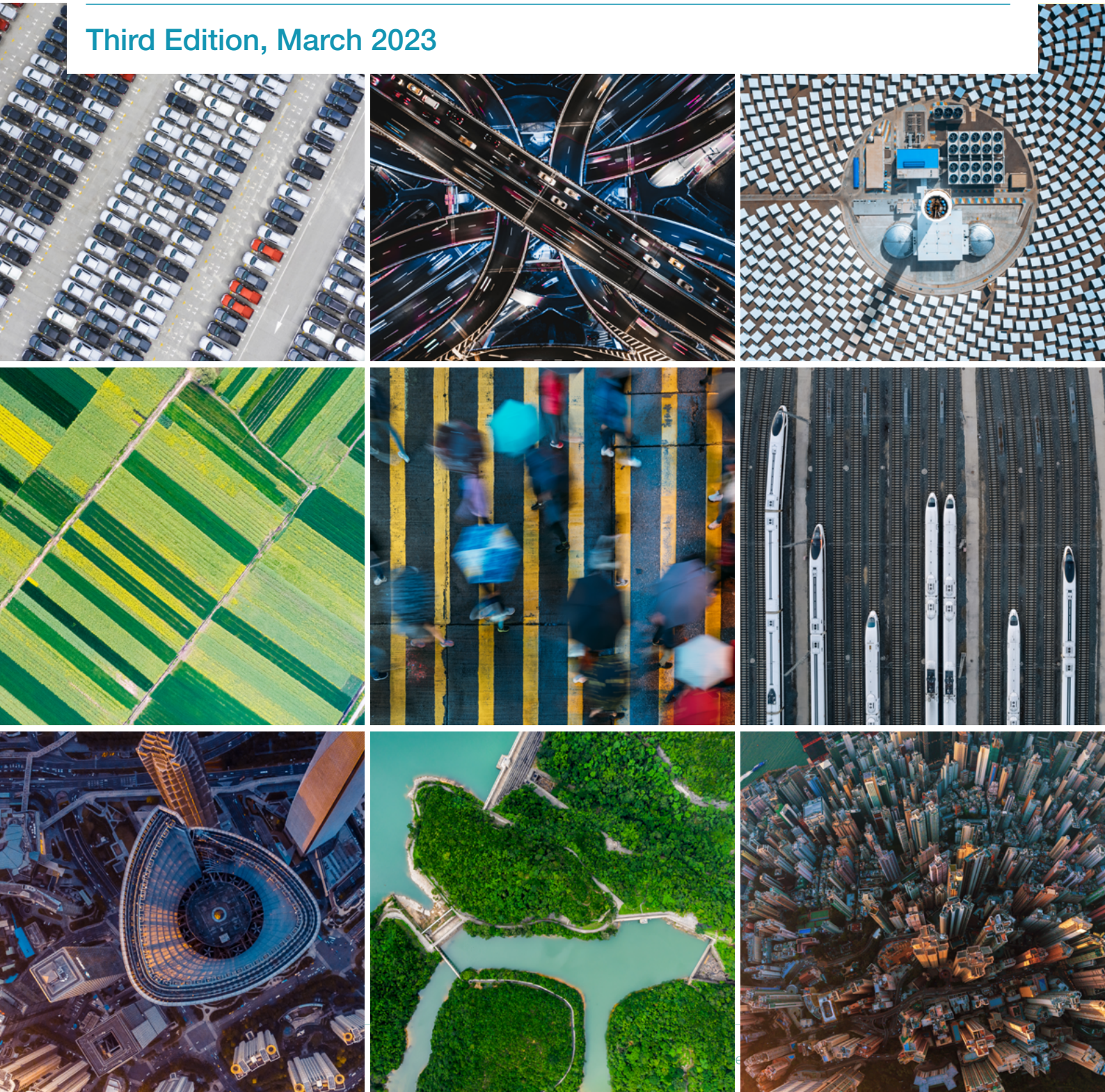


The Asian International Bond Markets: Development and Trends

Third Edition, March 2023



Researched and written by: Andy Hill, Yanqing Jia, and Mushtaq Kapasi, ICMA.

Data analysis by: Yanqing Jia, Andy Hill and Christopher Matthew, ICMA.

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Executive summary

The year 2022 was challenging for the international bond markets in Asia. The interest rate hikes by many central banks around the globe, geopolitical tensions, and sectoral credit events together contributed to the end of more than a decade of issuance growth for international bonds in Asia.

The annual issuance volume of international bonds in Asia declined 44% from the record value of over USD 610 billion in 2021 to USD 346 billion in 2022, near the level in 2015. Looking at the international issuance in Asia by deal nationality, China accounted for 33% in 2022 and continued to be the largest source of issuance, followed by Japan and South Korea. International issuance volume by South Korean issuers remained relatively resilient compared with other jurisdictions, with USD 40 billion in 2022, only a 25% decrease from 2021.

Green, social, sustainability and sustainability-linked bonds (all together “sustainable bonds”) followed the overall trend and also experienced a decline in issuance amount by 22% to USD 80 billion in 2022, but its proportion in all international issuance in Asia rose from 16% to 23%, evidencing the attractiveness of sustainable bonds as a financing instrument for issuers.

Behind the headline numbers, issuers, confronted with higher cost of issuing bonds in G3 currencies in 2022, tended to diversify into other funding sources including bank loans and the domestic bond markets and tap the international bond markets with shorter tenor, waiting for more clarity on the rate hike schedules. Meanwhile, investors indicated they remain generally interested in Asian G3 credits but have become more vigilant on pricing and credit risk.

Despite the unfavourable factors affecting the bond markets in Asia, there have been increasing efforts to test out the application of innovative technologies and promote digitalisation in the Asia bond markets.

As with the primary market, the Asia international secondary bond market faced a confluence of headwinds over the course of 2022. Interview participants suggest that secondary market conditions were challenging, particularly in some segments, with overall traded volumes lower than 2021, and with regular episodic spates of illiquidity and heightened price volatility.

Interviewees suggest that reduced liquidity, as seen in lower secondary market volumes, is in part a response to higher yields and widening credit spreads, which increase uncertainty for investors and risks for market-makers. This can also be attributed to a reduction in primary market activity.

Interviewees note that as a result of large moves and heightened volatility some secondary market liquidity providers suffered meaningful losses in the first half of 2022, which had repercussions for the market for the remainder of the year.

Interviewees comment that the use of electronic venues to transact in the secondary market continues to become more entrenched. Historically this has been mainly prompted by efficiencies, with most e-trading in smaller trade sizes and in more liquid, investment grade names. More recently, however, this increasingly has been driven by the need for price discovery and the search for liquidity. Accordingly, in the past twelve months we have seen a growth in the adoption of protocols other than RFQ, including all-to-all and portfolio trading.

Interviewees suggest that liquidity in both the Asia cross-border repo market and the index CDS market held up well during the market moves of 2022. Liquidity in the single-name CDS market, however, continues to wane.

Introduction

Why this report?

ICMA published the first edition of [The Asian International Bond Markets: Development and Trends](#) in March 2021 and released a [second version](#) in 2022. This third edition of the report aims to provide global market stakeholders with an updated overview and includes analysis of market events through the end of 2022.

This report also supplements [The Internationalization of the China Corporate Bond Market](#), 2021, which focuses on China's domestic CNY and offshore (primarily USD denominated) corporate bond markets.

Scope and methodology

The focus of this report is the international bond market in Asia¹. Throughout the report, the term “international bonds” refers to issues that are sold in a market outside the issuer's home jurisdiction, in the Euro market, or globally. This definition may be independent of whether or not a bond is cleared on international central securities depositories (ICSDs). This research covers trends in primary issuance in the international bond market as well as secondary market structure and trends in recent years.

In this report, ICMA combines quantitative data analysis with qualitative input from selected market participants. The quantitative data is taken from a variety of sources noted within the relevant text and charts. The qualitative input was synthesised from a series of interviews with investment banks, investors, trading venues, and market infrastructures (a partial list of participating institutions is provided in the acknowledgements). Interviews were conducted from November 2022 to March 2023. ICMA is grateful to the Hong Kong Monetary Authority for significant support on the quantitative data collection and analysis, as well as guidance on overall themes in this report.

About ICMA

The International Capital Market Association (ICMA) promotes well-functioning cross-border capital markets, which are essential to fund sustainable economic growth. It is a not-for-profit membership association with offices in Zurich, London, Paris, Brussels, and Hong Kong, serving over 600 members in 65 jurisdictions globally. Its members include private and public sector issuers, banks and securities dealers, asset and fund managers, insurance companies, law firms, capital market infrastructure providers and central banks. ICMA provides industry-driven standards and recommendations, prioritising three core fixed income market areas: primary, secondary and repo and collateral, with cross-cutting themes of sustainable finance and FinTech and digitalisation. ICMA works with regulatory and governmental authorities, helping to ensure that financial regulation supports stable and efficient capital markets.

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¹ The definition of Asia may differ by source with respect to certain frontier markets. Please refer to the full definitions at the end of the report.

Primary Markets

International bonds globally and in Asia

For any particular jurisdiction, the international bond market usually develops after issuers become seasoned in their domestic capital markets. Domestic borrowers tend to raise money in their own domestic market first, not only because their operations are in local currency, but also because they are more familiar with investors and regulations closer to home. As issuers gain experience, they may gradually tap another country/jurisdiction's market with issuances in that country/jurisdiction's currency, or issue bonds internationally in a global foreign currency and have them cleared through an international clearing house and held in an ICSD. Unlike local currency bonds in the domestic market, international bonds are mostly sold only to institutional investors and individual professional investors.

Reasons for raising funds through international bonds include, but are not limited to, meeting foreign currency funding needs, managing funding costs and structure, diversifying funding channels and investor base, and raising profile in the international markets. For investors, international bond markets are a way to obtain exposure to emerging market credits without the need to establish access to individual domestic markets or manage foreign exchange risks associated with local currencies. Investing in international bonds may also help with portfolio diversification and yield enhancement, especially in emerging markets such as Asia.

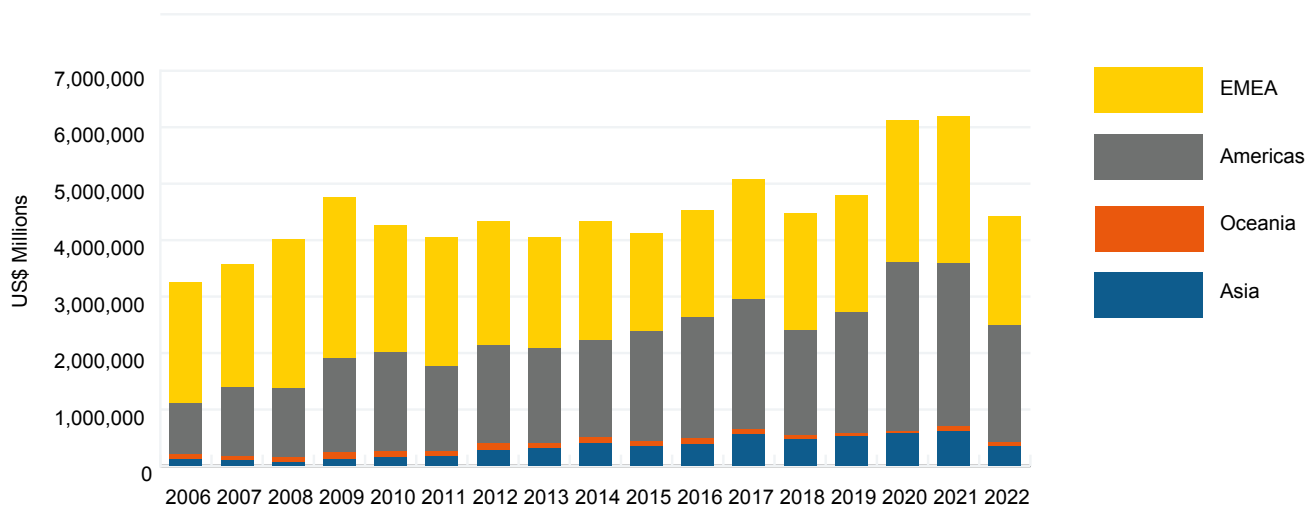
The Asian international bond market had experienced significant growth over recent years, despite a retreat in 2008 (figure 1). Of all bond issuances from Asia, international issuances made up only 7.2% in 2006 and accounted for only 3.6% in 2008 with the global financial crisis. Since then, international issuances expanded gradually and stabilised at around 17-19% of all bond issuances from Asia from 2017 to 2021 (figure 2). In 2021, it amounted to record level of USD 617 billion. However, in 2022, due to multiple headwinds affecting the global financial markets (explained in detail in the section "Deal nationality"), the proportion of international bond issuance shrunk significantly back to 2015 level, accounting for only 12.4% of bond issuances from Asia.

One main reason for the lower proportion of international issuances in Asia, compared with the world average of around 30-40% (figure 2), as interview participants pointed out, is a preference for many Asian issuers to secure financing onshore. Detailed reasons vary from country (jurisdiction) to country (jurisdiction) and are explained more fully in the section "Deal nationality" below.

While reliable regional data is difficult to obtain, generally speaking the view of market participants is that Asian companies source a smaller proportion of their total borrowings from the bond market in comparison with the US and European markets. For example, in China, total loan financing accounts for more than four times the amount of bond financing for non-financial corporates, while in Europe corporate loans outstanding are about three times the amount of corporate bonds outstanding, and in the US market the outstanding amount of corporate bonds exceeds that of corporate loans by 6%.² Considering the lower ratio of bond financing in Asia, the bond market in this region has potential to grow further.

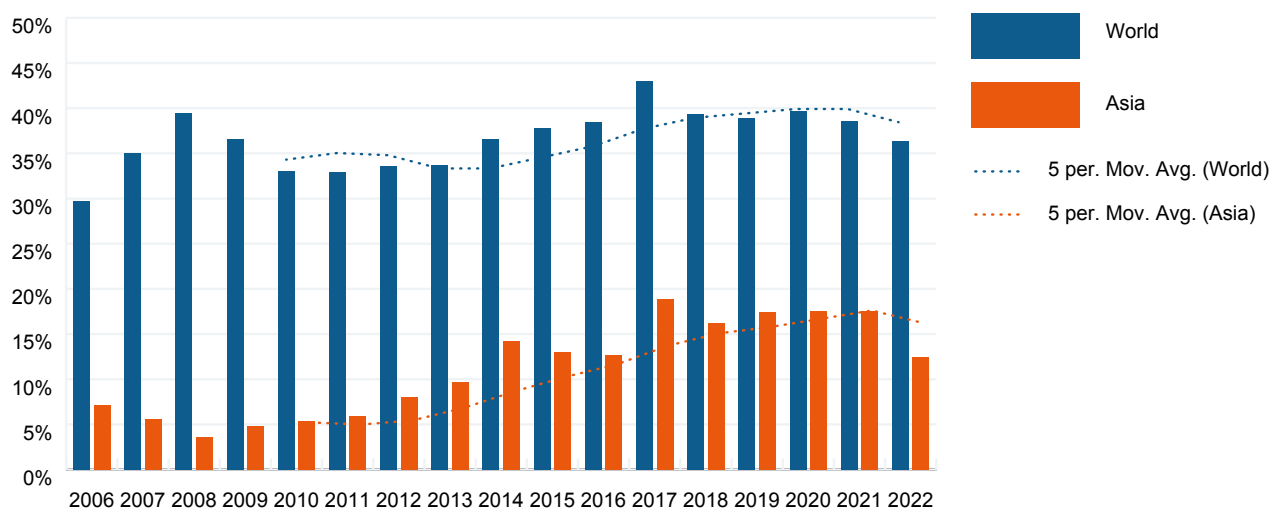
² ICMA estimates based on statistics published by the People's Bank of China, Euro Area Statistics, the Federal Reserve and Bank of International Settlement.

Figure 1: Global international bond issuance - by region (deal nationality³)



Source: ICMA analysis using Dealogic data (January 2023)

Figure 2: Percentage of international bond issuances over all issuances



Source: ICMA analysis using Dealogic data (March 2023)

In the context of the international bond markets, participants and operations often cover multiple jurisdictions, and geographical analysis often presents methodological issues. This paper provides various ways to look at “where” a bond transaction takes place, in the spirit of providing a more complete and nuanced picture of overall regional market activity. The analysis first covers the location of arrangement and execution, secondly the location of listing, and subsequently the issuer’s major place of business (the “deal nationality”).

³ Dealogic’s definition of “deal nationality” is the jurisdiction in which the majority of the borrower’s business takes place. Throughout this report, nationality and region refer to the deal nationality of bond issuances, unless otherwise specified.

Arrangement and execution

When issuing bonds, it is common practice for issuers to appoint market intermediaries, typically banks, to manage the debt capital raising process. The lead managers help issuers to understand market conditions and explore investor interest, and then manage book-building and allocation. Usually, these bank arrangers have an aim to cultivate and maintain investment relationships with investors that are both able to contribute to satisfying the issuer's ongoing funding needs, and also willing to act as committed ("buy and hold") stakeholders in the issuer's business. In particular, it is often important to issuers that investors in the primary market are purchasing bonds for investment purposes, rather than trading purposes, which helps to ensure that issuers will have closer relationships with and better long-term understanding of their direct investors. Therefore, the bank arrangers' ability to ensure access to a wide investor base, optimally price the transaction, and fulfil the issuers' funding requirements are essential contributors to the success of the bond issuance.

Bond arranging activities comprise originating and structuring, bookbuilding, legal and transaction documentation preparation, and sale and distribution. Where a bond is arranged in practice depends on many factors but is mainly influenced by the location of the leading banks (and their teams of professionals across investment banking, trading, legal, and operations) who are appointed to manage the transaction. A financial centre's regulatory system, independence of judiciary, and enforceability of contracts are also important for banks to minimise legal and operational risk in execution.

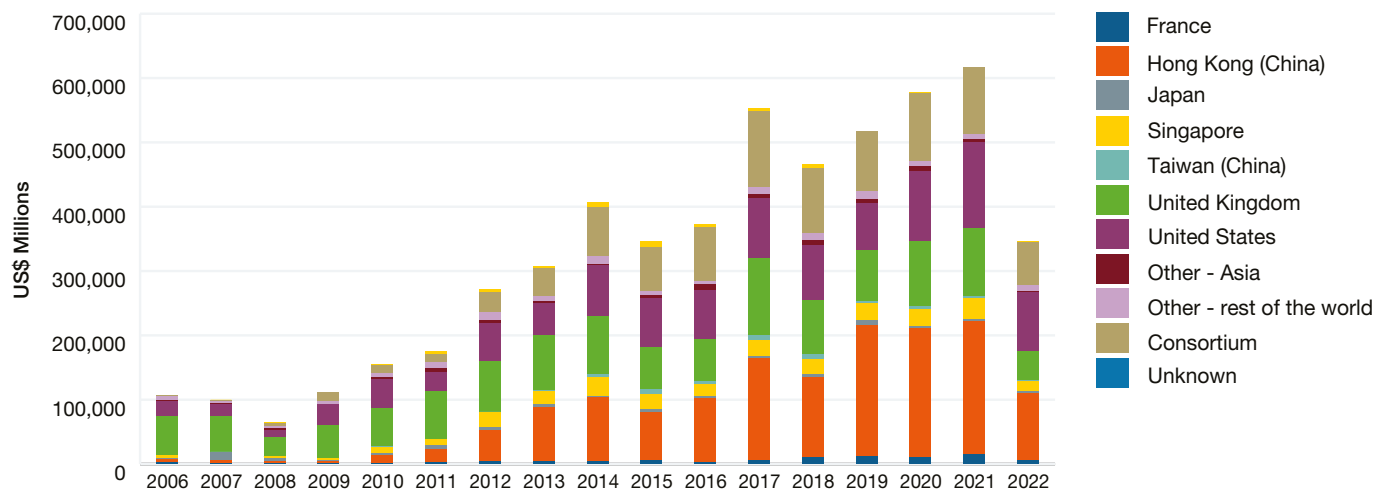
Looking at the main location of arrangement⁴ of Asian international issuances, the main trend since 2010 is that Asian financial centres have gained market share. The trend could be mainly attributed to the significant growth in bonds issued by Chinese issuers and Hong Kong's role as an established hub for international Chinese transactions. In particular, banks located in Hong Kong are seen to have closer banking relationships to the Chinese mainland combined with experience in international issuance practice and the ability to distribute bonds to a global investor base.

Over the last decade, Hong Kong has overtaken non-Asian financial centres to become the most common location for Asian international bonds to be arranged. Before 2010 mandates in the region were mostly granted to UK-based and US-based banks. Since 2010, banks located in Asia, especially Hong Kong, have managed an increasing share of international bond issuance from Asian jurisdictions. For 2022, Hong Kong arranged 30% of the Asian transactions⁵, while the US and the UK took shares of 26% and 13%, and Singapore 5%. The market shares in 2022 are similar to those in 2021.

⁴ For purposes of this analysis, a bond is considered as arranged in the location where the majority of its arranging activities takes place. The main location of arrangement is the jurisdiction where more than 50% of the lead banks of a deal are based. If two jurisdictions tie for a deal, the averaged nominal amount of the bond is calculated. Deals that do not have dominant jurisdiction for the group of lead banks are classified as "consortium". ICMA analysis is based on the "Lead Bank Nationality" classified by Dealogic.

⁵ By nominal amount of bond issuance.

Figure 3: International bond issuance in Asia (deal nationality) - by main location of arrangement



Source: ICMA analysis using Dealogic data (January 2023)

The Hong Kong Securities and Futures Commission (SFC) released in 2021 a new [Code of Conduct for capital market transactions](#) in Hong Kong, aimed at clarifying the roles played by intermediaries in DCM and ECM transactions and set out the standards of conduct expected of them in bookbuilding, pricing, allocation and placing activities. The new Code, effective August 2022, covers, among other aspects of the issuance process, the appointment of syndicates, communications between syndicates and issuers, treatment of proprietary orders from underwriter banks and related entities, transparency with respect to investor identities and investor demand, rebates offered to investors, and management of conflicts of interest. Since the new Code came into effect, various market participants, including syndicate banks, institutional investors and private banks, have generally welcomed the new requirements to increase transparency and enhance discipline. As of March 2023, no significant disruptions have been reported in the market or affected issuers' access to funding. ICMA continues to monitor market developments and engage closely with underwriters, investors, law firms and the SFC on compliance practices and documentation.

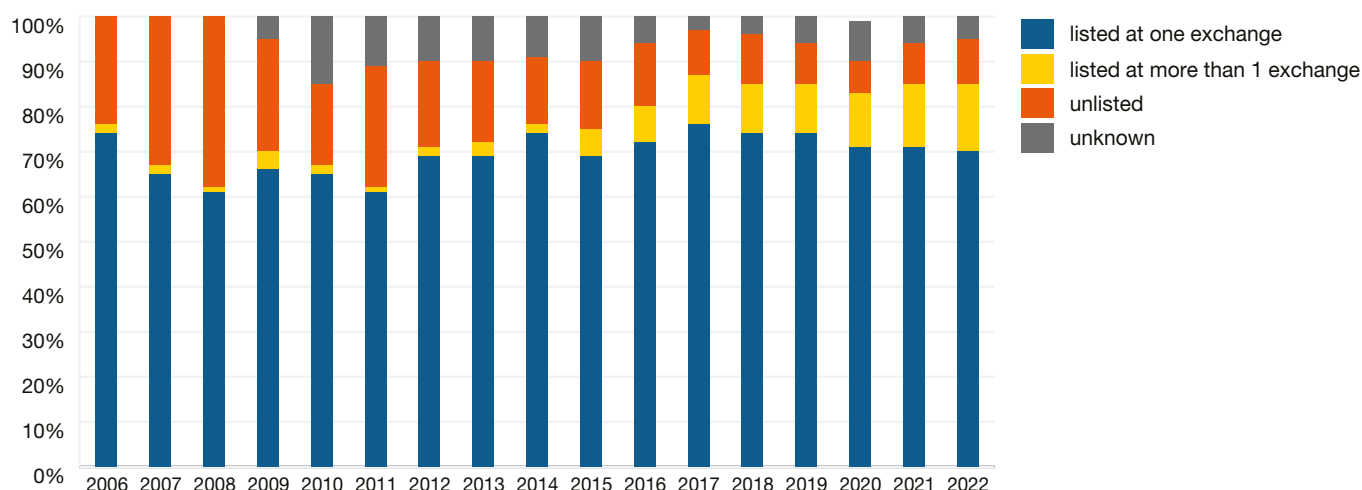
Listing

The listing of a bond on an exchange in theory facilitates visibility and trading on the secondary market, just as with equities. However, in practice, the Asian international bond market is similar to the rest of the world in that bonds are listed at exchange but are generally traded off-exchange. While market perspectives vary on the ultimate rationale for bonds in Asian international markets to be listed, one reason cited is that listed securities are preferred by many international institutional investors.

The ultimate motivations for this investor preference vary (and not all international investors require or prefer securities to be listed), but some general reasons are potentially increased transparency on deal documentation, required ongoing disclosure, an extra layer of governance provided by the listing approval process, and a potential, if not always realised, liquidity increase from such general attractiveness and on-exchange trading. Among the institutional investors in the bond markets, some fund managers have a mandate to invest in listed securities. Also, some investors may be able to invest in international bonds in practice only if they are listed on the exchanges of the investors' home countries. (For example, until late 2018 Taiwan life insurers could invest in international bonds listed at the Taipei Exchange which did not take up their overseas investment limit.) Bond issuances targeted at European markets may be listed at both the London Stock Exchange and an exchange in the European Economic Area. A dual listing may pave the way for outreach to a potentially wider group of investors.

In the last decade, around 82%⁶ of international bonds issued by Asian issuers were listed⁷ (figure 4). In fact, the percentage of international bond issuances listed on more than one exchange has increased steadily since 2011. In 2022, 15% of the international bond issuances from Asia opted for dual (or more) listing.

Figure 4: International bond issuances in Asia (deal nationality) - listed or not



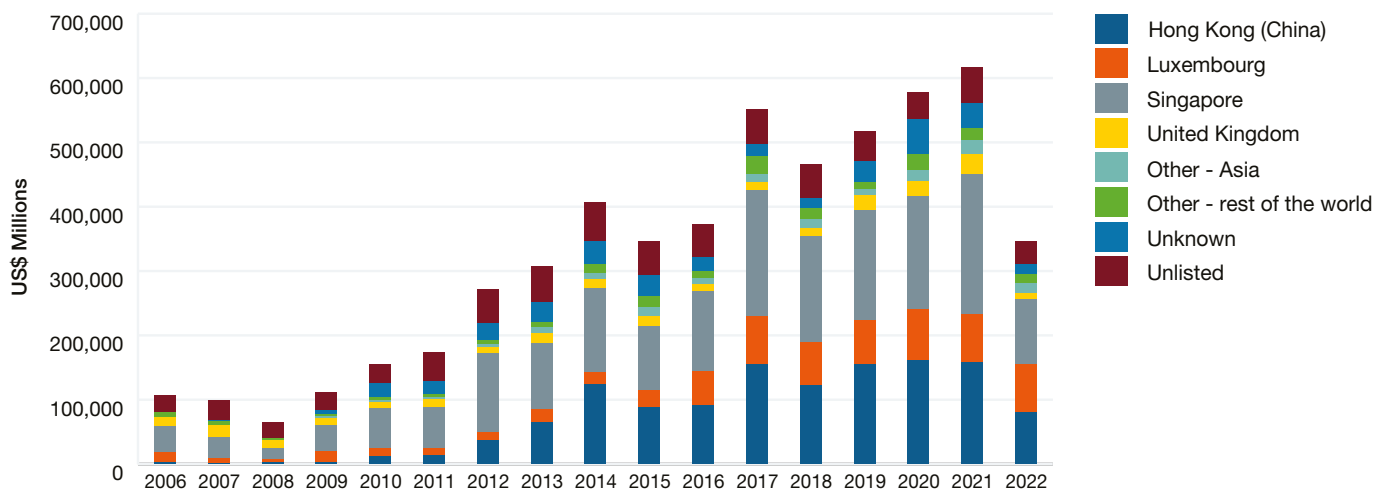
Source: ICMA analysis using Dealogic data (January 2023)

The issuer’s choice of listing location is generally determined by the relative simplicity, speed, predictability and affordability of the listing process. As interview participants suggest, besides considering who the target investors are, and any regulation or requirement they may face, when choosing the listing venue/jurisdiction, issuers’ main criteria are efficiency and cost of listing application and approval. For Asian international issuances, Singapore and Hong Kong are the most popular places for listing in Asia, and Luxembourg and the UK are the most popular in Europe. In 2022, Singapore and Hong Kong hosted 29% and 23% of the international issuances from Asia respectively. Luxembourg has become more attractive as a listing venue in 2022, attracting 21% of international bond issuances from Asia in 2022, compared with 12% in 2021, while the UK listed 3% of them in 2022 (figure 5).

6 By nominal amount.

7 Analysis is conducted using Dealogic data of “Tranche Listings”.

Figure 5: International bond issuance in Asia (deal nationality) - by listing location



Source: ICMA analysis using Dealogic data (January 2023)

Deal nationality

International bond issuances from Asia totalled USD 346 billion in 2022, a decrease of 44% from 2021 (figure 6). The main reasons cited by market participants include, first and foremost, the interest rate hikes by many central banks globally and the associated uncertainty, geopolitical conflicts, concerns about economic recovery and potential recessions, volatility in the secondary markets, and defaults observed in selected market segments that are yet to be resolved.

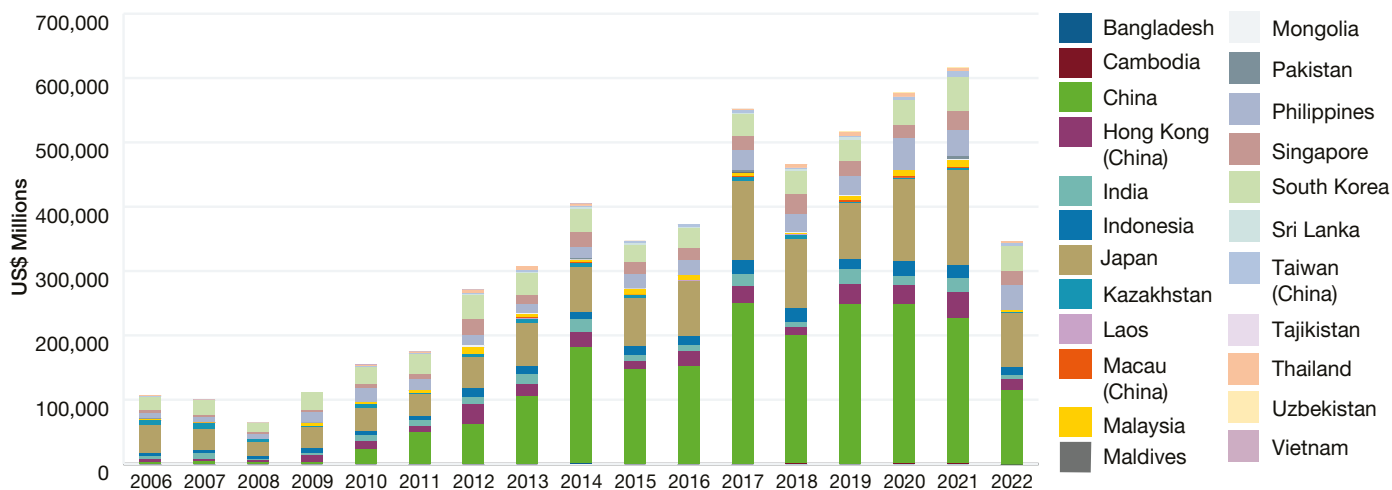
From the global financial crisis in 2008 through 2021, low interest rates together with the quantitative easing policies fuelled a bullish bond market till 2021.

The international bond market in Asia also benefited from the expansive monetary policies and experienced a steady growth in annual issuance volume from USD 65 billion in 2008 to over USD 610 billion in 2021. In particular, the market rescue measures in response to the market crash in March 2020 injected liquidity into the G3 markets and provided a favourable funding environment for all types of issuers – sovereign, supranational and agencies (SSA), corporates and financial institutions – to tap the market when COVID-19 and its effects on economics lingered with uncertainty.

As inflation rates moved up, many central banks tilted towards monetary tightening to slow down inflation in 2022. The increase in policy rates directly affected the funding cost of G3 bond issuers in the primary markets, and made investors cautious about the expected further rate hikes that would affect the valuation of bonds in their portfolios. Issuers tended to review what other funding channels they have, including bank loans, domestic bond markets, and private debt, while investors took a wait-and-see attitude towards new bond issuance. These intertwining demand and supply factors led to the decline of international bond issuance from Asia in 2022.

As of the start of March 2023, Asia's international bond market has started the year with USD 92 billion of issuance in the first two months of 2023, paired with level in 2022. Some interviewees pointed out that once there is increasing clarity on the schedule of further rate hikes and slowed pace in doing so, more corporate treasurers will be prompted to tap the international bond markets.

Figure 6: International bond issuance in Asia - by deal nationality



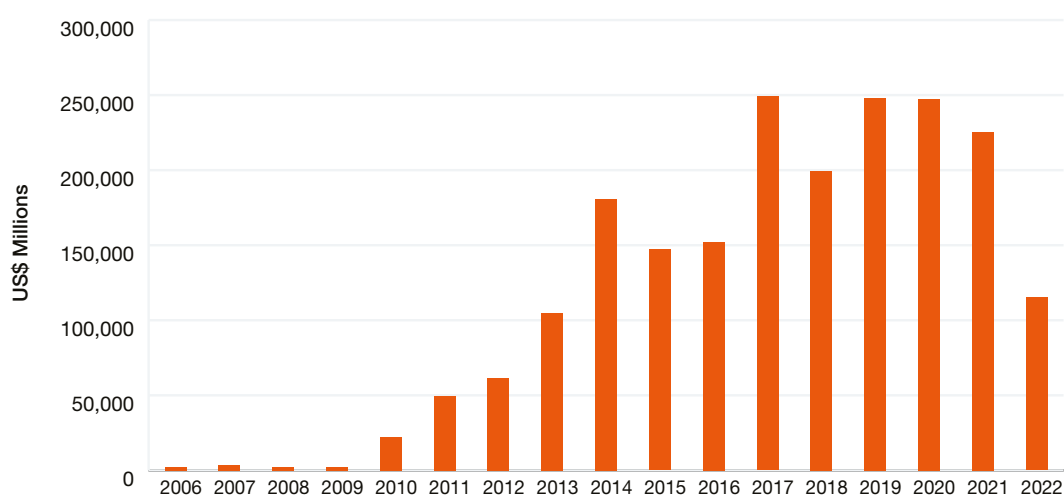
Source: ICMA analysis using Dealogic data (January 2023)

Before 2010, Japan and South Korea were the most active issuer countries, with relatively small international issuance from each jurisdiction in the rest of Asia. Since 2010 there has been a significant increase in issuance volume from China (including Hong Kong), ASEAN and India.

China⁸

The amount of international bond issuances from China increased rapidly since 2010 (figure 7), from fewer than 20 deals each year in the 2000s to over 700 deals in 2021, amounting to USD 224 billion and accounting for 37% of all the international bond issuances from Asia in 2021.

Figure 7: International bond issuances from China (deal nationality)



Source: ICMA analysis using Dealogic data (January 2023)

⁸ "China" by jurisdiction.

One of the factors contributing to this significant growth is the increasing overseas operational and financial activities of Chinese entities. Raising funds in USD or Euro offshore to meet their acquisition or expansion plans was especially advantageous from 2010 to 2014 with continued appreciation of RMB and low interest rates in USD funding markets. Interest rate hikes introduced by the Fed and the devaluation of RMB in 2015-2016, as well as the filing requirement introduced in 2015⁹ for all offshore issuances longer than one-year, led to a temporary decline in fund raising activities of Chinese entities offshore. The upward trend in issuance resumed in 2016. In 2018, the National Development and Reform Commission introduced stricter standards to manage the scale of foreign debt financings by onshore enterprises. These new stipulations, aimed at reducing levels of corporate and institutional leverage, contributed to the decline of new issuances from China in 2018.

For some Chinese issuers, going into the offshore market is a means to diversify their financing structure by providing an additional funding channel. The international bonds do not replace but rather supplement their existing bank loan or onshore capital raising.¹⁰ Issuers compare the cost of offshore funding after hedging with the market yield onshore, as well as considering where the funds raised will be used. Some interviewees pointed out that the offshore market allowed cheaper funding for IG issuers after hedging in 2020, but the case was reversed in 2021. As a result, more high-rated issuers turned to onshore issuances, contributing to the decline in the international bond issuance volume by Chinese issuers.

The flexibility of use of funds is a reason to favour an international bond issuance. Compared with issuers elsewhere in Asia, Chinese issuers also tend to attribute a greater weight to the opportunity to build a global reputation in addition to the obvious concerns of cost of capital when deciding whether to tap the international bond market. Some local governments encourage local state-owned enterprises (SOEs) and local government financing vehicles (LGFVs) to enter the offshore market, in order to promote their provinces and attract foreign investment in the long run.

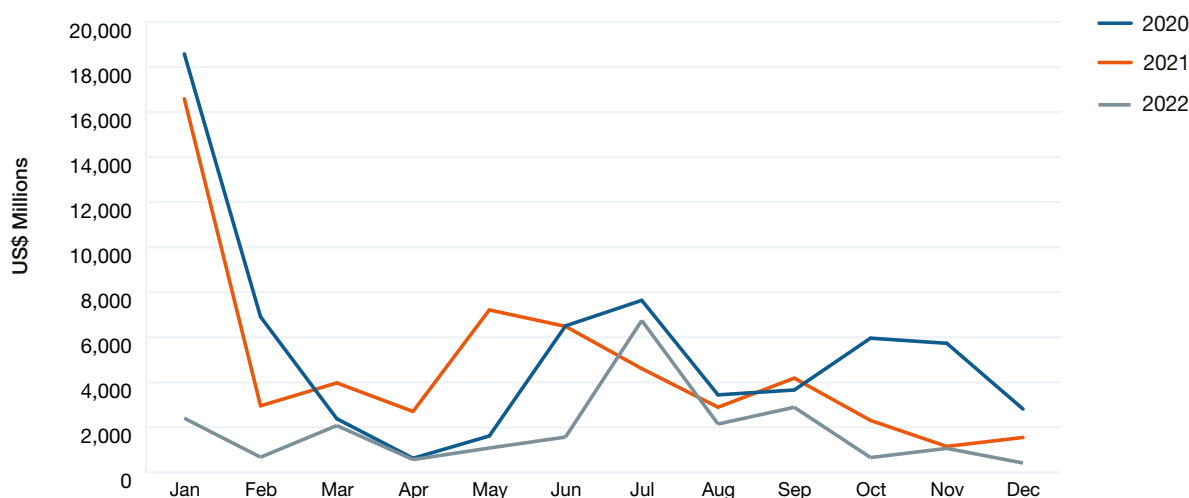
In 2021, significant credit events from the Chinese real estate industry affected issuance from the overall sector into the international bond market. Issuance volume from this class of issuer has continued to decline since June 2021 (figure 8) and the bond prices of many real estate issuers declined to distressed levels. In 2022, more Chinese real estate issuers declared defaults. Issuance from the real estate sector decreased from USD 57 billion in 2021 to USD 22 billion in 2022.

The international bond issuance from Chinese issuers declined by 49% to USD 115 billion in 2022. One of the reasons is the diverging policy rates in China and the US. With diverging monetary policies, the spread between China government bonds and US Treasury bonds, which was positive for more than a decade, narrowed in 2022 and eventually went into negative space in April 2022. Many Chinese issuers turned to the onshore market for cheaper funding. Even so, China remains the largest source of issuance in the Asia international bond market and accounts for a third of the new issuances brought to the market.

⁹ China's National Development and Reform Commission (NDRC) Circular on Promoting the Reform of the Filing and Registration Regime for Issuance of Foreign Debt by Corporate Entities (Circular 2044) published in September 2015.

¹⁰ It is notable, however, that bond financing is playing a larger role for Chinese corporates. The ratio of the outstanding volume of bonds to loans of non-financial corporates in the domestic market has increased from 16% at the beginning of 2014 to 26% at the end of 2021. (ICMA estimates based on statistics of PBOC)

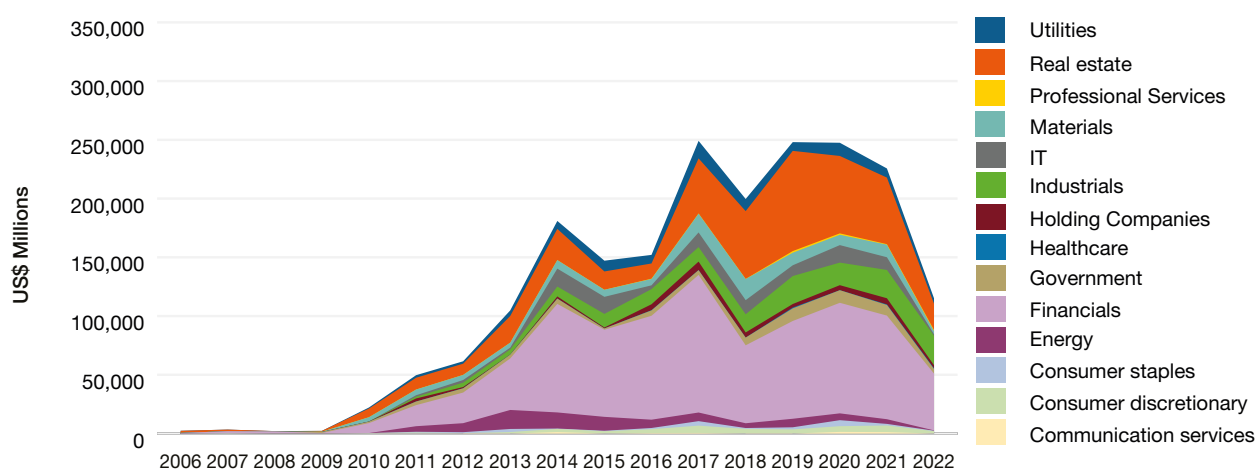
Figure 8: International bond issuances from Chinese real estate issuers



Source: ICMA analysis using Dealogic data (January 2023)

Looking at issuance by sector, the international bond issuances from China were mainly supplied by financial institutions and property developers, making up 42% and 19% of international bond issuances from China in 2022. The suite of Chinese issuers has continued to diversify since 2018 (figure 9). For example, the industrials sector has been more active in the primary markets, accounting for 22% in 2022, double the share in 2021. Issuers of weaker credits were still able to access the market but may need to provide additional credit enhancements. Dealogic data shows a surge of offshore Chinese bonds with standby letter of credits (SBLC), probably partly due to the property sector implications on the high yield (HY) markets, and partly due to the concerns about the enforceability of “keepwell agreements” intended to provide additional credit support. While 24 new issuances in 2020 were supported by SBLC, this number increased to 80 issuances in 2021 and further to 185 in 2022. 33%¹¹ of the international issuances from China in 2022 came to the market with a SBLC. The number of issuances with keepwell arrangements decreased from over 70 in 2014-2015 to 19 in 2022, while six of those issuances in 2022 have both keepwell agreement and SBLC as credit enhancements.

Figure 9: International bond issuances from China (deal nationality) by industry

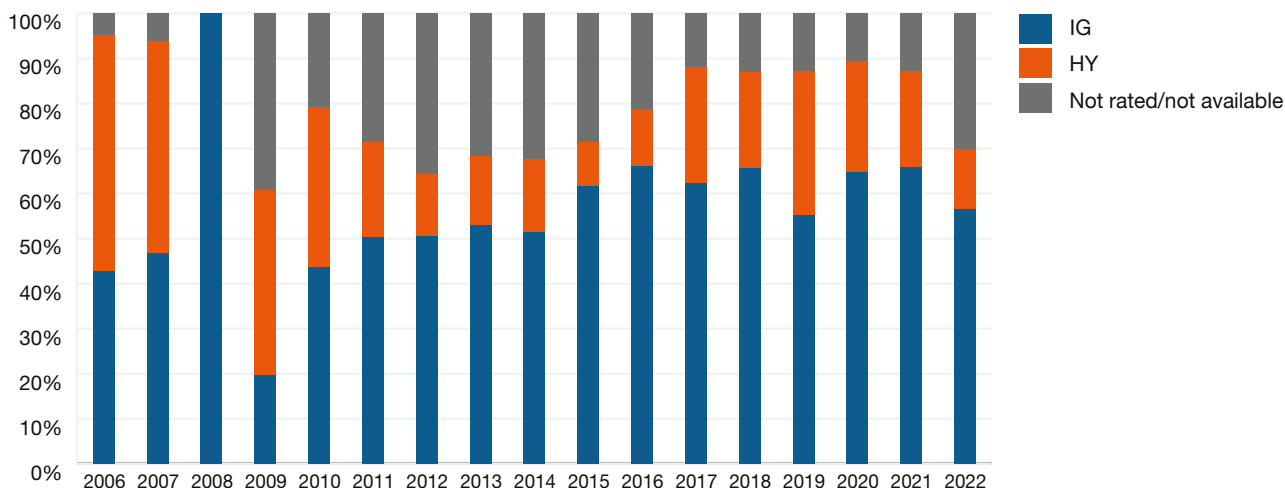


Source: ICMA analysis using Dealogic data (January 2023)

11 By number of issuances.

Despite concerns about the property sector (which accounts for a significant proportion of high-yield issuance), the proportion of overall high-yield and investment grade issuance has not changed dramatically from 2020 to 2022. (figure 10)

Figure 10: International bond issuances from China (deal nationality) by rating at launch



Source: ICMA analysis using Dealogic data (January 2023)

As of the end of 2022, compared to the previous year, many investors have expressed more caution with respect to Chinese high-yield credits, even Chinese credits in general.

Some market participants expressed the view that with state-owned enterprises involved in the restructuring process of distressed real estate developers and the Chinese policies encouraging banks to grant or maintain their loan exposures to property developers¹², the distressed real estate players may be able to recover in the long term. For the moment, priority has been given to protect retail homebuyers and domestic bond investors related to the troubled names, and current market consensus is that it will take time for the exposure of international bond investors to be recovered and for investors to rebuild confidence for the sector.

India

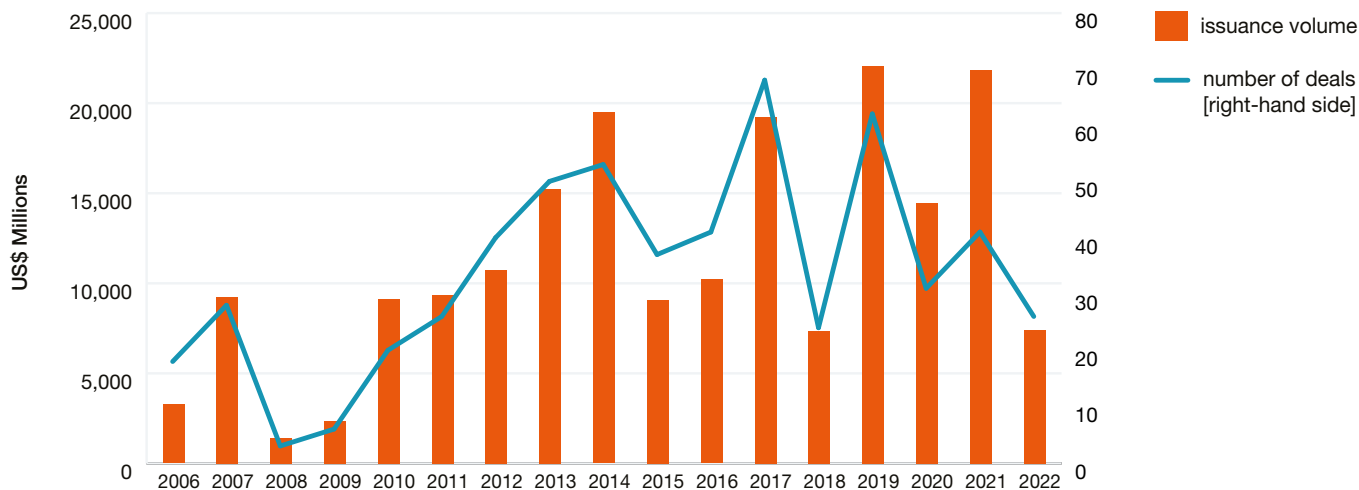
Back in 2006, only banks and a limited number of major corporate issuers from India tapped the foreign currency bond market. In 2011, state-owned enterprises and quasi-government entities started to consider raising funds in G3 currencies and were well received by investors, with 10 times oversubscription being observed. The shadow banking and credit crisis in 2018 led to a reduction in volumes, but issuance levels recovered the following year. International bonds from Indian issuers have continued to diversify in terms of issuer types, industry sectors (figure 12) and structures. In 2022, energy sector is the most dominant type of issuers from India.

The international bond issuance volume by Indian issuers increased to USD 21 billion in 2021, very close to the record level of 2019 (figure 11). In 2022, similar to the general trend in Asia, the international issuance from India contracted by 66% to USD 7.4 billion only. Interviewees pointed out that the local currency bond market functioned robustly, offering issuers cheaper funding with possibly 100-150 bps lower in issuing cost than issuing in G3 currency after currency swap, while many SOEs also turned to the loan markets to meet their funding and refinancing needs.

¹² PBOC and CBIRC issued [a joint notice on Providing Financial Support for the Stable and Healthy Development of the Real Estate Market](#), providing guidance to various types of financial market participants to support financing to property developers and construction companies.

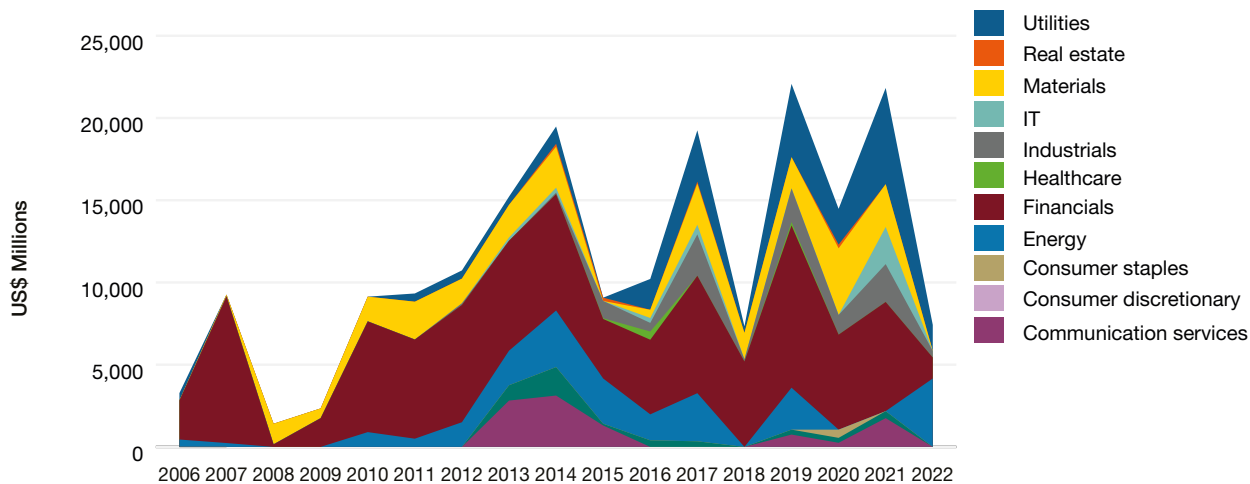
Also pertinent is the fact that the sustainable bonds (green, social, sustainability and sustainability-linked bonds) are increasingly popular among Indian issuers when they consider tapping the international bond market. The percentage of sustainable bonds increased from about 9% in 2020, to over 40% in 2021 and even in a rather sluggish year for bonds in 2022, sustainable bonds accounted for 39% of all the international bond issuance from India in 2022, a ratio significantly higher than most of the countries in Asia and even the global average (figure 13 and table 1).

Figure 11: International bond issuances from India (deal nationality)



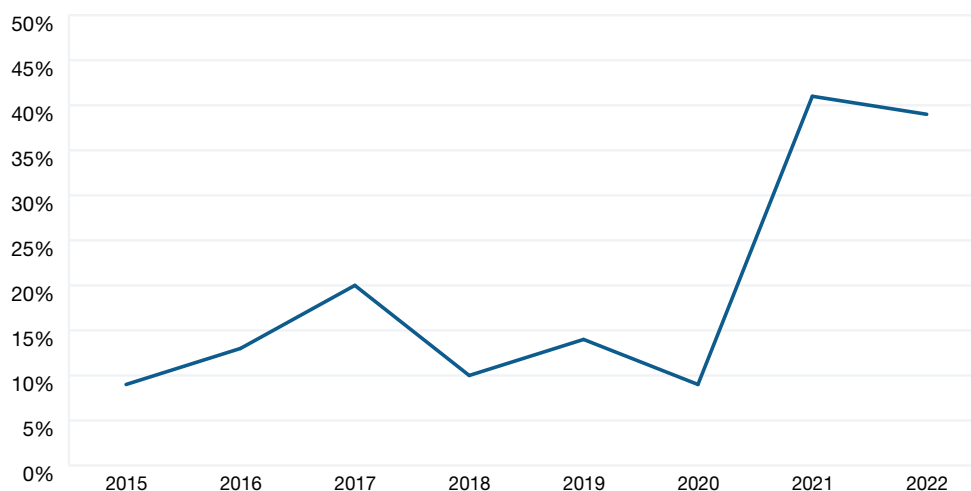
Source: ICMA analysis using Dealogic data (January 2023)

Figure 12: International bond issuances from India (deal nationality) – by industry



Source: ICMA analysis using Dealogic data (January 2023)

Figure 13: Percentage of sustainable bond issuance over all international issuance from India

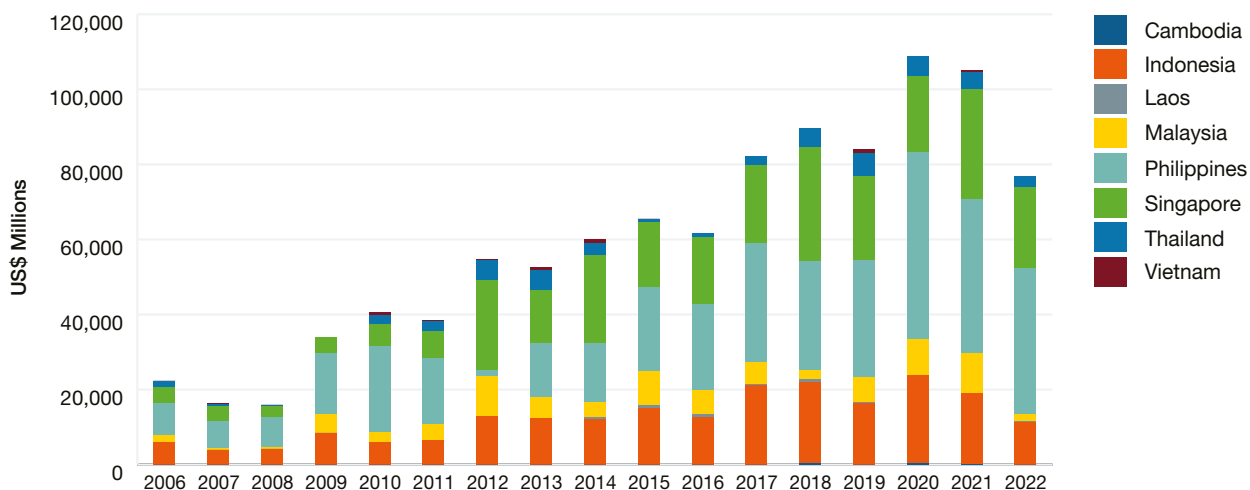


Source: ICMA analysis using Dealogic data (January 2023)

ASEAN

In ASEAN (a subregion of 10 countries in southeast Asia), international bond issuances have grown significantly since the global financial crisis, though the total level of issuance has fluctuated over the past decade (figure 14).

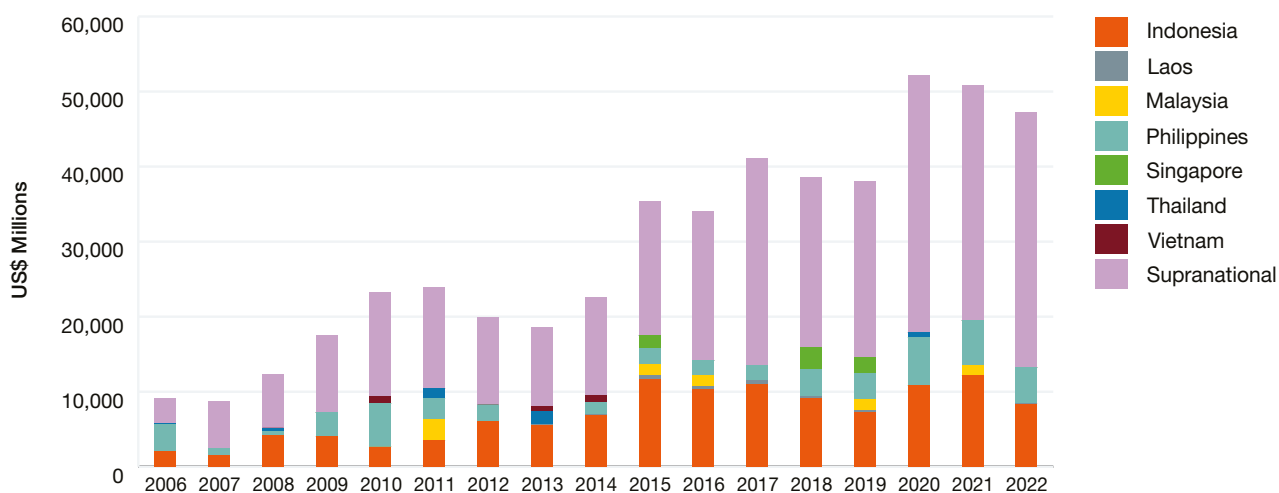
Figure 14: International bond issuance from ASEAN (deal nationality)



Source: ICMA analysis using Dealogic data (January 2023)

The international issuance volume from SSA issuers expanded gradually since 2013 (figure 15), amounting to USD 47 billion in 2022. Indonesia and the Philippines among the other ASEAN countries use the international bond market to raise funds most often. The supranational issuances, mainly driven by the Asian Development Bank headquartered in the Philippines, tripled from 2013 level and were not affected by the general market slowdown in 2022.

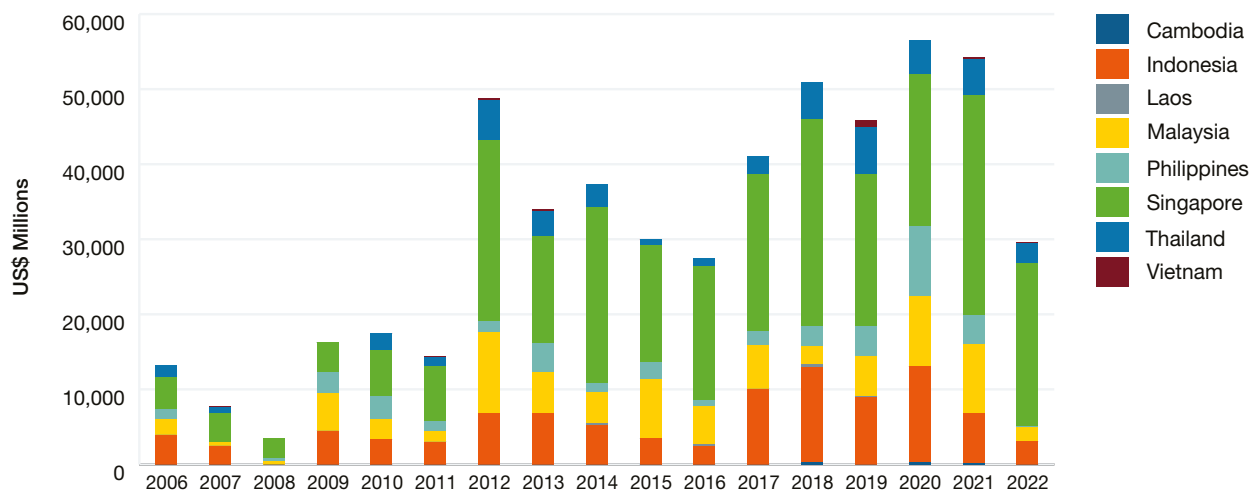
Figure 15: International SSA bond issuance from ASEAN (deal nationality)



Source: ICMA analysis using Dealogic data (January 2023)

Apart from SSA deals, the international issuance from ASEAN followed the general trend in Asia and contracted by 46% to USD 30 billion in 2022 (figure 16). Except for Singapore and Malaysia (10 issuances), the number of international issuances from individual ASEAN countries declined to single digits, if not to a halt.

Figure 16: International bond issuance from ASEAN (deal nationality) excluding SSA



Source: ICMA analysis using Dealogic data (January 2023)

According to bankers interviewed, many ASEAN corporate issuers (i) had less demand for cash; (ii) turned to domestic borrowing (in loans or bonds) for refinancing over international bond issuance in 2022, utilising the strong domestic markets.

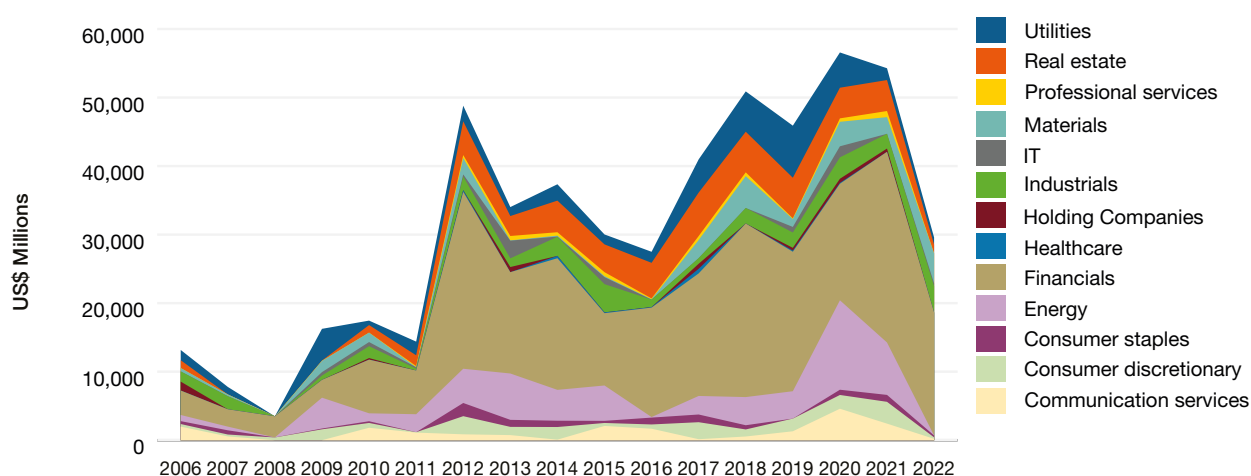
The main reason is that the local currency bond markets have matured to become deeper and more liquid. Since the Asian financial crisis, ASEAN governments had been committed to developing robust and strong local currency bond markets with SSA issuances. Over time, this momentum has extended to financial institutions and corporates. In the domestic capital market, corporates enjoy the benefit of an increasingly straightforward and familiar issuance process, adequate demand in relation to issue size, and familiarity with investors. Also, borrowers may issue retail bonds to address demand from retail investors too, whereas retail bonds are generally impractical in the USD international bond market due to regulatory requirements on disclosure and marketing.

In addition, commercial banks in the domestic market are relatively well capitalised which, in the experience of market participants, has meant that bank loans have historically been a less expensive source of funding than bonds¹³.

Another major factor is corporate size. Even relatively large corporates in ASEAN, when compared with global conglomerates, are relatively small. The market view, therefore, is that they may have to pay an issue premium in the international bond market.

Breaking down the international issuance from ASEAN by sector, financial institutions, followed by firms from the material and industrial sectors, are the major issuers with market share of 61%, 15% and 13% respectively in 2022 (figure 17).

Figure 17: International bond issuance from ASEAN (deal nationality) excluding SSA – by industry



Source: ICMA analysis using Dealogic data (January 2023)

Japan

The factors affecting the international bond issuances, including the comparative advantage in funding cost and JPY against other hard currencies, are increasingly influenced by monetary policies of Japan's and other major central banks. The Bank of Japan introduced its quantitative easing (QE) program in 2001, which has established an ultra-low interest rate environment for the Japanese bond market for the last two decades.

In the international market, the interest rate environment initially contributed to the development the Yen carry trade (borrowing Yen at lower cost to invest in other currency-denominated assets), which also led to an increase in yen denominated bond issuances. However, following the global financial crisis and the subsequent dramatic decrease in USD rates, the market gradually shifted away from the carry trade, and to a larger extent began to reflect credit fundamentals, more genuine funding needs, and business relationships between Japan and international investors.

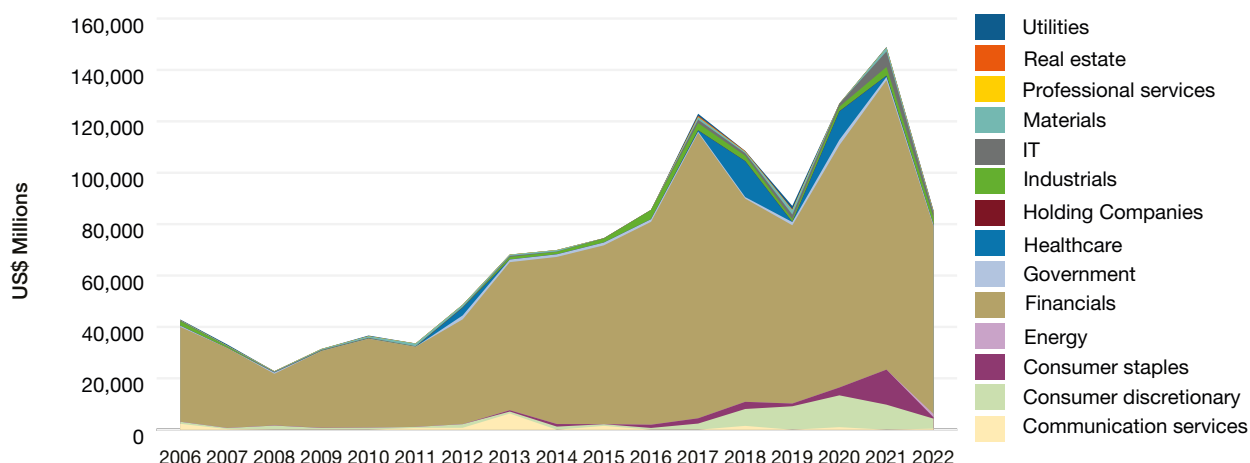
Since the 2008 financial crisis, the issuance volume of Japanese offshore bonds has grown steadily (figure 18). In 2017 it reached a peak of over USD 120 billion, driven by the desire of Japanese issuers to diversify their funding channels as well as to fund the operations of international businesses. 2020 and 2021 have also been record years for international bond issuance from Japan, with USD 127 billion in 2020 and USD 149 billion in 2021.

In 2022, the issuance volume declined by 43% to USD 85 billion. In 2022, the Bank of Japan was one of the very few central banks in the world that did not follow the monetary tightening trend globally. BOJ's policy rate remained at -0.1% as of the end of 2022 and the Yen has depreciated more than the US Dollar Index.

¹³ This is based on qualitative input by interview participants and holds true for individual borrowers. It is however difficult to compare cost of bond and loan financing on an aggregate basis.

Financial institutions have been the dominant type of issuers over the years, accounting for 86% of the total international issuance from Japan in 2022.

Figure 18: International bond issuance from Japan (deal nationality) – by industry



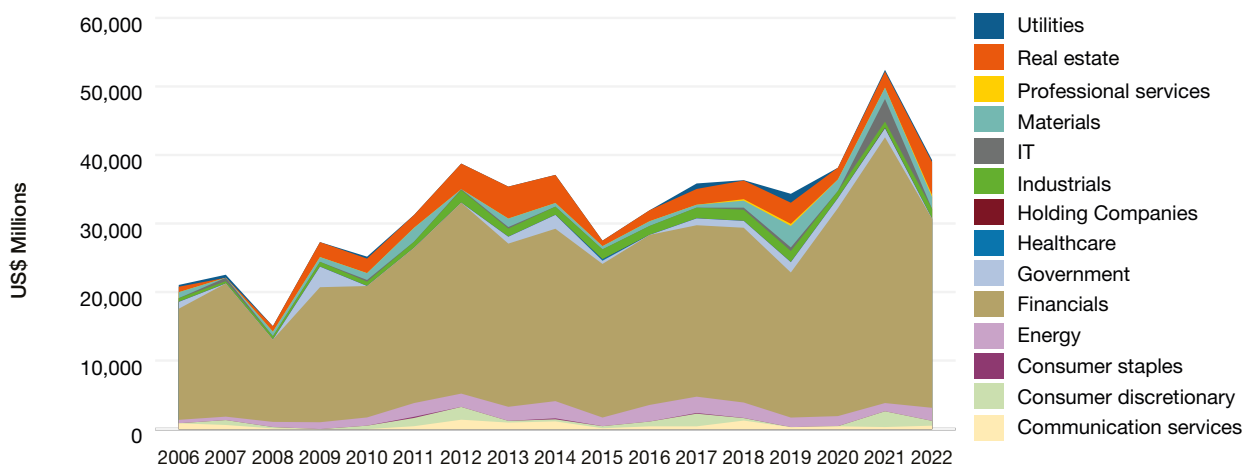
Source: ICMA analysis using Dealogic data (January 2023)

South Korea

International bonds from South Korea are also seen as attractive for institutional investors, both in their own right and as a diversification from Chinese credits. The issuances from Korea are dominated by bank issuers and SOEs, which are considered to have solid fundamentals and relatively low credit risk. Some are issued at a narrow spread to treasuries, but some types of investors, such as central banks, are happy to buy and hold, considering these a safe investment.

The issuance volume of international bond from South Korea in 2022 was more resilient than other countries, down by 25% only (figure 19). The interviewees implied that the credit disruption in the domestic bond market could be the reason. The default of a bond backed by local government in September 2022 evolved and, with the effects of monetary tightening, spread to a nation-wide contagion in the domestic bond market, leading to reduced primary market activities and higher yields. Even banks were refrained from issuing bonds in the domestic market for about two months, in order to channel investments to corporate bonds. Given the disruption in the local currency market, Korean issuers have tapped international bond markets as an important alternative funding source and are expected to continue the traction in USD issuance in the near future. Utilities, communications, industrials, and energy sectors even recorded more than 50% increase in international bond issuance volume in 2022.

Figure 19: International bond issuance from South Korea (deal nationality) – by industry

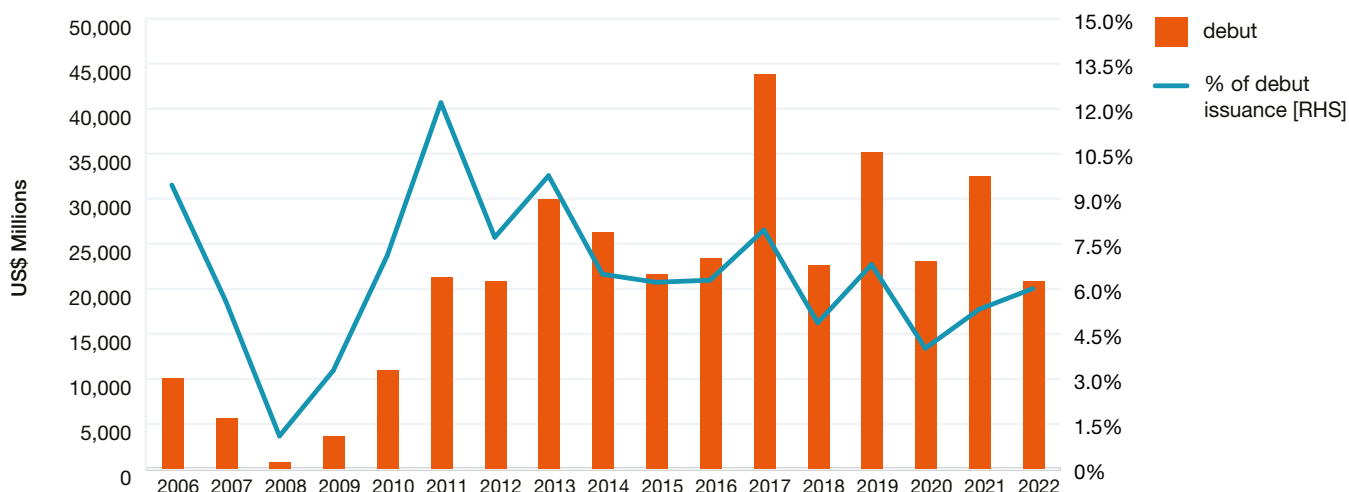


Source: ICMA analysis using Dealogic data (January 2023)

Debut issuance

The growth of the international bond market in Asia has been organic and fuelled constantly by new issuers¹⁴ coming to the market. From 2006 to 2021, debut international issuances generally accounted for between 4% to 12% of all issuances in a year, with exceptions of retreats during the 2008 finance crisis (1% and 3% for 2008 and 2009). The less favourable issuing environment in 2022 also contributed to fewer debut international issuances (USD 21 billion) but the overall ratio of debut issuance over all international issuance remained at 6%, due to strong pipeline from China (figure 20).

Figure 20: Debut issuance vs all international issuance in Asia (deal nationality)

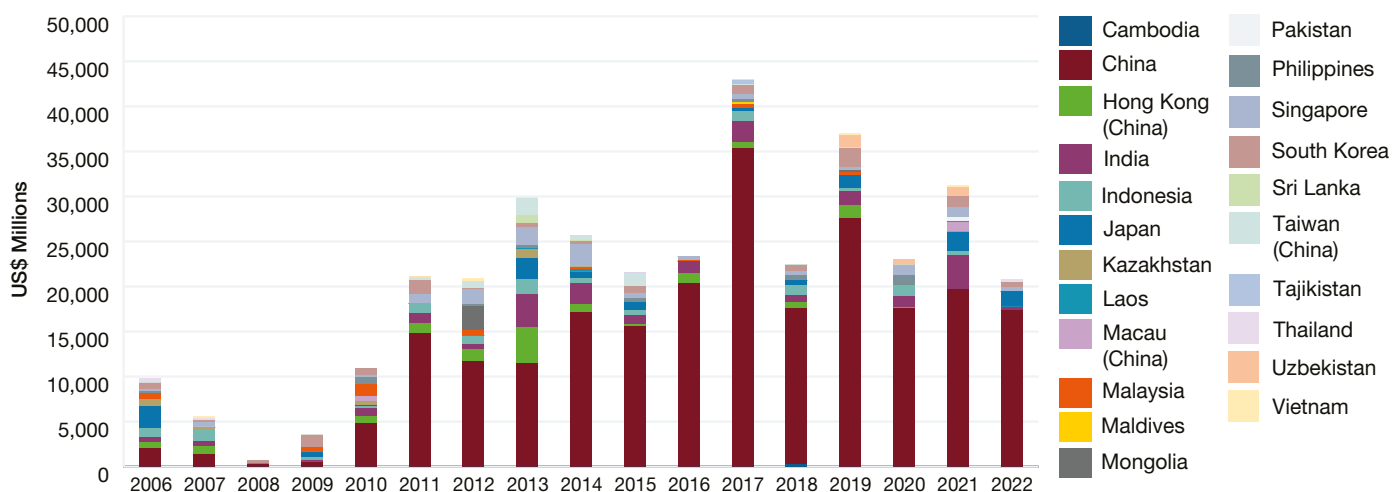


Source: ICMA analysis using Dealogic data (January 2023)

Breaking down the debut issuances by their deal nationality, we can see Chinese deals as a significant driving force, making up around 67-87% of all debut international issuances since 2014 (figure 21). In 2022, the percentage hit 83% with 144 Chinese debut issuers, of which the majority are LGFVs.

14 Debut issuance in this report is defined as the first international bond issuance of a parent group.

Figure 21: Debut international bond issuance in Asia – by deal nationality

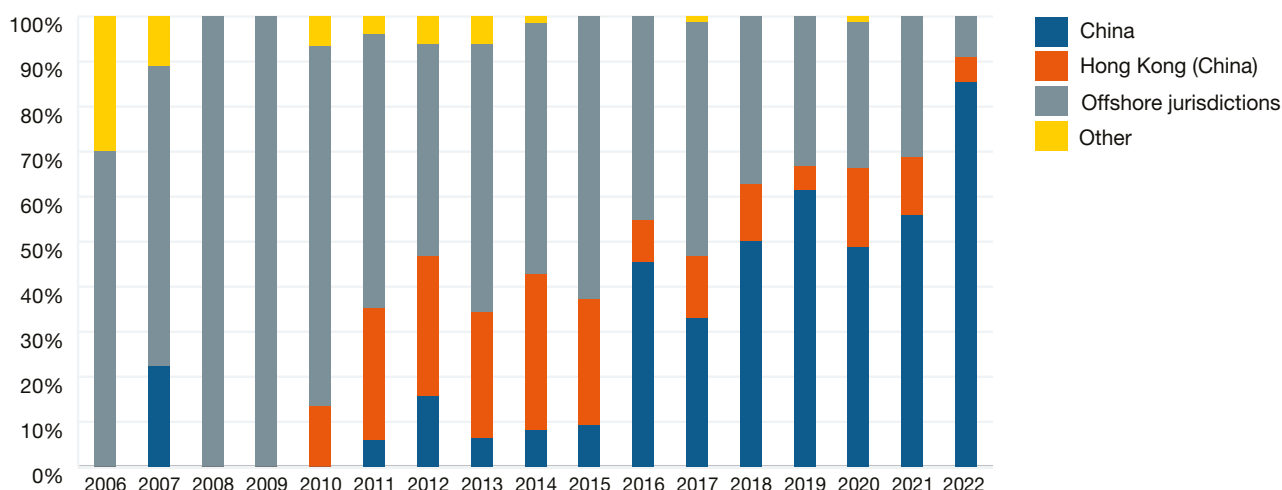


Source: ICMA analysis using Dealogic data (January 2023)

In the early growth stages of the Chinese international bond market, issuers preferred to issue their debut issuances via their companies incorporated in offshore jurisdictions (Cayman Islands, BVI, Bermuda, Jersey). The preference shifted towards Hong Kong entities in the 2010s and later to onshore entities directly (figure 22). This shift is also reflected in the trend of increasing issuances by Hong Kong entities in the first half of 2010s decade and by Chinese entities in the second half.

Debut issuances from China reduced only slightly from USD 20 billion in 2021 to USD 17 billion in 2022. 60% of those debut issuances in 2022 had a SBLC in place for credit enhancement.

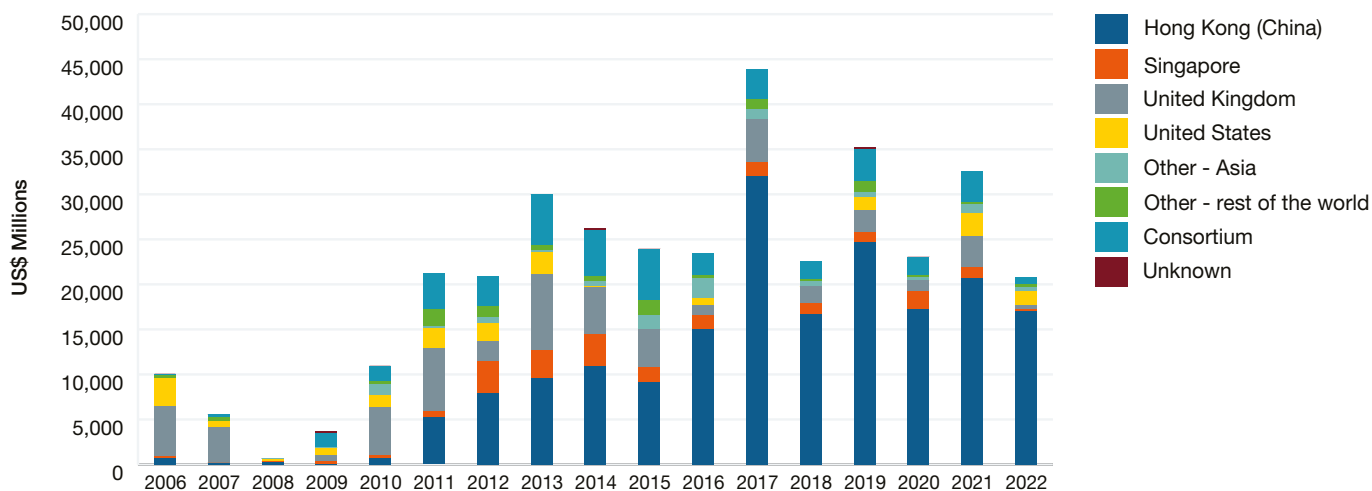
Figure 22: Debut international issuances from China – issuer incorporation breakdown



Source: ICMA analysis using Dealogic data (January 2023)

Banks in Hong Kong are increasing market share through mandates for arranging debut issuances for Chinese corporates. In 2022, Hong Kong arranged 82% of debut international issuances from Asia, all of which are Chinese deals (figure 23).

Figure 23: Debut international bond issuance in Asia (deal nationality) – by main location of arrangement

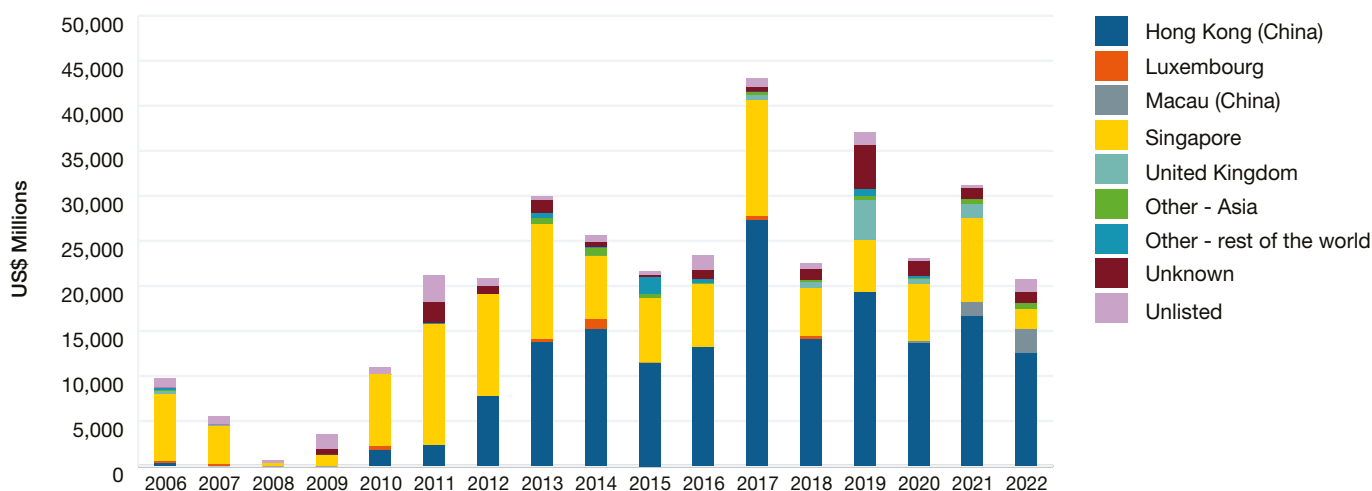


Source: ICMA analysis using Dealogic data (January 2023)

First-time issuers tend to have their international issuances listed, to enable maximum reach to the widest group of potential investors and make a positive impression in the international market. Less than 4% of debut issuances have not been listed from 2017 to 2021 and only 3 debt issuances in 2022 were not listed. Over the years, the preferred listing venues are Hong Kong Stock Exchange followed by Singapore Exchange. Listing venues in Europe are less often considered for first-time bond issuance. Macao has become a new popular choice, attracting issuers new to the international bond markets to list their first issuance there. The Chongwa Macao Financial Asset Exchange, established only in 2018, hosted 5% of the debut international issuance in 2021 and 13% in 2022.

Over the past decade, 56%¹⁵ of debut issuances were listed in Hong Kong, 27% in Singapore, and 3% in the UK. In 2022, 60% of debut Asian international bond issuances were listed in Hong Kong, 13% in Macao, and 10% in Singapore (figure 24).

Figure 24: Debut international bond issuance in Asia (deal nationality) – by listing location



Source: ICMA analysis using Dealogic data (January 2023)

¹⁵ By nominal amount.

Green, social, sustainability, and sustainability-linked bonds

Green, social and sustainability, and sustainability-linked bonds (collectively “sustainable bonds” or “GSSS bonds”) are increasingly part of the Asia international bond market landscape and have experienced exponential growth in recent years. Since the inception of the Green Bond Principles in 2014, the suite of sustainable bonds has expanded from green bonds, to social bonds, sustainability bonds, and sustainability-linked bonds (whose proceeds can be used for general corporate purposes with a pre-defined sustainability target for the issuers to reach). ICMA has managed the global bond market’s voluntary best practices for sustainable bond products and published the Green Bond Principles, the Social Bond Principles, the Sustainability Bond Guidelines, the Sustainability-Linked Bond Principles, the Climate Transition Finance Handbook, and related guidance documents.

Global market adoption, not only by issuers and investors, but also with the support of underwriters and external reviewers, as well as incentives from regulators, has fuelled the annual issuance volume of sustainable bonds from USD 38 billion in 2014 to over USD 1 trillion globally in 2021¹⁶.

However, despite this growth, when compared with conventional bonds, sustainable bond issuances remain only a fraction of the overall bond market, making up around 11% of the annual issuance in 2021¹⁷. In 2022, sustainable bonds were not immune to the general sentiment in the bond markets, but USD 883 billion of sustainable bonds were issued globally, resulting in even a slightly higher share of 12% (11% in 2021) in the total bond issuance globally.

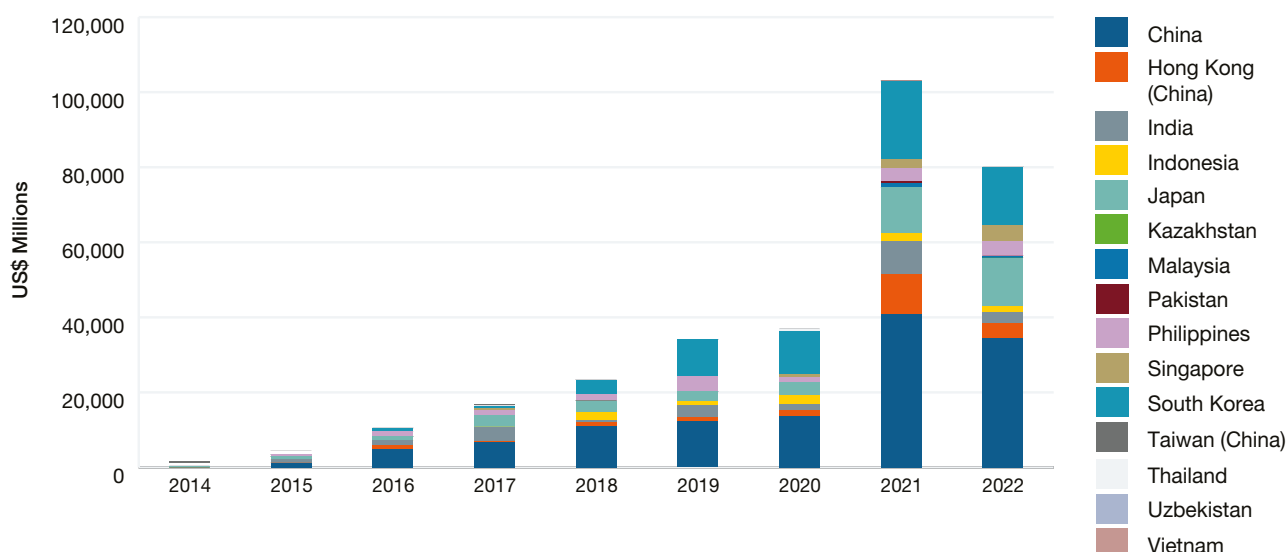
A similar pattern is also observed in the international bond markets in Asia. Uptake of issuance notably accelerated in 2021, when the issuance volume more than doubled in 2021 to USD 103 billion (figure 25). In 2022 the issuance volume of international sustainable bonds from Asia totalled USD 80 billion. Issuances from China account for 43% of total international sustainable bond issuance from Asia, followed by South Korea (19%), and Japan (16%). The ratios are similar to those in 2021.

Despite the decrease of 22% in dollar amount of sustainable international issuances from Asia in 2022, the percentage of sustainable bond issuance in international bonds from Asia has increased from 16% to 23%, much higher than the ratio of 12% globally. Notably South Korea, India, China, Malaysia and Hong Kong have even higher proportion of sustainable issuances in their international bond issuances (table 1). For South Korea, 40% of the funds raised using international bond issuances were labelled under either green, social, sustainability or sustainability-linked bonds.

¹⁶ Environmental Finance data.

¹⁷ ICMA analysis based on Environmental Finance and S&P data.

Figure 25: International sustainable bond issuance in Asia – by deal nationality



Source: ICMA analysis using Dealogic data (January 2023)

Table 1: Higher percentage of sustainable issuance in international bonds in selected Asian jurisdictions (deal nationality)

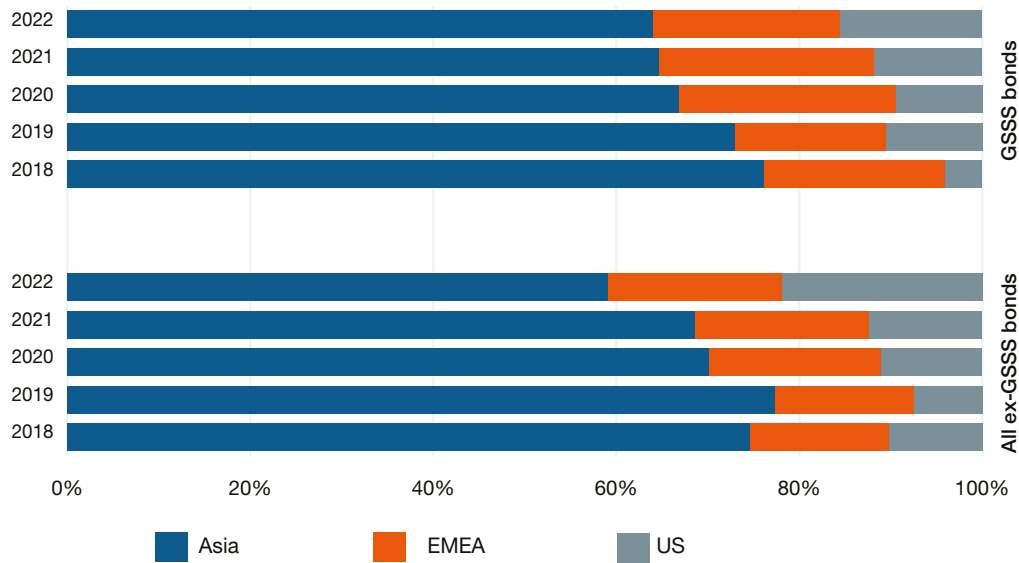
Top 5 jurisdictions in 2022	International sustainable issuance over all international issuance in 2022	Top 5 jurisdictions in 2021	International sustainable issuance over all international issuance in 2021
South Korea	40%	Vietnam	57%
India	39%	India	44%
China	30%	South Korea	39%
Malaysia	26%	Hong Kong (China)	26%
Hong Kong (China)	26%	China	17%
Asia average	23%	Asia average	16%
Global average	Sustainable issuance over all bond issuance in 2022	Global average	Sustainable issuance over all bond issuance in 2021
	12%		11%

Source: ICMA analysis using Dealogic, Environmental Finance and S&P data (January 2022 and 2023)

This demonstrates that sustainable bonds remain an attractive type of financing instrument for Asian issuers coming to the international bond market. Interviewees note that the primary considerations for issuers on whether to issue sustainable bonds in their domestic market or offshore are how funding costs differentiate between onshore and offshore, where the use of proceeds are supposed to flow, and whether the issuers target domestic investors or aim to diversify their investor base and for profiling in the long term.

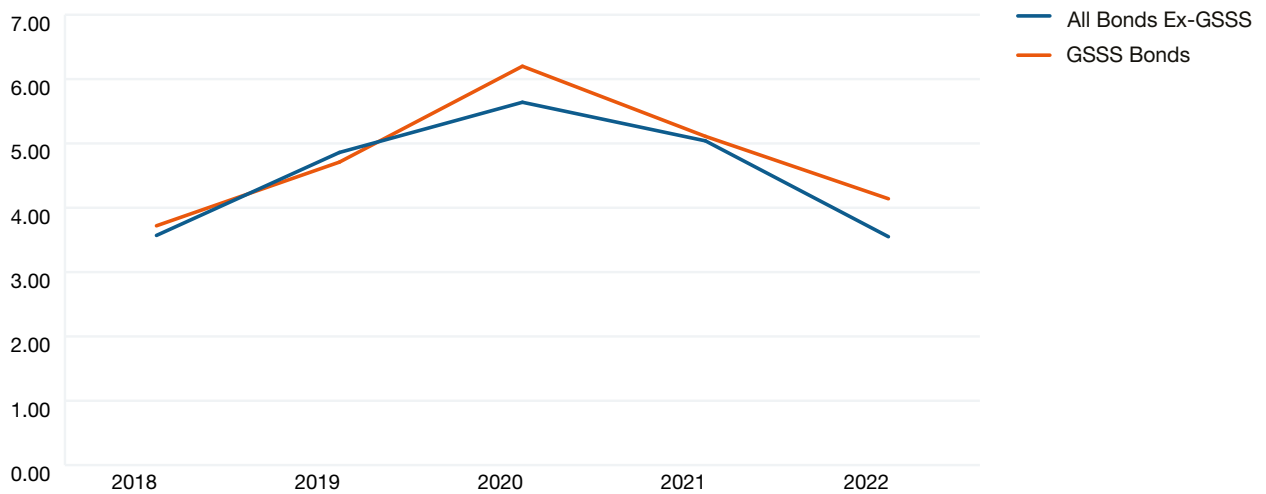
According to Covalent Capital's data, sustainable bond issuances have recorded a higher proportion of EMEA investors in their final orderbook, slightly higher book coverage ratios, and more tightening from the initial price guidance (IPG) than other Asia G3 bonds in the past 5 years (figures 26-28). The price tightening in 2022 is on average 8 bps more significant for sustainable bonds than other Asia G3 bonds.

Figure 26: Deal statistics of Asia G3 sustainable issuances - investor distribution by region¹⁸



Source: ICMA analysis using Covalent Capital data (February 2023)

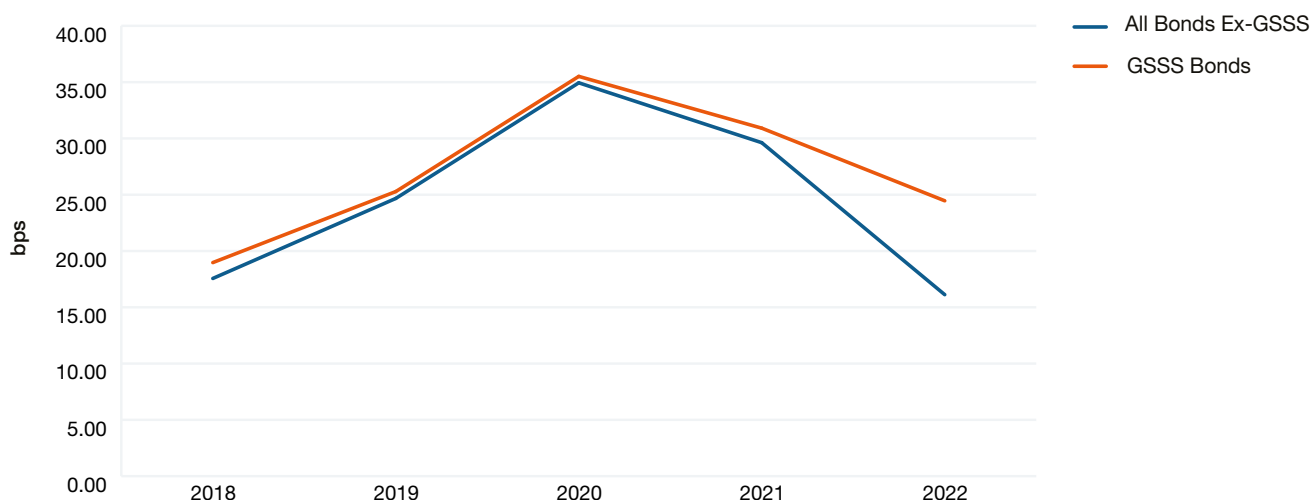
Figure 27: Deal statistics of Asia G3 issuances - average book coverage



Source: ICMA analysis using Covalent Capital data (February 2023)

18 For figures 26-28, 33, and 35-37, deal statistics are calculated/displayed for bonds where data is available with Covalent Capital as of date.

Figure 28: Deal statistics of Asia G3 issuances - average IPG tightening



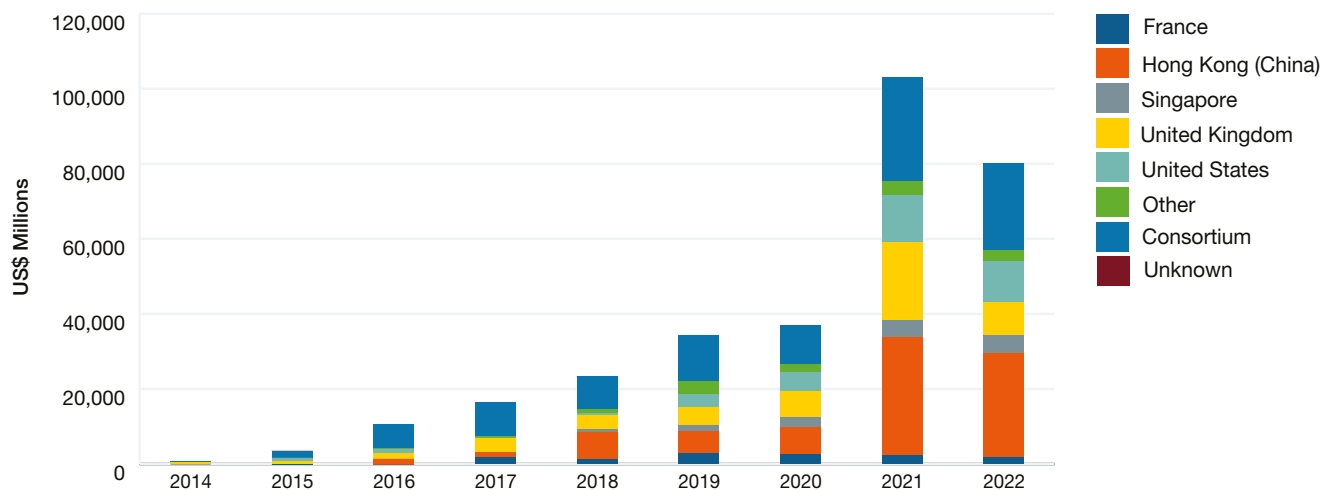
Source: ICMA analysis using Covalent Capital data (February 2023)

Awareness of sustainable bonds has increased steadily. Sustainable bond issuers often have sustainability on their overall corporate agenda, with management support to execute such issuances to support their underlying projects or overall sustainability strategy. Considerations include cost of funding, corporate profiling, and investor diversification across countries and regions. Interviewees expect that issuers will continue the focus on sustainable issuances in the future.

ESG is also recognised by the international investor community. They embrace more use-of-proceeds bonds and are attracted to the structures of sustainability-linked bonds, which provide an opportunity to engage with issuers' commitment to certain goals. Investors have also become more sophisticated, asking more and detailed questions about underlying environmental and social projects, as well as the additionality and traceability of sustainable impacts. (For more analysis please see section "Investors and distribution".)

International sustainable bonds issued from Asia are arranged by a diverse mix of lead banks. Driven by increasing offshore issuance by Chinese issuers, banks in Hong Kong have gained market share since 2021. Around a third of the issuances were arranged by Hong Kong banks (35% in 2022 and 31% in 2021), another third by a mix of banks underwriting the bonds together, while the remainder are arranged by banks from the UK, the US, Singapore and other jurisdictions (figure 29).

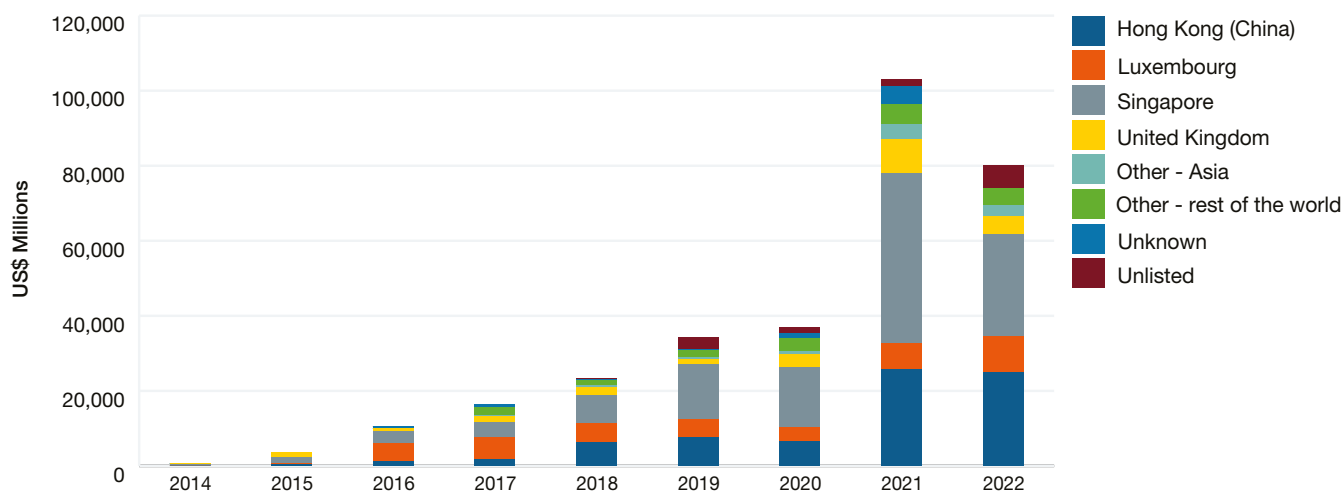
Figure 29: International sustainable bond issuance in Asia (deal nationality) - by main location of arrangement



Source: ICMA analysis using Dealogic data (January 2023)

Mirroring the pattern seen across all international bonds from Asia, the majority (92%) of the international sustainable bond issuances in 2022 are listed (figure 30). Singapore Exchange hosted 34%, of the sustainable issuances. The Hong Kong Stock Exchange followed with 31%. Luxembourg and the UK are home to 12% and 6% of the issuances.

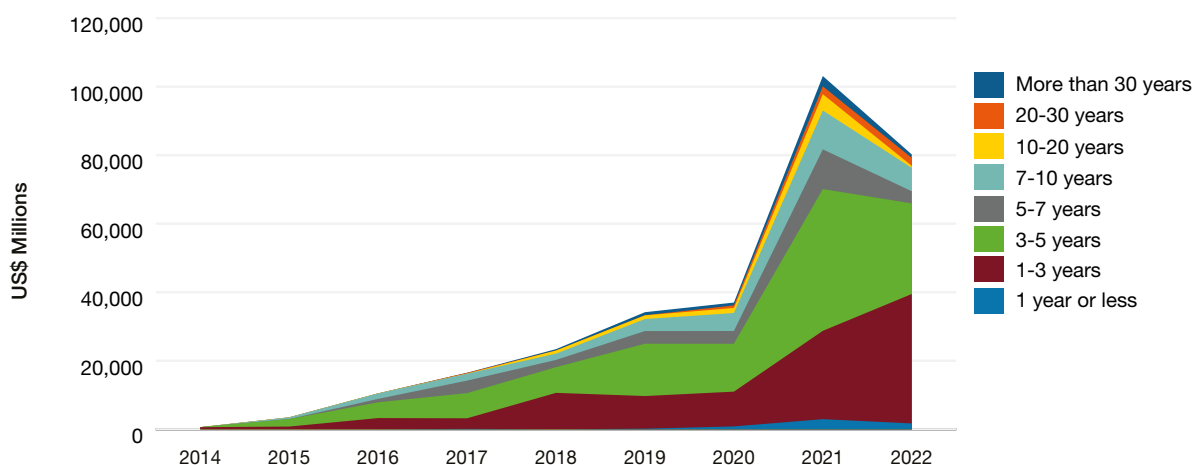
Figure 30: International sustainable bond issuance in Asia (deal nationality) - by listing location



Source: ICMA analysis using Dealogic data (January 2023)

Compared to the overall pool of international bonds from Asia, sustainable bonds have been issued infrequently at the very short end (no more than one year) and the long end (longer than 7 years) (figure 31). This may be explained by the structure of use-of-proceeds bonds, whose proceeds are invested often in medium term projects, and the character of sustainability-linked bonds, where issuers are committed to an improvement in key performance indicators, with a target date in the medium term. The large chunk of the international sustainable issuances is dated between 1-3 years (47%) and 3-5 years (33%) respectively. Interviewees expressed the wish to see more primary sustainable issuances, which would help to create a benchmark curve across a wider range of tenors.

Figure 31: International sustainable bond issuance in Asia (deal nationality) - by tenor

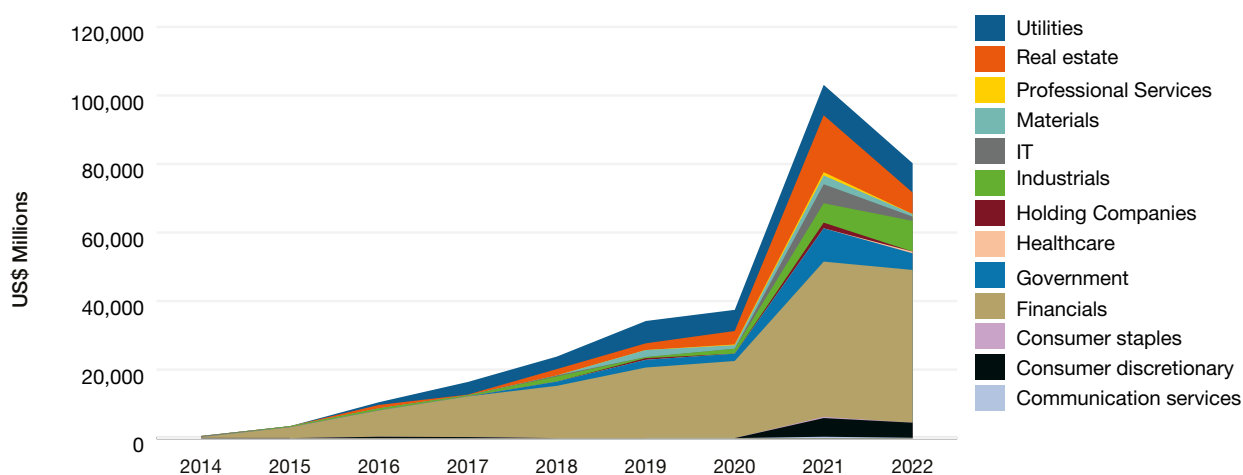


Source: ICMA analysis using Dealogic data (January 2023)

Sustainable bond issuance from Asia has been driven by financial sector issuers, which provided 55% of the supply since 2014. Over recent years, issuers have diversified with government, property developers, industrial and utility firms increasing market share, while some issuers from more traditional industries are exploring sustainability-linked bonds to finance their climate transition efforts. (figure 32)

According to anecdotal observations from interviews, sustainable issuances could have a pricing benefit (i.e. "greenium") of around 5-10 bps, depending on the quality of the use-of-proceeds and issuer credits.

Figure 32: International sustainable bond issuance in Asia (deal nationality) - by industry



Source: ICMA analysis using Dealogic data (January 2023)

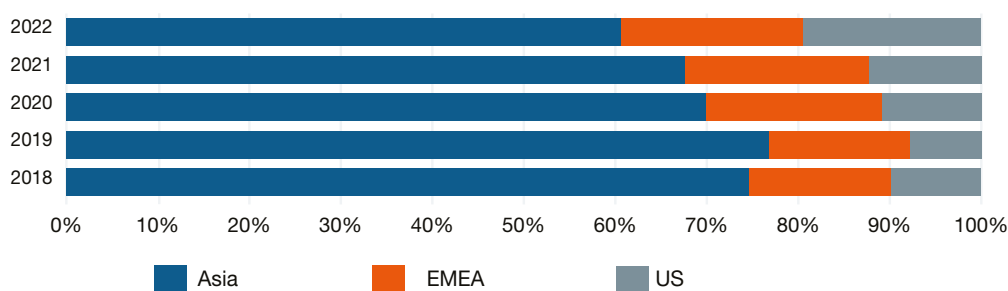
Investors and distribution

As the international bond market first developed in Asia, there was an initial trend of “Asian money buying Asian bonds”. Similar themes also applied for Chinese bonds. One straightforward explanation is that Asian investors – including offshore branches and subsidiaries of Asian banks and fund houses – are more familiar with Asian issuers and are more comfortable with the analysis of their credit and macroeconomic risk. In particular, it has been noted that Chinese investors may be able to better judge the risk of default on government-linked LGFVs and local SOEs. Secondly, Asian investors are generally more willing to accept the risk of (and find it easier to obtain internal approval for) Asian issuer names, rather than non-Asian issuers, given the same international credit rating. This “home country bias” is not unique to Asia and is also reflected in other regions in the world.

Interviewees indicated that this home-bias continues to influence the investor profile, but there has been increasing participation from international investors. Covalent Capital’s data confirms the story, showing the percentage of non-Asian investors in primary issuance of Asia G3 bonds rising from 25.3% in 2018 to 39.4% in 2022 (figure 33). Some interviewees, however, commented that non-Asian investors became more cautious with reduced interest in 2022 and some of the non-indexed active investors participated in deals in a more opportunistic capacity.

Sometimes it is difficult to derive an exact picture of the split of Asian and international investors for international bonds in Asia, as the disclosure on investor distribution is not required and purely on a voluntary basis. Also, with the growth of wealth in Asia, more US and European institutional investors have set up dedicated offices in Asia and raised funds in the region. Syndicate desks may classify orders from those Asian offices as “Asian” or international investors differently. Overall, market participants interviewed expressed a range of opinions on whether “Asian” investors in a primary distribution may represent non-Asian asset owners, or whether “non-Asian” investors in name may represent ultimate investment from Asian end-clients.

Figure 33: Deal statistics of Asia G3 issuances - investor distribution by region¹⁹

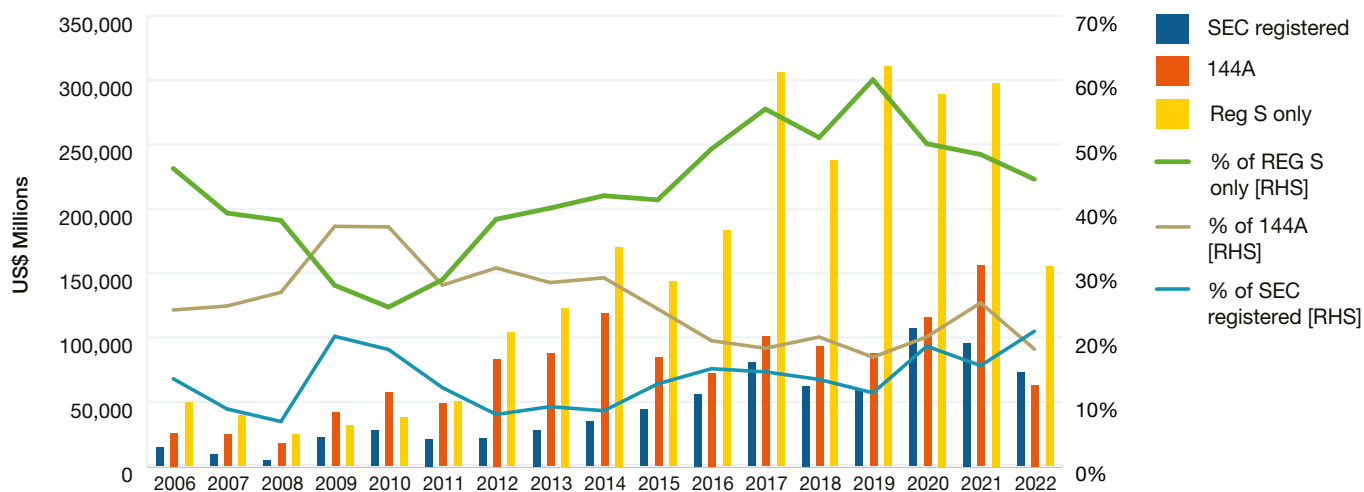


Source: ICMA analysis using Covalent Capital data (February 2023)

In the early 2000s, syndicate managers would recommend an issuer to offer in US 144A format for a large bond issuance, to secure enough orders from key international institutional investors. Over the years, with more US fund managers establishing offices and raising funds in Asia, 144A distribution is no longer as necessary as before. The percentage of deals that fall under Rule 144A has decreased since 2010, from 37% to 18% in 2022 (figure 34). The proportion of bond offerings registered with the SEC remained relatively stable, around 7-21%.

¹⁹ Deal statistics are calculated/displayed for bonds where data is available with Covalent Capital as of date and how data was reported by lead banks to Covalent Capital.

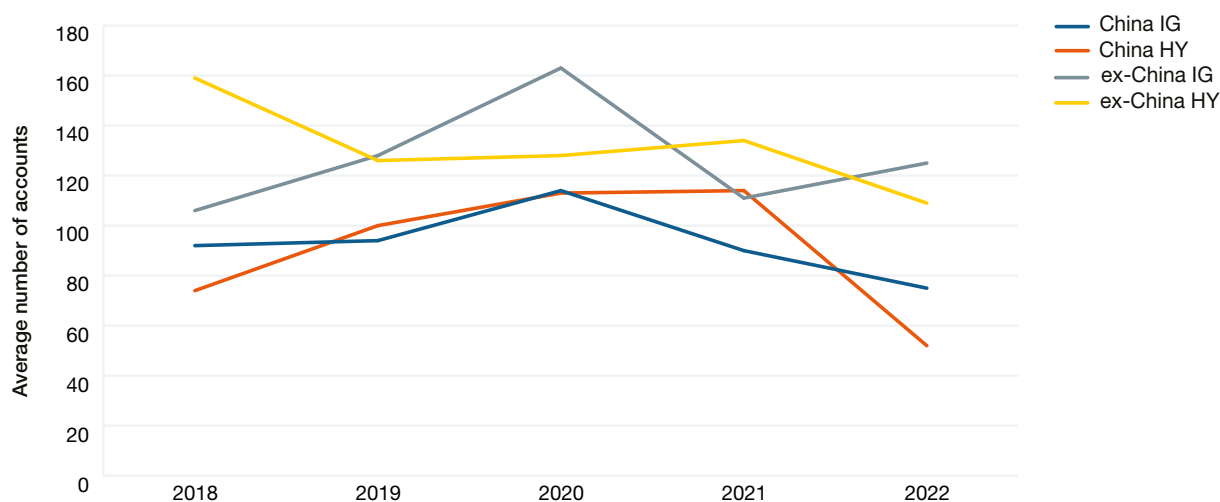
Figure 34: International bond issuance in Asia (deal nationality) - SEC Registered, 144A & Reg S



Source: ICMA analysis using Dealogic data (February 2023)

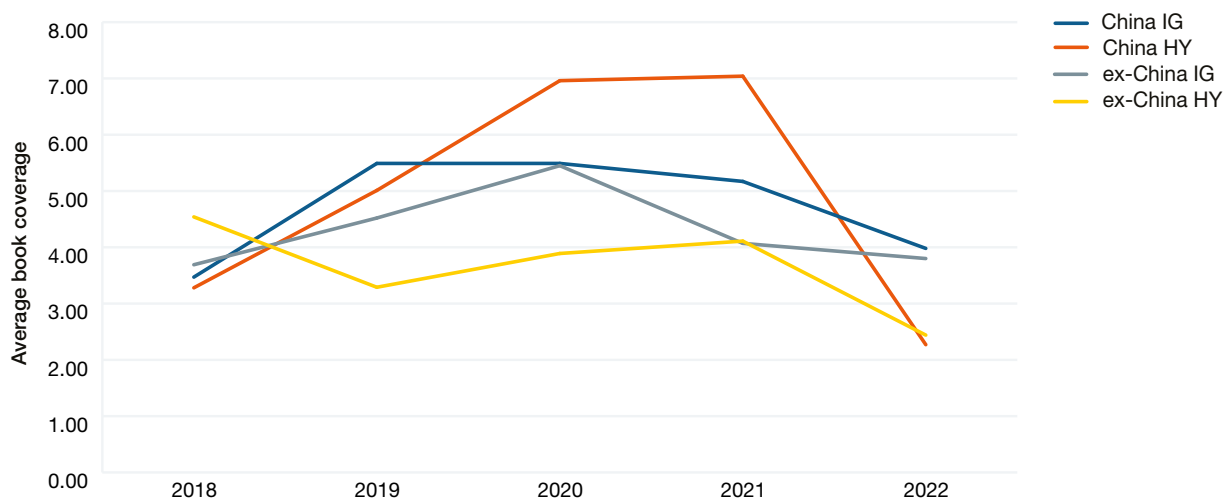
More recently it is not uncommon for new issuances to attract over 100 investors in the book-building process, with diverse investor backgrounds (figure 35). Flight to quality was observed among investors in 2022, evidenced by decreasing number of investor accounts participating in primary HY issuances, the fall in average book coverage ratio and reduced price tightening from IPG. In particular for Chinese HY issuances, the deal statistics tumbled to an average of 52 investors and 2.27x oversubscription in 2022, compared with 114 and 7.04x in 2021. Investors' preference is heavily skewed to sovereigns, SOEs and IG corporates.

Figure 35: Deal statistics of Asia G3 issuances - average number of accounts



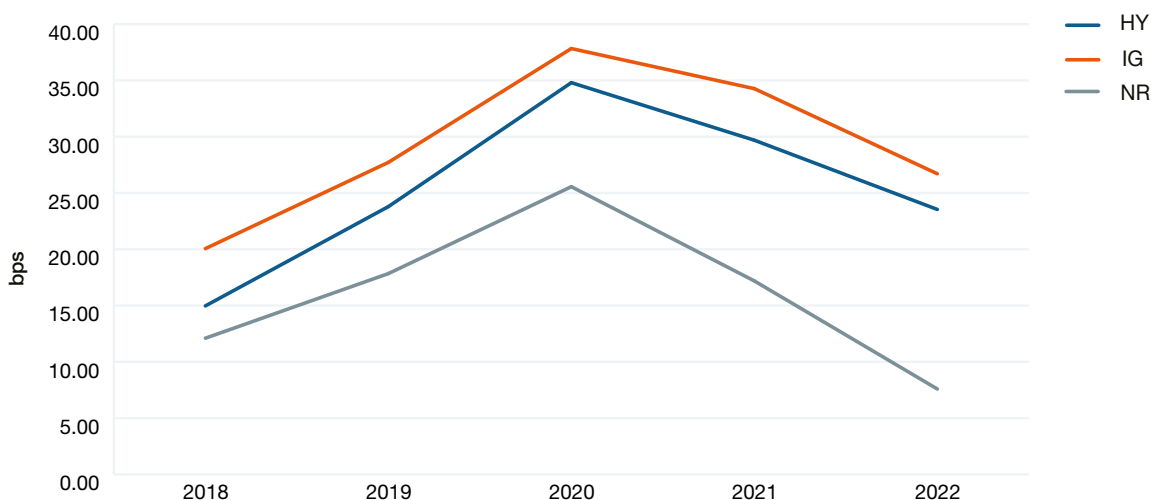
Source: ICMA analysis using Covalent Capital data (February 2023)

Figure 36: Deal statistics of Asia G3 issuances - average book coverage



Source: ICMA analysis using Covalent Capital data (February 2023)

Figure 37: Deal statistics of Asia G3 issuances - average IPG tightening



Source: ICMA analysis using Covalent Capital data (February 2023)

Overall, interview participants generally agreed that: (i) the investor types have become more diverse; (ii) interest in Asian emerging markets from non-Asian investors has increased in terms of volume and number of investors; (iii) investors have been examining the pricing and credit quality more carefully since 2022; (iv) with the slump in issuance and liquidity drying up in Asia, Asian investors are increasingly looking at US credits.

With respect to ESG, institutional investors are increasingly active in sustainable finance. Many asset managers have begun to introduce sustainability-themed funds, while some investors, including insurers, have begun to report sustainability metrics, declared “net zero” targets, or introduced exclusion policies for carbon-intensive industries. Similarly, many banks also now have bank-level sustainability strategies in place to reduce the overall emissions related to their portfolios. This may in turn affect their policies toward selling and underwriting bonds both for sustainable finance and in high-carbon sectors.

Interviewees note that although institutional investors are increasingly interested in sustainable bond issuances, the primary considerations are credits, pricing, and risk-adjusted return. But many comment that if all these factors were equal, sustainable bonds would still be preferred by investors. Meanwhile, many asset managers are recruiting talents to build up their ESG teams to examine company level ESG performance among other ESG parameters in overall credit analysis. Some interviewees also state that investors of sustainable bonds tend to hold them for longer.

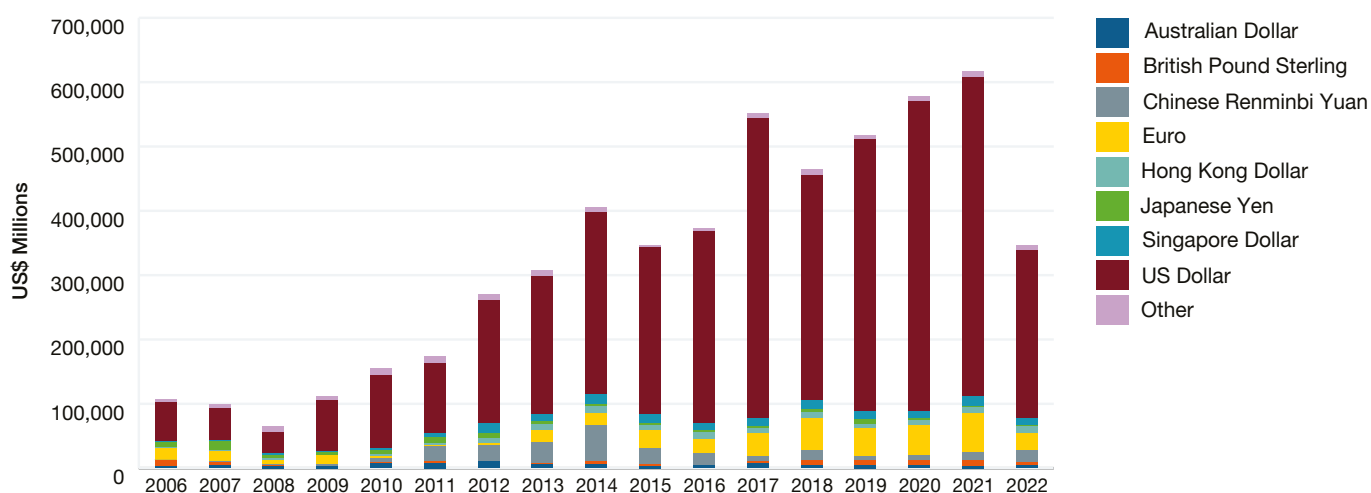
With the expected trend that issuers will pursue issuance of sustainable bonds, investors may have more choice over time, in terms of credit quality and tenor.

Currency

Unsurprisingly, the international bonds in Asia are mostly denominated in G3 currencies. USD issuances made up 76% (USD 262 billion) of all issuances in 2022, followed by EUR (USD 28 billion, 8%), RMB (USD 17 billion, 5%), SGD (USD 10 billion, 3%), HKD (USD 9 billion, 2.7%), and GBP (USD 6 billion, 1.7%) (figures 38 and 39). RMB has surpassed SGD in 2022, due to the diverging monetary policies of PBOC and the Fed, making dim sum bonds a more attractive funding option with lower after-swap financing cost, and the rise of Shanghai Free Trade Zone bonds (FTZ bonds), also known as Pearl bonds.

FTZ bonds are not a new concept but only took off as a market segment in 2022 stimulated by policy support. Chinese issuers issued 59 FTZ bonds in 2022, raising over USD 5 billion in total, while this product type was only attempted 7 times in 2021 with an annual issuance of about USD 830 million. Regarded as offshore bonds, FTZ bonds are subject to foreign debt registration requirements imposed by NDRC and international rules and practices, such as REG S and 144A. FTZ bonds can be issued in RMB as well as other currencies and are cleared by CCDC. Financial institutions in the Shanghai Free Trade Zone and investors active in the international bond markets, including domestic institutional investors approved as QDII, can invest in FTZ bonds. Currently FTZ bonds mainly attract RMB funds in the FTZ account. In other words, they are invested predominantly by institutions in the FTZ and intend to be held-to-maturity investments.

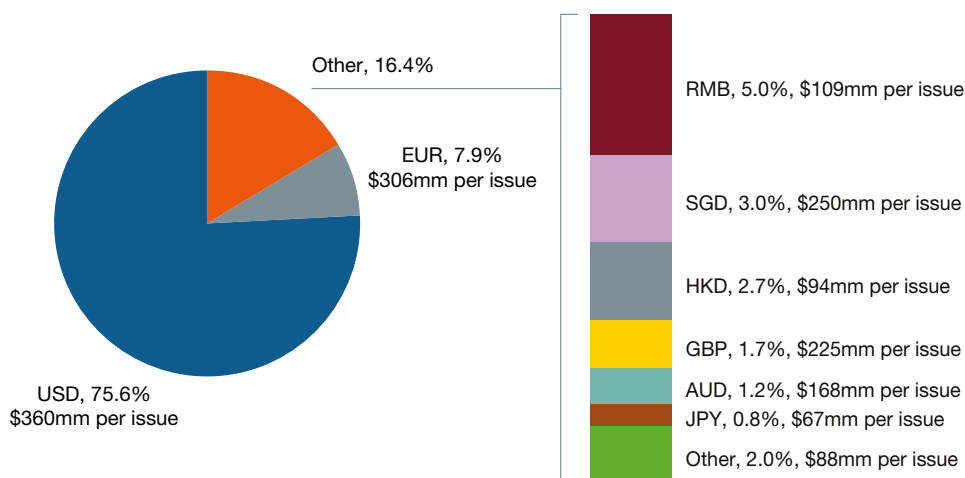
Figure 38: International bond issuance in Asia (deal nationality) - by currency



Source: ICMA analysis using Dealogic data (January 2023)

Abundance of USD and EUR liquidity in the international markets enables issuers to tap the market with a larger issue size (over USD 300 million) than issuing in local currencies, such as RMB. Issuers may not issue in the currency they need for business operations, but often consider the desired issue size and weigh up the after-swap funding cost to determine the currency for their international bond issuance.

Figure 39: 2022 issuance by currency with average issue size



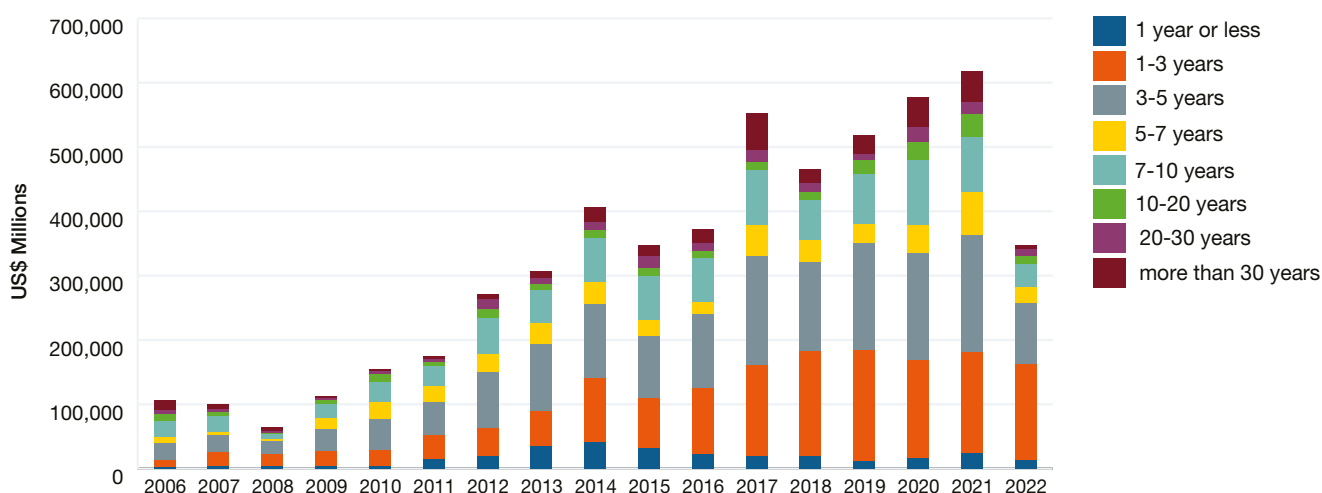
Source: ICMA analysis using Dealogic data (January 2023)

Tenor

1-3 years and 3-5 years are the most prevalent tenor in the Asian international bond market, taking up 43% and 27% respectively in the annual issuances in 2022 (figure 40). The ratios are much higher in 2022 than 25% and 29% in 2021. According to the interviewees, many treasurers chose to issue with shorter tenor in 2022 to buy time for more clarity about the Fed's interest rate decisions.

Different types of investors have their own preference for tenors. Funds often have a duration close to five years, while SSA investors and corporate treasury may prefer three years. Life insurers in contrast are often the dominant type of investors of long dated bonds, to match the long-term liabilities on their balance sheet. If there is not enough supply of long dated bonds, insurance companies look to other markets e.g. the US, Latin America and Middle East in search for such assets.

Figure 40: International bond issuance in Asia (deal nationality) - by tenor



Source: ICMA analysis using Dealogic data (January 2023)

Digitalisation and technology

The primary market is well served by technology solution providers. As per ICMA's Primary Markets Technology Directory, at least 46 solutions are up and running to automate all or part of the process of issuing bonds, of which 28 platforms or applications are available for Asian market participants. ICMA has been supporting the trend of digitalisation and automation, though wary of the risk of fragmentation given the siloed efforts and proprietary specifications of various vendors. In order to drive for cohesion and consistency, ICMA has been pioneering to create a common language to represent key bond characteristics in machine readable format, promoting standardisation and interoperability among the ever-growing number of solutions.

Meanwhile, the rapid development in the technologies in the past decade has also sparked new ideas to improve and revolutionise the debt capital markets. Market participants and regulators have been proactively contemplating the use and potential benefits of various innovative technologies, including distributed ledger technology (DLT), Artificial Intelligence, and algorithmic trading. Globally there have been a number of explorational applications of those innovative technologies in the primary and secondary bond markets every year.

To date, circa 50 bonds were issued using DLT and 11 digital bonds were issued alone in 2022, according to [ICMA's tracker webpage on Fintech applications in the bond markets](#). Three out of the 11 bonds were originated from the Asian markets, while in the meantime there are three initiatives from Asia at the level of financial market infrastructures, namely, a tokenisation platform for digital bonds issuance, an exchange-level cooperation to enable Blockchain-based short-term debt instruments, and a research to track green bonds using security tokens.

The pace of innovation has recently accelerated. In the first two months of 2023, five digital bonds were issued, including Hong Kong's tokenised government green bond whose full lifecycle is designed to take place on the DLT platform.

These innovative attempts in the primary markets have been testing the water, though at present almost all remain in the pilot phase with relatively small scale or are purely proof-of-concept projects. Many fundamental questions around digital bonds are yet to be answered. To demystify the jargon, ICMA convened an industry-wide DLT Bonds Working Group and published a guidance document named [Frequently Asked Questions on DLT and blockchain in bond markets](#) in September 2022.

Market practitioners participated in our interviews welcomed the various Fintech applications and digitalisation developments. They also commented that the benefits of frontier technologies like DLT on settlement or operational efficiency are yet to be systematically justified against potential initial investments. Moreover, those initiatives are often conducted in permissioned networks so that interoperability issues might hamper a smooth, rapid roll-out in the industry. For Fintech applications to be fully operationalised in the debt capital markets, among other things, it will need (i) interoperable or common market infrastructures; (ii) wide acceptance by and onboarding of various types of participants in the bond market ecosystem, including underwriters, investors, dealers/brokers, trading platforms, CSDs, legal, trustees and regulators.

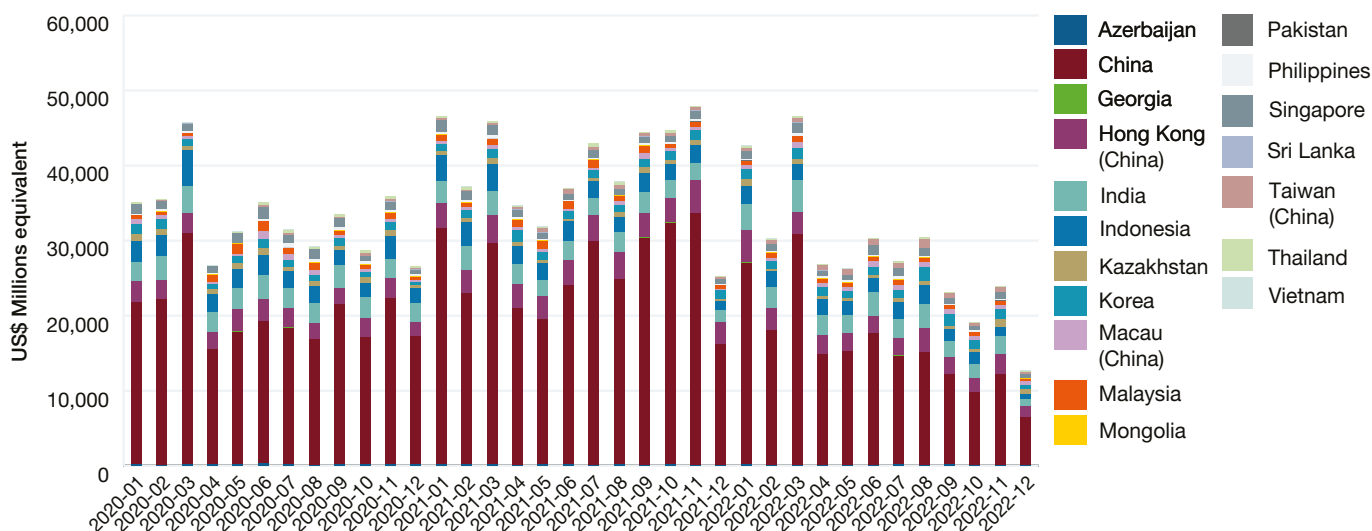
Secondary Markets

Market conditions

As with the primary market, the Asia international secondary bond market faced a confluence of headwinds over the course of 2022. These included rising USD and other bond yields, a general global trend of widening credit spreads, geopolitical tensions and uncertainty, the ongoing lockdown in China in response to the Covid pandemic, and the collapse in the China property market that reverberated throughout the Asia high yield sector. Interview participants suggest that secondary market conditions were indeed tougher, particularly in some segments, with overall traded volumes lower than 2021, and with regular episodic spates of illiquidity and heightened price volatility. This was particularly acute in the high yield sector, but at times spilled over into investment grade names.

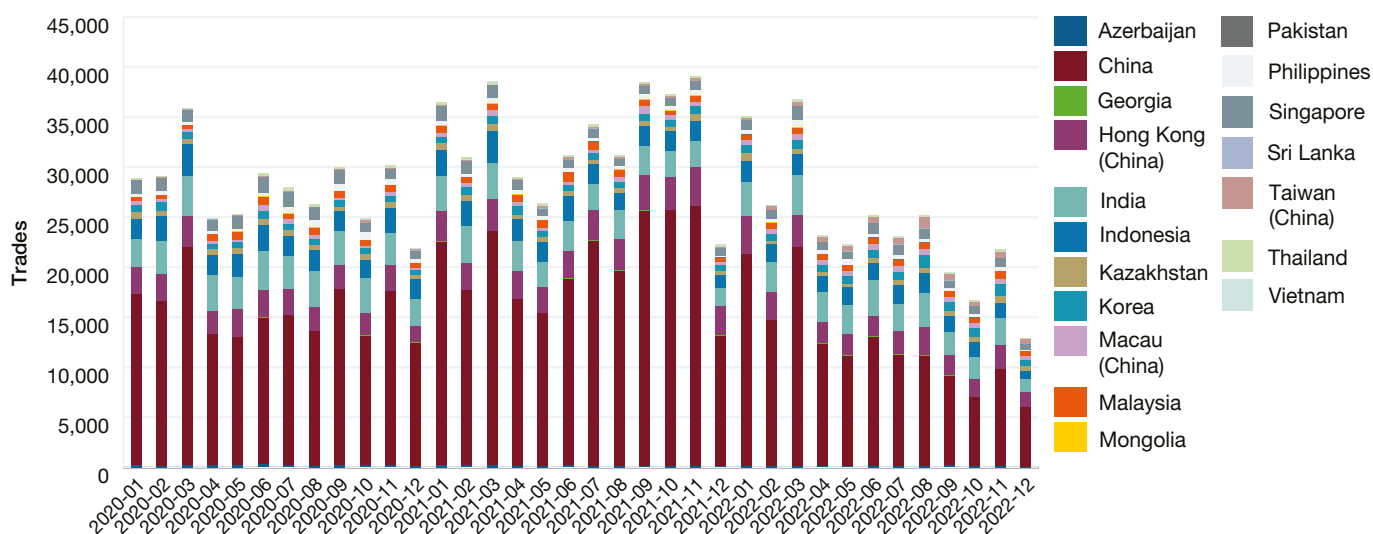
TraX data provided by MarketAxess corroborates the qualitative feedback, with notably lower volumes and trade counts from April 2022 onward and declining further in the final quarter. This is most observable in the case of non-financial corporates (NFCs) (see figures 41 and 42), but also applies to financial issuance (see figures 43 and 44). Overall, the data suggests a 29% reduction in total traded notional value in 2022 compared with 2021.

Figure 41: Asia international credit (NFCs) secondary market traded volumes by country/region of ultimate risk



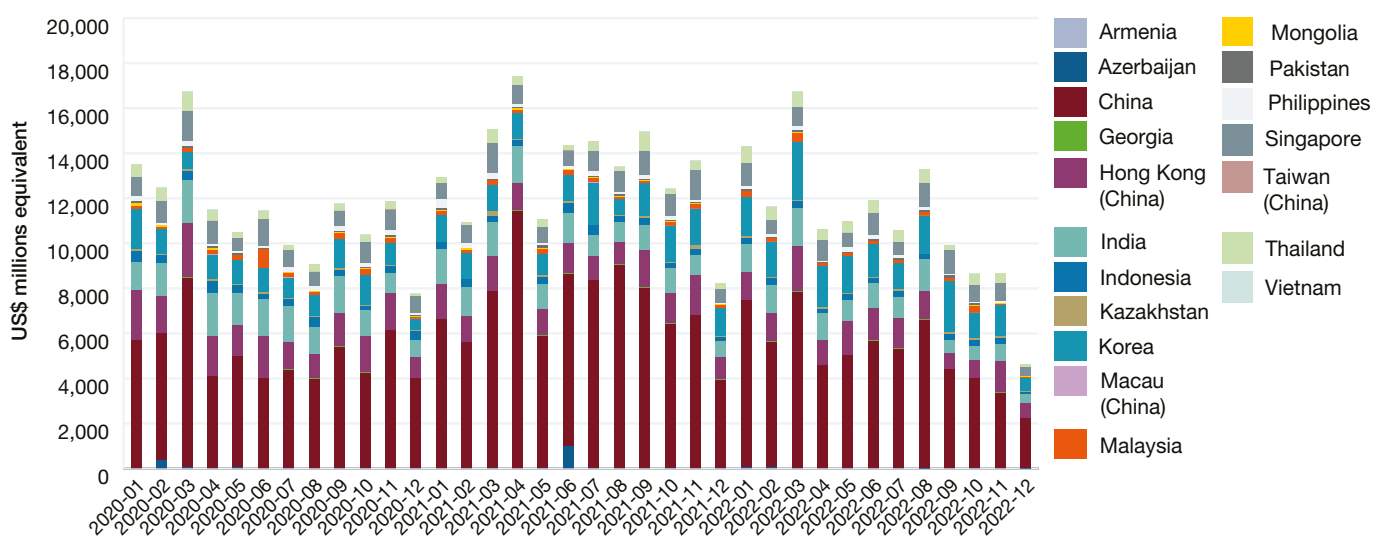
Source: ICMA analysis using TraX data from MarketAxess (March 2023)

Figure 42: Asia international credit (NFCs) secondary market trade count by country/region of ultimate risk



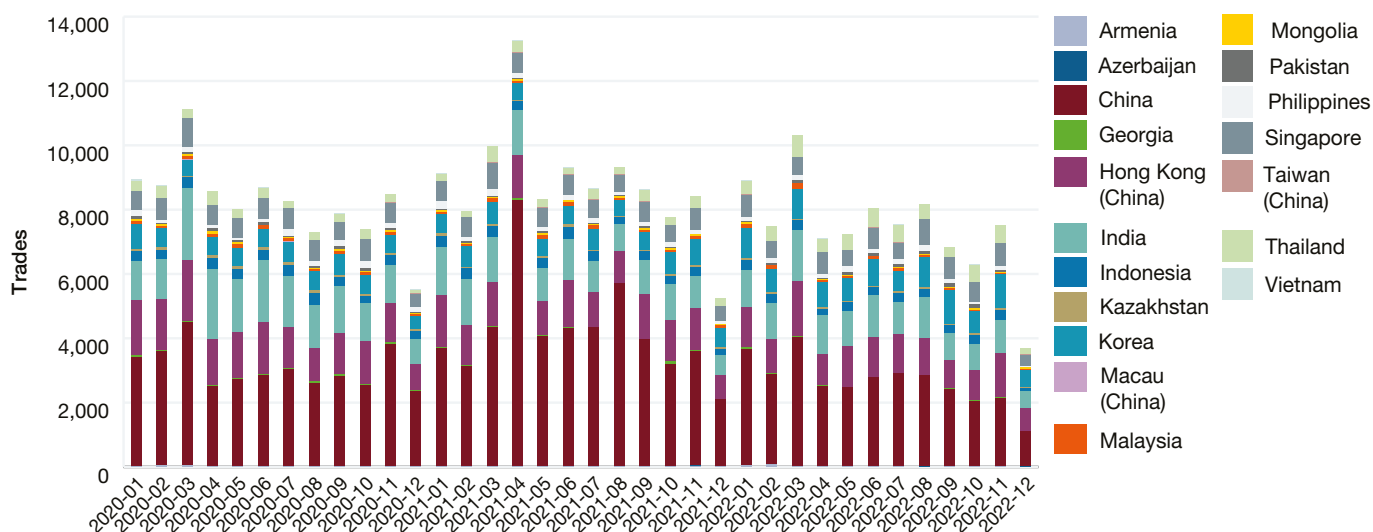
Source: ICMA analysis using TraX data from MarketAxess (March 2023)

Figure 43: Asia international credit (Financials) secondary market traded volumes by country/region of ultimate risk



Source: ICMA analysis using TraX data from MarketAxess (March 2023)

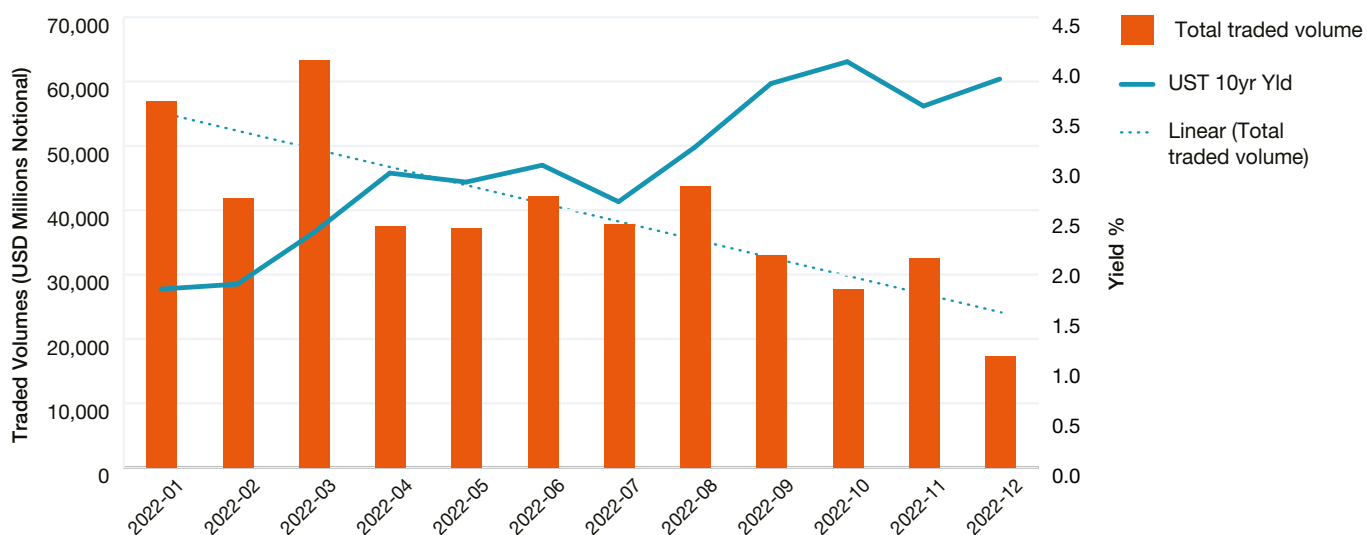
Figure 44: Asia international credit (Financials) secondary market trade count by country/region of ultimate risk



Source: ICMA analysis using TraX data from MarketAxess (March 2023)

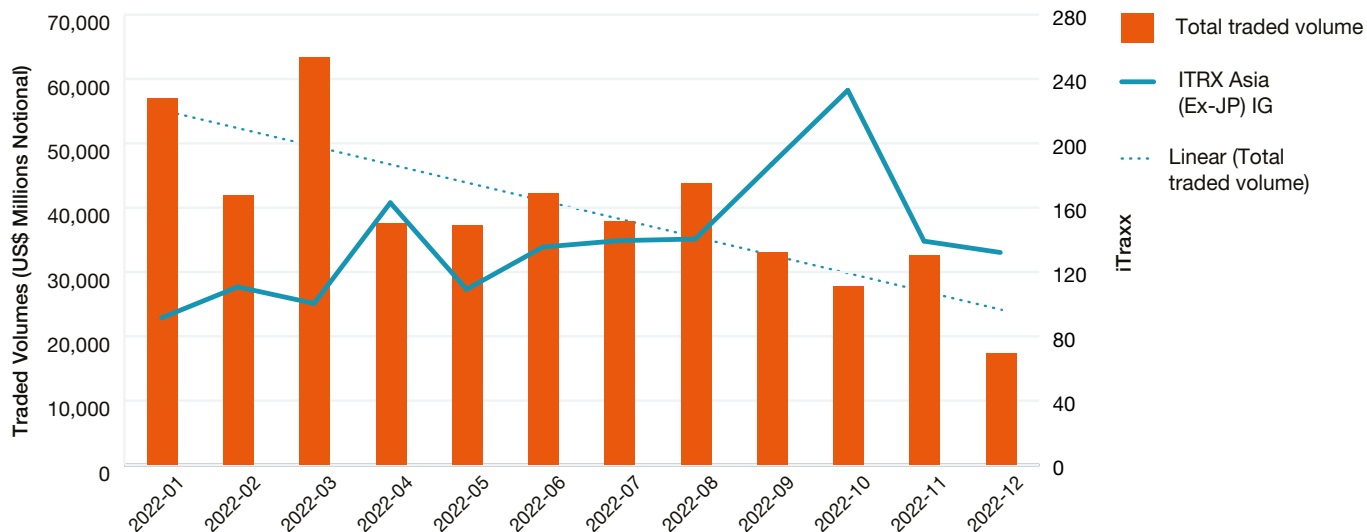
Interviewees suggest that reduced liquidity, as seen in lower volumes, is in part a response to higher yields and widening credit spreads, which increase uncertainty for investors and risks for market-makers, as can be seen in figures 45 and 46. However, some point to the fact that most secondary market activity for bonds can usually be found concentrated into the first few weeks, or even days, after issuance. Therefore, there is a significant correlation between primary market activity and secondary market trading. This can be seen in figures 47 and 48. Accordingly, lower issuance also seems to have had a material impact on secondary market volumes.

Figure 45: Traded volumes vs UST yields



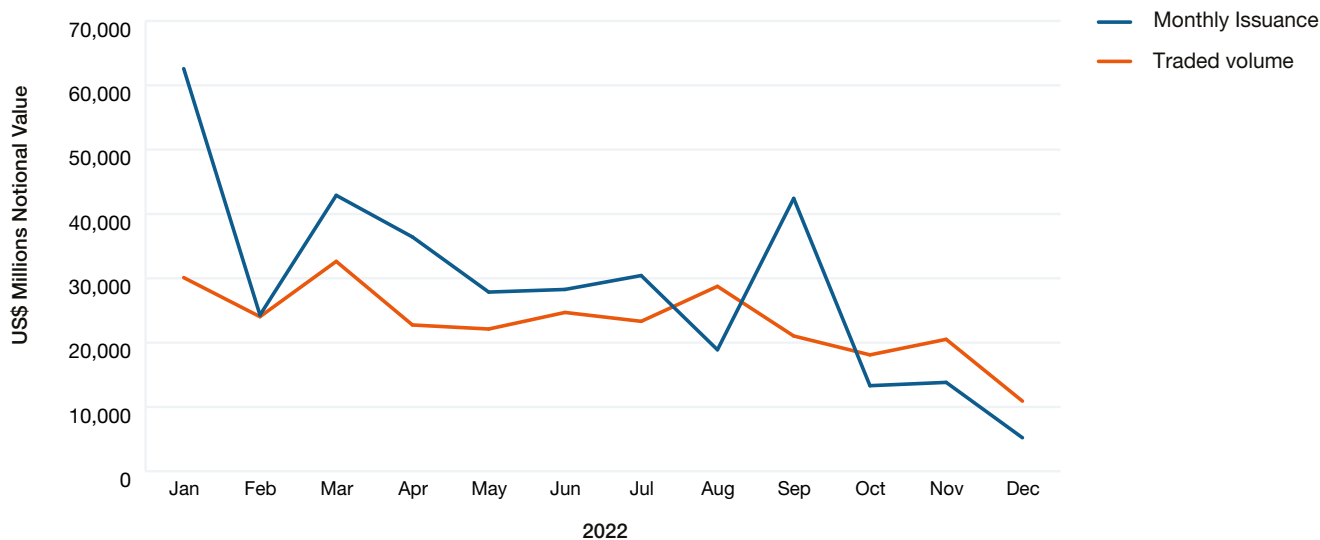
Source: ICMA analysis using TraX data from MarketAxess and Bloomberg data (March 2023)

Figure 46: Traded volumes vs credit spreads



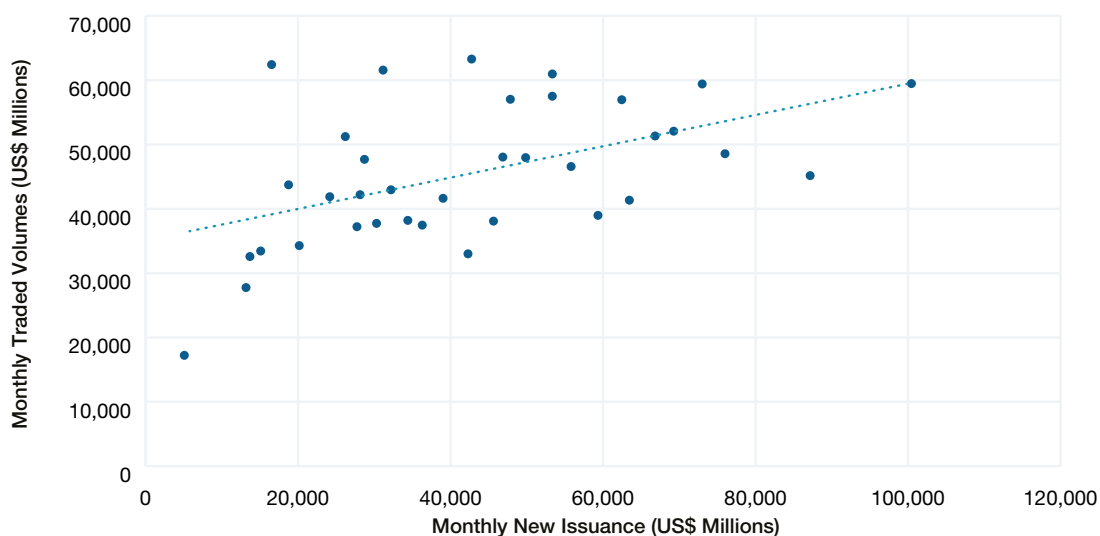
Source: ICMA analysis using TraX data from MarketAxess and Bloomberg data (March 2023)

Figure 47: New issuance vs traded volume (2022)



Source: ICMA analysis using TraX data from MarketAxess and Dealogic data (March 2023)

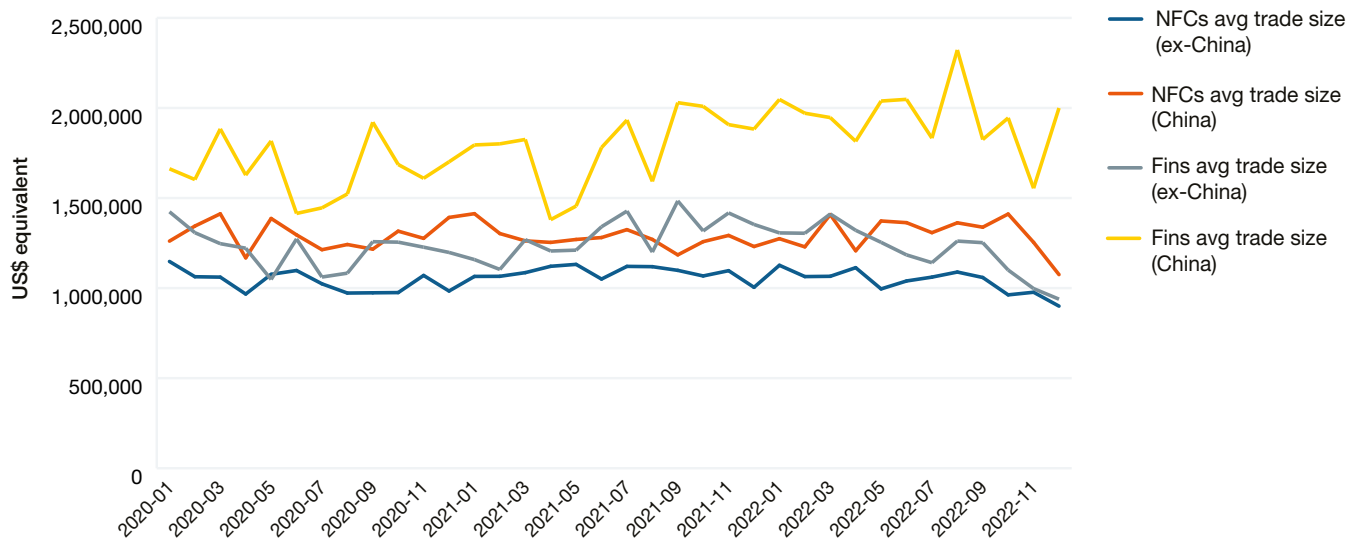
Figure 48: Relationship between new issuance and traded volumes (2020-22)



Source: ICMA analysis using TraX data from MarketAxess and Dealogic data (March 2023)

Perhaps a further indicator of a more challenged environment is a reduction in trade sizes, which can be observed as it becomes harder to find quotes, or dealers are reluctant to take larger positions onto their books. This trend can be observed in figure 49, particularly over the second half of 2022 (although China financial seem to make a recovery toward the very end of the year).

Figure 49: Average trade sizes



Source: ICMA analysis using TraX data from MarketAxess (March 2023)

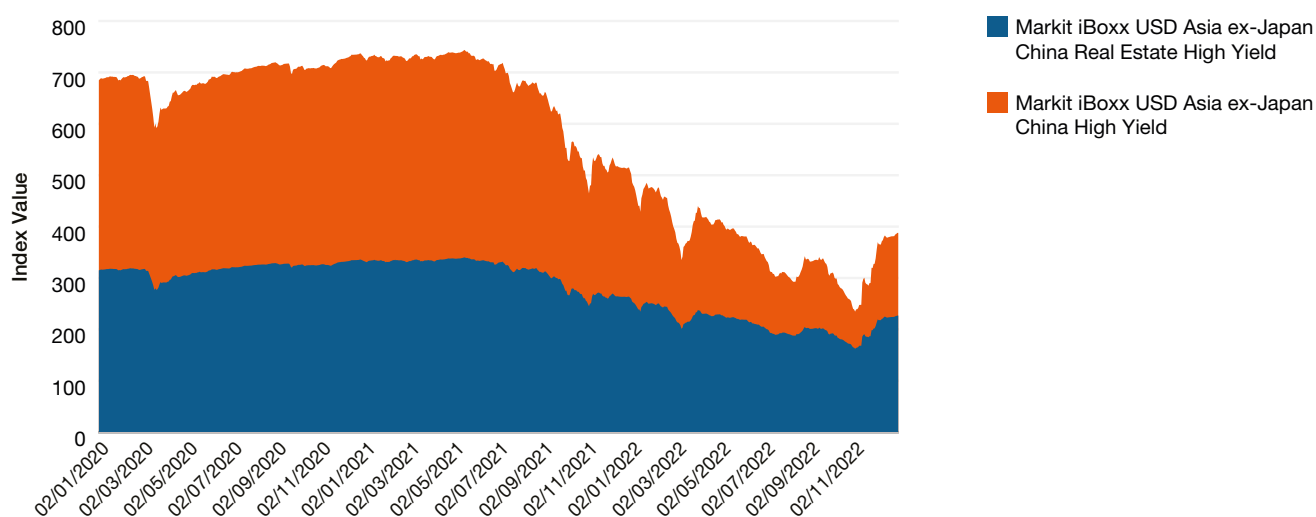
Market-making

Market-makers are very much at the core of secondary market liquidity, and interviewees from both sell-side and buy-side firms suggest that the Asia international bond market is well serviced by a broad range of liquidity providers. These constitute around 20 to 25 international banks and broker dealers, five to eight large Chinese banks, and then a number of local banks and brokerage houses who tend to be more niche or specialist dealers.

While interviewees maintain that for the most part liquidity in the Asia international credit market is generally quite good, even for certain high yield names and segments, it can tend to be binary, and vanish rapidly, particularly in response to sharp market moves or name-specific credit events. And 2022 was no exception. This was particularly the case in March-April when the China property sector became especially stressed (see figure 50), which quickly spilled over into other sectors and Asia high yield and cross-over names more broadly (see figure 51). Interviewees report that at this time the market became heavily skewed toward sell-orders, with few natural buyers, and that this put market-makers under intense pressure given their limited options to recycle positions, and a shortage of capacity to warehouse risk. Hence prices at this time tended to gap significantly, depending on the extent to which dealers were “axed” (ie positioned) with respect to client interests.

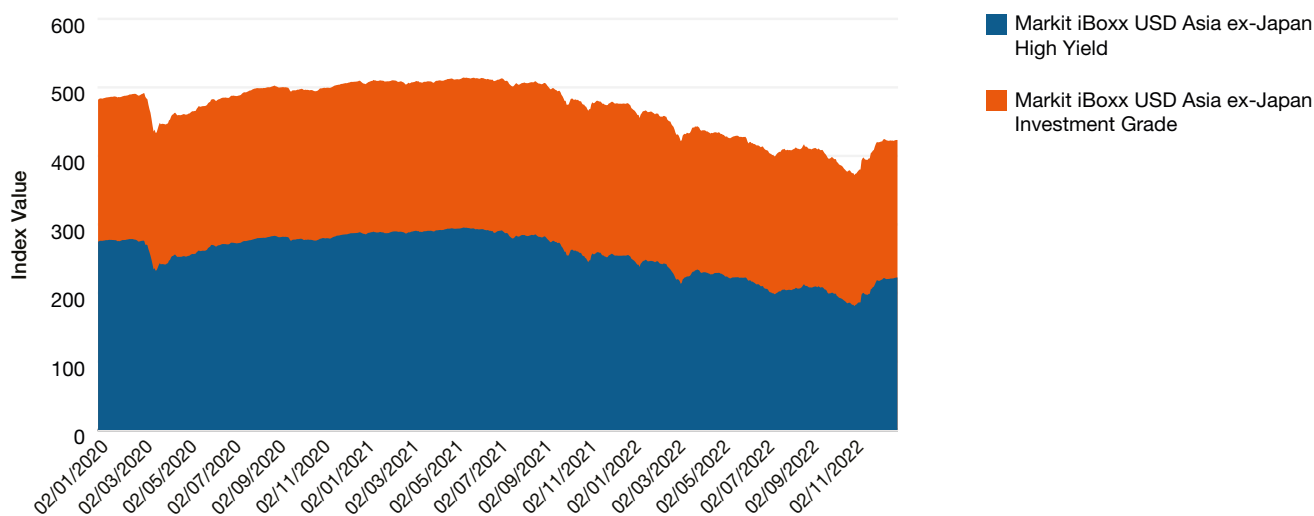
Interviewees note that as a result of large moves and heightened volatility some liquidity providers suffered meaningful losses in the first half of 2022, which had repercussions for the market for the remainder of the year. It became apparent that some banks and broker-dealers, both international and local, reined in their market-making activity, either retreating from the high yield segment or reducing their capacity to take positions more generally. The counter-side of this is that it did leave more opportunity for firms that had fared better earlier in the year to fill the gap, although this effectively meant a greater concentration of liquidity being provided by fewer houses. Interviewees further note that as the year-end came into sight, dealers reduced their risk appetite more broadly.

Figure 50: iBoxx USD Asia (ex-JP) China High Yield (Total Returns)



Source: S&P Dow Jones Indices. Data as of as of 31 Dec 2022. Past performance is no guarantee of future results.

Figure 51: iBoxx USD Asia (ex-JP) Investment Grade and High Yield (Total Returns)



Source: S&P Dow Jones Indices. Data as of as of 31 Dec 2022. Past performance is no guarantee of future results.

E-trading

Interviewees comment that the use of electronic venues to transact in the secondary market continues to become more entrenched, identifying three main drivers: efficiency, liquidity, and price discovery.

From an efficiency perspective, venue trading has become particularly valuable for managing flows in smaller trade sizes and in more liquid, investment grade names. One interviewee explained that for the 20-to-25 largest private banks in the region, it is not unusual for them to work between USD 100 million and USD 200 million of orders per day, which will mostly be in ticket sizes of between USD 100 thousand and USD 1 million. While private banks tend to have very large sales teams to manage these orders, the dealer banks do not, and hence the need for electronification. Accordingly, these orders will be worked almost exclusively through on-venue request-for-quote (RFQ) protocols, with a number of banks now relying on algorithms to provide quotes, particularly for the smaller tickets and more active names. Dealers report that this works efficiently, freeing up more time to concentrate on pricing and managing larger or more difficult orders, although one interviewee noted that during some of the more volatile periods in 2022, many, if not all, dealers switched-off their auto-quoting models.

From a liquidity perspective, trading venues can provide broader access to a wider range of market participants, and therefore different flows and axes. This is particularly the case through the emergence and adoption of different protocols.

While participants in the interviews estimated that around 90% to 95% of all electronically traded transactions are via RFQ (which is essentially an electronified version of voice trading), alternative trading protocols are slowly gaining some traction. "All-to-all" RFQs, for example, allow asset managers to reach a wider pool of potential liquidity providers other than their usual panel of dealers, and this particularly tends to gain more interest during periods of stretched liquidity. For lower-tier international banks and the larger local dealer firms, this provides access to the flows of the big asset managers and institutional investors, whose order they otherwise might not expect to see.

Another e-trading protocol that has become well established in the US and European credit markets, and which has begun to gain some interest in Asia, is "Portfolio Trading". This involves a client providing a list of bonds to their dealer, requesting bids or offers, or a mix of both, with a view to trading the entire list in one go based on the overall pricing package. Portfolios can run from ten-or-so ISINs to significantly more. Often this is used for portfolio rebalancing, picking up interest at month-end. However, according to interviewees, this protocol, similar to "All-to-All", comes into its own

during times of heightened volatility or thin liquidity, when the advantage of executing a contingent package of orders simultaneously might be preferable when considering the risk and time inherent in working multiple individual orders.

The growth of bond portfolio trading in other established markets can also be linked closely to the development of fixed income exchange traded funds (ETFs), where the creation and redemption process involves the concurrent buying and selling of a basket of underlying bonds. These transactions in the underlying bonds (which are essentially axe-driven) in turn generate more liquidity and price discovery points. As discussed with interviewees, the Asia bond ETF market remains relatively nascent, mainly focused on either global markets or the larger local markets (China, Australia), and predominantly indexing sovereign bonds. But the expectation is that this could change quite quickly.

From the perspective of price discovery, e-trading provides a number of inherent benefits, including greater visibility of what is trading, audit trail, and data capture. Indirectly, this has partly been driven by regulatory developments in the US (with the introduction of TRACE)²⁰ and in Europe with MiFIR/MiFID II.²¹ Particularly as international sell- and buy-side firms adapt their business models to incorporate regulatory reporting and best-execution requirements, so more trading activity has migrated onto venues, making this an established norm for all jurisdictions in which they operate. As a corollary of this is enhanced data generation and capture, which again can inform price discovery, investment decisions, and risk management.

While e-trading appears to be gaining ever wider adoption in the region, some interviewees point to the fact that the Asia international bond market is structurally very different to the US and Europe, which provides challenges to the wider adoption of e-trading seen in those markets. Not only is it smaller in terms of underlying size and number of issues, but it is very fragmented with national idiosyncrasies playing an important role. This means that larger or more difficult trades will tend to be negotiated by voice, rather than across platforms. Along with a well-established regional culture of interpersonal relationships and building trust, some feel that this is the biggest hurdle for venue trading, rather than a reticence to embrace technology. However, other participants point to the broader adoption of e-trading by global investment firms which is only likely to continue to drive this trend in the Asia markets.

Repo market

As some interviewees are keen to point out, a functional and liquid repo market is essential for the health of the underlying market. This is particularly the case in bear markets or during episodes of heightened volatility, when demand increases both for short-covering specific ISINs and to transform collateral into cash to meet margin requirements. Interviewees also suggest that liquidity in the Asia cross-border repo and securities lending markets continues to improve and held up well during the market moves of 2022. This is attributed to more use of repo and securities lending as a result of the introduction of uncleared margin rules (UMR) and the greater involvement of international asset managers who lend securities as a matter of course.

While there is little available data for repo activity in the Asia region, data from DataLend (EquiLend's market data product), which shows the value and fees of securities being loaned by lenders to broker-dealers, provides a good gauge of overall market activity, as well as underlying positioning. As can be seen in figure 52, the value of bonds on loan increased toward the end of 2021 and stayed elevated well into Q2 of 2022, which corresponds with the market sell-off starting in early 2022 (see figure 53). For the remainder of the 2022 we see volumes on loan trend lower, which is also consistent with the observed trading volumes in the underlying market.

A further observation from the data, and consistent with interviewee feedback, is a richening of repo rates (as seen in the form of increased lending fees), which again correlates with moves in the underlying market. As bonds sell off, and credit spreads widen, repo rates should richen as demand to borrow the securities (driven by short-selling) increases. One interviewee reports that while most liquid investment grade USD bonds in the Asia market can be borrowed at a

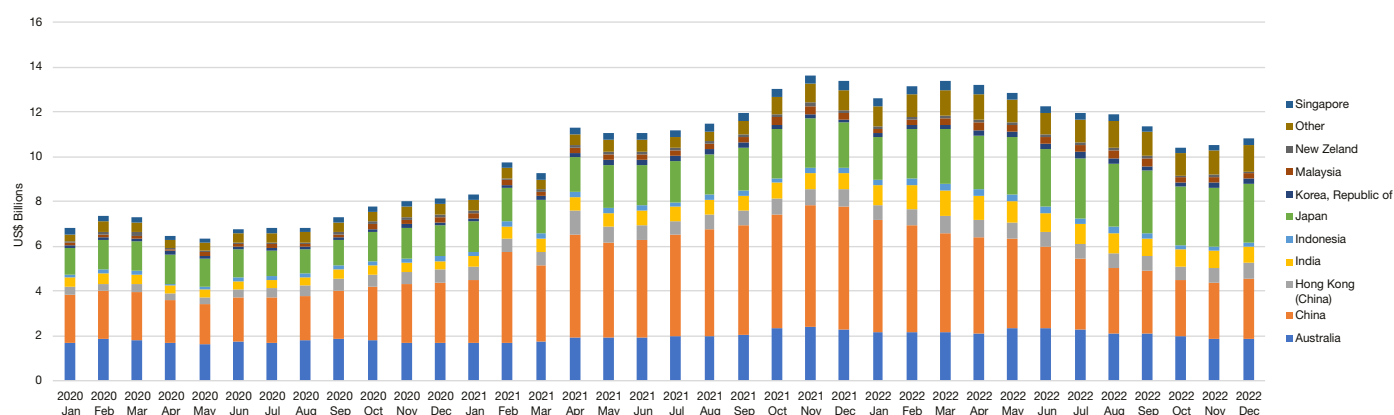
20 FINRA's Trade And Compliance Engine

21 The EU's Markets in Financial Instruments Regulation and second Directive

repo spread of around 20bp to general collateral (effectively the “specialness” of the specific bond), over the course of 2022 this widened significantly for many bonds, particularly for high yield names, most notably China, especially following the collapse in the property market. This saw some bonds trading at repo rates of -10% or lower as shorts tried to avert settlement fails and the risk of being bought-in. This trend in specialness is clearly illustrated in figure 54.

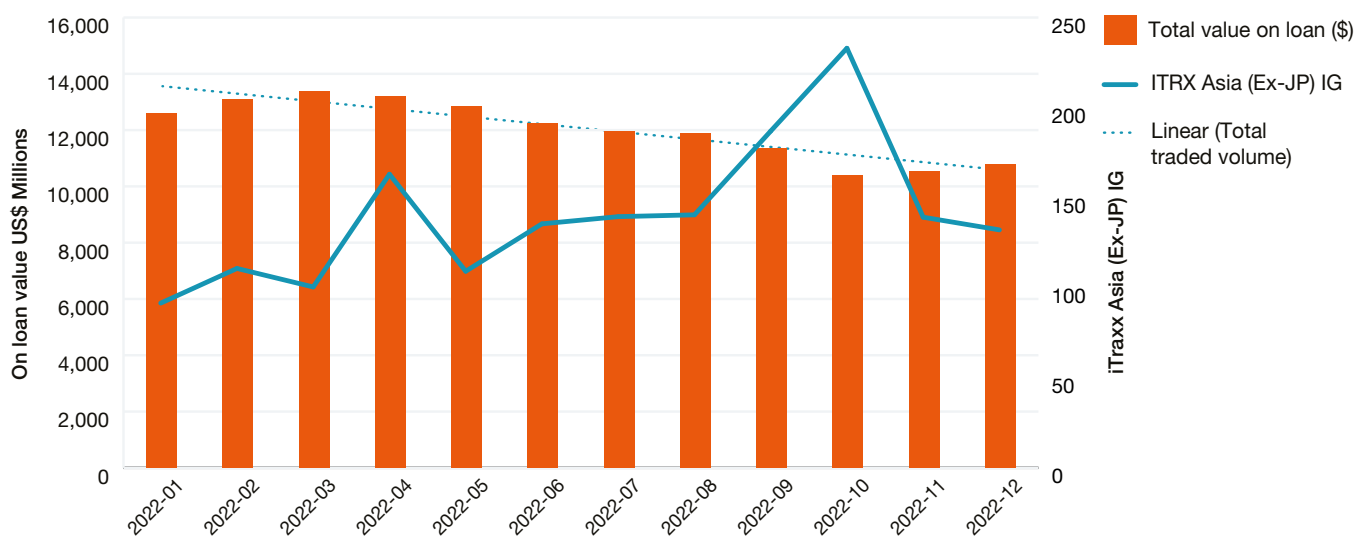
While the repo market appears to have worked well during 2022, interviewees suggest that more could be done to develop and internationalize the regional market. This includes greater regulatory alignment across jurisdictions, especially with respect to tax treatments, as well as broader adoption of standardized documentation, in the form of the Global Master Repurchase Agreement (GMRA), particularly in supporting access to local onshore markets, such as China.

Figure 52: Asia international credit on loan – average monthly balances by country/jurisdiction of issue



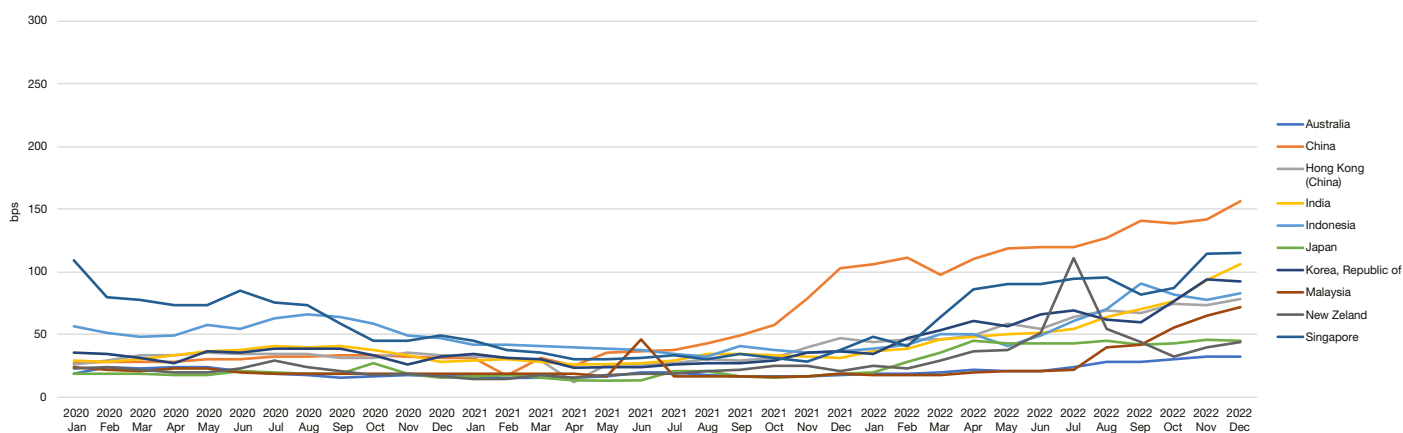
Source: DataLend (February 2023)

Figure 53: Asia international credit on loan vs credit spreads (2022)



Source: ICMA analysis using DataLend and Bloomberg data (February 2023)

Figure 54: Asia international credit on loan – average monthly fees by country/jurisdiction of issue



Source: DataLend (February 2023)

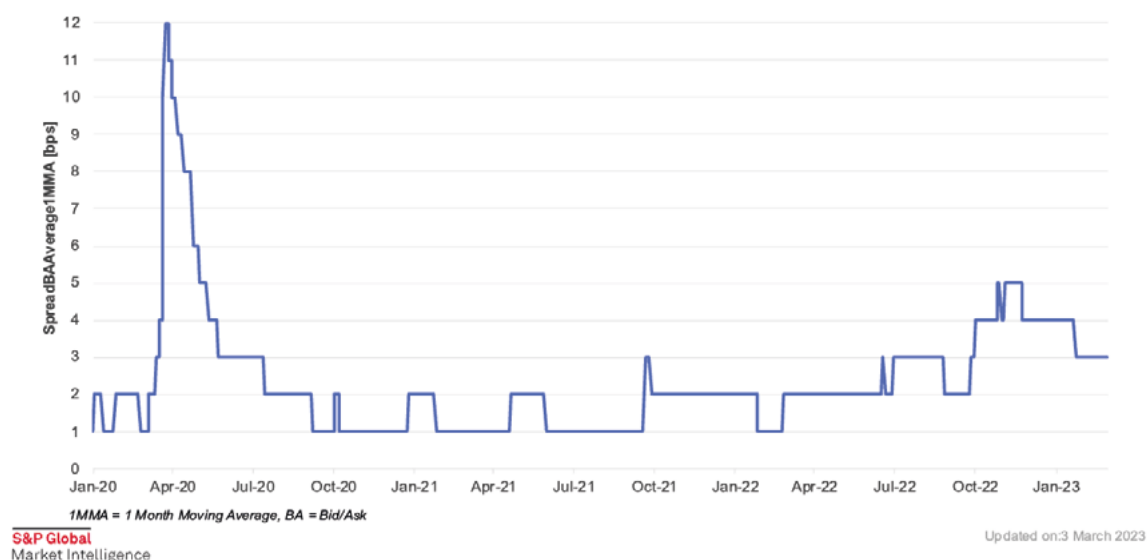
CDS

The ability to hedge and recycle credit risk through derivatives is also fundamental in underpinning functional and liquid credit markets, both for investors and market-makers, and here credit default swaps (CDS) play a pivotal role. Similar to the repo market, the CDS market becomes even more critical in times of heightened volatility.

Interviewees report that during 2022 the CDS index market (in the form of the iTraxx Asia investment grade index), functioned well, experiencing increased volumes, while maintaining good depth and relatively tight bid-ask spreads. This can be seen in figure 55, which shows the one-month moving average bid-ask spread of the on-the-run contract (in basis points), and which only widens going into Q4 and approaching year-end. Similarly, figure 56 shows the one-month moving average of the dealer count for the on-the-run contract, which again remains relatively steady until the final months of 2022.

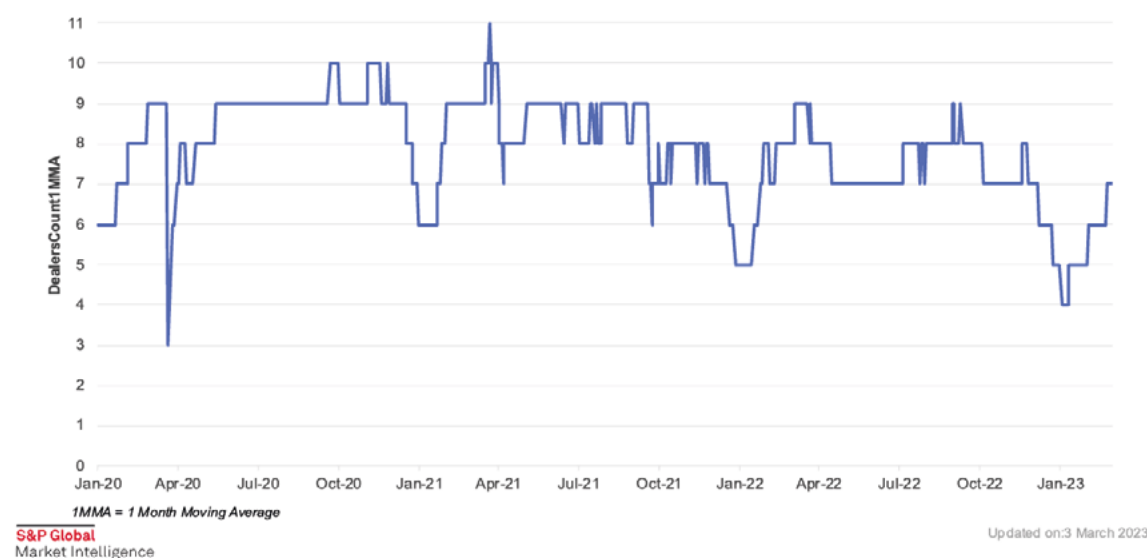
However, while interviewees point to a very liquid index market, they note the lack of a developed single name CDS market, which would provide hedging capabilities for specific credits, particularly for high yield names. As discussed in previous reports, there was previously a relatively vibrant SN-CDS market for Asia USD credit, but that this gradually thinned post-2008, leaving a gap, and potential vulnerability, in the market structure for international Asia credit.

Figure 55: iTraxx Asia (ex-JP) IG Index (On the Run): bid-ask spread (one-month moving average)



Source: S&P Global Market Intelligence

Figure 56: iTraxx Asia (ex-JP) IG Index (On the Run): dealer count (one-month moving average)



Source: S&P Global Market Intelligence

Outlook for 2023

At the start of 2023, interviewees are generally optimistic. While many of the same global economic and geopolitical concerns remain, they point to a number of factors that could help restore confidence and stability to the Asia credit market. From a macro-economic perspective, there is a view that the US may be reaching the peak of the interest rate cycle, while avoiding recession, and that this combined with the re-opening of China creates a positive environment for both new issuance and secondary trading. The PBOC's interventions to support the China property market should also help, although some fear that the hangover for this sector, and Asia high yield more generally, could last for a while longer as investors and dealers who were badly burned decide to steer clear. From a market structure perspective, wider adoption and the increased sophistication of e-trading is broadly expected to continue, helping to support greater efficiencies while providing more avenues of access for both regional and global investors.

Conclusion

As with bond markets globally, 2022 was a challenging year for the Asian international bond market, with total issuances 44% lower compared with 2021. This was mainly due to uncertainty being caused by rising interest rates and geopolitical conflicts, but also the impact of significant credit events in the Chinese real estate sector. In 2022, issuance from Chinese issuers declined by 49% year-on-year, although this remained the largest source of Asian international issuance by deal nationality (33%). Other trends, prompted by higher rates, include a move from G3 issuance into other sources of finance, including domestic bond issuance and bank loans, as well as a shortening of tenors. With respect to listing location, Luxembourg has gained a string foothold, although Singapore and Hong Kong remain the centre of choice.

We saw similar challenges in the secondary market, with a notable decrease in traded volumes, particularly in the second half of the year, this is also attributed to higher volatility and greater uncertainty, as well as the reduced amount of primary activity. While liquidity, more generally, seems to have been good, participants note that the number of active liquidity providers decreased through the year, and that this was particularly noticeable during episodes of heightened volatility.

However, interviewees are starting 2023 more optimistic, both with respect to the primary and secondary markets. More stability in the macro-economic outlook and a sense that the worst is behind us with respect to the Chinese property sector, as well as the opening up of China's economy post-Covid, are expected to provide a more stable footing for the market in the months ahead, while noting that significant uncertainty remains, not least around geopolitical risks.

Methodologies for data analysis:

Scope of international bonds under Dealogic include: Euro market private placement, Euro market public issue, foreign market private placement, foreign market public issue, global market public issue.

Countries/regions included in Asia, by data source:

- Covalent Capital data: Cambodia, China, Hong Kong (China), India, Indonesia, Laos, Macau (China), Malaysia, Maldives, Mongolia, Papua New Guinea, Philippines, Singapore, South Korea, Sri Lanka, Taiwan (China), Thailand, Vietnam.
- TraX data from MarketAxess: Armenia, Azerbaijan, Bangladesh, China, Georgia, Hong Kong (China), India, Indonesia, Kazakhstan, Korea (Republic of), Macau (China), Malaysia, Mongolia, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan (China), Thailand, Vietnam.
- ICMA applies the following list to Dealogic data: Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Hong Kong (China), India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Laos, Macao (China), Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan (China), Tajikistan, Thailand, Turkmenistan, Uzbekistan, Vietnam.

ICMA Zurich**T: +41 44 363 4222**

Dreikönigstrasse 8
8002 Zurich

ICMA London**T: +44 20 7213 0310**

110 Cannon Street
London EC4N 6EU

ICMA Paris**T: +33 1 70 17 64 72**

62 rue la Boétie
75008 Paris

ICMA Brussels**T: +32 2 801 13 88**

Avenue des Arts 56
1000 Brussels

ICMA Hong Kong**T: +852 2531 6592**

Unit 3603, Tower 2,
Lippo Centre
89 Queensway,
Admiralty, Hong Kong

