



FINANCING REAL ESTATE DEVELOPMENT USING BONDS IN ASIA

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ABSTRACT. During the global financial tsunami, banks were very cautious in financing business needs due to tight credit conditions. Alternative ways for financing projects were sought after by real estate developers worldwide. Within Asia, notably in Hong Kong SAR and Singapore, a number of reputable property developers have been tapping the capital debt market for funds in recent years amidst an increasingly regulated loan market and competitive pricing. In the face of a growing bond market, some corporate bond issues arranged by these property developers have been successful. Apart from investment appetite, property developers have to gauge carefully the pros and cons of raising funds through bond issues. Successful bond issues need to be structured with suitable credit enhancement features since the perception of risk and rising interest rates are major deterrents to potential investors who would otherwise face bond defaults or bear high opportunity costs with the committed funds. Through a number of case studies, the suitability of bond financing for property development is compared with loan financing. It is found that a close monitoring of market conditions and some foresight are essential ingredients for successful bond financing, for both straight bond issues and convertibles.

KEYWORDS: Real estate developers; Capital structure; Bonds; Loans; Convertibles

1. INTRODUCTION

The Asian financial crisis in the mid-90s has seen banks incurring substantial bad debts due to an over-reliance on loans to fund projects and stumbling property prices affecting borrowers' repayment capability. Having learnt the lessons, many Asian governments have resolved to promote the growth of their domestic bond markets to diversify the sources

of finance and reduce risks on the banking sector (Jin and Loh, 2002). The ratio of outstanding bond amounts to GDP has been increasing gradually from the stagnated figure of five percent in the 1990s to double digits in the 2000s (Das, 2005). Nevertheless, the Asian bond volume is still far below those of developed economies such as the UK and the US, yet the rate of growth is phenomenal with the vibrant economies. Sovereign and corporate

bonds have been popular, especially under the low interest rate regime in markets following the trend in the US closely, which saw a succession of rate reductions since the global financial crisis emerged in the late 2000s.

In the real estate and infrastructure development sectors, project promoters and investors need to match their funding needs with instruments of long maturity since the income streams of their projects span over long periods. Within Asia, whilst some developers have grown into conglomerates (such as in Hong Kong and Singapore), many other developers are still relatively focused on their mainstream property development and transaction business. The bigger developers enjoy a plethora of funding sources due to their stronger balance sheets and good credit ratings. They can tap the capital market for share and bond issues, whilst smaller developers can only resort to private equity and bank loans. Starting from late 2008, there has been a significant reduction in the general availability of loans (PwC, 2008). Banks became more selective and rigorous about lending (Treanor and Seager, 2009). For two years after the financial meltdown caused by the US sub-prime crisis, the impacts on developers of all sizes linger even when the economy is recovering, with loan cost being higher than pre-tsunami levels and liquidity limited to core business relationships (Basis Point, 2009). It was only starting from March 2010 that loan pricing has returned to pre-crisis level (Basis Point, 2010). To enable a wider choice of financing methods in the wake of cautious bank lending at times like this, a research project has been conducted on the use of bonds in Hong Kong and Singapore, which have the most vibrant capital markets amongst all Asian cities outside Japan, with their financial centres serving the needs of major Asian and other regional companies (Hines, 2001). This study is timely as Liow (2008) pointed out that market interdependence is a

rising trend after the Asian Financial Crisis, due to the growing interconnections between national economies.

2. GLOBAL BOND MARKETS AND REAL ESTATE

Bank loans have been regarded traditionally by developers worldwide as short-term finance, whereas longer term finance include equity capital and mortgage debenture (Harvey, 1987). A mortgage debenture is essentially a fixed-interest loan provided by a group of investors (with maturity between 15-35 years) to a developer and secured against the property or properties being financed. As for debenture, there is a difference in terminology between North America and the UK (Issac, 2003). In the US and Canada, a debenture would be unsecured, whereas in the UK, the borrowing is secured on the general assets of the company. Both mortgage debentures and debentures have been important sources of long-term finance for property companies in developed economies for decades. In the UK context, the mortgage debenture market has typically been a public one, and debentures have been sold by major property companies (Jolly, 1992). More recently, the term “bond” has been used interchangeably with “debenture”, but bonds can be secured against the issuers’ general assets or in some cases, unsecured (CIBC, 2010). For example, a GBP417 million “bond” issue was secured against London’s City Hall (Gibson, 2006) and another GBP300 million unsecured “bond” issue was made by a major commercial property developer with A- rating by Fitch, maturing in 2021 (Sleath, 2009). Often, the phrase “gilt-edged bond” is used in the UK to denote a bond issued by a blue chip company, which can be a developer, or the Bank of England. Due to the greater certainty over fixed interest expenses, developers tend to favour longer-term borrowings to fulfil the funding needs of their

investment properties (Beveridge, 1988). A study by Ooi (1999) of UK property companies supported the traditional view that developers time their long-term debt issues based on their expectation of future interest rate movements and the prevailing property market conditions. His findings also indicated that property companies employ more long-term debt to support their expansionary goals in a property market boom.

The domestic bond market of the US is the world's largest, with US\$815 billion average daily trading volume in 2009 (TheCityUK, 2010). Apart from treasury bonds, there are numerous bond types, including a large municipal bond market and various securitized products. Within the US\$6.1 trillion outstanding corporate bond volume (SIFMA, 2008), only major real estate developers issue bonds in the restrictive public market, whereas others access qualified institutional investors under Rule 144A, which waives the registration requirements of the Securities and Exchange Commission (Chaplinsky and Ramchand, 2004).

Japan has the second largest domestic bond market outside the US. Japanese long-term credit banks used to issue 5-year debentures, hence their loans to borrowers typically have a 5-year tenor, although loans up to 15 years have also been made (Hines, 2001). Apart from financial institutions, major developers such as Sumitomo Realty & Development Co. Ltd. and Kajima Corporation have also issued corporate bonds and debentures that make up 20 to 30% of their total interest-bearing debt (Sumitomo, 2009 and Kajima, 2009). Maroney and Naka (2006) also noted in their study that bonds form the most important component to a well-diversified Japanese investment portfolio.

In tandem with the development of the major bond markets in the world, Asian real estate developers have been quick to tap the bond market for their funding needs. As pointed

out by Warnock and Warnock (2008), the time is ripe for the supply of housing finance in emerging markets through bond market development, since financial institutions with long-dated liabilities have natural demand for long-dated assets such as bonds.

3. FUNDING NEEDS OF DEVELOPERS

Real estate developers normally build up their land reserves and watch for the right time to commence development to profit from an upside swing. In many countries and cities, governments rely on auction or tender arrangements to realize the highest possible value from land allocation. Upon successful bids, developers are obliged to pay large sums of money (sometimes called "land premium") within one to three months. To meet this short-term cash outflow requirement, they usually secure some bridging loans from banks, which carry high interest rates due to the lack of security offered to the lenders before the proper land titles are granted by the government. Developers with sufficient financial muscle may be able to pay upfront from their retained earnings, which actually cost more in the form of equity. Whether they use bridging loans or their own reserves in paying for the land cost, there is always the need to re-finance these initial cash injections and the upcoming construction expenditure with long-term funds of lower cost. Apart from new projects, real estate developers have to maintain a sufficient level of working capital for operating their investment properties. Hence, they have to secure suitably priced funds either on a project or corporate basis. During times of high liquidity, banks have been able to meet the large funding needs of major developers with syndicated or club loans. With the onset of the global financial crisis, however, bank loans were not as easy to come by. Conerly (2010) made the point that, even in the year 2009 with relaxed lending

policies, many companies would not be eligible for loans. As an alternative, established developers may access the capital market for equity funds and debt finance. Initial public offers or rights issues help developers build up their equity base, whereas bond or note issues can supplement or replace bank loans under the right circumstances. In cities such as Hong Kong and Singapore, another common way of financing residential development is through presale of uncompleted properties (Leung, 2010), but then the developers have to inject 30% of the development cost into the project to obtain presale consent from the government.

4. BOND *VERSUS* EQUITY AND LOAN FINANCING

From the perspectives of the fund raiser, the capital structure decision is an important one. Despite the intelligent question posed by Nobel prize-winners Modigliani and Miller (1958), who postulate that a firm's value is independent of financing decision based on restrictive assumptions, managers still insist on having a capital structure suitable to their organizations. Perhaps, as Myers (2001) asserted, there is no universal theory of the debt/equity choice, apart from conditional theories such as the Tradeoff Theory (Campbell and Kelly, 1994), Pecking Order Theory (Myers and Majluf, 1984) and Free Cash Flow Theory (Jensen, 1986). In practice, nowadays many believe that there is an optimum level (or range) of gearing of any firm, taking into consideration the cost of borrowing and taxation issues (Ogier et al., 2004). A summary of the capital structure considerations affecting the choice of equity, bank loan and bond is shown in Table 1. It would appear that bond is a good choice for real estate developers with good credit rating for meeting their long term funding needs.

However, Chesterton and Ghose (1998) made an interesting observation that firms in Hong Kong preferred the use of equity and bank loans to bonds. They argued that the family management style of Hong Kong companies and the low proportion (25%) of shares required to be listed in the Stock Exchange meant that dilution of control should not be a problem. The tax advantage of borrowing is also less obvious in Hong Kong when compared with markets such as the US, due to the relatively low corporate tax rate at 16.5%. They also regard banks as being more sympathetic to weak credit borrowers than bondholders. In addition, the liquidity of the equity market is higher than bonds in Hong Kong, being attributable to the familiarity of retail investors and transparency of share information, hence the scene of crowds of housewives and senior citizens peering into street-side bank monitors to make their buy-or-sell decisions is not uncommon. On the contrary, the liquidity of bonds is still low due to the immaturity, in terms of breadth and depth, of the local bond market. Daily turnover of the government issued Exchange Fund Notes is at HK\$45 billion (approximately US\$57 million) with bid and offer spreads under normal conditions at 15 basis points (HSBC, 2009). These figures are already exemplars among the Asian countries but still fall short of the US and European markets. However, in terms of tax on investors, an important incentive for bondholders for some long maturity debt instruments exists. For example, the Exchange Fund and other Qualifying Debt Instruments (QDI) in Hong Kong exempt the holders from associated profit tax if they have maturity periods of not less than 7 years. There is no capital gains tax in Hong Kong and Singapore upon realization of bond or equity holdings, but in other jurisdictions (e.g., Japan) this may well be a ground to reverse investment decisions.

Table 1. Comparison between equity, loan and bond financing

	Equity	Bank loan	Bond
Cost of fund	Highest in the long term as dividends	Cost of debt is tax-deductible	Depends on credit rating
Risk to fund provider	Depends on company's governance and performance	Depends on balance sheet strength (e.g., debt/equity ratio) and quality of asset as collateral	Bond default rare though possible
Control by fund raiser	Possible dilution	Subject to lenders' veto power & restrictive covenants	No loss of control
Liquidity (i.e., ease of increasing/decreasing holding)	Relatively highest	Subject to repayment terms of loan (i.e., term loan or revolving credit)	Depends on secondary market growth and call terms
Duration of use	No limit	Short-term	Long-term

Another distinct advantage of bonds over equity for fund-raisers is the disclosure requirement. In its bid to promote the bond market in Hong Kong, the market regulator, the Securities and Futures Commission, has recently relaxed the prospectus disclosure requirements for securities issuance to "professional investors" as well as potential investor pools of not more than 50 persons each. This facilitates the private placement of bonds to institutional investors, whereas any public share offer or retail bond offers are still subject to disclosure requirements similar to an initial public offering. Although formal credit rating is not mandatory for bond issuance in Hong Kong, institutional investors normally take up investment-grade bonds only. Hence, credit ratings are still commonly obtained for bond issues.

Regarding financial structure, Hong Kong real estate developers seem to have lower leverage than the overall industry average, as reflected by their gearing ratios (Ip and Hopewell, 1987; Chiang et al., 2002). Chiang et al. (2002) also highlighted the lower debt-to-equity ratios of major Hong Kong developers (mean = 0.37) as compared with those cited by AWSJ (1997) in the Asian region (e.g., Singapore at 0.45)

due to the preference of the former in using their retained earnings to finance projects.

Contrary to bonds, bank loans are more accessible to smaller companies, since the former entails credit rating fees and legal fees. Relationship banking can also bring banks closer to their customers, whereas bondholders and issuers seldom meet.

From the monitoring perspective, bank loan borrowers are subject to monitoring of banks during the tenor of their loans through rather restrictive covenants, whereas bondholders are usually less participative and they have limited powers to influence the management, except through a trustee but then a quorum is required for any bondholder meeting to take place. However, in the event of defaults, a breach of bond obligations is more devastating to an issuer than a breach of loan terms, as experienced by Olympia and York Development Ltd. in the 1990s, which saw the whole business empire file for bankruptcy in Canada and the US, although the firm has now revived.

Whilst the above comparisons apply to all corporations, real estate developers in Hong Kong and Singapore are unofficially classified by market players as "top tier", "second tier" or "lower tier" when they approach the

capital market and the loan market for funds. The strong bargaining power of the top tier developers was reported even back in the early 1990s, when seven developers supplied 70% of total new private housing in Hong Kong, with 55% coming from just four developers (HKCC, 1996). Often, they need not pledge their assets as collateral in securing loans. Before the recent credit crunch, it was common that these developers self-arranged their loan finance without the need for general syndication. However, for bond financing, developers have less influence on credit rating agencies.

Notwithstanding their ready accessibility to the loan market, major developers do issue bonds in addition to using bank loans. Apart from the purpose of diversifying funding sources, the longer duration of bonds provides another incentive for issuers, i.e., corporate bonds could have maturity of up to 15 years, whilst bank loans are due usually within 7 years. Therefore, long term bonds guarantee a fixed, more predictable and controllable cost of finance for developers which are unlikely to be satisfied by bank loans. To match with the funding needs of investment projects, long term bonds are more preferable than bank loans which require re-financing at market rates from time to time once the loans are due, posing interest rate risks to developers.

5. CONDITIONS FOR BOND ISSUES

For bonds to be launched successfully, the endogenous factor which must be present is the credit worthiness of the issuer within the expected maturity period. There are however, a number of exogenous factors interplaying to affect the price, the interest rate (and hence the yield), the subscription volume and the secondary market.

Fixed-rate bonds would be more attractive to investors when prevailing market interest rates are low or falling, since they would like to lock in their investment returns. Increase

in demand will push up bond prices. Given the necessary level of liquidity and issue volume for transactions to take place with adequate transparency, the market will react as mentioned. Investors also refer to established yield curves in the market as benchmarks to gauge whether the level of return being offered by a particular bond with a certain maturity period is reasonable or not. When interest rates rise, bond prices in the secondary market will fall whilst the yield is maintained where possible. It is because raising market interest rates imply a better-off return from other investment tools, resulting in a shrinkage of demand for bonds and thus dragging down the price of bonds. Hence, floating rate notes (FRN) are more suitable for developing bond markets or issuers with weaker credits, so that investors would be protected against wide fluctuations in bond prices.

In addition, when the market experiences turbulence, such as during a financial crisis, a phenomenon called “flight to quality” appears. Investors tend to move their capital from risky instruments to safer ones, with bonds being one of the best alternatives. When the interest rate movement is unpredictable, some issuers may choose to embed options in their bonds, making them either “callable” by the issuers before maturity, or “puttable” by the investors before maturity. The option to call back bonds during low interest rate enables the issuers to re-pay existing debts and issue new debts at a lower price. By the same token, the put option enables investors to sell the bonds back to the issuers when they wish to redirect their investments. These call and put options would increase and decrease bond yields respectively.

Real estate developers issue bonds for three main reasons: (1) locking in fixed rate cost of finance in expectation of rising market rates; (2) balancing their debt portfolio with longer maturity funds than can be offered by bank loans and (3) diversifying sources of funding.

Some companies may issue convertible bonds, which enable holders to convert their

bonds into shares of the issuers at pre-defined prices within a certain period. The cost of issue can be lower but then dilution of control would take place at the point of conversion. As Stein (1992) concluded in his findings, managers asserted that their primary motives in using convertibles is to raise equity on a “delayed action” basis. For investors, convertible bonds can be an attraction since they are given the option to share the fortune of companies with growing profits, or else they may benefit from rising share prices at realization.

Another possible ingredient of success for bond issues is that of bundling to include offers of different maturities, risks and return characteristics so that investors can structure their desirable diversification portfolios (Adair et al., 2007). This may be possible where a regeneration project comprises of housing and infrastructure.

6. REAL ESTATE BOND MARKETS IN HONG KONG AND SINGAPORE

Hong Kong’s onshore bond market was opened in 1990 and has grown into one of Asia’s most sophisticated, with sound market infrastructure and open access for offshore investors. Government bonds only account for around 4% of GDP, compared with 36% in Singapore. Corporate bonds make up around 83% of Hong Kong’s outstanding domestic bond volume, with large blue chip real estate developers who take advantage of the high liquidity of funds dominating the issues (Rogers, 2009). This has grown from HK\$26.1 billion in 1997 to HK\$60.6 billion in 2007 (Latter, 2008). Typical issue size is at HK\$200-300 million (US\$1 = HK\$7.8). The Hong Kong Mortgage Corporation is instrumental in developing securitized investment products, whilst quasi-public bodies such as the Mass Transit Railway Corporation Ltd. and the Airport Authority are frequent bond issuers. The rest of the market is made up of supranational issues from mul-

ti-lateral agencies. In recent years, mainland Chinese entities have issued Renminbi bonds successfully in Hong Kong.

In Singapore, the Monetary Authority (MAS) kick-started the country’s bond market in 1998. The Singapore Government Securities (SGS) were stepped up in issue volume, extending the risk-free yield curve to 20-years (Rogers, 2009). Statutory boards (such as Housing Development Board, Jurong Town Corporation and Land Transport Authority) add to the vibrancy of issues. Moving in tandem is the corporate bond market, with 5 times increase in the 10-year from 1995 to 2004 at S\$123 billion (Ng, 2005). Similar to Hong Kong, real estate companies also dominate the corporate debt market in Singapore, with 260 issues totaling S\$14.7 billion (US\$1 = S\$1.6) from 1998 to 2008 (Rogers, 2009). Average issue size is at S\$70-80 million. More recent development includes REITs and the launch of Islamic “Sukuk”, which is a type of financial certificate complying with Islamic law.

7. CASE STUDIES: USE OF BOND FINANCING BY PROPERTY DEVELOPERS

The following case studies track the use of bond financing in the real estate sector of Hong Kong and Singapore by several major property developers and their subsidiaries for their corporate financing, through a study of public domain data, including those published in the *Basis Point* and companies’ annual reports. The first four cases relate to straight bond issues and the last two relate to convertible bond issues. The data on the bond issues shown has been selected to reflect and illustrate general principles for discussion in this paper, whereas the developers concerned have got other issues in-between the issues shown or beyond the time frame covered herein. The purpose of depicting the cases is to illustrate the different varieties of bond issues by a number of major

active developers, whose identities are not the focus (hence being kept anonymous). It must be remembered when reading these cases that the success or otherwise of using bonds, like other financial instruments, depends on market conditions throughout the bond life cycle. Although one can only make financing decisions *a priori*, lessons from hindsight are useful.

7.1. Developer A

Developer A carries good credit rating and utilizes a mix of financing instruments in its diversified business activities. Although it issues bonds denominated in different currencies, only the Hong Kong dollar issues are shown in Table 2 for the sake of simplicity. Column 3 shows the hypothetical loan costs at the same time of the relevant bond issues, which are estimated by the authors based on the then current Hong Kong Interbank Offer Rates (“HIBOR”) plus all-in rates chargeable to the developer as obtained from various sources (such as “*Basis Point*” and “*Bloomberg*”, *etc.*). The 3-month HIBOR rates at the time of issue, at maturity, and averaged throughout the bond period with corresponding standard deviations are shown to represent the extent of interest rate movement and degree of volatility (this data being obtained from The Hong Kong Monetary Authority). It can be seen that most of the fixed-rate bond issues of the developer carried coupon rates which were closely aligned with the average rates of the Exchange Fund Notes (which is the de facto risk-free rate in Hong Kong, as shown in Column 5 of Table 2) of similar maturity periods at the time of their issues. Since the coupon rate represents the investment return of the instrument held to maturity, its level will depend on the risk premium the issuer pitches above the benchmark rate (i.e., that of the Exchange Fund Notes having similar maturity as the bond being issued). Although bond price can be fixed above, at or

below par value, most of the issues shown were issued at par. However, as the bond price fluctuates during its life as explained, the yield will also change accordingly. Nevertheless, market fluctuation rarely affects issuers’ obligations, as coupon and principal repayments are always fixed from the issuer’s perspective, unless the issuers consider premature redemption or repurchase from the secondary markets. Hence, the coupon rates instead of yields are used as a proxy for comparing the relationship between bond costs and estimated hypothetical loan costs to the developers at the time of issue. From Table 2, although it appears that sometimes the developer raised funds through the issuance of bonds at a time when he could have borrowed directly from his banks at a lower spot rate (still based on floating interest), the developer could still benefit from the use of the diversified funding sources in his development business and enjoy the advantages of long term bond financing as previously discussed. Figure 1 demonstrates the erratic movements of HIBOR in the period 1999-2001 and that the impending interbank interest rate hike in the period 2004-2006 might have prompted Developer A to lock in funding cost by issuing bonds with an expectation that interest rates would rise. The reason cited by the developer’s Finance Manager in the media was that they wanted to develop funding sources of longer maturity by leveraging on the favourable market conditions, rather than needing the money at the time. From hindsight, bank rates were low in 2002 due to abundant cash saving built up after the IT bubble burst, with further unexpected dip bottoming out in 2003-04 due to the pandemic SARS. It can also be seen that the developer issued bonds which bear floating rates, or later swapped into such from fixed rates, in an attempt to minimize the risk of paying extra funding cost at a time when HIBOR was sliding in 2001-02.

Table 2. Data on selected bond issues of developer A

Issue year ⁴	Issue amount ⁴ (HK\$ mil)	Estimated loan cost at issue (Hibor + all-in rate) ¹	Bond coupon rate ⁴	Yield of exch. fund notes at bond issue ³	Average 3-mth Hibor at issue	Average 3-mth Hibor during bond period (S.D.) ²	3-mth Hibor at maturity	Maturity year ⁴
2000	2,000	6.58%	7.5%	6.65%	5.93%	3.52% (1.97%)	1.28%	2003
2000	500	6.86%	7.35%	6.66%	6.21%	2.96% (1.79%)	1.08%	2003
2000	500	7%	7.68%	6.94%	6.21%	2.18% (1.81%)	3.4%	2005
2001	300	5.58%	Hibor + 0.28%	5.04%	5.08%	1.91% (1.28%)	0.07%	2004
2002	910	2.2%	Hibor + 0.38%	3.22%	1.77%	3.43% (1.69%)	4.78%	2007
2005	1000	3.70%	3.5%	3.36%	3.4%	3.78% (0.87%)	2.17%	2008
2006	150	4.91%	5.1%	4.71%	4.52%	*3.08% (1.44%)	0.23% (Jun 09)	2016

* Asterisk indicates that average HIBOR is calculated up to Jun 09.

¹ Estimate is based on HIBOR and all-in spread.

² Standard Deviation (S.D.).

³ The EFNs have the same maturity as the corresponding corporate bonds shown, from HKMA.

⁴ From Annual Reports.

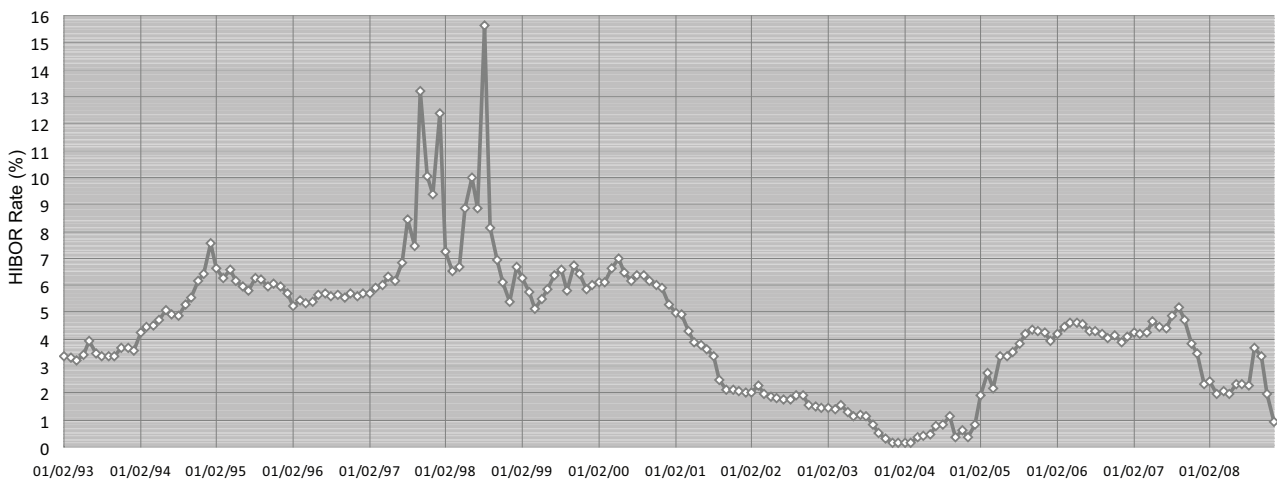


Figure 1. Movement of 3-month Hong Kong interbank offer rate (HIBOR) (Source of data: Hong Kong Monetary Authority)

7.2. Developer B

Table 3 shows bonds issued by Developer B, who swapped the fixed rates of their bond issues into floating rates, thereby matching their obligations with interest rate movement. The floating rates were in line with the borrowing cost of bank loans. The developer also issued a callable bond as well as zero-coupon bonds. Zero coupon bond investors receive no regular interest income but enjoy a greater discount when purchased. Hence, the developer can repay at face value upon bond maturity with project incomes when they are completed or at least pre-sold.

From Figure 1, it appears that Developer B also wished to lock in funding cost at a time when HIBOR fluctuated intermittently in the period 1999-2001, and also when interest rates had an upward trend in 2007. Its zero-coupon convertible bond issues had lower yields but

potential for capital gain as an attraction. The private placement issues by the subsidiary companies were fully guaranteed by the parent company.

7.3. Developer C

Hawkins (2005) and Greenspan (2000) made the analogy that bond markets can act as "Spare Tyre", substituting for bank lending as a source of corporate funding. Real estate developers have traditionally been the biggest issuers of domestic corporate debts in Singapore, followed by government-linked companies and foreign companies (Rogers, 2009). To prove the point that real estate developers are willing to issue bond even when bank loans are less costly, Table 4 shows a Singapore developer issuing a 3.01% coupon bond which was 0.59% higher than it could possibly borrow from banks in 2005.

Table 3. Data on selected bonds issues of developer B

Issue year ⁴	Issue amount ³ (HK\$ mil)	Bond coupon rate ³	Yield of exch. fund notes at bond issue ²	Average 3-mth Hibor at issue	Average 3-mth Hibor during bond period (S.D.) ¹	3-mth Hibor at maturity	Maturity year ³
1999	500	8.15% (swapped to Hibor + 1.15%)	6.68%	5.87%	5.08% (1.47%)	1.76%	2002
1999	500	8.18% (swapped to Hibor + 1%)	6.96%	5.95%	2.32% (1.92%)	0.42%	2004
2007	2,500	0% (zero-coupon convertible bond)	3.94%	4.17%	*2.59% (1.48%)	0.23% (Jun 09)	2010
2007	2,350	0% (zero-coupon convertible bond)	4.2%	4.14%	*2.69% (1.48%)	0.23% (Jun 09)	2012

* Asterisk indicates that average HIBOR is calculated up to Jun 09.

¹ Standard Deviation (S.D.).

² The EFNs have the same maturity as the corresponding corporate bond shown, from HKMA.

³ From Annual Reports.

It is postulated that developers take bond issuance as an alternative and additional source of funding which help them to broaden the funding channel. The issue was also made when the Singapore Interbank Offer Rate had been rising, presumably prompting the developer to lock-in funding cost.

7.4. Developer D

Table 5 shows a Developer D in Hong Kong who, in the years 1996, 1997 and 2002, issued retail convertible bonds at a lower coupon rate than the yields of Exchange Fund Notes. First-

ly, under the Hong Kong taxation regime, non-business individual investors are not liable to tax for interest income. Hence, they might be content with a lower return. As mentioned earlier, private placements with institutional investors entail higher cost since these investors are liable to corporate tax, except for certain bonds or QDI.

Secondly, listed companies can enhance the attraction of their bond sale by issuing convertible bonds (CB), which give their holders the right to convert the bonds into shares of the companies at a predetermined price and conversion ratio before maturity.

Table 4. Data on the straight bond issue of a Singapore developer C

Issue year ¹	Issue amount ¹ (S\$ mil)	Estimated loan cost at issue (SIBOR + all-in spread)	Bond coupon rate ¹	Rate of S'pore gov't bond at issue ²	Average 3 mth SIBOR at issue	Average 3 mth SIBOR during bond period	3 mth SIBOR ³ at maturity	Maturity year
2005	325	2.42%	3.01%	2.625%	2.13%	*2.12%	0.44-0.56%	2010

* Asterisk indicates average SIBOR calculated up to Jun 09.

¹ From Annual Report.

² The Singapore government bond has the same maturity as the corresponding corporate bonds shown.

³ SIBOR stands for Singapore Interbank Offer Rate, from Singapore Government Securities.

Table 5. Data on selected bond issues of developer D

Issue year ⁴	Issue amount ⁴ (HK\$ mil)	Bond coupon rate ⁴	Yield of exch. fund notes at issue ³	Average 3-mth Hibor at issue	Average 3-mth Hibor during bond period (SD) ²	3-mth Hibor at maturity	Maturity year ⁴
1993	200	5% (convertible bond)	NA	3.61%	6.19% (1.5%)	5.94%	2000
1994	NA	FRN Max(HIBOR+ 1.75 or 6.25)	NA	4.21%	6.38% (1.65%)	5.55%	1999
1996	200	5% (convertible bond)	5.94%	5.24%	6.5% (1.56%)	5.08%	2001
1997	145	4% (convertible bond)	7.12%	5.85%	5.9% (2.27%)	1.95%	2002
2002	1500	3.75% (convertible bond)	4.88%	1.81%	2.25% (1.6%)	4.37%	2007

¹ NA = data not available.

² Standard Deviation (S.D.).

³ The EFNs have the same maturity as the corresponding corporate bonds, from HKMA.

⁴ From Annual Reports.

Hence, the coupon rates for CBs would usually be lower than similar straight bond rates due to the option to share the fortune of the issuers. Table 5 shows that coupon rates in 1996 and 1997 were even lower than the 3-month HIBOR at issue. Hence, from the developers' perspective, they could obtain low cost finance at the time of issuance.

An interesting phenomenon observed from developer D is that their CBs were issued during economic downturn, such as the Asian financial crisis in year 1997 and the SARS in 2002. During those times, the stock market dived and dragged the share price below the conversion trigger price; implying that the chance of converting the CBs to shares was relatively low.

On the other hand, during recovery or economic boom period, share market performed well and interest rate increased. Hence, the developer might face conversion of CBs to shares but they still benefited from financing at low interest rates.

From the investors' perspective, it is difficult to foresee if they would benefit eventually from the shares. Nevertheless, as mentioned, the convertible bond is an option giving the right to the holders of CBs to equity ownership. This is an attraction when the share performs well, otherwise the CB holders can still receive coupon and principal re-payment.

Maturity of the CBs plays an important role too. On one hand, a longer maturity period will give a higher chance for CB holders to capture the additional profit from rising share prices. On the other hand, a long maturity period also benefits the issuer especially when the CBs are issued at a time of low interest rates. Even when the cost of bond financing is slightly higher than bank loans at issue, it may still be worthwhile from a long term perspective.

For developers with high gearing, the use of CBs as a financing means could provide them with a win-win solution. On one hand, they can obtain adequate capital for their real estate projects or for building up land reserve. On the other hand, if the CBs do trigger conversion, the debt would become equity immediately, which would then strengthen the equity base in their balance sheets in case of further financing needs.

In times of declining property market, developers' credit ratings may be down-graded as the valuations of their property portfolios and their land bank water down. The CBs' market value would then be significantly reduced, providing the developers with a golden opportunity to repurchase their CBs at deep discounts (provided that call options are embedded in the issues and the developers are still financially strong for the repurchase).

7.5. Developers E and F

Table 6 and Table 7 show the data of 2 property developers in Hong Kong who had issued convertible bonds to finance their corporate and project needs. Both developers issued CBs at conversion prices above the prevailing market prices of their shares. This is to prevent discount issues of new shares as a protection to existing stockholders. In the case of Developer E, share price rose above conversion prices and triggered conversion, which benefited the investors. Share price falls enabled the company to repurchase its CB from the market at a profit, implying that the issuer effectively reduced its actual cost of borrowing. As for Developer F, the CBs carried embedded put options with redemption price above par value to compensate investors. Its call option also made investors choose between gainful conversion or redemption at least at par.

Table 6. Data on selected convertible bond issues of developer E

Issue year ¹	Issue amount ¹ (HK\$ mil)	Conversion price ¹	Bond coupon rate ¹	Average yield of exch. fund notes ²	Maturity year ¹	Event after bond issue	Remark
1993	1,560	HK\$6.86	5%	Not available in market	2000	Substantial amounts of this bond were converted to shares between 1993 and 1997, when share prices went up higher than HK\$12 and HK\$10 respectively. In 2000, only US\$3.9 million (about HK\$30 million) of this bond was redeemed at maturity.	Investors better-off
1996	1,560	HK\$9.55	5%	6.82%	2001	As property prices went down sharply after 1997, bond prices dropped significantly. In 1998, the developer repurchased HK\$31 million bond from the market at a discount price of 61%. In 2001, US\$195 million (about HK\$1,521 million) value of this bond was redeemed at maturity.	Developer better-off
1997	1,130	HK\$8.5	4%	6.82%	2002	Same as the previous bond issue, the developer repurchased HK\$116 million of its bond in 1998 at a discount price of 60-77% and another HK\$116 million at a discount price of 45-48%. The rest of the bond was redeemed in 2001.	Developer better-off
2002	1,500	HK\$4	3.75%	4.90%	2007	After the SARS, as the property market picked up gradually, the share price of the developer climbed higher than the conversion price in mid-2003. One year later, the price reached HK\$6 and this lot of CBs were all converted to shares after 2004.	Investors better-off
2004	2,500	HK\$9.225 (HK\$9.10 after 2006)	1.625%	3.03%	2009	This lot of CBs were issued in end-2004, when the share price was moving around the range of HK\$7-8. The CBs were all converted to shares by 2007 because in 2006 the share price went above HK\$13.	Investors better-off

¹ From Annual Reports.² EFN data from HKMA.**Table 7.** Data on selected convertible bond issues of developer F

Issue year ¹	Issue amount ¹ (HK\$ mil)	Conversion price ¹	Bond coupon rate ¹	Average yield of exch. fund notes ²	Maturity year ¹	Event after bond issue	Remark
1997	1,950	HK\$21.5	2%	7.27%	2007	The share price of this developer has been lower than the conversion price most of the time. Hence, no conversion was triggered. In 1998, the developer repurchased US\$51.5 million (about HK\$399 million) value of the bond from the market at the cost of only HK\$321 million and recognised a gain of HK\$78 million.	Developer better-off
2005	2,500	HK\$25.955	Zero coupon	3.30%	2010	In 2002, the CB holder exercised the put option, requiring the developer to redeem US\$196.78 million of the CB at 129.712% of the principal amount, as laid down in the agreement. The developer also exercised its call option to redeem the remaining bond at par value. When the share price of the developer climbed near HK\$20, it issued this CB. The share price reached HK\$29.5 in 2006. Since this is a zero-coupon bond with no interim interest payment, the redemption price was set at 119.354% of the principal amount at maturity. The imputed finance cost of the liability portion of this CB is 5.1%.	Investors better-off

¹ From Annual Reports.² EFN data from HKMA.

8. CONCLUSIONS

Property developers can access the bond market as an alternative source for funds, in addition to the equity and loan markets, with relative merits and demerits. Interest rate movement, however, makes it difficult for developers to determine the right time and prices for their bond issues. As shown through a series of case studies in this paper, fixed rate bonds may cost more than bank loans at times, but developers may still use them to broaden funding channels (Case A and C). Floating rate bonds may help issuers to match prevailing interest rate movement (Case A and B). Zero-coupon bonds dispense with interim interest payments and repay the holders upon maturity, which is suitable for long-term development projects (Case B). In parallel with institutional issues, retail issues can be a useful approach to broaden and deepen the local bond market with enhanced liquidity, although there is more stringent regulatory control. Features such as call and put options with the right ingredients may also help to attract investors. Last but not least, through careful price fixing and monitoring of share price movement associated with the state of the property market, developers and their investors may be able to realize gains through convertible bonds (Case E and F). The variety of bond types can help major developers with different funding needs satisfy their requirements when they look for broader financing channels. This paper has depicted the essential considerations of bond financing for Asian real estate developers, who, in the wake of recent financial turmoils, need to ensure that their funding sources are not limited by bottlenecks in bank financing.

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DISCLAIMER

The authors and the publisher do not guarantee the accuracy of the data presented in this paper, which is meant for academic discourse and not for commercial purposes.

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SANTRAUKA

NEKILNOJAMOJO TURTO STATYBŲ FINANSAVIMAS OBLIGACIJOMIS AZIJOJE

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Siaučiant pasauliniam finansų cunamiui, dėl griežtų kreditavimo sąlygų bankai verslo poreikius finansavo labai atsargiai. Visame pasaulyje NT vystytojai ieškojo alternatyvių būdų, kaip finansuoti projektus. Pastaraisiais metais, kai paskolų rinka buvo vis labiau reguliuojama, o kainos konkurencingos, ne vienas gerbiamas NT vystytojas Azijoje, ypač Honkongo specialiajame administraciniame regione ir Singapūre, lėšų ieškojo kapitalo (obligacijų) rinkoje. Obligacijų rinkai augant, kai kurios tokių NT vystytojų išleistos įmonių obligacijų emisijos buvo sėkmingos. NT vystytojams reikia atidžiai įvertinti ne tik investicijų poreikį, bet ir visus lėšų rinkimo leidžiant obligacijas „už“ ir „prieš“. Idant obligacijų emisija būtų sėkminga, ją formuojant būtina deramai sustiprinti kreditą, nes tikėtina rizika ir augančios palūkanos yra pagrindiniai aspektai, kurie atbaido potencialius investuotojus, nes kitaip jiems tektų nemokios obligacijos arba didelės patikėtų lėšų alternatyviosios sąnaudos. Atliekant kelis atvejo tyrimus NT statybų finansavimo obligacijomis tinkamumas lyginamas su finansavimu paskolomis. Nustatyta, kad atidus rinkos sąlygų stebėjimas ir įžvalgumas yra būtini komponentai sėkmingam finansavimui obligacijomis išleidžiant tiek paprastųjų, tiek konvertuojamųjų obligacijų emisijas.