dowling, January 1983</i>  | No. 32 | Meeting Basic Human Needs in Asian Developing Countries<br>— <i>Jungsoo Lee and Emma Banaria, March 1985</i>   |
| No. 12 | ASEAN: Economic Situation and Prospects<br>— <i>Seiji Naya, March 1983</i>  | No. 33 | The Impact of Foreign Capital Inflow on Investment and Economic Growth in Developing Asia<br>— <i>Evelyn Go, May 1985</i>  |
| No. 13 | The Future Prospects for the Developing Countries of Asia<br>— <i>Seiji Naya, March 1983</i>  | No. 34 | The Climate for Energy Development in the Pacific and Asian Region: Priorities and Perspectives<br>— <i>V.V. Desai, April 1986</i>   |
| No. 14 | Energy and Structural Change in the Asia-Pacific Region, Summary of the Thirteenth Pacific Trade and Development Conference<br>— <i>Seiji Naya, March 1983</i>    | No. 35 | Impact of Appreciation of the Yen on Developing Member Countries of the Bank<br>— <i>Jungsoo Lee, Pradumna Rana, and Ifzal Ali, May 1986</i>                                     |
| No. 15 | A Survey of Empirical Studies on Demand for Electricity with Special Emphasis on Price Elasticity of Demand<br>— <i>Wisarn Pupphavesa, June 1983</i>              | No. 36 | Smuggling and Domestic Economic Policies in Developing Countries<br>— <i>A.H.M.N. Chowdhury, October 1986</i>  |
| No. 16 | Determinants of Paddy Production in Indonesia: 1972-1981—A Simultaneous Equation Model Approach<br>— <i>T.K. Jayaraman, June 1983</i>                             | No. 37 | Public Investment Criteria: Economic Internal Rate of Return and Equalizing Discount Rate<br>— <i>Ifzal Ali, November 1986</i>   |
| No. 17 | The Philippine Economy: Economic Forecasts for 1983 and 1984<br>— <i>J.M. Dowling, E. Go, and C.N. Castillo, June 1983</i>  | No. 38 | Review of the Theory of Neoclassical Political Economy: An Application to Trade Policies<br>— <i>M.G. Quibria, December 1986</i>   |
| No. 18 | Economic Forecast for Indonesia<br>— <i>J.M. Dowling, H.Y. Kim, Y.K. Wang, and C.N. Castillo, June 1983</i>   | No. 39 | Factors Influencing the Choice of Location: Local and Foreign Firms in the Philippines<br>— <i>E.M. Pernia and A.N. Herrin, February 1987</i>                                    |
| No. 19 | Relative External Debt Situation of Asian Developing Countries: An Application of Ranking Method<br>— <i>Jungsoo Lee, June 1983</i>                               | No. 40 | A Demographic Perspective on Developing Asia and Its Relevance to the Bank<br>— <i>E.M. Pernia, May 1987</i>   |
| No. 20 | New Evidence on Yields, Fertilizer Application, and Prices in Asian Rice Production<br>— <i>William James and Teresita Ramirez, July 1983</i>                     | No. 41 | Emerging Issues in Asia and Social Cost Benefit Analysis<br>— <i>I. Ali, September 1988</i>  |
| No. 21 | Inflationary Effects of Exchange Rate Changes in Nine Asian LDCs<br>— <i>Pradumna B. Rana and J. Malcolm Dowling, Jr., December 1983</i>                          | No. 42 | Shifting Revealed Comparative Advantage:   |

- Experiences of Asian and Pacific Developing Countries  
—*P.B. Rana, November 1988*
- No. 43 Agricultural Price Policy in Asia: Issues and Areas of Reforms  
—*I. Ali, November 1988*
- No. 44 Service Trade and Asian Developing Economies  
—*M.G. Quibria, October 1989*
- No. 45 A Review of the Economic Analysis of Power Projects in Asia and Identification of Areas of Improvement  
—*I. Ali, November 1989*
- No. 46 Growth Perspective and Challenges for Asia: Areas for Policy Review and Research  
—*I. Ali, November 1989*
- No. 47 An Approach to Estimating the Poverty Alleviation Impact of an Agricultural Project  
—*I. Ali, January 1990*
- No. 48 Economic Growth Performance of Indonesia, the Philippines, and Thailand: The Human Resource Dimension  
—*E.M. Pernia, January 1990*
- No. 49 Foreign Exchange and Fiscal Impact of a Project: A Methodological Framework for Estimation  
—*I. Ali, February 1990*
- No. 50 Public Investment Criteria: Financial and Economic Internal Rates of Return  
—*I. Ali, April 1990*
- No. 51 Evaluation of Water Supply Projects: An Economic Framework  
—*Arlene M. Tadler, June 1990*
- No. 52 Interrelationship Between Shadow Prices, Project Investment, and Policy Reforms: An Analytical Framework  
—*I. Ali, November 1990*
- No. 53 Issues in Assessing the Impact of Project and Sector Adjustment Lending  
—*I. Ali, December 1990*
- No. 54 Some Aspects of Urbanization and the Environment in Southeast Asia  
—*Ernesto M. Pernia, January 1991*
- No. 55 Financial Sector and Economic Development: A Survey  
—*Jungsoo Lee, September 1991*
- No. 56 A Framework for Justifying Bank-Assisted Education Projects in Asia: A Review of the Socioeconomic Analysis and Identification of Areas of Improvement  
—*Etienne Van De Walle, February 1992*
- No. 57 Medium-term Growth-Stabilization Relationship in Asian Developing Countries and Some Policy Considerations  
—*Yun-Hwan Kim, February 1993*
- No. 58 Urbanization, Population Distribution, and Economic Development in Asia  
—*Ernesto M. Pernia, February 1993*
- No. 59 The Need for Fiscal Consolidation in Nepal: The Results of a Simulation  
—*Filippo di Mauro and Ronald Antonio Butiong, July 1993*
- No. 60 A Computable General Equilibrium Model of Nepal  
—*Timothy Buehrer and Filippo di Mauro, October 1993*
- No. 61 The Role of Government in Export Expansion in the Republic of Korea: A Revisit  
—*Yun-Hwan Kim, February 1994*
- No. 62 Rural Reforms, Structural Change, and Agricultural Growth in the People's Republic of China  
—*Bo Lin, August 1994*
- No. 63 Incentives and Regulation for Pollution Abatement with an Application to Waste Water Treatment  
—*Sudipto Mundle, U. Shankar, and Shekhar Mehta, October 1995*
- No. 64 Saving Transitions in Southeast Asia  
—*Frank Harrigan, February 1996*
- No. 65 Total Factor Productivity Growth in East Asia: A Critical Survey  
—*Jesus Felipe, September 1997*
- No. 66 Foreign Direct Investment in Pakistan: Policy Issues and Operational Implications  
—*Ashfaq H. Khan and Yun-Hwan Kim, July 1999*
- No. 67 Fiscal Policy, Income Distribution and Growth  
—*Sailesh K. Jha, November 1999*

## ECONOMIC STAFF PAPERS (ES)

- No. 1 International Reserves: Factors Determining Needs and Adequacy  
—*Evelyn Go, May 1981*
- No. 2 Domestic Savings in Selected Developing Asian Countries  
—*Basil Moore, assisted by A.H.M. Nuruddin Chowdhury, September 1981*
- No. 3 Changes in Consumption, Imports and Exports of Oil Since 1973: A Preliminary Survey of the Developing Member Countries of the Asian Development Bank  
—*Dal Hyun Kim and Graham Abbott, September 1981*
- No. 4 By-Passed Areas, Regional Inequalities, and Development Policies in Selected Southeast Asian Countries  
—*William James, October 1981*
- No. 5 Asian Agriculture and Economic Development  
—*William James, March 1982*
- No. 6 Inflation in Developing Member Countries: An Analysis of Recent Trends  
—*A.H.M. Nuruddin Chowdhury and J. Malcolm Dowling, March 1982*
- No. 7 Industrial Growth and Employment in Developing Asian Countries: Issues and Perspectives for the Coming Decade  
—*Ulrich Hiemenz, March 1982*
- No. 8 Petrodollar Recycling 1973-1980. Part 1: Regional Adjustments and the World Economy  
—*Burnham Campbell, April 1982*
- No. 9 Developing Asia: The Importance of Domestic Policies  
—*Economics Office Staff under the direction of Seiji Naya, May 1982*
- No. 10 Financial Development and Household Savings: Issues in Domestic Resource Mobilization in Asian Developing Countries  
—*Wan-Soon Kim, July 1982*
- No. 11 Industrial Development: Role of Specialized Financial Institutions  
—*Kedar N. Kohli, August 1982*
- No. 12 Petrodollar Recycling 1973-1980. Part II: Debt Problems and an Evaluation of Suggested Remedies  
—*Burnham Campbell, September 1982*
- No. 13 Credit Rationing, Rural Savings, and Financial Policy in Developing Countries  
—*William James, September 1982*
- No. 14 Small and Medium-Scale Manufacturing

- Establishments in ASEAN Countries: Perspectives and Policy Issues  
—*Mathias Bruch and Ulrich Hiemenz, March 1983*
- No. 15 Income Distribution and Economic Growth in Developing Asian Countries  
—*J. Malcolm Dowling and David Soo, March 1983*
- No. 16 Long-Run Debt-Servicing Capacity of Asian Developing Countries: An Application of Critical Interest Rate Approach  
—*Jungsoo Lee, June 1983*
- No. 17 External Shocks, Energy Policy, and Macroeconomic Performance of Asian Developing Countries: A Policy Analysis  
—*William James, July 1983*
- No. 18 The Impact of the Current Exchange Rate System on Trade and Inflation of Selected Developing Member Countries  
—*Pradumna Rana, September 1983*
- No. 19 Asian Agriculture in Transition: Key Policy Issues  
—*William James, September 1983*
- No. 20 The Transition to an Industrial Economy in Monsoon Asia  
—*Harry T. Oshima, October 1983*
- No. 21 The Significance of Off-Farm Employment and Incomes in Post-War East Asian Growth  
—*Harry T. Oshima, January 1984*
- No. 22 Income Distribution and Poverty in Selected Asian Countries  
—*John Malcolm Dowling, Jr., November 1984*
- No. 23 ASEAN Economies and ASEAN Economic Cooperation  
—*Narongchai Akrasanee, November 1984*
- No. 24 Economic Analysis of Power Projects  
—*Nitin Desai, January 1985*
- No. 25 Exports and Economic Growth in the Asian Region  
—*Pradumna Rana, February 1985*
- No. 26 Patterns of External Financing of DMCs  
—*E. Go, May 1985*
- No. 27 Industrial Technology Development the Republic of Korea  
—*S.Y. Lo, July 1985*
- No. 28 Risk Analysis and Project Selection: A Review of Practical Issues  
—*J.K. Johnson, August 1985*
- No. 29 Rice in Indonesia: Price Policy and Comparative Advantage  
—*I. Ali, January 1986*
- No. 30 Effects of Foreign Capital Inflows on Developing Countries of Asia  
—*Jungsoo Lee, Pradumna B. Rana, and Yoshihiro Iwasaki, April 1986*
- No. 31 Economic Analysis of the Environmental Impacts of Development Projects  
—*John A. Dixon et al., EAPI, East-West Center, August 1986*
- No. 32 Science and Technology for Development: Role of the Bank  
—*Kedar N. Kohli and Ifzal Ali, November 1986*
- No. 33 Satellite Remote Sensing in the Asian and Pacific Region  
—*Mohan Sundara Rajan, December 1986*
- No. 34 Changes in the Export Patterns of Asian and Pacific Developing Countries: An Empirical Overview  
—*Pradumna B. Rana, January 1987*
- No. 35 Agricultural Price Policy in Nepal  
—*Gerald C. Nelson, March 1987*
- No. 36 Implications of Falling Primary Commodity Prices for Agricultural Strategy in the Philippines  
—*Ifzal Ali, September 1987*
- No. 37 Determining Irrigation Charges: A Framework  
—*Prabhakar B. Ghate, October 1987*
- No. 38 The Role of Fertilizer Subsidies in Agricultural Production: A Review of Select Issues  
—*M.G. Quibria, October 1987*
- No. 39 Domestic Adjustment to External Shocks in Developing Asia  
—*Jungsoo Lee, October 1987*
- No. 40 Improving Domestic Resource Mobilization through Financial Development: Indonesia  
—*Philip Erquiaga, November 1987*
- No. 41 Recent Trends and Issues on Foreign Direct Investment in Asian and Pacific Developing Countries  
—*P.B. Rana, March 1988*
- No. 42 Manufactured Exports from the Philippines: A Sector Profile and an Agenda for Reform  
—*I. Ali, September 1988*
- No. 43 A Framework for Evaluating the Economic Benefits of Power Projects  
—*I. Ali, August 1989*
- No. 44 Promotion of Manufactured Exports in Pakistan  
—*Jungsoo Lee and Yoshihiro Iwasaki, September 1989*
- No. 45 Education and Labor Markets in Indonesia: A Sector Survey  
—*Ernesto M. Pernia and David N. Wilson, September 1989*
- No. 46 Industrial Technology Capabilities and Policies in Selected ADCs  
—*Hiroshi Kakazu, June 1990*
- No. 47 Designing Strategies and Policies for Managing Structural Change in Asia  
—*Ifzal Ali, June 1990*
- No. 48 The Completion of the Single European Community Market in 1992: A Tentative Assessment of its Impact on Asian Developing Countries  
—*J.P. Verbiest and Min Tang, June 1991*
- No. 49 Economic Analysis of Investment in Power Systems  
—*Ifzal Ali, June 1991*
- No. 50 External Finance and the Role of Multilateral Financial Institutions in South Asia: Changing Patterns, Prospects, and Challenges  
—*Jungsoo Lee, November 1991*
- No. 51 The Gender and Poverty Nexus: Issues and Policies  
—*M.G. Quibria, November 1993*
- No. 52 The Role of the State in Economic Development: Theory, the East Asian Experience, and the Malaysian Case  
—*Jason Brown, December 1993*
- No. 53 The Economic Benefits of Potable Water Supply Projects to Households in Developing Countries  
—*Dale Whittington and Venkateswarlu Swarna, January 1994*
- No. 54 Growth Triangles: Conceptual Issues and Operational Problems  
—*Min Tang and Myo Thant, February 1994*
- No. 55 The Emerging Global Trading Environment and Developing Asia  
—*Arvind Panagariya, M.G. Quibria, and Narhari Rao, July 1996*
- No. 56 Aspects of Urban Water and Sanitation in the Context of Rapid Urbanization in Developing Asia  
—*Ernesto M. Pernia and Stella LF. Alabastro, September 1997*
- No. 57 Challenges for Asia's Trade and Environment  
—*Douglas H. Brooks, January 1998*
- No. 58 Economic Analysis of Health Sector Projects: A Review of Issues, Methods, and Approaches  
—*Ramesh Adhikari, Paul Gertler, and Anneli Lagman, March 1999*
- No. 59 The Asian Crisis: An Alternate View  
—*Rajiv Kumar and Bibek Debroy, July 1999*
- No. 60 Social Consequences of the Financial Crisis in Asia  
—*James C. Knowles, Ernesto M. Pernia, and Mary Racelis, November 1999*



## OCCASIONAL PAPERS (OP)

- |   |   |
|---|---|
| <p>No. 1 Poverty in the People's Republic of China: Recent Developments and Scope for Bank Assistance<br/>—<i>K.H. Moinuddin, November 1992</i></p> <p>No. 2 The Eastern Islands of Indonesia: An Overview of Development Needs and Potential<br/>—<i>Brien K. Parkinson, January 1993</i></p> <p>No. 3 Rural Institutional Finance in Bangladesh and Nepal: Review and Agenda for Reforms<br/>—<i>A.H.M.N. Chowdhury and Marcelia C. Garcia, November 1993</i></p> <p>No. 4 Fiscal Deficits and Current Account Imbalances of the South Pacific Countries: A Case Study of Vanuatu<br/>—<i>T.K. Jayaraman, December 1993</i></p> <p>No. 5 Reforms in the Transitional Economies of Asia<br/>—<i>Pradumna B. Rana, December 1993</i></p> <p>No. 6 Environmental Challenges in the People's Republic of China and Scope for Bank Assistance<br/>—<i>Elisabetta Capannelli and Omkar L. Shrestha, December 1993</i></p> <p>No. 7 Sustainable Development Environment and Poverty Nexus<br/>—<i>K.F. Jalal, December 1993</i></p> <p>No. 8 Intermediate Services and Economic Development: The Malaysian Example<br/>—<i>Sutanu Behuria and Rahul Khullar, May 1994</i></p> <p>No. 9 Interest Rate Deregulation: A Brief Survey of the Policy Issues and the Asian Experience<br/>—<i>Carlos J. Glower, July 1994</i></p> <p>No. 10 Some Aspects of Land Administration in Indonesia: Implications for Bank Operations<br/>—<i>Sutanu Behuria, July 1994</i></p> <p>No. 11 Demographic and Socioeconomic Determinants of Contraceptive Use among Urban Women in the Melanesian Countries in the South Pacific: A Case Study of Port Vila Town in Vanuatu<br/>—<i>T.K. Jayaraman, February 1995</i></p> | <p>No. 12 Managing Development through Institution Building<br/>— <i>Hilton L. Root, October 1995</i></p> <p>No. 13 Growth, Structural Change, and Optimal Poverty Interventions<br/>—<i>Shiladitya Chatterjee, November 1995</i></p> <p>No. 14 Private Investment and Macroeconomic Environment in the South Pacific Island Countries: A Cross-Country Analysis<br/>—<i>T.K. Jayaraman, October 1996</i></p> <p>No. 15 The Rural-Urban Transition in Viet Nam: Some Selected Issues<br/>—<i>Sudipto Mundle and Brian Van Arkadie, October 1997</i></p> <p>No. 16 A New Approach to Setting the Future Transport Agenda<br/>—<i>Roger Allport, Geoff Key, and Charles Melhuish, June 1998</i></p> <p>No. 17 Adjustment and Distribution: The Indian Experience<br/>—<i>Sudipto Mundle and V.B. Tulasidhar, June 1998</i></p> <p>No. 18 Tax Reforms in Viet Nam: A Selective Analysis<br/>—<i>Sudipto Mundle, December 1998</i></p> <p>No. 19 Surges and Volatility of Private Capital Flows to Asian Developing Countries: Implications for Multilateral Development Banks<br/>—<i>Pradumna B. Rana, December 1998</i></p> <p>No. 20 The Millennium Round and the Asian Economies: An Introduction<br/>—<i>Dilip K. Das, October 1999</i></p> <p>No. 21 Occupational Segregation and the Gender Earnings Gap<br/>—<i>Joseph E. Zveglic, Jr. and Yana van der Meulen Rodgers, December 1999</i></p> <p>No. 22 Information Technology: Next Locomotive of Growth?<br/>—<i>Dilip K. Das, June 2000</i></p> |
|---|---|

## STATISTICAL REPORT SERIES (SR)

- |   |   |
|---|---|
| <p>No. 1 Estimates of the Total External Debt of the Developing Member Countries of ADB: 1981-1983<br/>—<i>I.P. David, September 1984</i></p> <p>No. 2 Multivariate Statistical and Graphical Classification Techniques Applied to the Problem of Grouping Countries<br/>—<i>I.P. David and D.S. Maligalig, March 1985</i></p> <p>No. 3 Gross National Product (GNP) Measurement Issues in South Pacific Developing Member Countries of ADB<br/>—<i>S.G. Tiwari, September 1985</i></p> <p>No. 4 Estimates of Comparable Savings in Selected DMCs<br/>—<i>Hananto Sigit, December 1985</i></p> <p>No. 5 Keeping Sample Survey Design and Analysis Simple<br/>—<i>I.P. David, December 1985</i></p> <p>No. 6 External Debt Situation in Asian Developing Countries<br/>—<i>I.P. David and Jungsoo Lee, March 1986</i></p> <p>No. 7 Study of GNP Measurement Issues in the South Pacific Developing Member Countries. Part I: Existing National Accounts of SPDMCs—Analysis of Methodology and Application of SNA Concepts<br/>—<i>P. Hodgkinson, October 1986</i></p> <p>No. 8 Study of GNP Measurement Issues in the South Pacific Developing Member Countries. Part II: Factors Affecting Inter-country Comparability of Per Capita GNP<br/>—<i>P. Hodgkinson, October 1986</i></p> <p>No. 9 Survey of the External Debt Situation</p> | <p>in Asian Developing Countries, 1985<br/>—<i>Jungsoo Lee and I.P. David, April 1987</i></p> <p>No. 10 A Survey of the External Debt Situation in Asian Developing Countries, 1986<br/>—<i>Jungsoo Lee and I.P. David, April 1988</i></p> <p>No. 11 Changing Pattern of Financial Flows to Asian and Pacific Developing Countries<br/>—<i>Jungsoo Lee and I.P. David, March 1989</i></p> <p>No. 12 The State of Agricultural Statistics in Southeast Asia<br/>—<i>I.P. David, March 1989</i></p> <p>No. 13 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1987-1988<br/>—<i>Jungsoo Lee and I.P. David, July 1989</i></p> <p>No. 14 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1988-1989<br/>—<i>Jungsoo Lee, May 1990</i></p> <p>No. 15 A Survey of the External Debt Situation in Asian and Pacific Developing Countries: 1989-1992<br/>—<i>Min Tang, June 1991</i></p> <p>No. 16 Recent Trends and Prospects of External Debt Situation and Financial Flows to Asian and Pacific Developing Countries<br/>—<i>Min Tang and Aludia Pardo, June 1992</i></p> <p>No. 17 Purchasing Power Parity in Asian Developing Countries: A Co-Integration Test<br/>—<i>Min Tang and Ronald Q. Butiong, April 1994</i></p> <p>No. 18 Capital Flows to Asian and Pacific Developing Countries: Recent Trends and Future Prospects<br/>—<i>Min Tang and James Villafuerte, October 1995</i></p> |
|---|---|

## SPECIAL STUDIES, OUP (SS,Comm)

(Co-published titles; Available commercially through Oxford University Press Offices, Edward Elgar Publishing, and Palgrave MacMillan)

### FROM OXFORD UNIVERSITY PRESS:

Oxford University Press (China) Ltd  
18th Floor, Warwick House East  
Taikoo Place, 979 King's Road  
Quarry Bay, Hong Kong  
Tel (852) 2516 3222  
Fax (852) 2565 8491  
E-mail: [webmaster@oupchina.com.hk](mailto:webmaster@oupchina.com.hk)  
Web: [www.oupchina.com.hk](http://www.oupchina.com.hk)

1. Informal Finance: Some Findings from Asia  
*Prabhu Ghatte et. al., 1992*  
\$15.00 (paperback)
2. Mongolia: A Centrally Planned Economy in Transition  
*Asian Development Bank, 1992*  
\$15.00 (paperback)
3. Rural Poverty in Asia, Priority Issues and Policy Options  
*Edited by M.G. Quibria, 1994*  
\$25.00 (paperback)
4. Growth Triangles in Asia: A New Approach to Regional Economic Cooperation  
*Edited by Myo Thant, Min Tang, and Hiroshi Kakazu*  
1st ed., 1994 \$36.00 (hardbound)  
Revised ed., 1998 \$55.00 (hardbound)
5. Urban Poverty in Asia: A Survey of Critical Issues  
*Edited by Ernesto Pernia, 1994*  
\$18.00 (paperback)
6. Critical Issues in Asian Development: Theories, Experiences, and Policies  
*Edited by M.G. Quibria, 1995*  
\$15.00 (paperback)  
\$36.00 (hardbound)
7. Financial Sector Development in Asia  
*Edited by Shahid N. Zahid, 1995*  
\$50.00 (hardbound)
8. Financial Sector Development in Asia: Country Studies  
*Edited by Shahid N. Zahid, 1995*  
\$55.00 (hardbound)
9. Fiscal Management and Economic Reform in the People's Republic of China  
*Christine P.W. Wong, Christopher Heady, and Wing T. Woo, 1995*  
\$15.00 (paperback)
10. From Centrally Planned to Market Economies: The Asian Approach  
*Edited by Pradumna B. Rana and Naved Hamid, 1995*  
Vol. 1: Overview  
\$36.00 (hardbound)  
Vol. 2: People's Republic of China and Mongolia  
\$50.00 (hardbound)  
Vol. 3: Lao PDR, Myanmar, and Viet Nam  
\$50.00 (hardbound)
11. Current Issues in Economic Development: An Asian Perspective  
*Edited by M.G. Quibria and J. Malcolm Dowling, 1996*  
\$50.00 (hardbound)
12. The Bangladesh Economy in Transition  
*Edited by M.G. Quibria, 1997*  
\$20.00 (hardbound)
13. The Global Trading System and Developing Asia  
*Edited by Arvind Panagariya, M.G. Quibria, and Narhari Rao, 1997*  
\$55.00 (hardbound)
14. Social Sector Issues in Transitional Economies of Asia  
*Edited by Douglas H. Brooks and Myo Thant, 1998*  
\$25.00 (paperback)  
\$55.00 (hardbound)

15. Intergovernmental Fiscal Transfers in Asia: Current Practice and Challenges for the Future  
*Edited by Yun-Hwan Kim and Paul Smoke, 2003*  
\$15.00 (paperback)
16. Local Government Finance and Bond Markets  
*Edited by Yun-Hwan Kim, 2003*  
\$15.00 (paperback)

### FROM EDWARD ELGAR:

Marston Book Services Limited  
PO Box 269, Abingdon  
Oxon OX14 4YN  
United Kingdom  
Tel +44 1235 465500  
Fax +44 1235 465555  
Email: [direct.order@marston.co.uk](mailto:direct.order@marston.co.uk)  
Web: [www.marston.co.uk](http://www.marston.co.uk)

1. Reducing Poverty in Asia: Emerging Issues in Growth, Targeting, and Measurement  
*Edited by Christopher M. Edmonds, 2003*

### FROM PALGRAVE MACMILLAN:

Palgrave Macmillan Ltd  
Houndmills  
Basingstoke  
Hampshire RG21 6XS  
United Kingdom  
Tel: +44 (0)1256 329242  
Fax: +44 (0)1256 479476  
Email: [orders@palgrave.com](mailto:orders@palgrave.com)  
Web: [www.palgrave.com/home/](http://www.palgrave.com/home/)

1. Managing FDI in a Globalizing Economy  
Asian Experiences  
*Edited by Douglas H. Brooks and Hal Hill*  
2004
2. Poverty, Growth, and Institutions in Developing Asia  
*Edited by Ernesto M. Pernia and Anil B. Deolalikar,*  
2003

## SPECIAL STUDIES, ADB (SS, ADB)

(Published in-house; Available commercially through ADB Office of External Relations)

1. Rural Poverty in Developing Asia  
*Edited by M.G. Quibria*  
Vol. 1: Bangladesh, India, and Sri Lanka, 1994  
\$35.00 (paperback)  
Vol. 2: Indonesia, Republic of Korea, Philippines,  
and Thailand, 1996  
\$35.00 (paperback)
2. Gender Indicators of Developing Asian  
and Pacific Countries  
*Asian Development Bank, 1993*  
\$25.00 (paperback)
3. External Shocks and Policy Adjustments:  
Lessons from the Gulf Crisis  
*Edited by Naved Hamid and Shahid N. Zahid, 1995*  
\$15.00 (paperback)
4. Indonesia-Malaysia-Thailand Growth Triangle:  
Theory to Practice  
*Edited by Myo Thant and Min Tang, 1996*  
\$15.00 (paperback)
5. Emerging Asia: Changes and Challenges  
*Asian Development Bank, 1997*  
\$30.00 (paperback)
6. Asian Exports  
*Edited by Dilip Das, 1999*  
\$35.00 (paperback)  
\$55.00 (hardbound)
7. Development of Environment Statistics in Developing  
Asian and Pacific Countries  
*Asian Development Bank, 1999*  
\$30.00 (paperback)
8. Mortgage-Backed Securities Markets in Asia  
*Edited by S.Ghon Rhee & Yutaka Shimomoto, 1999*  
\$35.00 (paperback)
9. Rising to the Challenge in Asia: A Study of Financial  
Markets  
*Asian Development Bank*  
Vol. 1: An Overview, 2000 \$20.00 (paperback)  
Vol. 2: Special Issues, 1999 \$15.00 (paperback)  
Vol. 3: Sound Practices, 2000 \$25.00 (paperback)  
Vol. 4: People's Republic of China, 1999 \$20.00  
(paperback)  
Vol. 5: India, 1999 \$30.00 (paperback)  
Vol. 6: Indonesia, 1999 \$30.00 (paperback)  
Vol. 7: Republic of Korea, 1999 \$30.00 (paperback)  
Vol. 8: Malaysia, 1999 \$20.00 (paperback)  
Vol. 9: Pakistan, 1999 \$30.00 (paperback)  
Vol. 10: Philippines, 1999 \$30.00 (paperback)  
Vol. 11: Thailand, 1999 \$30.00 (paperback)  
Vol. 12: Socialist Republic of Viet Nam, 1999 \$30.00  
(paperback)
10. Corporate Governance and Finance in East Asia:  
A Study of Indonesia, Republic of Korea, Malaysia,  
Philippines and Thailand  
*J. Zhuang, David Edwards, D. Webb,  
& Ma. Virginita Capulong*  
Vol. 1: A Consolidated Report, 2000 \$10.00 (paperback)  
Vol. 2: Country Studies, 2001 \$15.00 (paperback)
11. Financial Management and Governance Issues  
*Asian Development Bank, 2000*  
Cambodia \$10.00 (paperback)  
People's Republic of China \$10.00 (paperback)  
Mongolia \$10.00 (paperback)  
Pakistan \$10.00 (paperback)  
Papua New Guinea \$10.00 (paperback)  
Uzbekistan \$10.00 (paperback)  
Viet Nam \$10.00 (paperback)  
Selected Developing Member Countries \$10.00 (paperback)
12. Government Bond Market Development in Asia  
*Edited by Yun-Hwan Kim, 2001*  
\$25.00 (paperback)
13. Intergovernmental Fiscal Transfers in Asia: Current Practice  
and Challenges for the Future  
*Edited by Paul Smoke and Yun-Hwan Kim, 2002*  
\$15.00 (paperback)
14. Guidelines for the Economic Analysis of Projects  
*Asian Development Bank, 1997*  
\$10.00 (paperback)
15. Guidelines for the Economic Analysis of  
Telecommunications Projects  
*Asian Development Bank, 1997*  
\$10.00 (paperback)
16. Handbook for the Economic Analysis of Water Supply Projects  
*Asian Development Bank, 1999*  
\$10.00 (hardbound)
17. Handbook for the Economic Analysis of Health Sector Projects  
*Asian Development Bank, 2000*  
\$10.00 (paperback)
18. Handbook for Integrating Poverty Impact Assessment in  
the Economic Analysis of Projects  
*Asian Development Bank, 2001*  
\$10.00 (paperback)
19. Handbook for Integrating Risk Analysis in the Economic  
Analysis of Projects  
*Asian Development Bank, 2002*  
\$10.00 (paperback)
20. Guidelines for the Financial Governance and  
Management of Investment Projects Financed by the  
Asian Development Bank  
*Asian Development Bank, 2002*  
\$10.00 (paperback)
21. Handbook on Environment Statistics  
*Asian Development Bank, 2002*  
\$10.00 (hardback)
22. Defining an Agenda for Poverty Reduction, Volume 1  
*Edited by Christopher Edmonds and Sara Medina, 2002*  
\$15.00 (paperback)
23. Defining an Agenda for Poverty Reduction, Volume 2  
*Edited by Isabel Ortiz, 2002*  
\$15.00 (paperback)
24. Economic Analysis of Policy-based Operations: Key  
Dimensions  
*Asian Development Bank, 2003*  
\$10.00 (paperback)

## **SPECIAL STUDIES, COMPLIMENTARY (SSC)**

(Published in-house; Available through ADB Office of External Relations; Free of Charge)

1. Improving Domestic Resource Mobilization Through Financial Development: Overview *September 1985*
2. Improving Domestic Resource Mobilization Through Financial Development: Bangladesh *July 1986*
3. Improving Domestic Resource Mobilization Through Financial Development: Sri Lanka *April 1987*
4. Improving Domestic Resource Mobilization Through Financial Development: India *December 1987*
5. Financing Public Sector Development Expenditure in Selected Countries: Overview *January 1988*
6. Study of Selected Industries: A Brief Report *April 1988*
7. Financing Public Sector Development Expenditure in Selected Countries: Bangladesh *June 1988*
8. Financing Public Sector Development Expenditure in Selected Countries: India *June 1988*
9. Financing Public Sector Development Expenditure in Selected Countries: Indonesia *June 1988*
10. Financing Public Sector Development Expenditure in Selected Countries: Nepal *June 1988*
11. Financing Public Sector Development Expenditure in Selected Countries: Pakistan *June 1988*
12. Financing Public Sector Development Expenditure in Selected Countries: Philippines *June 1988*
13. Financing Public Sector Development Expenditure in Selected Countries: Thailand *June 1988*
14. Towards Regional Cooperation in South Asia: ADB/EWC Symposium on Regional Cooperation in South Asia *February 1988*
15. Evaluating Rice Market Intervention Policies: Some Asian Examples *April 1988*
16. Improving Domestic Resource Mobilization Through Financial Development: Nepal *November 1988*
17. Foreign Trade Barriers and Export Growth *September 1988*
18. The Role of Small and Medium-Scale Industries in the Industrial Development of the Philippines *April 1989*
19. The Role of Small and Medium-Scale Manufacturing Industries in Industrial Development: The Experience of Selected Asian Countries *January 1990*
20. National Accounts of Vanuatu, 1983-1987 *January 1990*
21. National Accounts of Western Samoa, 1984-1986 *February 1990*
22. Human Resource Policy and Economic Development: Selected Country Studies *July 1990*
23. Export Finance: Some Asian Examples *September 1990*
24. National Accounts of the Cook Islands, 1982-1986 *September 1990*
25. Framework for the Economic and Financial Appraisal of Urban Development Sector Projects *January 1994*
26. Framework and Criteria for the Appraisal and Socioeconomic Justification of Education Projects *January 1994*
27. Guidelines for the Economic Analysis of Telecommunications Projects *Asian Development Bank, 1997*
28. Guidelines for the Economic Analysis of Water Supply Projects *Asian Development Bank, 1998*
29. Investing in Asia *Co-published with OECD, 1997*
30. The Future of Asia in the World Economy *Co-published with OECD, 1998*
31. Financial Liberalisation in Asia: Analysis and Prospects *Co-published with OECD, 1999*
32. Sustainable Recovery in Asia: Mobilizing Resources for Development *Co-published with OECD, 2000*
33. Technology and Poverty Reduction in Asia and the Pacific *Co-published with OECD, 2001*
34. Asia and Europe *Co-published with OECD, 2002*