

# Bond Market Development in East Asia<sup>1</sup>

The development of bond markets in the Asian region has become a focus of policy-makers over the past few years, with at least three intergovernmental working groups among countries in the region currently examining the issue. The work is being undertaken in an effort to strengthen the financial sectors of east Asian countries and to reduce vulnerabilities to future financial crises. Weaknesses identified at the time of the Asian financial crisis included an excessive reliance on bank-intermediated financing and difficulties in borrowing longer term, particularly in local currency.

This article begins with a recap on why bond markets should be developed, examines progress in the Asian region to date and concludes with a discussion on some recent multilateral initiatives.

## Why Develop Local Currency Bond Markets?

There are a number of reasons for developing bond markets. Firstly, there may be a specific borrowing need which can be met efficiently in the non-intermediated debt market. In the case of governments, for example, there may be a need to fund fiscal

deficits. These can be quite large and can only be met by tapping the wide range of investors available in the traded debt market. From a governance perspective, the non-intermediated debt market also has the advantage of being more transparent and it reduces the risk that governments will rely on central bank funding. There are also positive flow-on effects for other borrowers in terms of providing a pricing benchmark for other fixed-income securities.

From a private sector perspective, borrowers need to finance investment projects that are expected to yield returns over a long period. If long-term finance is not available from banks (as is quite often the case) and bond markets do not exist, firms may have to finance the acquisition of long-term assets by incurring short-term debt, thereby creating a maturity mismatch. If firms attempt to compensate for the lack of a domestic bond market by borrowing in international bond markets, they may expose themselves to excessive foreign exchange risk. Alternatively, investment policies may be biased in favour of short-term projects.

There are additional advantages in fostering the development of *local currency* bond markets. Local currency debt markets promote more efficient financial markets by generating a range of market yields that reflect

1. The east Asian countries referred to in this article are China, Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand.

the opportunity cost of funds at each maturity in the local currency, an essential element for efficient investment and financing decisions. In particular, the existence of tradable instruments based on a local currency yield curve allows market participants to hedge their exposures: fixed-rate liabilities can be converted into floating-rate liabilities, and/or foreign exchange exposures can be transformed into local currency exposures via the use of foreign exchange forwards or cross-currency interest rate swaps. Arbitrage opportunities between foreign and local currency debt markets can also be exploited to lower the cost of borrowing.

At a more general level, a local currency yield curve contributes to the stability of the financial system. In addition to potentially lowering the risk-adjusted cost of borrowing, the overall level of risk should be reduced by spreading it across many participants, and to entities best placed to bear the risk. In the context of the Asian region, the need to strengthen the financial system in this way is particularly important for those countries seeking to liberalise their capital accounts. If capital inflows are forced into short-term obligations (such as bank deposits) because longer-term debt instruments are not available, the capital-importing nation is more vulnerable to a sudden outflow of capital.

Another reason for developing bond markets is to avoid concentrating intermediation directly on banks. With banks being highly leveraged, such concentration may make the economy more susceptible to crises. The damage caused to the real economy by such crises is generally much higher, and the necessary restructuring more protracted, in the absence of a well-functioning bond market. Even in cases where a bank is providing the finance, a well-developed bond market allows the transfer of this risk through securitisation or other credit derivatives. Banks are able to repackage loans and sell them as bonds (such as mortgage-backed or other asset-backed securities). This reduces banks'

exposure to credit and liquidity risk and can allow them to manage any maturity mismatch.

The yield curve for government debt also provides valuable information about expectations of likely macroeconomic developments and about market reactions to monetary policy moves.<sup>2</sup>

---

## Local Currency Debt Markets in east Asia

---

There is a great diversity in the degree of development of local currency bond markets across east Asian countries. In terms of absolute size, resident local currency issues with remaining terms to maturity of more than a year range from about US\$2 billion in Indonesia, to about US\$465 billion in China (Table 1). At just under US\$1 000 billion, the combined size of the bond markets of the nine economies in east Asia is equivalent to about 8 per cent of the US bond market, or about 18 per cent of the Japanese market. Relative to the size of these economies, the east Asian local currency bond markets range from less than 2 per cent of GDP in Indonesia, to 74 per cent in Malaysia. In comparison, bond markets (both government and private) amount to about 124 per cent of GDP in the US, 134 per cent in Japan and 32 per cent in Australia. (While this is the most relevant measure of residents accessing longer-term non-intermediated debt markets, it understates the relative importance of markets such as Hong Kong and Singapore (and for that matter Australia) where local currency issuance by non-residents is sizable; in the case of Hong Kong, local currency issues by non-residents are more than double issues by residents.)

Much of the impetus for growth in non-intermediated debt markets in Asia has come from the government sector and was associated with the Asian financial crisis. The crisis led to a large slowdown in economic

2. For a more detailed discussion of the reasons for developing local currency bond markets see BIS (2002), 'The development of bond markets in emerging economies', BIS Paper No 11, Bank for International Settlements.

**Table 1: Local Currency Denominated Securities Issued by Residents\***  
Amount outstanding as a share of GDP – March 2003

	Total**		Government	Financial institutions	Non-financial institutions
China	36.7	(465)	19.2	16.7	0.8
Hong Kong	8.9	(14)	3.0	3.7	2.2
Indonesia <sup>^</sup>	1.5	(2)	–	–	–
Korea	49.7	(246)	16.0	11.4	22.3
Malaysia	73.6	(72)	33.6	4.4	35.5
Philippines	22.0	(17)	20.7	–	1.3
Singapore	43.2	(38)	20.5	19.9 <sup>^^</sup>	2.8 <sup>^^</sup>
Taiwan	37.0	(105)	22.7	4.0	10.3
Thailand	30.3	(39)	19.3	5.9	5.0
Australia	32.0	(134)	16.6	3.5	11.9
United States	124.0	(13 070)	31.9	70.2	21.9
Japan	133.9	(5 482)	100.3	19.9	13.7

\* Remaining term to maturity greater than 1 year, except for China where all securities are included

\*\* Bracketed figures refer to size in US\$ billion

<sup>^</sup> IMF estimate for Indonesia (2000)

<sup>^^</sup> Also includes securities with a remaining term to maturity of less than 1 year

Source: BIS

activity in the region and a banking crisis requiring a public sector injection of capital, which resulted in a number of countries moving from surplus fiscal positions to deficit positions which have persisted. At the same time, sharp adverse movements in exchange rates and interest rates highlighted the vulnerabilities of firms running large unhedged foreign exchange and interest rate positions, thereby emphasising the need to promote the development of markets which would enable firms to more effectively manage their financial risks.

In response to these developments, governments began to tap domestic bond markets on a regular basis. Recognising the benefits of having a benchmark for longer maturities, governments also extended the maturity profile of their debt (Table 2). Singapore launched a 10-year issue in 1998, Korea introduced a 10-year bond in 2000 and

China introduced a 20-year issue in 2001. Even governments that had built up large net asset positions over time, which could have been run down to finance budget deficits – such as Hong Kong and Singapore – continued to issue fixed-interest securities in the interests of developing a well-functioning bond market.<sup>3</sup>

As a result, there is now considerable Asian government paper outstanding. By maturity, the vast bulk of this debt has a remaining term-to-maturity of less than 10 years, with a considerable proportion at 1 year or less (Graph 1). Korea and Hong Kong have almost no issuance beyond the 10-year mark. Sovereign issues denominated in foreign currency have largely been confined to the Philippines.

Notwithstanding the range of maturities issued in local currency, liquidity tends to be

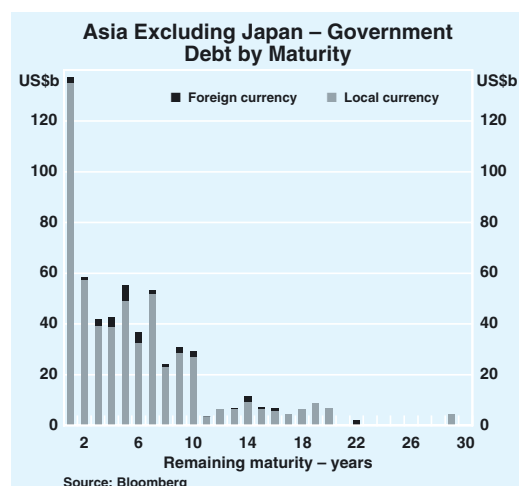
3. Some central banks in the region have also issued debt securities, though these have tended to be for maturities of up to two years and are used primarily to remove excess liquidity associated with large capital inflows. .

Table 2: Government Debt Issuance

	Maturities* Years	Issuance calendar	Turnover ratio** (2002)	Futures market	Repurchase agree- ments	Non- resident partici- pation	With- holding tax
China	2, 3, 5, 7, 10, 15, 20	×	0.4			×	–
Hong Kong	2, 3, 5, 10	×	15.6	✓	✓	✓	×
Indonesia <sup>^</sup>	5, 10					✓	✓
Korea	3, 5, 10	✓	9.6	✓	✓	✓	✓
Malaysia	3, 7, 10, 15, 20	✓	3.7	✓		Limited	✓
Philippines	2, 5, 7, 10, 20					✓	✓
Singapore	2, 5, 7, 10, 15	✓	5.0	✓	✓	✓	×
Taiwan	10, 15, 20	✓				✓	
Thailand	2, 5, 7, 10, 14	✓	2.5		✓	✓	✓

\* Two years and longer  
\*\* Annual bond turnover as a share of securities outstanding  
<sup>^</sup> Includes recapitalisation bonds  
Sources: National central banks

Graph 1



concentrated towards the shorter end of the market – around 3 to 7 years – the major exceptions being Singapore and Hong Kong where liquidity is more evenly distributed. Turnover in the debt markets is not particularly high, though it has increased steadily over the past five years in most markets. Sovereign debt turnover ratios are relatively low in Thailand and Malaysia (less than 5), and highest in Hong Kong (about 16); turnover in China was quite low in 2002,

though the World Bank suggests that it increased quite markedly in the first half of this year. In comparison, turnover ratios in the US and Australia are about 30 and 9 respectively.

Price discovery and secondary market liquidity has also been enhanced by the promotion of interest rate futures and repurchase agreement (including securities lending) markets. Korea, Singapore, Hong Kong and Malaysia have interest rate futures markets, with the Korean contracts being the most active regionally; Taiwan is scheduled to launch a futures contract towards the end of this year. Liquidity in the secondary market is also influenced by the participation of non-residents in the market and taxation arrangements. There are few restrictions on participation in these markets by non-residents, though procedural requirements can be relatively onerous in some countries and non-residents may still be subject to a combination of withholding, capital gains and turnover taxes (although there is scope in a number of countries to have this burden reduced). The one exception is China where participation is limited to Qualified Foreign Institutional Investors under changes

introduced in November 2002. Most countries follow a book-entry system of clearing and have introduced a delivery-versus-payment system.

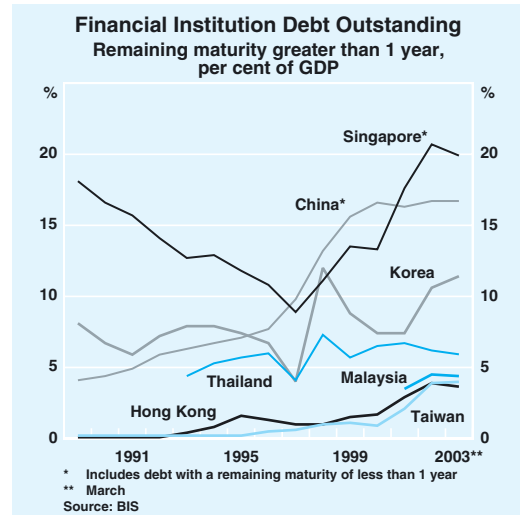
Traditionally banks have been the largest holders of public sector securities in Asia, accounting for around 60 per cent of public sector securities on issue. Holdings of institutional investors, such as insurance companies and pension funds, are much smaller, at around 20 per cent. This contrasts with markets in industrialised economies where the share of public sector debt held by institutional investors is higher. Accordingly, institutional investors are seen as key to the development of debt markets in emerging markets in Asia given the high level of domestic savings in these countries. In particular, the development of funded pension schemes is expected to bring with it the need to hold fixed-interest debt as a hedge against long-dated liabilities. While some countries have introduced rules governing portfolio decisions of these investors (for mainly prudential reasons), which have assisted in the development of the public sector debt market, most countries have been cautious, conscious of introducing distortions typically associated with captive market arrangements.

## Corporate Sector Debt Markets

Corporate sector debt markets (including issues by government-sponsored enterprises) have generally lagged the development of the government debt market. For much of the period up until the Asian financial crisis, financial institutions accounted for most of the activity in this market, usually in the form of issues of fixed-income securities with maturities of up to 10 years. This issuance was disrupted around the time of the financial crisis, but it has since recovered and it is now well above pre-crisis levels (Graph 2).

The largest increase in issuance has been in Singapore, Korea and China. In the case of Singapore, much of the growth has been in

Graph 2



structured products, with the share of private sector debt issuance through special purpose vehicles increasing from 37 per cent in 2001 to 50 per cent in 2002. The growth in these vehicles has been driven by asset securitisations (mainly of property) and credit products. In Korea, three primarily state-owned enterprises – the Korea Development Bank, the Industrial Bank of Korea and the Korea Deposit Insurance Corporation – account for most of the issuance by financial institutions. Similarly, in China government-owned banks issue financial institution bonds. These bonds, which are only issued to residents, are used to fund longer-term project-specific loans. In countries such as Malaysia and Thailand, governments are stepping up efforts to promote the development of a secondary mortgage market through issues by government-sponsored financial enterprises.

There has been a gradual increase in issuance by the non-financial corporate sector over the latter part of the 1990s, though this market remains relatively underdeveloped in a number of countries (Graph 3). This owes mainly to the fact that the government debt market, which provides the foundation for a number of hedging instruments, is still being developed and to the less homogeneous nature of the corporate sector debt market, with

Graph 3



issues varying widely from conventional securities through to bonds with equity warrants.

The main exceptions are Malaysia and Korea where debt of non-financial institutions as a ratio to GDP exceeds that of the US and Japan. In Malaysia, issuers represent a broad cross section of the economy, including utility companies, manufacturers and retailers. The tenure of new issues is typically 5 years. The early establishment of a credit ratings agency (in 1990) and the funding of government-initiated infrastructure projects have been important for the development of this market.

A wide range of corporate entities also issue into the Korean market, with most corporate bonds issued for three years, though there are also 1- and 5-year bonds. A major change in this market since the Asian financial crisis has been the shift away from bank-guaranteed bonds to non-guaranteed bonds with credit ratings obtained from at least two credit rating agencies. The Korean market experienced a sharp pull-back in 1999 associated with the collapse of the Daewoo group which dented confidence in that market.

Relative to GDP, the Taiwanese non-financial corporate sector debt market is somewhat smaller with issues ranging from 2 to 12 years (though more typically toward the longer end of this spectrum). Issuance of

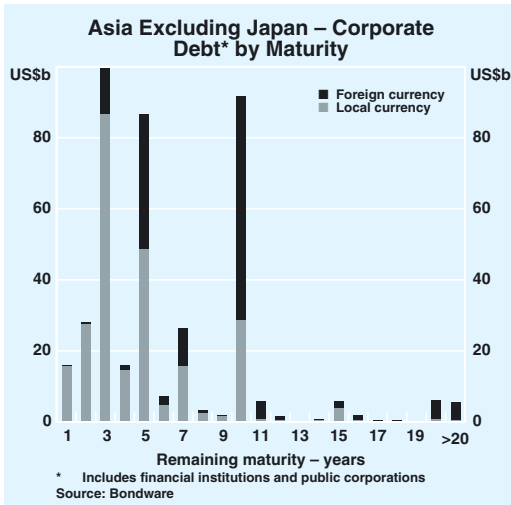
corporate bonds has picked up significantly over the past three years after growth slowed in 1999 when the government began to require unsecured corporate bonds to be credit-rated before they could be issued.

In addition to promoting the development of a benchmark yield curve, a number of countries have taken steps over the past few years to remove impediments to the development of local currency corporate bond markets. These include improving settlement practices (Singapore, Malaysia), actively promoting the development of asset-backed securities markets (Hong Kong), encouraging the establishment of credit ratings agencies (Thailand and Malaysia), reviewing regulations affecting the development of the market (Taiwan and China) and improving market transparency (Malaysia). At an aggregate level, banks and institutional investors account for most of the holdings of corporate sector debt, with the split being fairly even between the two, though it does vary across markets.

It is difficult to establish to what extent residents in these countries remain reliant on non-intermediated borrowings denominated in foreign currency, rather than local currency borrowings. The largest deals so far this year for the Asian corporate sector have generally been denominated in US dollars. To some extent this reflects a combination of the US dollar market being considerably deeper and more liquid – particularly for longer maturities – than the domestic markets and the close link between a number of the Asian currencies and the US dollar. It is also possible that in well-developed markets, such as those in Hong Kong and Singapore, residents are issuing foreign currency bonds but then swapping the proceeds back into local currency using derivative contracts. (In this case, issuance by non-residents in local currency tends to be larger than normal.)

The Dealogic Bondware database of primary issuance, which picks up widely distributed issues, suggests that a number of corporate borrowers continue to tap the foreign currency bond market, particularly for longer maturities (Graph 4). Resident issues

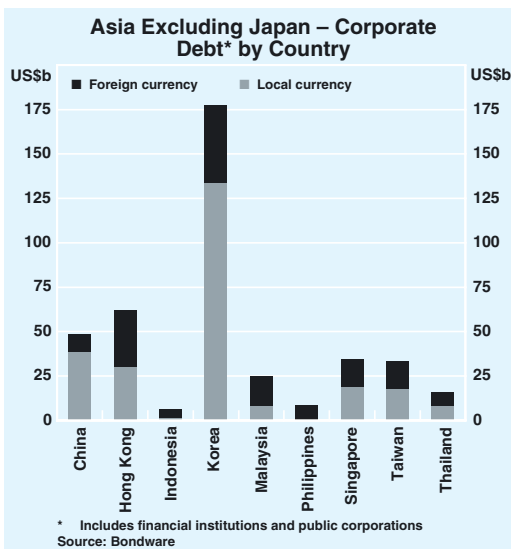
**Graph 4**



denominated in foreign currency account for around one-third of total resident issuance picked up by this data source, with this share changing little over the past three years.

Foreign currency corporate issuance in the region is concentrated in Hong Kong and Korea: in Hong Kong foreign currency debt is around 50 per cent of total corporate issuance, whereas in Korea it amounts to only 25 per cent of the total (Graph 5). Foreign currency issuance in other countries generally

**Graph 5**



accounts for around half of total corporate debt issuance. At either end of the spectrum sit China, which makes relatively little use of foreign currency corporate debt, and the Philippines, which issues mainly foreign currency denominated corporate debt.

### Recent Multilateral Initiatives

Development of regional bond markets has become a policy priority for a number of governments in the region. As noted earlier, this is based on a consensus that bond market development is an essential building block for improving the efficiency of financial intermediation in the region and reducing potential currency and maturity mismatches.

Groups currently examining Asian bond market development include Asia-Pacific Economic Cooperation (APEC), the Association of South East Asian Nations plus Korea, Japan and China (ASEAN+3), and the Asian Co-operation Dialogue (ACD). The main focus of APEC and ASEAN+3 has been on providing the infrastructure for the development of viable local currency bond markets. The APEC grouping’s work spans the harmonisation of regulatory infrastructure, the development of securitisation and credit guarantee markets and the development of new regional debt products. ASEAN+3 working groups are currently examining the role of credit ratings agencies, settlement procedures and the promotion of issuance by non-residents, particularly international organisations, in Asian currencies. The possibility of issuing bonds denominated in a basket of Asian currencies is also being promoted by this group. The aim of the more recently formed ACD is to improve public awareness of the various Asian bond market reform initiatives, as well as to secure political support for them.

At a more practical level the Executives Meeting of East Asian and Pacific (EMEAP) grouping of 11 central banks from the region (Australia, China, Hong Kong SAR,

Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore and Thailand) has established the Asian Bond Fund (ABF), in conjunction with the Bank for International Settlements. Established in July 2003, it is designed to promote development of regional bond markets and channel some of the region's foreign currency reserves back into the region. Accordingly, EMEAP member central banks have invested a total of US\$1 billion of foreign exchange reserves in the fund, which invests in a basket of US-dollar denominated bonds issued by government and quasi-government issuers in EMEAP economies (other than Australia,

New Zealand and Japan where bond markets are already well developed). EMEAP has also announced that it will study the feasibility of extending the investment to include bonds denominated in regional currencies. The establishment of the US-dollar denominated ABF is only a small step when judged against either the size of foreign exchange reserves in the region or against bond market issuance in the region. Nonetheless, it represents a firm commitment by member central banks to regional bond market development. Larger gains are expected to accrue from the next step – a local currency fund. √