The rise of Hong Kong's corporate bond market: drivers and implications

Prepared by David Leung, Ceara Hui, Tom Fong and Alfred Wong[1]

Abstract

The growth of Hong Kong SAR's corporate bond market has accelerated considerably since the global financial crisis, suggesting that local corporations increasingly regard market-based financing as a workable alternative to bank-based funding. The acceleration was driven by both cyclical and structural factors such as unconventional monetary accommodation by major central banks and market promotion initiatives by the Hong Kong government. From the perspective of financial stability and longer-term financial development, the rapid growth of the bond market has mixed implications. On the positive side, it complements bank-based financing, providing the economy with an additional channel of financial intermediation. However, policymakers need to be vigilant about the potential risks to financial stability as the corporate sector may have become more vulnerable to shocks as a result of increased leverage.

Keywords: Corporate bond market, Hong Kong SAR, financial intermediation, corporate leverage, bank-based financing, market-based financing

JEL classification: G12, G21, G30, E50

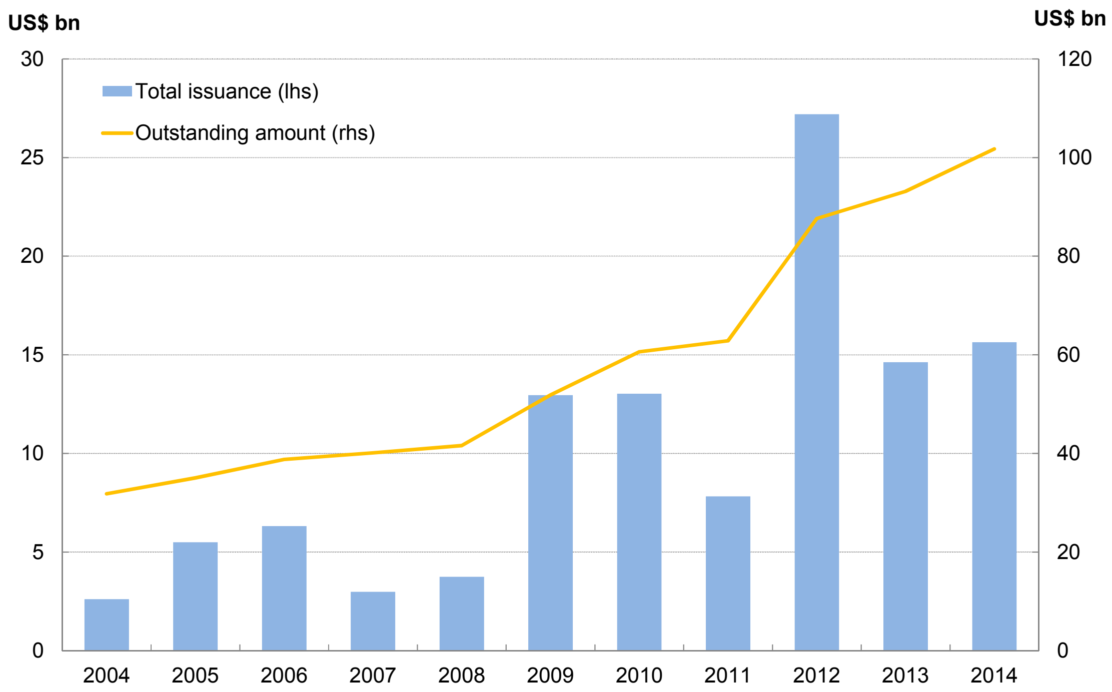
[1] Research Department of the Hong Kong Monetary Authority.

1. Background

The bond market has played an increasingly prominent role in financial intermediation in Hong Kong SAR in recent years.[2] While bank lending still accounted for 77% of the total borrowing of non-financial corporations at the end of 2014, the growth of the corporate bond market has accelerated considerably. Prior to the global financial crisis, the outstanding amount of corporate bonds grew at an average annual rate of around 5%, which was broadly in line with Hong Kong's nominal GDP growth. Following the crisis, outstanding corporate bonds posted a significantly faster growth of 17% per annum on average, far outpacing economic growth. As a result, the total amount of outstanding corporate bonds rose to US$101.8 billion at the end of 2014, more than double the US$38.8 billion outstanding at the end of 2006 (Graph 1).

Outstanding amounts and annual issuance of Hong Kong non-financial corporate bonds

Graph 1



Note: Outstanding amounts are estimated from issuance data for debt securities on the assumption that all debt securities mature on their original maturity dates.

Source: HKMA staff estimates based on data from Dealogic.

[2] In this paper, corporations refer to non-financial corporations and corporate bonds are their debt securities regardless of currency denomination, with original tenors of 12 months or more. Whether a bond is classified as a Hong Kong bond depends on the deal nationality, which is based on the nationality of the issuer parent if there is a credit support or guarantee for the issuing subsidiary. For deals without that support or guarantee, the deal nationality refers to the nationality of the issuing subsidiary. Based on data collated by Dealogic, as of the end of 2014, the outstanding amount of corporate bonds in Hong Kong stood at US$101.8 billion, of which 14%, 65% and 22% are denominated in HKD, USD and other currencies respectively.

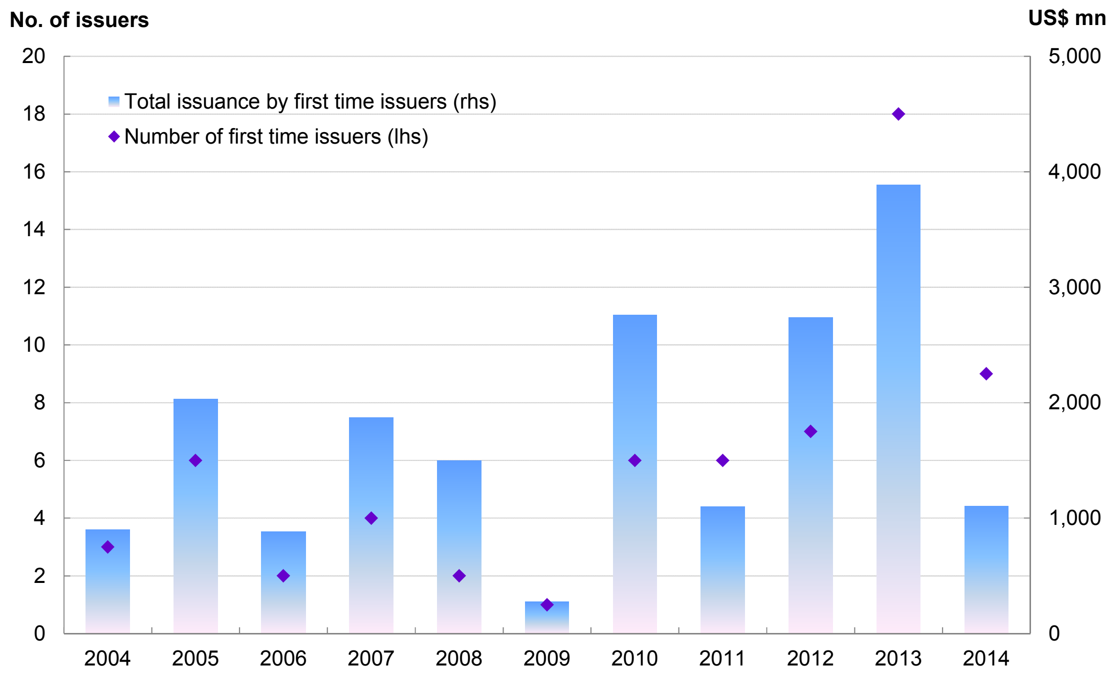
From the perspective of financial development, the rise of the Hong Kong corporate bond market should be welcomed since it opens up an alternative financing channel for local corporations, which were traditionally dependent on bank loans as the primary source of borrowing. The financial crisis which beset many Asian economies in 1997–98 showed that the lack of a well developed bond market can be a source of financial system fragility. However, there are concerns that market-based intermediation can also allow global monetary and financial shocks to be transmitted into domestic borrowing costs more easily and frequently, given that international capital markets are now highly interconnected. The wider availability of bond financing has also raised the question whether corporations might be encouraged to take on more debt, thus making them more vulnerable to negative shocks. Against this backdrop, we take a closer look at the recent developments in the Hong Kong corporate bond market, with a focus on the driving forces behind its rapid growth as well as the implications for financial stability.

2. Recent developments in Hong Kong's corporate bond market

The rapid growth of Hong Kong's corporate bond market is obvious in the average annual bond issuance by corporations, which almost quadrupled from around US$4 billion before the crisis to US$15 billion following the crisis (Graph 1). In addition to the volume of issuance, two trends suggest that bond financing has become more widespread than before.

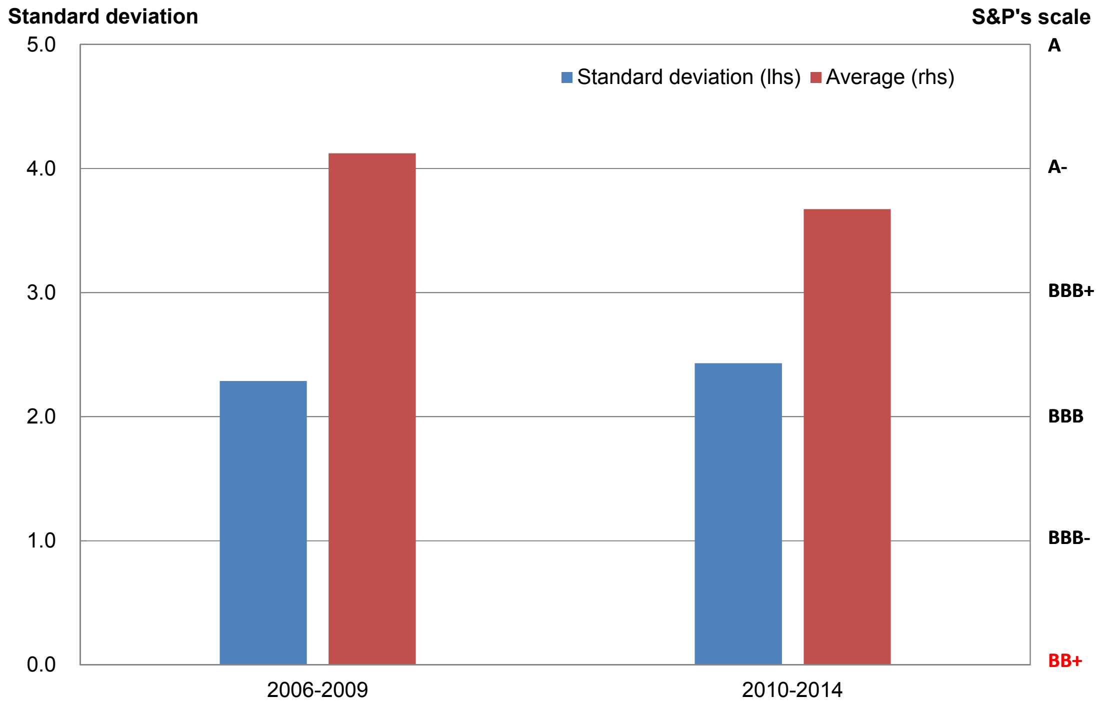
- *First-time bond issuers*: After the crisis, more corporations have begun to turn to the bond market for funding. As shown in Graph 2, annual bond issuance by first-time issuers amounted to an average of US$2.0 billion registered in 2009–14, or a 37.6% increase from the US$1.4 billion in 2004–08, suggesting that the growth in bond issuance is driven by both newcomers as well as increased issuance by incumbent bond issuers. The number of first-time bond issuers also shows a similar upward trend.
- *Credit rating distribution*: After the crisis, bond issuers are less confined to corporates with top credit ratings, as corporations with lower credit ratings are now able to gain access to the bond market. As measured by Standard & Poor's, issuers' credit ratings ranged from A+ to BBB– in 2014, compared with a relatively tight range of AA to A– back in 2006. As a consequence, the credit ratings of newly issued corporate bonds had a higher standard deviation after the crisis (Graph 3).

First-time issuers of corporate bonds in Hong Kong Graph 2



Source: HKMA staff estimates based on data from Dealogic.

Credit ratings of Hong Kong corporate bond issuance Graph 3



Note: One standard deviation represents one notch difference in credit rating.

Source: HKMA staff estimates based on data from Dealogic.

3. Driving forces for the Hong Kong corporate bond market

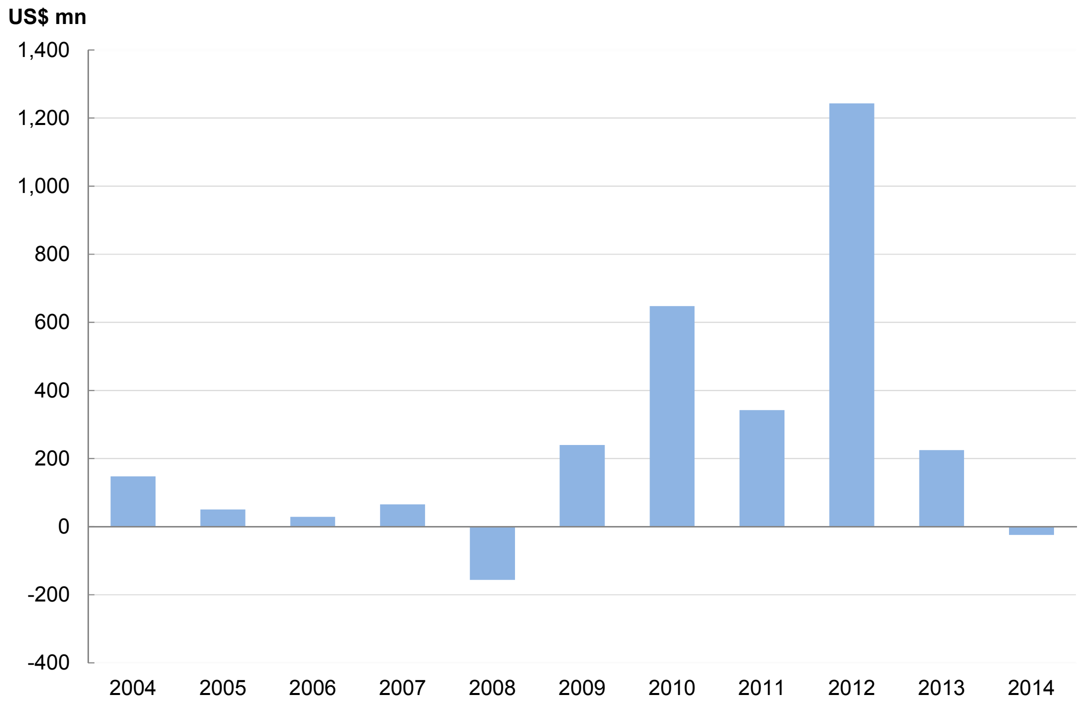
The surge in corporate bond issuance reflects a rather long list of driving forces that can be classified as either cyclical or structural factors:

Cyclical factors

Unconventional monetary stimulus from major central banks in the aftermath of the US subprime and European debt crises has flooded the market with liquidity, pushing interest rates to historical lows. As a result, there has been a tendency for bond investors to turn to the corporate bond market, particularly those in emerging market economies with relatively solid fundamentals. As a proxy indicator of this search-for-yield phenomenon, annual global net inflows into Hong Kong's bond mutual funds amounted to US$487 million on average during 2010–14, representing an almost sevenfold jump from US$73 million during 2004–07, according to data collected by EPFR Global (Graph 4). As a result of these massive fund inflows, corporate bond yields declined, which in turn allowed corporations to raise funds at lower costs than before the crisis.[3] It is noteworthy that the rapid

Global net inflows into Hong Kong's bond mutual funds

Graph 4



Source: EPFR Global.

[3] As a proxy indicator, the yields of Hong Kong's corporate bonds denominated in US dollars averaged 3.64% in 2014, compared to 5.75% in 2007, according to HSBC Asian Bond Index data.

growth of corporate bonds has in recent years been dominated, to a significant extent, by fixed rate and perpetual bond issuance, indicating that corporations opted for bond financing so as to lock in lower funding costs at prevailing market interest rates.

Structural factors

Two sets of structural factors are crucial for the growth of the corporate bond market. The first one is related to the initiatives by the Hong Kong government to promote the market. In his 2009–10 budget speech, the Financial Secretary announced his intention to promote further and sustainable development of the bond market in Hong Kong through the Hong Kong Government Bond (HKGB) Programme. Since the first issuance of HKGB in September 2009, the local government bond market has expanded rapidly (Graph 5). By boosting the supply of government bonds, the programme helped improve market liquidity and expand the investor base, which in turn provided a favourable environment for corporations to tap the local bond market. In December 2014, two additional measures were announced to further promote market development. First, the tenors of bonds issued under the Exchange Fund Bills and Notes Programme and the HKGB Programme were streamlined to minimise overlaps in longer tenors so that a single benchmark yield curve can be established. Second, a discount facility for HKGB was introduced to provide greater flexibility for banks to manage liquidity, an important characteristic that is likely to boost demand.[4] Alongside government initiatives, the increasingly popular medium-term note (MTN) programme has encouraged the corporate sector to use standardised documentation for bond issues. By streamlining issuance procedures, corporations have more flexibility to issue bonds when the market timing is favourable. On the investor side, the MTN programme also makes it more convenient for private bankers to approach corporate issuers through "reverse enquiry".[5]

The second set of factors is related to regulation that lowers the appetite of banks for exposure to loans with relatively long tenors. The decline in long-term bank credit was exacerbated by the deleveraging undertaken by European banks during the European sovereign debt crisis. In fact, there are signs that the average tenor of Hong Kong's syndicated loans has been on the decline since the global financial crisis (Graph 6). For instance, the average tenor of syndicated loans in Hong Kong shortened to 3.8 years in 2014 from 4.7 years in 2008. Tight credit conditions in this market segment have sharply pushed up the long-term costs of bank lending.[6] As a result, the loan market has become a less accessible and appealing financing channel, inducing corporations to tap the bond market for their long-term funding needs.

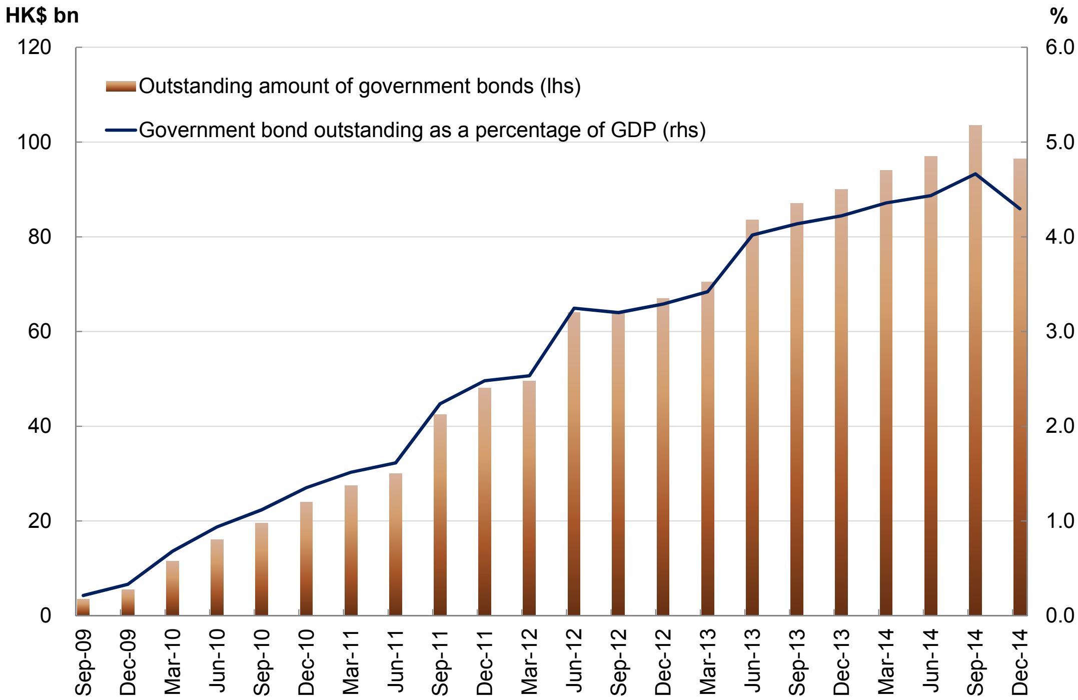
[4] For details, see HKMA Press Release "Streamlining Issuance of Exchange Fund Notes and Government Bonds and Introduction of Discount Facility for Government Bonds", 8 December 2014.

[5] Reverse enquiry is a common practice whereby investors approach and ask the corporations-of-interest to issue bonds specifically for them, instead of passively waiting for public tenders.

[6] For instance, in the Hong Kong syndicated loan market, loan costs jumped to 185 basis points above the reference rate in the second half of 2014 from 122 basis points in the same period of 2008.

Outstanding amount of Hong Kong government bonds

Graph 5

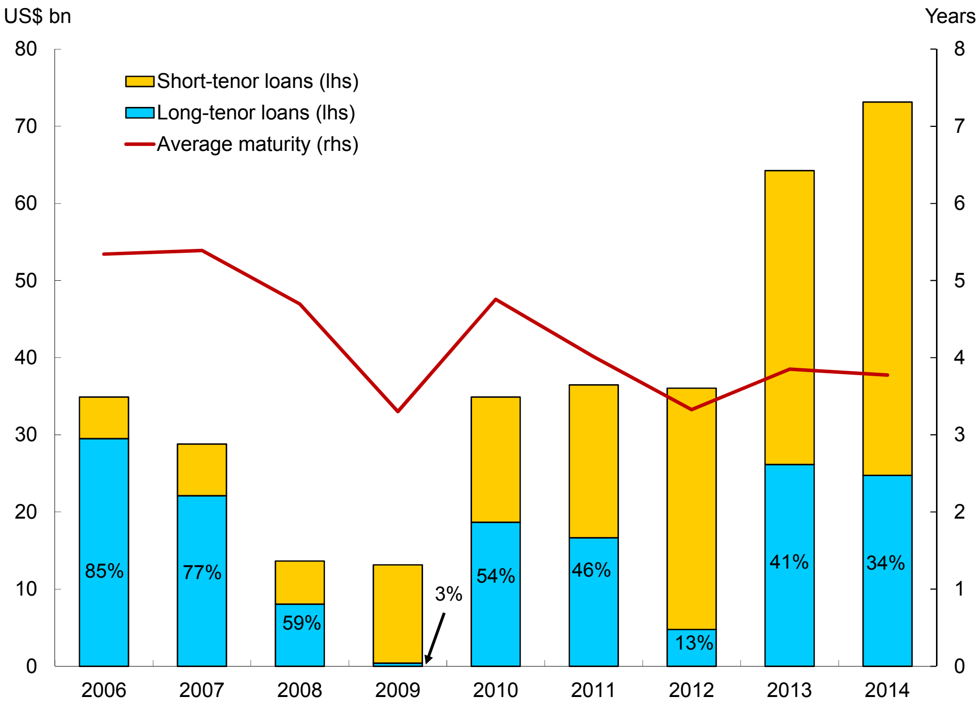


Note: Only HKD bonds issued under the Government Bond Programme are included in the calculation.

Sources: Census and Statistics Department of Hong Kong; *HKMA Monthly Statistical Bulletin*.

Hong Kong syndicated loan origination and average tenor

Graph 6



Note: Short-tenor loans refer to syndicated loans with maturity of less than five years. Long-tenor loans refer to those with maturity equal to or longer than five years.

Source: HKMA staff estimates based on data from Bloomberg.

4. Implications of the rapid growth of corporate bond market

The rapid growth of the corporate bond market has mixed implications for financial stability and longer-term financial development. In general, there are three major issues that policymakers and market participants need to consider, namely, availability of corporate financing, vulnerability of corporate financing to shocks, and concerns about excessive corporate leverage.[7]

4.1. Availability of corporate financing

With the rapid expansion of its corporate bond market, Hong Kong has seen some success in developing an alternative financing channel for the corporate sector, which has traditionally relied too much on bank lending as compared with advanced economies. This development should be welcomed for three reasons. First, since commercial banks tend to rely heavily on short-term deposits, interbank borrowing or issuance of money market instruments for their funding, banks are inherently constrained in their capacity to provide long-term credits, given their need to manage maturity mismatch. A well developed corporate bond market could therefore fill this niche and offset the natural limitations of bank lending. This is especially true for many institutional investors with long investment horizons (such as pension funds, endowment funds and insurance companies) as they would be a natural match for corporates with long-term borrowing needs. Second, multiple financial intermediation channels provide corporations with more diversified funding sources. To the extent that negative shocks to the banking sector and the bond market are not perfectly correlated, there is room for corporates to be additionally safeguarded against credit crunches during times of distress. Third, as bond investors are predominantly institutional investors that are highly international in terms of their portfolio allocation strategies, local corporations are in a better position to tap international funding sources, making their borrowing terms less restricted to domestic funding conditions. Such gains are analogous to the gains from the international trade of goods and services.

4.2. Vulnerability to shocks

As the pricing of corporate bonds are usually based on major government bond yields (notably the US Treasury yields), the increased use of bond financing could make corporate borrowing costs more sensitive to global monetary and financial conditions. Since the first hint from the US Federal Reserve on the tapering of its quantitative easing program in May 2013, financial markets have shifted their focus to the potential impact of an ultimate rebound of interest rates on the economy. The Hong Kong Monetary Authority (HKMA) has conducted empirical research (see

[7] To guard against and mitigate spillovers from global shocks, the Hong Kong SAR authorities have introduced various types of macroprudential measures targeting credit growth and the property market. Research suggests that these measures have helped safeguard financial stability and have influenced loan growth, interest costs, property market transactions and speculative activity. For details, see HKMA (2013b).

Annex for details) on the impact of US monetary normalisation on the sovereign bond yields of 11 economies in the Asia-Pacific region. The study finds that the potential impact could be significant, especially if the process should turn out to be more disorderly than expected.[8] This finding is important because an increase in sovereign bond yields could easily translate into higher borrowing costs for the entire economy. In particular, it was found that in the May–September 2013 episode, the actual increases of sovereign yields registered were greater than the mean estimates based on the model for most economies in the Asia-Pacific region, suggesting that markets might have over-reacted to adverse shocks. Nonetheless, the associated tail risks could be even greater as the estimates at the 90th and 95th percentiles are many times higher than the actual increases or mean estimates. Taking Hong Kong as an example, the actual increase in the sovereign bond yield was 1.2% during the episode, while the estimated increase at the mean and 95th percentile are 0.9% and 3.1% respectively.

4.3. Concerns about corporate leverage

There have been concerns that enhanced availability of corporate funding through the bond market might result in a further increase in corporate leverage, hence threatening economic and financial stability. Graph 7 shows that as corporations increased their borrowing from banks and in the bond market, the leverage ratio of the corporate sector as a whole (measured by the ratio of total assets to shareholders' funds) has been on the rise while corporate debt-servicing capability as measured by the interest coverage ratio (defined as the ratio of earnings before interest and taxes to interest expenses) is on the decline.

Nonetheless, the issue of possible over-indebtedness of the corporate sector must be examined in a wider context. Based on the statistics compiled by the IMF in a recent study, unlike in many other Asian countries, a considerable amount of corporate debt in Hong Kong is owned by corporations with relatively low levels of leverage (Graph 8). In addition, Hong Kong has only a small share of corporate debt linked to corporations with a low interest coverage ratio (Graph 9). This is attributable to the fact that the post-crisis development has opened up funding channels for corporations that were unable or less able to borrow in the past.

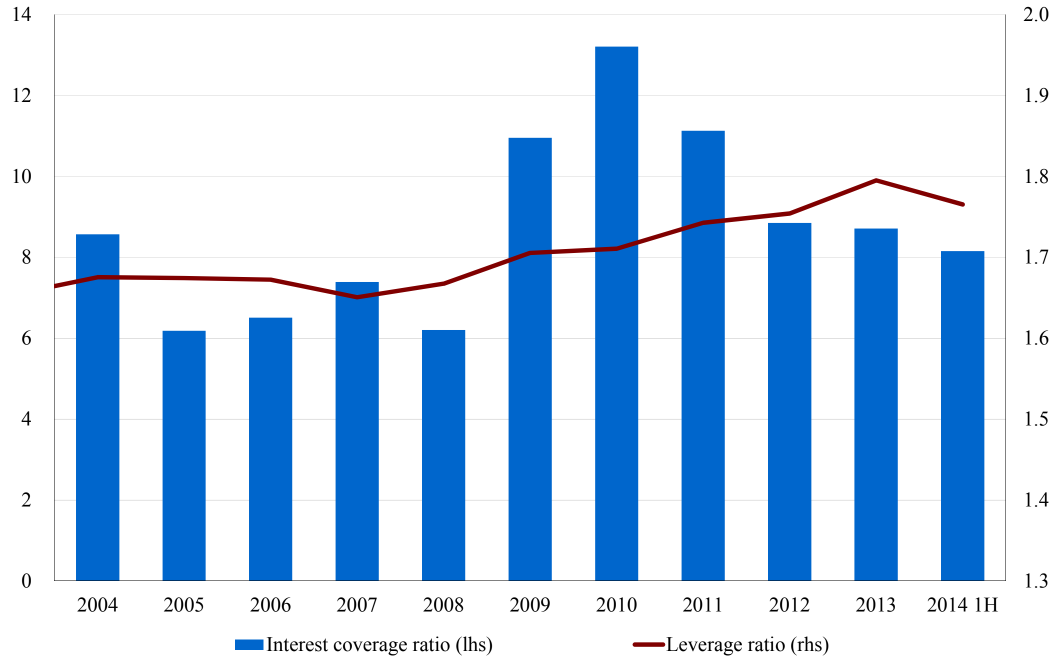
Finally, the structure of corporate debt in terms of sectoral composition is very important from a macroeconomic perspective. The risk is higher if the lending is concentrated in a certain economic sector, and *vice versa*. The Herfindahl-Hirschman index (HHI) is employed to track the concentration risk.[9] As can be seen, the HHI has risen in recent years, as larger corporations such as property developers found it more cost-efficient to raise funds in the bond market (Graph 10). From the

8 Empirical studies also found significant evidence suggesting that local sovereign bond yields in emerging economies have moved much more closely with the US Treasury bond yield after 2005. For details, see Turner (2013).

9 The HHI is a statistical measurement of concentration. It is defined as the sum of the squares of the shares of individual sectors. As such, the index ranges between 0 and 1, with a higher reading of the index meaning a higher degree of concentration.

Leverage ratio and interest coverage ratio of listed non-financial corporations in Hong Kong

Graph 7

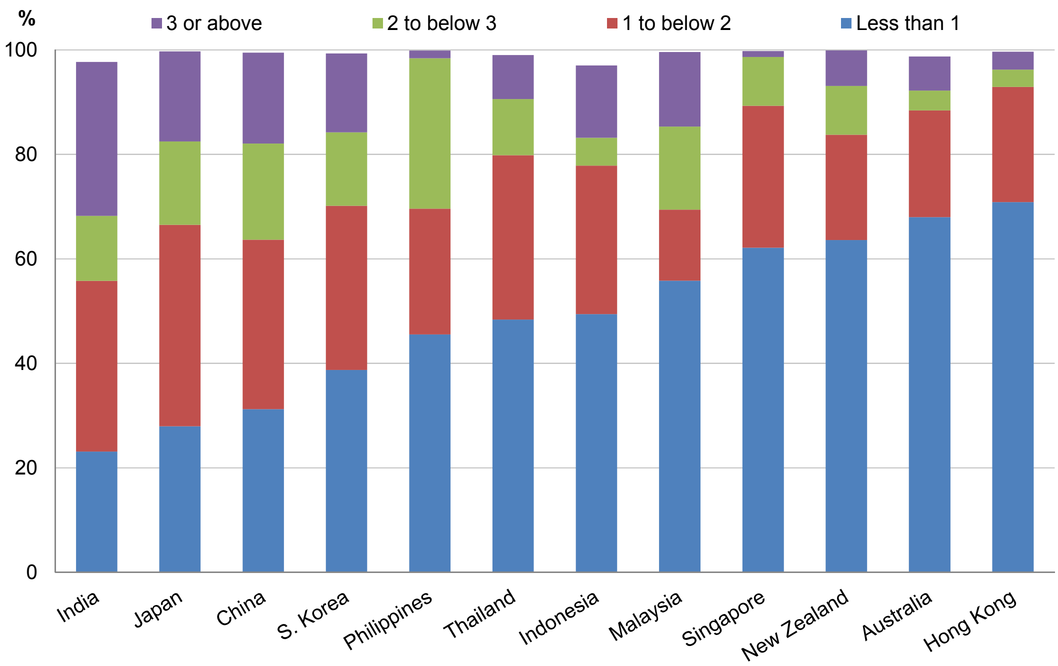


Note: The leverage ratio is defined as the ratio of total assets to shareholders' funds. A higher value indicates higher leverage. Interest coverage ratio is defined as the ratio of earnings before interest and taxes to interest expenses.

Source: HKMA staff estimates based on data from Bloomberg.

Share of corporate debt by leverage ratio

Graph 8

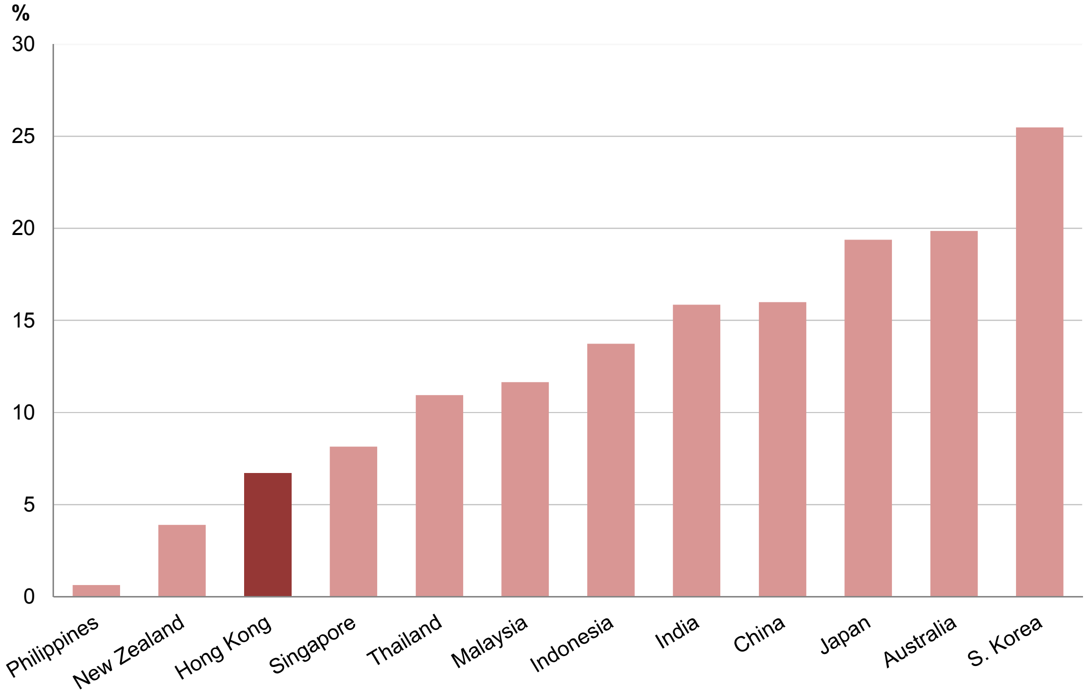


Note: The leverage ratio in this graph is defined as the ratio of total debt to common equity and therefore is not strictly comparable with the leverage ratio reported in Graph 7.

Source: IMF, *Regional Economic Outlook*.

Share of corporate debt owed by firms with interest coverage ratio of less than one

Graph 9

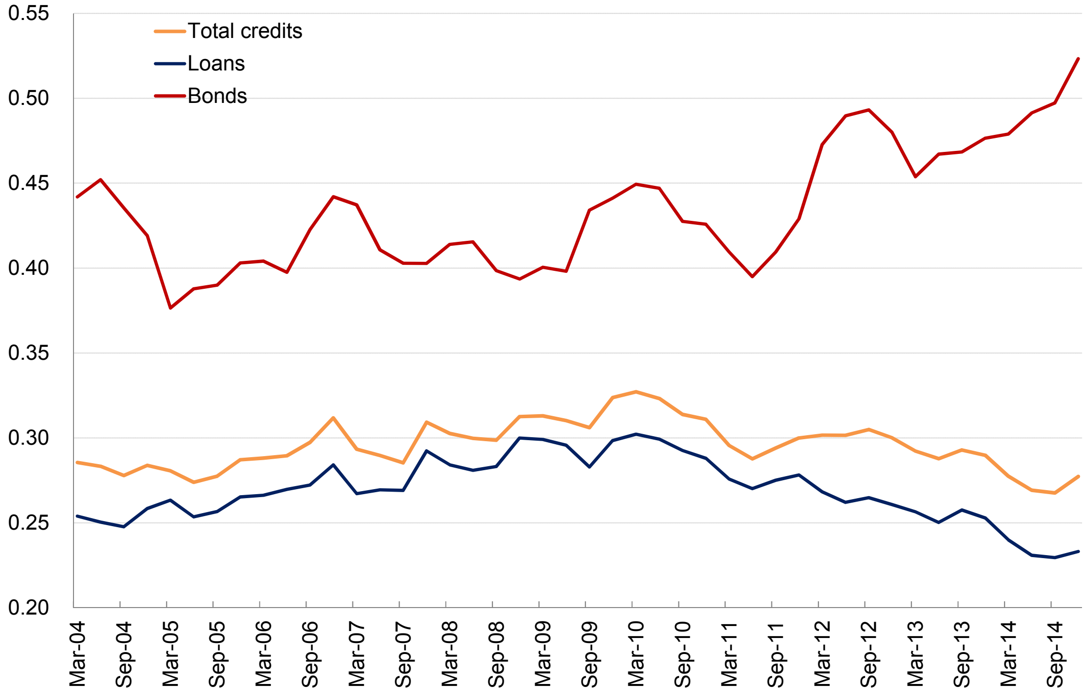


Source: IMF, *Regional Economic Outlook*.

perspective of an investor investing solely in Hong Kong corporate bonds, the risk is certainly higher. However, as bond investors tend to be highly international in terms of their portfolio holdings, the risk can be diversified away by investing in bonds from other economies. Meanwhile, from the perspective of the banking sector, as property developers shifted to the bond market for financing, banks were able to release funds for lending to corporations in other sectors. Indeed, bank loans to various industries, other than information technology and building, construction and property development, have accelerated since the global financial crisis (Graph 11). As a result, the HHI for bank loans has come down significantly (Graph 10). Given that loans to corporations account for a significant share of total domestic lending in Hong Kong, the banking sector is now subject to a smaller concentration risk. From the macro angle, the HHI for total corporate credit, ie bond financing and bank financing combined, has also trended lower from 2010 onwards.

The HHI for outstanding corporate bonds, bank loans and total credits to non-financial corporations in Hong Kong

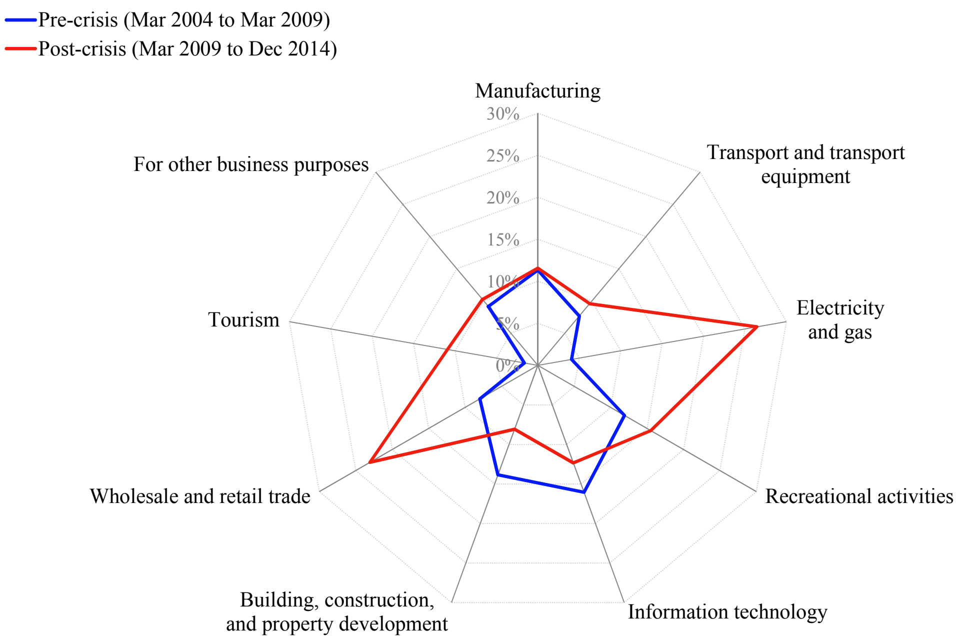
Graph 10



Sources: *HKMA Monthly Statistical Bulletin* and HKMA staff calculations; Dealogic.

Annual loan growth by industry

Graph 11



Source: HKMA Monthly Statistical Bulletin.

5. Conclusion

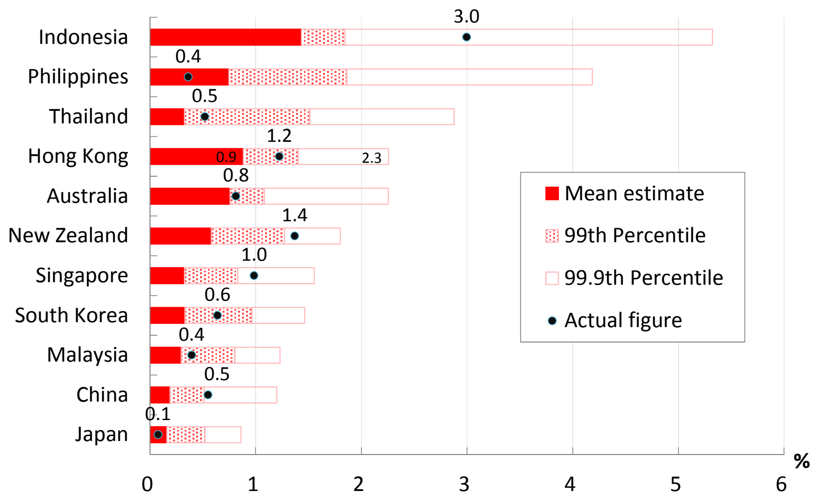
In summary, the rise of the corporate bond market has mixed implications for policymakers. On the one hand, the availability of an additional financing channel, over the long term, reduces the traditional over-reliance on bank lending and enables corporations to further diversify their funding sources. However, the challenge is that the rapid growth of the market has added fuel to the rise in total credit growth in an extraordinary monetary environment, which is often a precursor to financial crisis. While key indicators suggest that the financial burden of the debt is now distributed more evenly and bank credit (as well as overall credit) to the corporate sector has become more diversified, the potential risks associated with the increased leverage can never be downplayed. Particularly, the corporate sector is expected to face a higher interest burden in view of the eventual normalisation of interest rates by the US Federal Reserve, a process that is widely expected to begin in the coming months. Therefore, any impact of such changes in market conditions on corporate leverage merits close monitoring.

Annex: How might sovereign bond yields in Asia-Pacific react to US monetary normalisation under turbulent market conditions?[10]

The HKMA has conducted a study on the potential impact of US monetary normalisation on the sovereign bond yields of 11 Asia-Pacific economies.[11] The study employs a quantile vector autoregressive model with principal component analysis in the assessment of the tail risk of sovereign debt in the region, which may not be detectable using traditional OLS-based analysis. The model is used to compute short-run changes in the sovereign bond yield of each of the economies based on the scenario seen between May and September 2013 during which the increase in the 10-year US Treasury yield was 94 basis points. Different quantiles can be considered as representing different levels of market distress: the higher the quantile, the greater is the distress.

Graph A1 shows the short-run response in the sovereign bond yields in Asia-Pacific estimated at the mean and various quantiles along with their corresponding actual increases, with the economies ranked according to the size of their response at the 95th percentile.

Estimated short-run changes in local sovereign bond yields based on the scenario seen between May 2013 and September 2013 * Graph A1



* During this period the US Treasury bond yield rose by 94 bps.

Source: HKMA staff calculation

Two salient points of the findings are noteworthy. First of all, it is apparent that the actual increases registered in the episode are mostly greater than the mean

[10] For details, see HKMA (2014).

[11] The economies are Australia, China, Hong Kong SAR, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, Korea and Thailand.

estimates. This reflects the knee-jerk reaction of international investors in running for the exit in response to the news of tapering, given that these economies had received significant capital inflows after several rounds of quantitative easing by the US Federal Reserve. Second, by comparing the actual increases and the estimates at the various quantiles, the findings highlight the importance of assessing the potential tail risk. The estimates at the 90th and 95th percentiles are many times larger than the actual increases or mean estimates, suggesting that the volatility and turbulence of financial markets in times of extreme adversity can be even more disruptive than imagined.

In sum, the empirical evidence supports that the US Treasury bond yield can have a significant influence on sovereign bond yields in Asia-Pacific, one of many channels by which US monetary normalisation could affect the region's economies. This would be especially the case if the process should turn out to be more disorderly than expected.

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