Debt market development in Singapore

Teo Swee Lian

1. Introduction

In 1997, the Monetary Authority of Singapore (MAS) embarked on a fundamental review of its policies in regulating and developing Singapore's financial sector. One component was the development of a liquid bond market. The Asian crisis showed that an overdependence on the banking system could exacerbate problems for borrowers. Having a deep and liquid bond market would offer borrowers the flexibility to diversify their sources of funding and provide them with a good alternative source to raising long-term capital for matching any long-term expenditure needs.

Moreover, many investors in financial assets in Singapore held short-term money market products, equities or property. The development of the bond market would make available to investors a wider choice of assets, of varying credit risks and maturities, to bridge this gap in the risk spectrum. Insurance companies would also have long-term assets to match long-term liabilities and would not need to resort to a heavy allocation into equities.

This paper gives an update on the bond market development efforts in Singapore, and discusses some of the issues and challenges the market faces going forward.

2. Initiatives to develop the Singapore dollar bond market

The measures taken since 1997 have focused on several key areas:

(i) building the Singapore Government Securities (SGS) yield curve to serve as a benchmark;

(ii) building a critical mass and diversity of issuers;

(iii) developing the depth and breadth of the investor base;

(iv) developing the talent pool with expertise in debt origination, trading and sales; and

(v) establishing the physical infrastructure and markets for hedging.

Measures taken to develop the SGS market

The following measures were taken:

- extending the benchmark yield curve, by issuing 10-year SGS in 1998, and 15-year in 2001;
- establishing a public calendar of issuance. There is a weekly issue of three-month T-bills, while one-, two-, five-, seven-, 10- and 15-year bonds are issued according to an annual calendar announced in September for the following year. The exact size of each T-bill and bond issue is made known one week before the auction;
- adopting an issuance programme with the aim of building large, liquid benchmarks, including
  - increasing the typical size of SGS issues to around S$2-3 billion per tranche,
  - reopening existing issues to enlarge the free float for trading,
  - buying back small-sized, off-the-run issues in order to channel liquidity into the larger benchmark bonds that MAS had started issuing,
- establishing a repo facility to support the primary dealers; and
- providing a pool of securities from which primary dealers could borrow to cover their short positions arising from market-making activities.

Having an efficient repo market is important for supporting secondary market activity and is a key element in a liquid bond market. A deep and liquid repo market provides market players with a means of financing positions, and enables them to take long/short positions such as buying one bond and selling another to take advantage of yield curve arbitrage opportunities. In addition, it also facilitates portfolio management. In markets where foreign players participate, the ability to execute repos is important, especially if they do not have access to the domestic deposit base. Otherwise funding would be through credit lines from the banking system, which are often not as efficient as collateralised funding in repo markets. MAS established a repo facility to support the market-making activities of the primary dealers. It has also made more active use of repo transactions in its money market operations. Furthermore, MAS has encouraged players to adopt best international practices and documentation standards.

As the SGS market is still developing, the presence of designated market-makers known as primary dealers (PDs) has been beneficial in ensuring an active secondary market. PDs in SGS are required to provide two-way quotes under all market conditions, and are obliged to underwrite SGS issued through primary auctions. In return, privileges are accorded so that it is attractive for banks to become PDs. For example, only PDs can participate directly in primary auctions, only PDs have access to the MAS repo facility, and MAS carries out its money market operations solely through the PDs.

The primary auction design is an important consideration in mitigating non-competitive behaviour at primary bond auctions. The key aspects of auction design in achieving this objective include: (a) the scope of private sector participation; (b) the role of competitive versus non-competitive bids;[1] (c) central bank participation; (d) the price determination and allocation mechanism for competitive bids; and (e) the transparency of the auction. In Singapore, SGS auctions are modelled on the "discriminatory price" format, rather than the "uniform price" format.[2] Allowing both competitive and non-competitive bidding at bond auctions has benefits. Non-competitive bidding may reduce the likelihood of collusive behaviour among the major players at the auction by ensuring that less sophisticated investors, who may not have current market information, are able to purchase a certain amount of securities at a current market yield. As a result, it helps achieve a broader investor base. However, the amount of securities allotted through non-competitive bidding must be controlled. If a large proportion of the bids are non-competitive, then the resultant price will be distorted as it only represents a very small proportion of market demand. In the SGS market, both competitive and non-competitive bidding is allowed, but only competitive bidding is permitted in T-bill auctions. MAS participates directly in SGS auctions in order to acquire securities for its money market operations and for its repo facility. To minimise the impact of MAS's involvement on prices, MAS participates in SGS bond auctions on a non-competitive basis.

The range of measures taken to develop the SGS market has been successful in establishing a more liquid benchmark yield curve. The increased size and liquidity of the SGS market have also resulted in its inclusion in JP Morgan's World Government Broad Index in June 2001, as well as in Lehman Brothers' Global Aggregate Index.

The outstanding volume of SGS has more than doubled since 1997. Total outstanding volume as at 2001 was S$ 53.6 billion compared to S$ 22 billion in 1997. In 2001, outstanding SGS stood at 39% of GDP.

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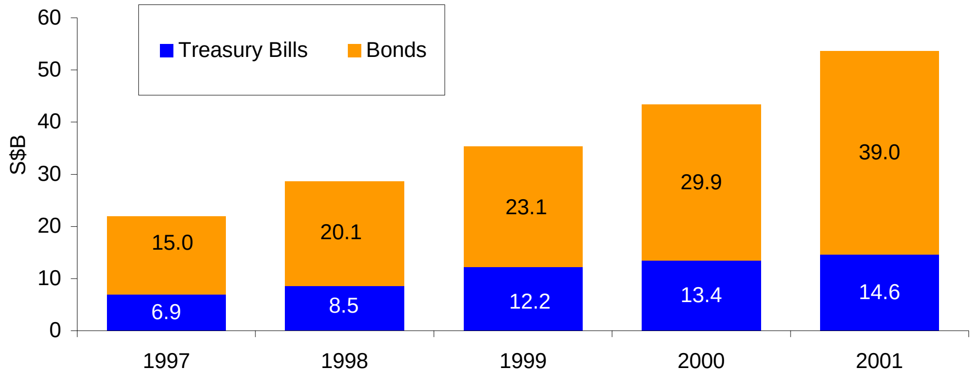
1 A competitive bid is one where the applicant wants to be allocated securities only at the yield specified in her application. An applicant submitting a non-competitive bid is willing to be allotted securities at the average yield of all successful bidders.

2 In a "discriminatory price" auction, successful bidders pay the price they bid, while in "uniform price" auctions all successful bidders pay the same price. See the paper by Mohanty in this volume.

Graph 1

Singapore government securities outstanding

In billions of Singapore dollars

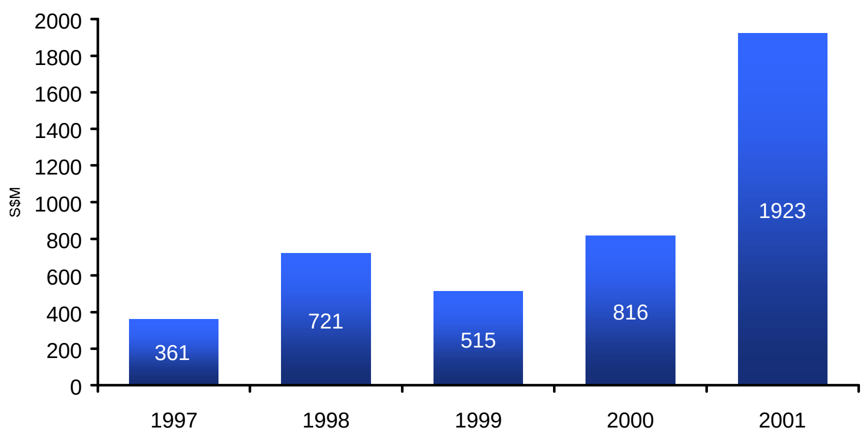


The average daily turnover in both the outright (Graph 2) and repo (Graph 3) markets has made significant progress with daily volumes of over S$ 1 billion in 2001.

Graph 2

Singapore government securities: average daily turnover

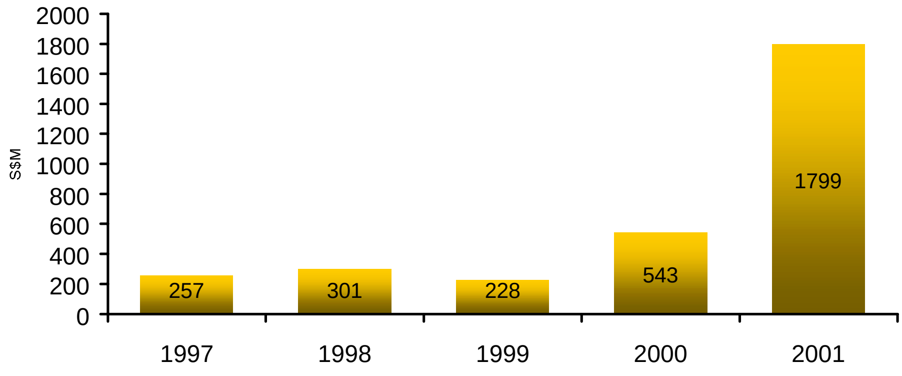
In millions of Singapore dollars



Graph 3

Repo market: average daily turnover

In millions of Singapore dollars



Building critical mass and diversity of issuers

A two-pronged approach has been adopted. First, the government encouraged the statutory boards to tap the debt capital markets for their funding needs. To date, three statutory boards[3] have issued bonds denominated in Singapore dollars and have raised about S$ 5.3 billion since October 1998. They are expected to continue to be significant issuers in the Singapore bond market.

Second, the policy of non-internationalisation of the Singapore dollar was liberalised in August 1998 to allow foreign entities to tap the Singapore dollar bond market. This was subject to the requirement that the domestic currency proceeds must be swapped or converted to a foreign currency if bought or used outside Singapore. A further liberalisation, allowing even unrated foreign entities to tap the market provided they sold the bonds only to sophisticated investors, was subsequently phased in. Since October 1998, there have been 75 issues totalling S$ 7.5 billion by foreign entities from the US, Europe and the Asia-Pacific region.

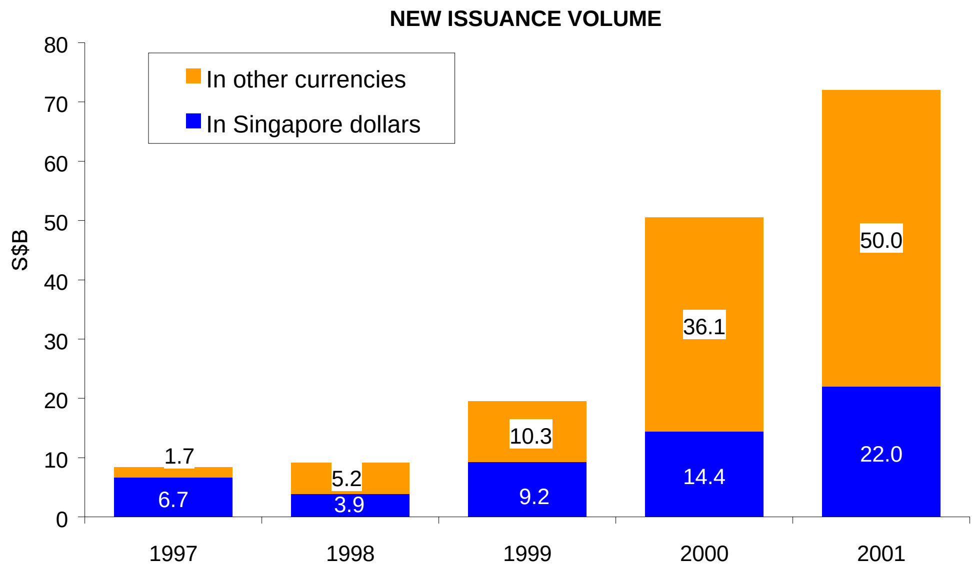
The total volume of S$ denominated and non-S$ denominated corporate debt continued to grow strongly in 2001 with total corporate bond issuance of S$ 80.8 billion. For debt denominated in Singapore dollars, issuance was across the maturity spectrum up to 15 years with structured paper comprising 47% of the total Singapore dollar debt issued. The market also saw the launch of several large Singapore dollar bond issues of around S$ 1 billion in 2001, compared to average issue sizes of S$ 20 million before 1998. For other debt, the bulk of the issuance was concentrated in short-term commercial paper.

3 Jurong Town Corporation, Housing Development Board and Land Transport Authority.

Graph 4

Corporate debt market: new issuance

In billions of Singapore dollars

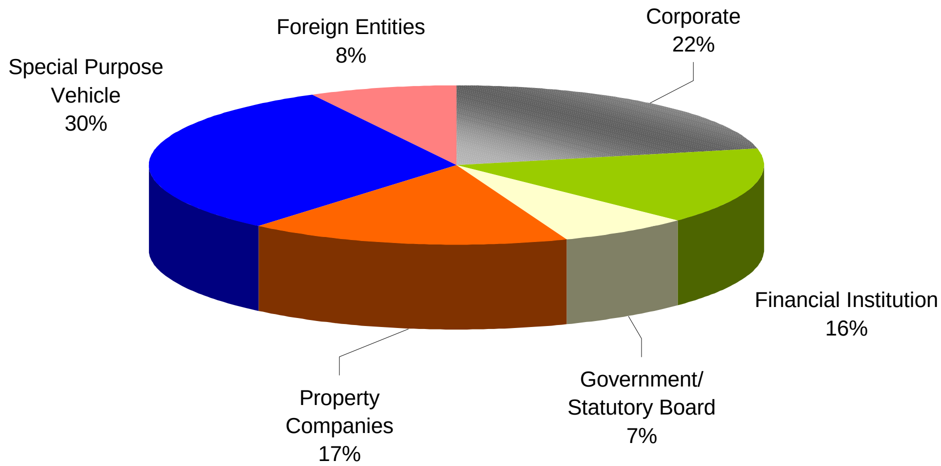


Singapore is now experiencing a greater diversity of issuers in the market. Prior to 1998 property companies dominated the local currency bond market. Now there are also issues by the engineering, manufacturing, food, logistics and transport industries.

Graph 5

Issuers in Singapore dollar bond market, 2000

As a percentage of all issuers



Broadening and deepening the investor base

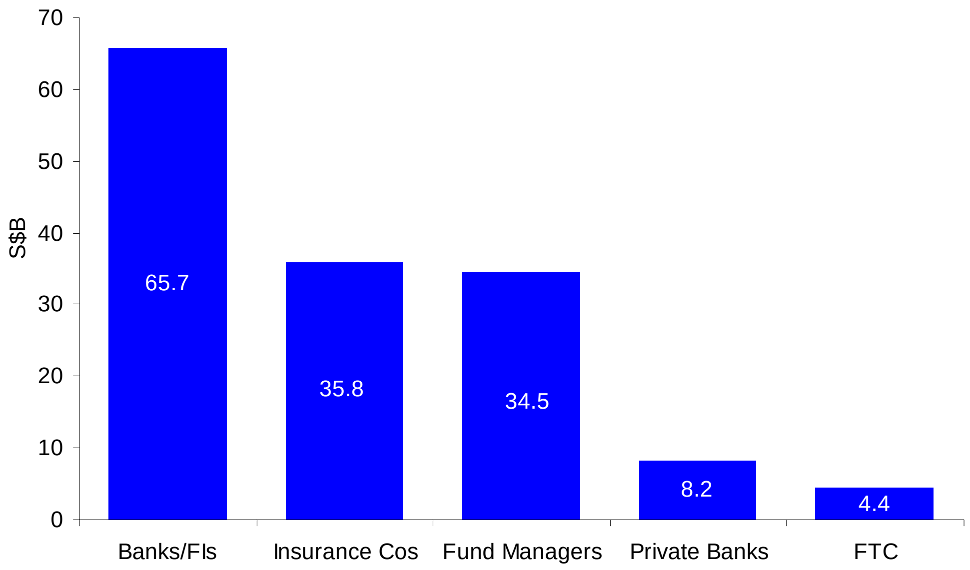
The investor base in Singapore for Singapore dollar-denominated bonds (including SGS) is largely institutional, and dominated by the banks and insurance companies. Fund managers are also fairly active although they only invest a minority of funds in these bonds. Ongoing initiatives are being taken to develop the funds management industry to increase the depth and breadth of the fixed income investor base in Singapore. The retail investor base is currently small. However, there is growing interest and demand, as evidenced by the oversubscription in the various tranches of the statutory board bonds offered to the public. The intermediaries have also been active in trying to raise the level of awareness and educate the public on bond investments, and organised a retail bond fair to meet this objective. They have also been reaching out to more non-resident investors.

Investments in S$ and non-S$ debt securities by investors resident in Singapore has grown by an estimated 32% in 2001 to S$ 144 billion. Insurance companies' fixed income investments as a percentage of the total investments also grew from 30% in 1999 to 41% in 2000, and stood at 49% as at September 2001.

Graph 6

Investments by resident financial institutions in debt securities (all currencies)

In billions of Singapore dollars



Developing the talent pool

In addition to the pool of issuers and investors, the presence of intermediaries is also crucial in structuring the transactions and providing secondary market support. Singapore has introduced a tax incentive scheme to improve capabilities in the arrangement, distribution and trading of bonds.

Establishing the infrastructure and markets for hedging

SGS transactions are cleared on a delivery-versus-payment (DvP) basis over the MAS Electronic Payment System and MAS's book-entry clearing system for SGS. For clearing Singapore dollar-denominated non-government bonds, an electronic book-entry DvP system was put in place in 1998 by the Central Depositary, a subsidiary of the Singapore Exchange.

To facilitate secondary market activity, wider participation has been encouraged and costs reduced through the removal of regulatory reserve requirements and a tax scheme. Furthermore, a five-year SGS bond futures contract was launched in June 2001.

3. Challenges facing debt market development

The challenges facing the further development of the debt market in Singapore include:

- *increasing market liquidity*

  Domestic corporate treasurers and fund managers, including insurance companies, need to be educated and encouraged to be more proactive in portfolio management and in using sophisticated risk management instruments.

  What is the best approach for Singapore to take to use technological developments to increase the transparency and liquidity of the market? For example, should the market move more quickly towards trading on e-bond platforms?

- *improving the depth and breadth of the investor base*

  There is the need to continue to educate domestic investors about investing in bonds, as opposed to other traditional investments such as property, equity and cash. There is also a need to raise the level of sophistication of the domestic institutional investors. In addition, Singapore wants to encourage non-resident investors to participate in the bond market.