Credit Guarantee & Investment Facility

An Asian Bond Markets Initiative

ASEAN+3 CORPORATE BOND MARKET REPORT

PURSUING DEVELOPMENT, MARKING MILESTONES

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Abbreviations

The following are the most common abbreviations used in this research paper.

ADB	Asian Development Bank
AMBIF	ASEAN+3 Multi-Currency Bond Issuance Framework
ASEAN	Association of Southeast Asian Nations
ASEAN+3	Association of Southeast Asian Nations countries and the People's Republic of China, Japan, and Republic of Korea
ASEAN6	ASEAN member states Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam
AUM	assets under management
BPAM	Bond Pricing Agency Malaysia
BPMB	Bank Pembangunan Malaysia Berhad (Malaysia Development Bank)
BNM	Bank Negara Malaysia (Central Bank of Malaysia)
BSP	Bangko Sentral ng Pilipinas (Central Bank of the Philippines)
BVAL	Bloomberg Valuation Service
CGIF	Credit Guarantee and Investment Facility
COFIX	cost of funds index
CRA	credit rating agency
CSX	Cambodia Securities Exchange
FCY	foreign currency
GDP	gross domestic product
HNIW	high net-worth individual
ILIP	investment-linked insurance product
KLIBOR	Kuala Lumpur Interbank Offer Rate
KWAP	Kumpulan Wang Persaraan (Diperbadankan) (Retirement Fund Incorporated)
KWSP	Kumpulan Wang Simpanan Pekerja (Employees' Provident Fund)
Lao PDR	Lao People's Democratic Republic
LCY	local currency
LGFV	local government financing vehicles
LIBOR	London Interbank Offer Rate
LTAT	Lembaga Tabung Angkatan Tentera (Armed Forces Fund)
LTNCD	long-term negotiable certificate of deposit
MDB	multilateral development bank
MOF Viet Nam	Ministry of Finance, Viet Nam
OJK	Otoritas Jasa Keaungan (Financial Services Authority of Indonesia)
PDEX	Philippine Dealing Exchange
PHEI	PT Penilai Harga Efek Indonesia (Indonesia Bond Pricing Agency)
PRC	The People's Republic of China
SC Malaysia	Securities Commission Malaysia
SEC Philippines	Securities and Exchange Commission of the Philippines
SEC Thailand	Securities and Exchange Commission of Thailand
SERC	Securities and Exchange Regulator of Cambodia
SGX	Singapore Exchange
SME	small and medium-sized enterprise
SOE	state-owned enterprise
SORA	Singapore Overnight Rate Average
SRO	self-regulatory organization
ThaiBMA	Thailand Bond Market Association
TRIS	Thai Rating and Information Services
YTM	yield to maturity

Currency

CNH	offshore Chinese renminbi
CNY	Chinese yuan
EUR	Euro
HKD	Hong Kong dollar
IDR	Indonesian rupiah
JPY	Japanese yen
KHR	Cambodian riel
KRW	Korean won
MYR	Malaysian ringgit
PHP	Philippine peso
SGD	Singapore dollar
THB	Thailand baht
VND	Viet Nam dong
USD	US dollar

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This paper has a two-fold objective: first, this is an update of the previously published research, ASEAN Corporate Bond Market Research in 2022, which covers the local currency corporate bond markets of Cambodia, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. In some instances, there may also be references to the financial market developments in Brunei, Lao PDR, and Myanmar. Under this, this report aims to provide the key developments in the ASEAN markets, as well as the unique characteristics of each corporate bond market in ASEAN. Second, this report includes corporate bond market information on the "+3 markets" – the People's Republic of China, Japan, and the Republic of Korea. With the inclusion of these three markets, this report aims to show a wider perspective on the development of a "regional corporate bond market" of ASEAN+3.

Led by Dong Woo Rhee, Chief Financial Officer, with assistance from Soleil Corpuz, Research Analyst, this research effort aims to show the characteristics of corporate bond markets in ASEAN+3. For any questions or comments on the contents of this report, please contact research@cgif-abmi.org.

Executive Summary

1. Overview of Corporate Bond Markets in ASEAN+3

- The “+3 countries” in ASEAN+3, which are composed of the People’s Republic of China (PRC), Japan, and the Republic of Korea (Korea), have significantly larger domestic corporate bond markets than the ASEAN countries. Among ASEAN, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam have established corporate bond markets. Cambodia has recently developed its local currency corporate bond market. On the other hand, Brunei, Lao People’s Democratic Republic (PDR), and Myanmar do not have local currency corporate bonds in their markets.
- When considering each country's economic scale, Korea and Malaysia have the largest local currency corporate bond markets in ASEAN+3, followed by the PRC, Thailand, Singapore, and Japan. In addition, the corporate bond markets of Viet Nam, Philippines, Indonesia, and Cambodia are relatively small in the region, both in absolute terms and relative to the size of their economies.

2. Specific Characteristics of Corporate Bonds in ASEAN+3

- The comparisons of the specific characteristics of corporate bonds in ASEAN+3 highlight the uniqueness of corporate bond markets in the region. Malaysia has more long-term bonds than other ASEAN countries because bonds are often utilized for long-term project financing in Malaysia.
- Despite straight fixed coupon bonds being dominant in most corporate bond markets, callable bonds and floating coupon bonds are prevalent in the corporate bond markets of the Philippines and Viet Nam, respectively. In contrast, Indonesia has a strong dominance of plain vanilla straight fixed coupon bonds.
- Singapore has notable percentages of perpetual bonds in terms of maturity distribution, callable bonds in terms of maturity type, and variable coupon bonds in terms of coupon type. In fact, the percentages of these bonds are attributed to a single factor, a popularity of perpetual callable bonds in the country. While the perpetual callable bonds’ coupon types are classified as variable coupon bonds, they are closer to fixed coupon bonds because the perpetual callable bonds’ coupon rates are fixed until call dates and re-fixed at the benchmark government bond rate plus a pre-determined spread if a call is not exercised.
- Thailand is notable for having a relatively well-distributed range of credit ratings for its corporate bonds, spinning from AAA to BBB. This is different from most other ASEAN+3 countries where corporate bonds tend to be concentrated at A and above. In fact, Singapore has more BBB-rated bonds than Thailand. However, in Singapore, BBB-rated bonds are already internationally investment-grade bonds that attract both foreign and local investors.

3. Investors

- The key investor groups of local currency corporate bonds in ASEAN+3 are banks, insurance companies, pension funds, mutual funds, and individuals. Thailand is unique as individuals are the biggest investor group of local corporate bonds in its market unlike other countries where institutional investors are dominant investors of their local corporate bonds. In fact, individuals may be the biggest investor group of corporate bonds in Singapore as well because the biggest investor group in the country is private banking whose clients are mostly high-net-worth individuals.
- Different investor groups have different investment appetite for corporate bonds. Banks would tend to invest in bonds with lower tenors. Insurance companies and pension funds prefer to invest in high-grade long-term bonds. The investment appetite of mutual funds can be very diverse, as they

manage funds from different end-investors with different investment objectives. Individual investors would mainly be concerned on returns on their investments.

- For institutional investors, one crucial factor that can influence is the risk weight and risk charge regulations imposed by regulators in each country in ASEAN. For banks, ASEAN banking regulators follow the Basel framework on risk weights. For insurance companies, ASEAN regulators do not follow one framework for the risk charges. One common aspect on risk weight and risk charge regulations is the preferential treatment to exposures to multilateral development banks, in which the minimum possible risk weight or risk charge can be applied.

4. Issuers

- Banks, real estate, and other financial companies are active issuer groups in most ASEAN+3 countries. In the PRC, more than half of newly issued corporate bonds are from banks. Thailand has a relatively balanced corporate bond market, with issuers from various industries participating. In Cambodia, banks and other financial institutions did not issue any bonds in 2023, although there had been some issuances in previous years.

5. Other Market Participants

- Other corporate bond market participants include the regulators, credit rating agencies, and the bond pricing agencies in ASEAN+3. Notably, regulators in the region have implemented various regulations aimed at encouraging more bond issuances, enhancing investor protection, and providing better frameworks for new bond products.
- Credit rating agencies are present in all ASEAN+3 countries where local currency corporate bonds are outstanding. In some countries, credit rating is a requirement for issuance of corporate bonds under certain conditions.
- Bond pricing agencies play a crucial role in providing fair values of outstanding bonds and yield matrices, which consist of yields corresponding to specific maturities, sector, and credit ratings. The PRC, Korea, Indonesia, and Malaysia have dedicated bond pricing agencies; while Japan, Thailand, and Viet Nam have institutions that include bond pricing functions as part of their services. In Cambodia, Philippines, and Singapore, fair values of corporate bonds are available from their exchanges as long as the bonds are listed. Bloomberg also provides fair values for local currency corporate bonds in ASEAN+3, as available.

6. Credit Spread

- A credit spread indicates the price of credit risk. It is generally calculated as the difference between the yield of a corporate bond and the yield of a government bond with the same maturity. In Viet Nam, however, credit spreads are calculated against the 12-month deposit rate instead of the government bond rate, regardless of the tenor of the corporate bonds.
- The credit spread matrix, which consists of credit spreads corresponding to specific maturities and credit ratings, is available in the PRC, Japan, Korea, Indonesia, Malaysia, Thailand, and Viet Nam where bond pricing agencies or institutions with bond pricing functions operate. This matrix serves as a valuable reference for corporate bond investors and issuers when investing in or issuing bonds that have specific maturities and credit ratings.
- Credit spreads also provide insights into the rating cliff within a market. In Malaysia, the additional spread from a one-notch downgrade jumps significantly from AA3 to A1, reflecting the rating cliff in the country where corporate bonds are primarily concentrated at AA3 or above.

7. Guaranteed Bonds

- A share of guaranteed bonds in the corporate bond market varies significantly among the countries in ASEAN+3. In Cambodia, nearly all corporate bonds are guaranteed, while the Philippines has no outstanding guaranteed corporate bonds. Guaranteed corporate bonds are relatively active in Malaysia and Singapore but they are not in Korea, Japan, and Indonesia.
- In the ASEAN+3 corporate bond markets, guarantors include parents and subsidiaries (or the group company), governments, banks, and third-party companies. Third-party companies include national guarantors and international financial institutions specializing in credit guarantee, such as CGIF and GuarantCo. While some countries in ASEAN+3 have established their own national guarantors, they are not active in guaranteeing corporate bonds except the ones in the PRC. CGIF is the most active third-party guarantor in ASEAN+3, providing guarantees for bonds issued by entities from 12 out of the 13 ASEAN+3 countries. GuarantCo is active in Cambodia and Viet Nam.
- Co-guarantees and partial guarantees used to be observed in ASEAN region although they are not present now. They may show up again in ASEAN markets depending on situation.

8. Cross-Border Bonds

- Cross-border bonds can be classified as inbound or outbound bonds. In this research paper, inbound bonds refer to local currency corporate bonds issued by foreign entities in the local bond market. Conversely, outbound bonds refer to foreign currency corporate bonds issued by local entities in the offshore market.
- Singapore is the only ASEAN country that has an active market for inbound bonds, largely due to its status as a global financial hub. While Malaysia and Thailand do not have active markets for inbound bonds, each exhibits unique characteristics. As the largest sukuk market in the world, Malaysia has seen the sukuk issued by foreign entities, including those from middle east countries. On the other hand, Thailand has issuances from neighboring countries with less developed or inactive corporate bond markets.
- USD is the most widely used currency for bond issuances in foreign markets by companies from most ASEAN+3 countries. However, in Cambodia, Lao PDR, and Myanmar, THB is the most preferred foreign currency by their companies.
- Given one of the biggest obstacles in cross-border bonds being the unfamiliarity of issuers to investors in target issuance markets, CGIF plays a significant role in facilitating these transactions because CGIF is better known to local investors than foreign issuers and is rated AAA by local rating agencies. Singapore and Thailand are two main venues for CGIF guaranteed cross-border corporate bonds.

9. Thematic Bonds

- Thematic corporate bond issuances are relatively active in +3 countries. Within ASEAN, Malaysia leads the sustainable bond market in ASEAN, followed by Singapore.
- Green bond is the first thematic bond type introduced in ASEAN+3 region and continues to dominate the regional thematic bonds market. Social bonds take the far second, followed by sustainability bonds.

10. Outlook and Considerations

- Efforts should focus on the broader development of capital markets in the countries where corporate bond markets are yet to be active to foster the growth of their corporate bond markets.
- Individuals are becoming an increasingly significant investor group of corporate bonds in the region. It is ideal that regulations can protect them reasonably without overly restricting their access to corporate bonds, especially for those who are aware of and willing to accept the associated risks.
- Various initiatives have been implemented to promote the cross-border bond issuances in ASEAN+3. In particular, CGIF plays a significant role in cross-border bond transactions. As regional market participants become more familiar with these initiatives, intra-regional cross-border bond issuances are expected to be more active.
- As the importance of thematic bonds is increasingly recognized by regulators and market participants, their issuances are expected to grow in the region. To facilitate rapid growth of these bonds, regulatory measures, such as tax incentives and bond grant programs, may be considered.

Country Snapshots

The People's Republic of China

- In ASEAN+3, the PRC has the largest absolute value of corporate bonds issued in 2023. However, despite having the largest size, the PRC's corporate bond market is characterized by short term maturities. Given this maturity distribution profile, most of the short-term corporate bonds in the PRC are zero-coupon type.
- Corporate bonds in the PRC are concentrated on AAA and AA ratings. Bond yields jump dramatically when credit rating drops from AA to A.
- The PRC is the only country in ASEAN+3 where national and provincial guarantors are active in guaranteeing corporate bonds.
- One important distinction in the PRC's corporate bond market is the impressive growth of the thematic bonds. Over the past few years, green bonds have taken most of the market share in the country's thematic bond market. Other types of thematic bonds are also gaining traction in the PRC.

Japan

- The maturity distribution leans more on the 3 to 5 years term, and to some extent 5 to 10 years term. This may indicate the development of Japan's corporate bond market as it can host longer tenor bonds, compared to other countries in the region. One distinct characteristic of Japan's corporate bond market is the high issuance of secured bonds, which is the second highest ratio in the region, after Malaysia.
- Issuers in the financial sector (outside of banks) are very active in the corporate bond market of Japan in 2023. Other significant issuer groups include those in the Industrials and Consumer Discretionary sectors.
- Cross-border bonds are active in the market, as the Japanese yen is considered as a major currency in the bond market. In ASEAN+3, Japan has the most diversified set of foreign issuers.

Korea

- In ASEAN+3, Korea has the largest corporate bond market when the economic scale of each country is considered.
- The bond issuances of Korean companies in 2023 are generally short in terms of maturity distribution and straight in terms of maturity type. In addition, credit ratings of the newly issued bonds would be from AA to AAA, indicating a relatively high rating cliff in the country.
- Korea has several bond pricing agencies and credit rating agencies in their market. This indicates that the infrastructure for corporate bond market is well developed in Korea.
- Similar with the PRC, Korea is very active in promoting thematic bonds in the corporate bond market. The transparency in the thematic bond market is also promoted by the Korea Exchange.

Cambodia

- After the successful first corporate bond issuance in the country in 2018, Cambodia has made significant progress in developing its nascent corporate bond market. Each year, Cambodia has witnessed new bond issuances, the majority of which are guaranteed by reputable credit guarantors.
- Cambodia also welcomed the first credit rating agency – a step towards better market development. This will promote market transparency and pave the way for more informed decision making among investors.

Out of the eight outstanding corporate bonds in Cambodia by end of 2023, five sought credit ratings from the Rating Agency of Cambodia.

- Cambodia has also welcomed credit guarantees as an important catalyst in its corporate bond market. Out of the eight outstanding corporate bonds in the country, seven are guaranteed by third-party guarantors, such as CGIF and GuarantCo.

Indonesia

- The corporate bond market of Indonesia is relatively small compared to its neighboring countries, such as Malaysia, Singapore, and Thailand, especially when considering the economic scale of each country. However, the corporate bond market infrastructure in Indonesia is well-developed, with two credit rating agencies actively providing ratings for IDR corporate bonds and one dedicated bond pricing agency offering comprehensive information on IDR yields and credit spreads.
- Plain vanilla bonds are common in the corporate bond market, resulting in almost all corporate bonds being straight fixed-coupon bonds. Guaranteed bonds are also rare.
- To provide a diverse corporate bond products that are available in the market, Indonesia's key regulator, Otoritas Jasa Keaungan, passed its guidelines for issuance of sustainable bonds. Previously, only green bonds were covered in the guidelines. At present, the guidelines include other types of thematic bonds, such as social bonds, sustainability bonds, and sustainability-linked bonds.

Malaysia

- Malaysia has the most developed corporate bond market in ASEAN not only in terms of absolute corporate bond market size but also in terms of relative corporate bond market size which takes into account the economic scale of each country.
- Malaysia has more long-term and secured corporate bonds than other ASEAN countries. These characteristics are attributed to the market practice where bonds are widely utilized for long-term project financing in the country.
- There is a strong demand for long-term corporate bonds in Malaysia as insurance companies and pension funds are key investors of corporate bonds in the country. However, investors tend to be conservative regarding credit ratings, resulting in a rating cliff in the market where corporate bonds are primarily concentrated at AA and above.
- Malaysia's bond market can accommodate both conventional and Islamic bond products. As the largest sukuk market in the world, Malaysia welcomes the issuances of sukuk by foreign entities as well as local entities.

Philippines

- The corporate bond market size of the Philippines is the second smallest next to Cambodia among seven countries which have outstanding local currency corporate bonds in ASEAN. Corporate bond issuers are mostly the companies from large conglomerates in the country, as a result, corporate bonds or their issuers are mostly rated AA or above.
- More than half of the corporate bonds in the Philippines are callable bonds, which is unique compared to other markets where straight bonds are generally dominant. In addition, unlike other ASEAN countries that have outstanding guaranteed corporate bonds, there are currently no outstanding guaranteed corporate bonds in the Philippines.

- One unique bond type in the Philippines is the bank's long-term negotiable certificates of deposit (LTNCD), which are exempt from withholding tax if issued with a maturity longer than five years. This tax incentive influenced more issuances of the bonds with maturities of five to ten years, resulting in this maturity group accounting for almost half of all corporate bonds in the country. However, there has been a moratorium on issuing LTNCDs since 2022, which is affecting the supply of LTNCDs in the market.

Singapore

- Singapore is one of the advanced markets for corporate bonds in the region. In addition, as a recognized international financial hub, Singapore is the only country where foreign issuers are actively participating the local currency corporate bond market in ASEAN.
- Singapore has notable percentages of perpetual bonds in terms of maturity distribution, callable bonds in terms of maturity type and variable coupon bonds in terms of coupon type. In fact, they are attributed to a single factor, a popularity of perpetual callable bonds in the country.
- Singapore is the country where guaranteed corporate bonds are relatively active in the region together with Cambodia and Malaysia. In addition, Singapore is the main venue for the cross-border corporate bonds guaranteed by CGIF together with Thailand.
- Singapore continues its bond grant schemes for sustainable bonds so as to increase the supply of new bond products in the market.

Thailand

- Thailand is another promising market in ASEAN, which is set to follow Malaysia and Singapore in terms of the developmental level. One key aspect in Thailand's corporate bond market is the high participation of retail investors, who hold 39% of the corporate bonds in the country. With higher participation of individual investors, more financing can flow into the domestic corporate bond market of the country.
- Thailand is notable for having a relatively well-distributed range of credit ratings for its corporate bonds, spinning from AAA to BBB. This is different from most other ASEAN countries where corporate bonds tend to be concentrated at AA and above. However, the additional spread from a one-notch downgrade jumps significantly from A- to BBB+, implying that there are some investors who can invest only A- or above rated corporate bonds.
- Thailand has specific regulations to encourage cross-border corporate bonds in the country. Baht bonds and foreign currency bonds are greatly welcomed, such that some of the documentary requirements to issue these bonds are simplified and streamlined.
- The companies from Cambodia, Lao PDR, and Myanmar tap the corporate bond market in Thailand when considering bond issuances outside of their local markets. As a result, THB is the most widely used foreign currency for companies from these three countries. This is different from other ASEAN+3 countries where USD is the most widely used currency when their companies issue bonds in foreign markets. Thailand is also the main venue for cross-border corporate bonds guaranteed by CGIF together with Singapore.

Viet Nam

- Viet Nam ranks in the middle in terms of corporate bond market size within ASEAN. Recently, the corporate bond market of Viet Nam has developed in areas such as credit rating or bond pricing services. The number of rated corporate bonds increased in 2024, following the requirement of credit ratings on publicly offered corporate bond issuances under certain conditions, effective January 1, 2024. In addition, one local credit rating agency began providing the VND credit spread matrix in 2024.
- One interesting characteristic of Viet Nam's corporate bond market is the reference rate used when pricing corporate bonds, in which the 12-month deposit rate of the four major banks in the country is applied instead of the government bond rates. This implies that corporate bonds must be more than competitive than the prevailing deposit rates to attract more investors, including the retail investors.
- While a share of guaranteed corporate bonds is not significant out of the total corporate bonds in the country, the guaranteed corporate bonds are mostly guaranteed by two international third-party guarantors, namely CGIF and GuarantCo.
- Over the past two years, Viet Nam's corporate bond market has been affected by a series of defaults. The passage of Decree 08/2023/ND-CP has contributed to the impact of the defaults in the country, such that it offers some provisions for both issuers and investors to negotiate the repayments of principal and interests.

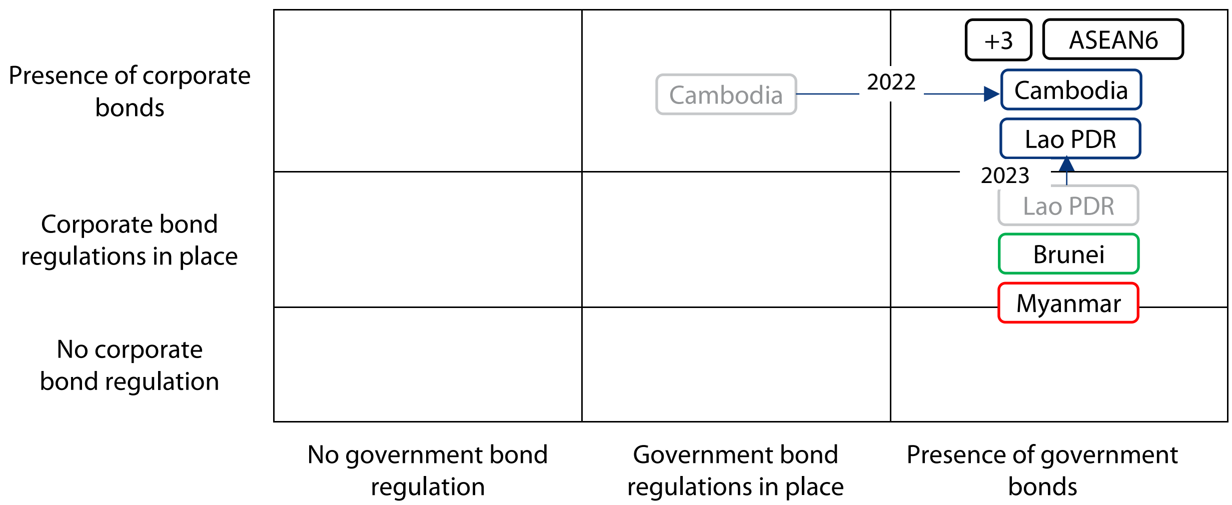
1 Overview of the Corporate Bond Markets in ASEAN+3

1.1 Developmental Stage

Each corporate bond market in ASEAN+3 is marked by different characteristics and developmental stages. The "+3 markets", which are composed of the People's Republic of China (PRC), Japan, and the Republic of Korea, have significantly large domestic corporate bond markets. On the other hand, the ASEAN market is still largely in its developmental stages, although many countries have made significant strides in developing their corporate bond market.

ASEAN6 – Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam – have maintained some momentum in growing their corporate bond market. The countries have all been exploring new bond products, particularly the thematic bonds, to encourage more investor activity in the market. Tapping the thematic bond segment also indicates a level of maturity in ASEAN6, marking that they already have the regulatory fundamentals and sufficient investor base to support such thematic bonds.

Figure 1.1: Illustration of the Developmental Stage of the ASEAN+3 Bond Market, 2023



Lao PDR = Lao People's Democratic Republic.
Source: Author's research.

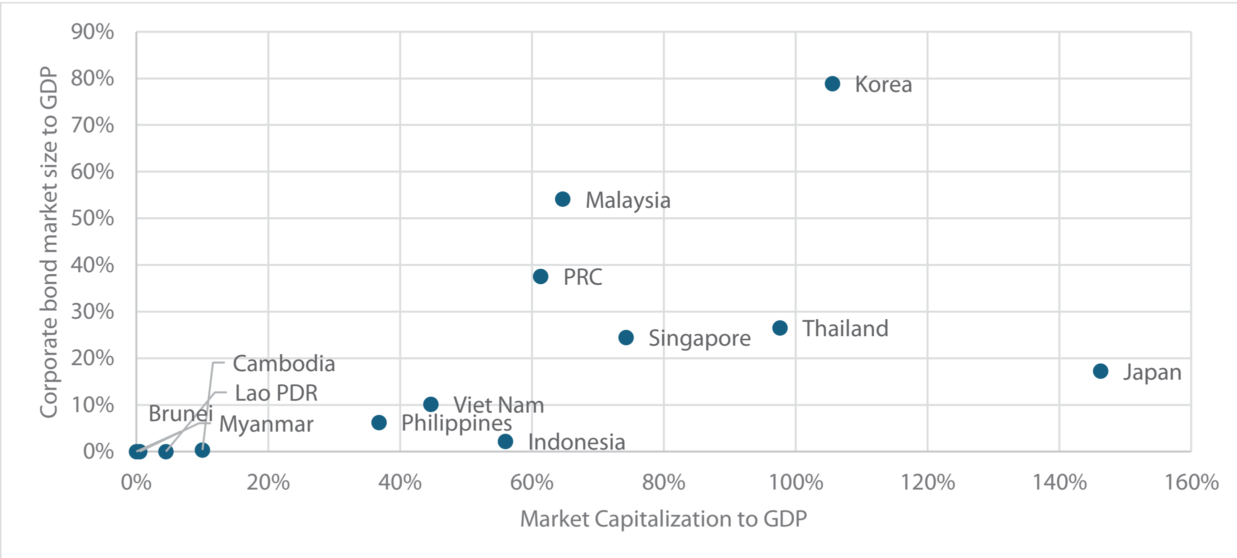
Based on Figure 1.1, Cambodia and Lao PDR implemented significant changes in their bond markets. Cambodia's corporate bond market took off much earlier than its government bond market. Nevertheless, the issuance of Cambodia's maiden sovereign bond in 2022 served as another impetus for further growth in the overall bond market of the country.

Lao PDR welcomed its first corporate bond in July 2023. Although being denominated in USD, the bond of Souvanny Home Center has a tenor of four years with a coupon rate of 7.50%. This feat may set the foundation for more corporate bond issuances in the future, especially for local currency denominated bonds.

Although the corporate bond market of Brunei has limited traction on the issuer side, Brunei has invested on corporate bonds in other ASEAN markets, which helped in developing the cross-border corporate bond market in ASEAN. Such activities indicate a more promising corporate bond market in the region in the future.

A corporate bond market typically develops following the growth of a country's stock market. Although the development of a corporate bond market is not always proportional to that of the stock market, it generally emerges once the stock market has reached a certain level of maturity. Figure 1.2 supports this statement. Brunei, Myanmar, and Lao PDR do not have local currency corporate bonds in their markets because Brunei does not have a stock market and the stock markets in Myanmar and Lao PDR are still in their early stages, with market capitalizations accounting for only 1% and 4% of their respective gross domestic products (GDPs).

Figure 1.2: Relationship between Market Capitalization to GDP and Corporate Bond Market Size to GDP, 2023



GDP = gross domestic product, Lao PDR = Lao People's Democratic Republic, PRC = The People's Republic of China.
Notes and Sources:
1. Values for the local currency (LCY) corporate bond market size and GDP as of December 2023 from Asian Bonds Online.
2. Values for the LCY corporate bond market of Viet Nam are from the Ministry of Finance, Viet Nam, as sourced from Asian Bonds Online.
3. The information on market capitalization among ASEAN countries (except Cambodia) as of end of December 2023 is sourced from Bloomberg. On the other hand, the information on market capitalization among the +3 countries is from Asian Development Bank Key Indicators Database.
4. The information on market capitalization of Cambodia is from Cambodia Stock Exchange and the information on GDP is from ADB Key Indicators for Asia and the Pacific 2024. The US dollar (USD)-equivalent of the GDP value is calculated using the exchange rate of KHR4,085 to USD1 as of 31 December 2023.

1.2 Corporate Bond Market Sizes

Table 1.1 shows the level of corporate bond market development of each country in ASEAN+3 not only in terms of absolute corporate bond market size but also in terms of relative corporate bond market size which takes into account the economic scale of each country. Corporate bond market sizes of the +3 countries are significantly larger than those of the ASEAN countries. The PRC is the largest in terms of absolute corporate bond market size, while Korea is the largest when the economic scale of each country, GDP, is taken into account. The most developed corporate bond market in ASEAN is Malaysia not only in terms of absolute size but also in terms of relative size, followed by Thailand and Singapore.

Table 1.1: Corporate Bond Market, Market Capitalization, and Gross Domestic Product of ASEAN+3, 2023

Country	LCY Corporate Bond Market (A)	GDP (B)	Market Capitalization (C)	A/B (%)	A/C (%)
PRC	6,671.44	17,762.76	10,892.23	37.56	61.25
Japan	724.60	4,203.41	6,149.20	17.24	11.78

Korea	1,470.17	1,864.13	1,967.99	78.87	74.70
Cambodia	0.10	31.21	3.13	0.32	3.19
Indonesia	29.84	1,356.91	759.90	2.20	3.93
Malaysia	184.47	341.00	220.51	54.10	83.66
Philippines	27.33	438.54	161.42	6.23	16.93
Singapore	124.77	509.96	378.76	24.47	32.94
Thailand	137.51	518.38	506.10	26.53	27.17
Viet Nam	42.51	420.44	187.75	10.11	22.64

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, GDP = gross domestic product, LCY = local currency, USD = US dollar.
Notes and Sources:
1. Values from columns A to C are in USD billions.
2. Values for the LCY corporate bond market size and GDP as of December 2023 are from Asian Bonds Online.
3. Values for the LCY corporate bond market of Viet Nam are from the Ministry of Finance, Viet Nam, as sourced from Asian Bonds Online.
4. The information on market capitalization among ASEAN countries (except Cambodia) as of end of December 2023 is from Bloomberg. On the other hand, the information on market capitalization among the +3 countries is from the Asian Development Bank Key Indicators Database.
5. The information on market capitalization of Cambodia is from Cambodia Stock Exchange and the information on GDP is from ADB Key Indicators for Asia and the Pacific 2024. The USD-equivalent of the GDP value is calculated using the exchange rate of KHR4,085 to USD1.

Table 1.2 compares the size of the corporate bond market to the size of the government bond market and the corporate loan market of each country in ASEAN+3. In terms of the size of the corporate bond market relative to the government bond market, Korea and Cambodia are the only two countries where corporate bond markets exceed government bond markets. In Korea, the high ratio is due to the well-developed corporate bond market, while in Cambodia, it is primarily attributed to the nascent state of the government bond market. On the other hand, the ratio of the corporate bond market size to the corporate loan market size indicates the extent to which companies rely on bonds for financing compared to bank loans. Korea and Malaysia are the only two countries where companies rely on bonds for financing as much as they do on bank loans. In contrast, bank loans remain the dominant source of financing in other countries, especially in Cambodia and Viet Nam.

Table 1.2: Corporate Bond Market, Government Bond Market, and Corporate Loan Market of ASEAN+3, 2023

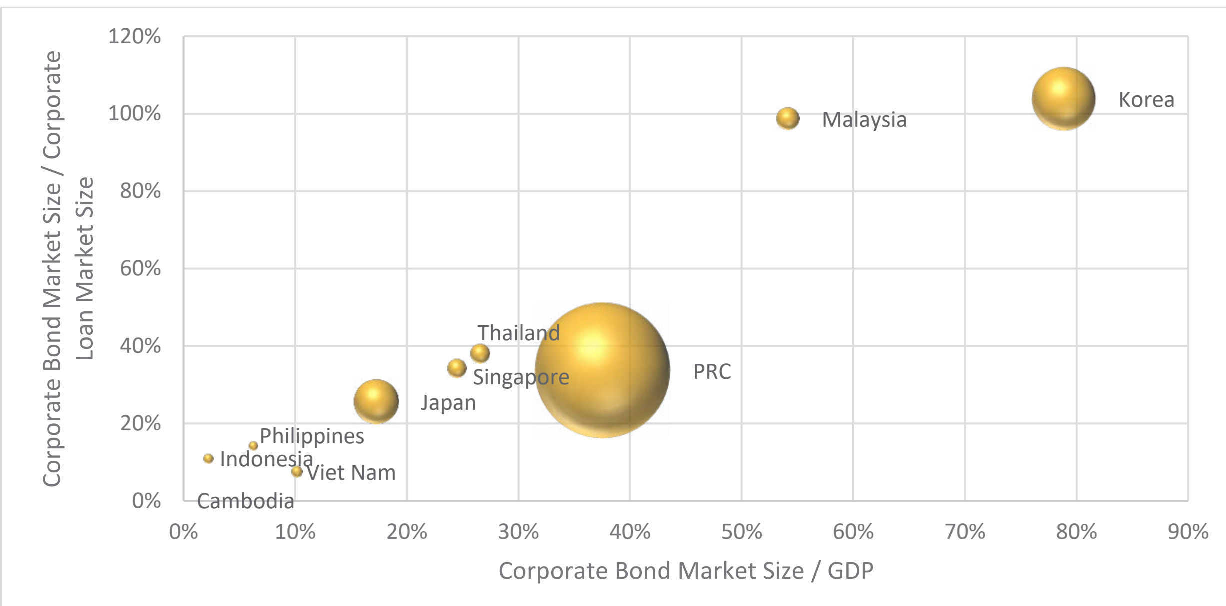
Country	LCY Corporate Bond Market (A)	LCY Government Bond Market (B)	Corporate Loan Market (C)	A/B (%)	A/C (%)
PRC	6,671.44	13,095.93	19,790.98	50.94	33.71
Japan	724.60	8,918.33	2,819.13	8.12	25.70
Korea	1,470.17	932.88	1,416.05	157.59	103.82
Cambodia	0.10	0.06	41.15	166.67	0.24
Indonesia	29.84	377.23	271.22	7.91	11.00
Malaysia	184.47	248.73	186.72	74.16	98.79
Philippines	27.33	178.3	191.76	15.33	14.25
Singapore	124.77	194.65	363.41	64.10	34.33
Thailand	137.51	230.54	360.67	59.65	38.13
Viet Nam	42.51	97.42	558.89	43.6	7.61

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CNY = Chinese yuan, LCY = local currency, USD = US dollar.
Notes and Sources:

1. Values from columns A to C are in USD billions.
2. For Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam: Asian Bonds Online for the corporate bond market size and government bond market size as of December 2023; Central bank of each country for the corporate loan market size as of December 2023.
3. For Cambodia: Cambodia Securities Exchange.
4. Brunei Darussalam, Lao PDR, and Myanmar are excluded from the list due to the absence of outstanding LCY corporate bonds in these countries.
5. Corporate loan market data of the PRC is the CNY-denominated loans to enterprises and public institutions, as reported in the Statistical Report on the Credit Structure of Financial Institutions (2023). The corporate loan market data of Korea corresponds to the corporate loans from financial institutions, as reported in the Financial Stability Report 2023 of the Bank of Korea. The corporate loan market data of Japan corresponds to the Outstanding Loans and Bills Discounted to Corporations (including financial corporations), as of December 2023, as reported by Bank of Japan.
6. The exchange rates used are as of end of December 2023, reported by Bloomberg.

Figure 1.3 shows the state of the corporate bond market development within ASEAN+3. The size of each bubble represents the corporate bond market size of each country. As shown in the figure, the PRC, Korea, and Japan have the largest corporate bond markets in absolute terms. However, when considering the relative corporate bond market size – taking into account each country's economic scale or comparing the bond market size to the corporate loan market size - Korea and Malaysia rank as the top two countries, followed by the PRC, Thailand, Singapore, and Japan. On the other hand, the corporate bond markets of Viet Nam, Philippines, Indonesia, and Cambodia are relatively small in the region, both in absolute terms and relative to the size of their economies or corporate loan markets.

Figure 1.3: State of Corporate Bond Market Development in ASEAN+3, 2023

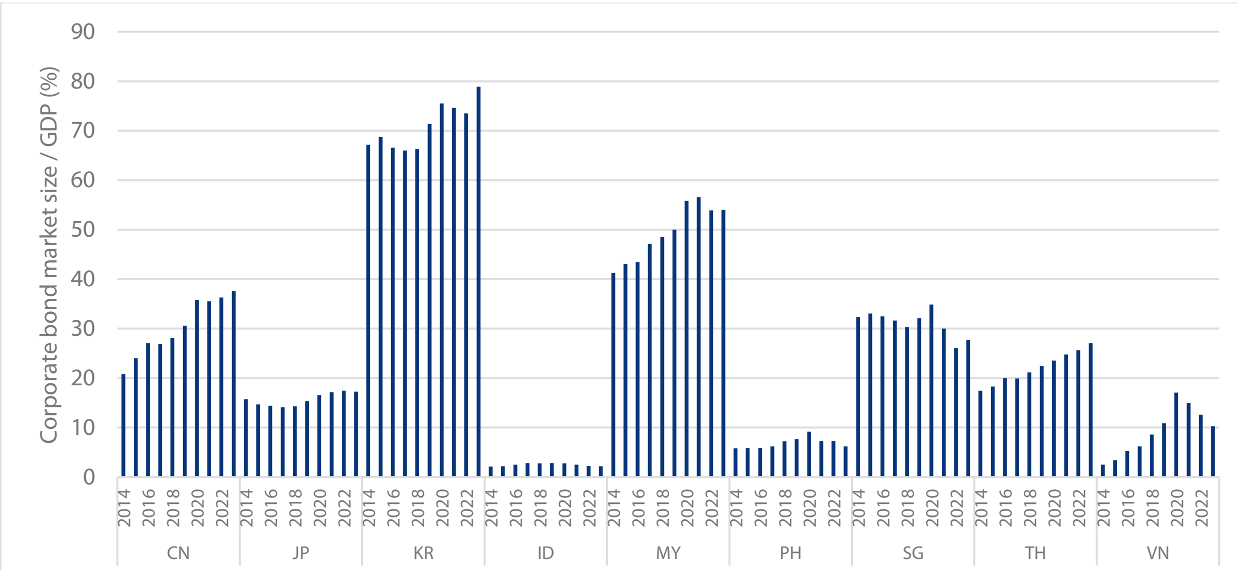


ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, GDP = gross domestic product, PRC = The People's Republic of China.
Note: The size of the bubble represents the size of the corporate bond market of the country.
Source: Author's calculations.

1.3 Historical Corporate Bond Market Sizes

Figure 1.4 shows the historical corporate bond market size in ASEAN+3 as a percentage of GDP over a 10-year period. During this period, the corporate bond markets in the PRC, Korea, Malaysia, Thailand, and Viet Nam have shown notable growth, although Malaysia and Viet Nam have experienced a decline in recent years. In contrast, the corporate bond markets of Indonesia and the Philippines remained stagnant, staying below 10% of their respective GDPs. However, this does not mean that the corporate bond markets in these countries have not experienced growth. The bars in the chart imply that these markets have grown in proportion to their GDPs over the period.

Figure 1.4: Historical Corporate Bond Market Size of ASEAN+3



ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CN = The People's Republic of China, GDP = gross domestic product, ID = Indonesia, JP = Japan, KR = Republic of Korea, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand, VN = Viet Nam.
Note: Cambodia is excluded because its corporate bond market size is still too small to be compared to its GDP.
Sources: Asian Bonds Online, 2024 and Author's calculations.

2 Specific Characteristics of the Corporate Bond Markets in ASEAN+3

This section discusses the characteristics of local currency (LCY) corporate bond markets in ASEAN+3, which includes information on the average issue sizes, coupon types, maturity type, payment rank, and credit rating distribution of corporate bonds issued in each domestic market in the region. The bonds analyzed in this section are the corporate bonds newly issued in 2023. Bonds with maturities of 6 months or shorter were excluded to prevent overrepresentation, as these bonds may be reissued within the year for roll-over purposes. It is important to note that some countries, such as Korea, do not include bonds issued by government-related entities, while others do, even though the same criteria were used for downloading bond data across all countries. As a result, the exclusion of government-related bonds – typically large in size and long in maturity – may lead to a smaller issue size and a shorter maturity distribution for Korea than they would be otherwise.

2.1 Issue Size

Table 2.1 shows the issue size of new issuances of corporate bonds in ASEAN+3. In terms of the average issue sizes, Cambodia ranks the smallest and Japan the largest. Korea, Indonesia, and Malaysia are the countries where bonds can be issued even if the issue sizes are very small. In the case of Malaysia, it has very small corporate bond issuances, which may be due to the strong presence of sukuk, where small issuances are common.

Table 2.1: Comparison of Issue Sizes of New Issuances of Corporate Bonds in ASEAN+3, 2023
(USD million)

Country	Average	Minimum	Maximum
PRC	133.34	0.42	6,300.05
Japan	171.64	2.11	1,755.62
Korea	45.29	0.00	602.67
Cambodia	16.71	10.02	20.10
Indonesia	32.54	0.00	268.30
Malaysia	30.42	0.01	538.93
Philippines	139.52	12.52	662.44
Singapore	113.57	0.38	642.29
Thailand	45.33	0.73	723.15
Viet Nam	25.33	4.53	82.27

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China, USD = US dollar.
Note: Exchange rate to USD1 are as follows: CNY7.1428, JPY142.40, KRW1,294.23, KHR4,101, IDR15,484, MYR4.6388, PHP55.342, SGD1.3234, THB34.571, and VND24,309.
Sources: Bloomberg; Cambodia Stock Exchange; and Author's calculations.

2.2 Issuance Type

The issuance of corporate bonds can come as private placement or public offering, with both methods allowed across the ASEAN+3 countries. Generally, issuances via private placements are offered to a limited number of investors – particularly the professional investors – while issuances via public offering are extended to a wider range of investors. At present, there is no data which separates the market between the two main issuance types in ASEAN.

Table 2.2 provides a summary of information about private placements and public offerings among the countries with LCY-denominated corporate bond markets in ASEAN+3. The differences between these two types of issuances reflect the possible target investors.

Table 2.2: Information about Private Placement and Private Offering in ASEAN+3

Country	Private Placement	Public Offering
PRC	Defined as the issuance of debt financing instruments by nonfinancial enterprises with legal qualifications (i.e., enterprises) to "designated institutional investors"	Offerings to a wider institutional investor base
Japan	No specific limitation on the number of investors, but is limited to particular types of investors, such as the qualified institutional investors	No specific limitation on the number and type of investors; Has specific guidelines for issuances with small amounts (less than JPY100 million)

Korea	An invitation to acquire newly issued securities without placing them for public offering	An invitation to at least 50 investors to acquire newly issued securities
Cambodia	Allowed in the market, in which the issuer must file the relevant documents	More prevalent in the market, since the regulations center on public offering issuance method, in which the issuer must seek approval of Securities and Exchange Regulator of Cambodia
Indonesia	Offerings under private placement must be for professional investors only; new regulations specify the need for registering the offering documents and continuous disclosures	A bond offering to 100 persons or resulting in sales to more than 50 persons
Malaysia	No distinct feature compared with other ASEAN markets, but the practice is allowed and is more common in wholesale bonds targeting sophisticated investors	Public offering is not mentioned as an issuance type in Malaysia. In fact, same as "private placement", public offering is only a method of issuance in the country.
Philippines	Allowed in the market in form of "exempt transactions" and offers to professional investors	Offers to more than 19 investors
Singapore	Allowed, in which bonds are offered to up to 50 investors	Allowed, wherein bonds are sold to a broader market
Thailand	Allowed, in which bonds are offered to Accredited Investors	Allowed, and can be offered to and bought by any type of investors. Publicly offered bonds are more actively traded
Viet Nam	Allowed, in which offering is to less than 100 investors	Allowed, in which bonds are offered via mass media to 100 or more investors

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.

Notes:
1. In Malaysia, "sophisticated investors" include institutional investors (e.g., banks, insurance companies, unit trusts, and pension or provident funds) and high net worth investors.
2. In the Philippines, "exempt transactions" mean offers aimed to professional investors and those under the 19-lender rule. Under exempt transactions, issuers do not need to submit a registration statement for the corporate bond to the Securities and Exchange Commission of the Philippines.
Sources: Asian Development Bank Bond Market Guides and Bank of Korea

2.3 Maturity Distribution

Table 2.3 shows the maturity distribution of corporate bonds issued in 2023. The table shows corporate bonds with maturities of up to 3 years dominate the corporate bond issuances in the PRC, Korea, Indonesia, Philippines, and Thailand. Even in Malaysia, where long-term bonds (with maturities of up to 10 years) are common in the market, the ratio of corporate bonds with maturities of up to 3 years have the highest share among maturity groups, albeit the presence of long-term bonds (with maturities of more than 10 years). In fact, the ratio of long-term bonds in Malaysia are also the highest in ASEAN. It must be noted that bonds are used in Malaysia for project finance.[1] In the case of Cambodia, all corporate bonds are issued with the maturities of longer than 3 years. It is related to the tax incentive given to the issuers when they issue long-term bonds.

[1] In other countries, bank loans are dominant in project finance. Project finance is the long-term financing of infrastructure and industrial projects based on their cash flows.

Table 2.3: Comparison of Maturity Distribution of Newly Issued Corporate Bonds in ASEAN+3, 2023 (%)

Country	Up to 3 years	> 3 to 5 years	> 5 to 10 years	> 10 years	Perpetual
PRC	84.40	8.77	5.00	1.83	-
Japan	20.77	38.36	23.54	10.86	6.47
Korea	83.19	12.06	1.80	0.78	2.18
Cambodia	-	59.90	40.10	-	-
Indonesia	79.89	18.54	1.57	-	-
Malaysia	36.54	21.38	29.80	10.17	2.11
Philippines	64.00	25.08	10.92	-	-
Singapore	16.34	30.18	27.11	-	26.37
Thailand	54.24	27.25	11.44	2.76	4.31
Viet Nam	-	82.21	17.79	-	-

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Notes:
1. Data refers to the original maturity of the bond.
2. Percentages may not total 100% because of rounding.
Sources: Bloomberg and Author's calculations.

Singapore is also unique because there is a significant amount of perpetual bonds in the market. They are mostly perpetual callable bonds which are treated as equity. They are generally called on the first call date, which is typically five years after issuance, because otherwise they would be required to pay much higher coupons.

In the Philippines, bonds with maturities of 5 to 10 years used to account for nearly half of the corporate bonds in the country. One reason for this is the withholding tax exemption applied to long-term negotiable certificates of deposits (LTNCDs), which are issued by banks with maturities of more than 5 years. It must be noted that there has been an indefinite moratorium on the issuance of LTNCDs starting January 2022, such that only those LTNCDs which are approved but unissued before end of December 2020 could still be issued. As such, only a few LTNCDs were observed to be issued after 2020 when the notice of moratorium was published.[2] As a result, corporate bonds with maturities of 5 to 10 years are no longer dominant in the Philippines.

2.4 Maturity Type

Straight bonds are dominant for corporate bonds in ASEAN+3 except the Philippines where callable bonds occupy more than a half of corporate bonds. Singapore also shows a significant share of callable bonds. They are mostly perpetual callable bonds, which are treated as equity.

Table 2.4: Comparison of Maturity Type of Newly Issued Corporate Bonds in ASEAN+3, 2023 (%)

Country	Straight	Callable	Convertible	Putable	Sinkable	Others
PRC	88.82	3.93	0.66	5.55	0.28	0.76
Japan	78.25	18.59	2.26	-	-	0.90
Korea	94.49	5.27	-	0.15	-	0.08
Cambodia	100.00	-	-	-	-	-
Indonesia	99.04	0.69	0.27	-	-	-

[2] Philippine News Agency. 2019. *BSP sets indefinite moratorium on long-term deposit issuance.* https://www.pna.gov.ph/articles/1086749#:~:text=MANILA%20%2D%2D%20An%20indefinite%20moratorium,to%20the%20regular%20time%20deposits.

Malaysia	88.43	8.20	0.20	-	0.42	2.74
Philippines	36.87	63.13	-	-	-	-
Singapore	50.42	44.34	-	-	-	5.24
Thailand	86.78	13.04	-	-	-	0.18
Viet Nam	82.21	-	-	-	2.32	15.47

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Notes:
1. Rows may not total 100% because of rounding.
2. For Malaysia, Singapore, and Thailand, perpetual callable bonds are included in the callable category.
3. "Others" refers to the maturity types with two features, such as callable/sinkable and callable/putable, and extendible.
Sources: Bloomberg and Author's calculations.

2.5 Coupon Type

Table 2.5 provides the comparison of coupon type for newly issued corporate bonds in 2023. The PRC has the highest ratio of zero-coupon bonds due to the abundance of short-term corporate bonds, which are commercial papers or negotiable certificate of deposits having maturities of up to 1 year. Although fixed coupon type is a common coupon type among ASEAN countries, floating rate bonds are more common in Cambodia and Viet Nam. Variable coupon bonds in Singapore are mostly related to perpetual callable bonds whose coupons are fixed until call dates and coupons after call dates are re-fixed with the benchmark rates at call dates plus spreads. As such, the bonds that are classified as variable coupon bonds in Singapore are closer to fixed coupon bonds rather than variable coupon bonds.

Table 2.5: Comparison of Coupon Type of Newly Issued Corporate Bonds in ASEAN+3, 2023 (%)

Country	Fixed	Floating	Step	Variable	Zero	Others
PRC	43.90	-	0.91	6.11	49.08	-
Japan	78.32	0.13	-	18.61	2.94	-
Korea	88.32	10.59	-	-	1.08	-
Cambodia	20.00	39.90	-	40.10	-	-
Indonesia	97.61	-	1.58	-	0.81	-
Malaysia	72.89	13.62	0.25	1.07	12.12	0.05
Philippines	99.19	-	-	-	0.81	-
Singapore	62.17	11.18	-	26.65	-	-
Thailand	88.66	0.05	0.30	4.31	6.69	-
Viet Nam	42.54	57.46	-	-	-	-

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Notes: Rows may not total 100% because of rounding.
Sources: Bloomberg and Author's calculations.

Table 2.6 shows the different reference rates for floating rate corporate bonds in the ASEAN+3 countries, where such bonds are notably issued. In Korea, the certificate of deposit (CD) rate used to be the most common reference rate for floating rate bonds, but it has been replaced by cost of funds index (COFIX) or Korean Interbank Offered Rate (KORIBOR). Malaysia and Singapore use their respective interbank rates as reference rates for floating rate bonds, while Cambodia uses the secured overnight financing rate (SOFR), and Viet Nam uses the average 12-month deposit rates.

Table 2.6: Information on Reference Rates for Floating Rate Corporate Bonds in ASEAN

Country	Reference Rate	Description
Korea	Cost of Funds Index (COFIX)	COFIX reflects the average cost of funds for a group of major banks in Korea, based on the interest they pay for deposits and other funding sources.
Cambodia	Secured Overnight Financing Rate (SOFR)	A reference rate established as an alternative to the London Interbank Offered Rate (LIBOR).
Malaysia	Kuala Lumpur Interbank Offer Rate (KLIBOR)	KLIBOR was introduced in 1987 as an official indicator of the conditions in the ringgit interbank money market. Tenors of the KLIBOR are 1 month, 2 months, 3 months, 6 months and 12 months.
Singapore	Singapore Overnight Rate Average (SORA)	SORA is the volume-weighted average rate of borrowing transactions in the unsecured overnight interbank Singapore dollar cash market. Tenors of the interbank rates of SORA are 1 week, 1 month, 2 months, 3 months, 6 months, and 12 months.
Viet Nam	Average 12-month deposit rates	This will be computed based on the deposit rates given by the four state-owned banks (Bank for Investment and Development of Vietnam, Vietcombank, VietinBank, Agribank).

Sources: Korea Financial Investment Association (KOFIA); Cambodia Securities Exchange (CSX); Vietnam Bond Market Association (VBMA); Monetary Authority Singapore (MAS); Bloomberg; and Author's research.

2.6 Payment Rank

Unsecured bonds are dominant for corporate bonds in all ASEAN+3 countries in terms of payment rank. Malaysia has a high ratio of corporate bonds with secured payment rank, while Singapore has a high ratio for subordinated bonds. A high level of secured bonds in Malaysia is linked to developed project-related bonds in the country because project bonds are structured similar to project finance loans in which security is a common characteristic. Japan has a high ratio of secured and subordinated bonds.

Table 2.7: Comparison of Payment Rank of Newly Issued Corporate Bonds in ASEAN+3, 2023 (%)

Country	Secured	Unsecured	Subordinated
PRC	0.11	95.51	4.39
Japan	15.98	68.23	15.80
Korea	6.46	89.92	3.63
Cambodia	-	100.00	-
Indonesia	7.65	91.69	0.65
Malaysia	17.25	75.83	6.92
Philippines	-	100.00	-
Singapore	7.64	65.28	27.08
Thailand	10.39	84.94	4.67
Viet Nam	-	100.00	-

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.

Notes:

1. Rows may not total 100% because of rounding.
2. Secured bonds include first, second, and third liens, and asset-backed securities.

Sources: Bloomberg and Author's calculations.

On the other hand, the high ratio of subordinated bonds in Singapore is associated with the issuance of perpetual callable bonds which are characterized to be subordinated bonds with variable coupons. As reference, Table 2.8 is an example of the structure of a subordinated bond in Singapore.

Table 2.8: Example of Perpetual SGD-denominated Callable Bond in Singapore

Issuer	XXX Company
Issue Date	13 August 2021
Maturity	Perpetual, Callable on 13 August 2026 with par value
Coupon Rate	3% until 13 August 2026
	After 13 August 2026, SGD Sovereign 5Y rate on 13 August 2026 + 2%

SGD = Singapore dollar, Y = year.
Source: Bloomberg.

2.7 Credit Ratings

Table 2.9 shows the credit rating distribution of each country with rated LCY corporate bonds that were issued in 2023. Credit ratings are from the most widely used local rating agency of each country except Singapore where they are from one of the most recognized international rating agencies, Moody's. Rating cliffs are observed from some ASEAN+3 countries. In Japan, Korea, and Indonesia, most rated corporate bonds are issued with an A rating or higher. In the PRC, Malaysia and the Philippines, most rated corporate bonds are issued with an AA rating or higher. All rated corporate bonds in Cambodia are issued with an AAA rating. Singapore and Thailand are the countries where significant BBB-rated corporate bonds are observed. Singapore, in particular, can have significant BBB-rated corporate bonds because they can be invested by foreign investors, given that these bonds are investment grade in terms of international rating scale.

Table 2.9: Comparison of Current Credit Ratings of Newly Issued Corporate Bonds in ASEAN+3, 2023 (%)

Country	AAA	AA	A	BBB	Below BBB
PRC	93.93	5.86	0.21	-	-
Japan	2.10	50.54	46.58	0.78	-
Korea	46.02	46.67	6.67	0.41	0.22
Cambodia	100.00	-	-	-	-
Indonesia	46.14	-	42.64	0.45	-
Malaysia	52.67	42.82	4.51	-	-
Philippines	94.85	5.15	-	-	-
Singapore	14.85	-	17.47	67.69	-
Thailand	5.64	21.10	46.48	22.63	4.16

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea; PRC = The People's Republic of China.
Notes:
1. Credit rating distributions are based on the most recent credit ratings as of November 2024, which is downloaded from Bloomberg. Only newly issued corporate bonds in 2023 are used in this table.
2. Bonds whose credit ratings are not available or withdrawn are excluded in the calculation of the percentages.
3. The following domestic credit rating agencies (CRAs) are used for each market: China Chengxin Credit Ratings Company for the PRC, Rating & Investment Information Inc. (R&I) for Japan, Korea Ratings Corporation for Korea, Rating Agency of Cambodia (RAC) for Cambodia, PEFINDO Rating for Indonesia, RAM Rating for Malaysia, PhilRatings for the Philippines, Moody's for Singapore, and TRIS Rating for Thailand. The table reflects the equivalent rating scales of each domestic credit rating agency. Short-term ratings are excluded from the computation of the distribution of credit ratings.
4. Despite having three domestic CRAs, Viet Nam is excluded from the table due to lack of published information on rated corporate bonds. At present, only the issuer ratings are being disclosed publicly by the domestic CRAs in the country.
Sources: Bloomberg and Author's calculations.

Viet Nam is a developing case in ASEAN's corporate bond market in terms of credit rating information. Some issuers opt to have their bonds privately rated, and thus, the credit rating and the consequent credit rating report are not disclosed to the public. These ratings are used for their direct communications to their creditors and lenders. For bond issuance, issuers are using their issuer ratings instead. In the coming years, it is expected that Viet Nam's corporate bond market will be more accustomed to credit ratings – whether issuer ratings or bond ratings – as the domestic CRAs continue to enhance their capacities.[3]

3 Investors

This section provides information on the investors of corporate bonds in ASEAN+3. The bond investors in ASEAN+3 are segmented into institutional investors and retail investors. In some markets, high net worth individuals are also active investors of corporate bonds.

3.1 Investor Compositions

Table 3.1 shows the investor profile of the corporate bond market in ASEAN+3. Four institutional investors are active in the region, namely commercial banks, insurance companies, mutual funds, and pension funds. Mutual funds and pension funds are investing in corporate bonds as they need them for their investment targets on the funds that they manage.

Table 3.1: Major Investor Groups in ASEAN+3, 2024

Country	Largest Investor Group	Second Largest	Third Largest
PRC	Commercial Banks	Unincorporated products	Insurance companies
Japan	Insurance companies	Pension funds	Individuals
Korea	Asset Management Companies	Insurance Companies	Banks
Cambodia	Commercial Banks	Insurance Companies	
Indonesia	Insurance and Pension Funds	Mutual Funds	Banks
Malaysia	Commercial Banks	Insurance Companies	Pension Funds
Philippines	Commercial Banks	Insurance Companies	Mutual Fund
Singapore	Private Banking	Commercial Banks	Mutual Funds
Thailand	Individuals	Insurance Companies	Government Pension Fund, Provident Funds, and Social Security Office
Viet Nam	Commercial Banks	Insurance Companies	Securities Companies

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Sources:
1. PRC: *China Central Depository & Clearing Annual Report*.
2. Japan: *Japan Securities Dealers Association Fact Book 2024*.
3. Korea: Investor group data from Korea Financial Investment Association (KOFIA).
4. Cambodia: Market interviews.
5. Indonesia: *Indonesia Bond Market Directory 2023*.
6. Malaysia: *Asian Bond Online Malaysia Market Summary, November 2018*.
7. Philippines: Market interviews.

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[3] Chapter 5 of this report includes the credit rating agencies in ASEAN, where it is shown the partnerships that domestic CRAs have formed with international CRAs to improve their capacities in delivering credit rating services.

8. Singapore: Monetary Authority Singapore (MAS). *Singapore Corporate Debt Market Development 2020*.
9. Thailand: Thai Bond Market Association (ThaiBMA) *2023 Bond Market Highlights*.
10. Vietnam: Vietnam Bond Market Association (VBMA), January 2023.

Until recently, mutual funds were considered the top investor group in Indonesia due to the tax incentives extended to them. However, in 2021, the tax rate became unified across all investor groups in the country. This gives more opportunities for other investor groups to invest in corporate bonds.

Thailand presents a different investor profile than the rest of the countries in ASEAN+3. The largest investor group in the corporate bond market of Thailand is individual investors. According to the 2023 annual report of the Thai Bond Market Association (ThaiBMA) on Thailand's bond market, individual investors held 39% of corporate bonds in the country, while the second largest investor group, insurance companies, held only 16%.

As mentioned earlier in this report, regulations on bond offerings are considering a more conducive environment for professional investors, which may include high net worth individuals (HNWIs). In Singapore, HNWIs have been active in accessing the bond market through the private banks. With the implementation of appropriate regulations and guidelines to encourage active and transparent participation of HNWIs, they can become an active investor group in the corporate bond market in the future.

One key investor group observed in the PRC is "unincorporated products". Unincorporated products are considered as the products that are managed by banks, insurance companies, asset management companies, or securities companies. However, instead of these institutions, it is their clients who are the actual owners of the unincorporated products. These products include wealth management products, securities investment funds, trust funds, and insurance products as well as the funds that are managed by asset management companies. These products are primarily invested by individual investors, with institutional investors participating to a lesser extent. As a result, the investment appetite for unincorporated products mirrors that of individual investors, who have generally low-risk appetite in the PRC.

3.2 Investment Appetite Per Domestic Investor Group

Table 3.2 attempts to map the common aspects in the investment appetite of domestic investor groups in ASEAN+3. The banks' investment appetites on corporate bonds are generally 1) short to medium in terms of maturity to match the short-term maturity profile of their liabilities (e.g., customer deposits), 2) LCY and USD in terms of currency and 3) moderate in terms of credit rating because they already provide loans to SMEs.

On the other hand, the investment appetite of insurance companies on corporate bonds can be described as 1) long in terms of maturity to match the long-term profile of their liabilities, 2) mostly LCY in terms of currency and 3) highly rated in terms of credit rating because they are considered as conservative investors. Pension funds are largely similar to insurance companies in terms of investment appetite because they are also considered as long-term conservative investors.

The investment appetites of mutual funds on corporate bonds are generally 1) relatively short in terms of maturity, 2) LCY and FCY in terms of currency and 3) diverse in terms of credit rating because of the differences in the investment objectives of their clients. Individual investors often pursue higher yields and do not have internal guidelines on the credit ratings eligible for their corporate bond investments. While some countries have regulations that do not allow banks or security companies to sell corporate bonds below certain credit ratings to retail investors, HNWIs are generally exempt from these regulations as they are considered professional investors.

Table 3.2: Investment Appetite of Major Domestic Investor Groups for LCY-denominated Corporate Bonds in ASEAN+3, 2024

Investor Group	Tenor	Currency	Credit Rating
Banks	Up to 5 years	LCY and USD	BBB and higher
Insurance Companies	Up to 10 years or longer	Mostly LCY	A and higher
Mutual Funds	Up to 3 years	LCY and FCY	Diverse
Pension Funds	Up to 10 years or longer	LCY and FCY	A and higher
Individuals	Up to 10 years	LCY and FCY	Diverse

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, FCY = foreign currency, LCY = local currency, USD = US dollar.
Note: The credit rating reflects the scale in each domestic market in ASEAN.
Source: Market interviews.

The following section provides notable information on the five investor groups in ASEAN:

Banks

Commercial banks in ASEAN+3 generally prefer to invest in the shorter end of the tenor, as most of the bonds are held for their treasury operations and need more liquid instruments to support their deposit liabilities. The private banking sector has different appetites for corporate bonds as it is for high-net-worth clients. The private banking sector is considered as the biggest investor group in Singapore, which invests in perpetual bonds as their high-net worth individual clients prefer to invest them due to the high yields.

Insurance Companies

Insurance companies generally invest in long-term bonds to match their long-term liabilities, which arise from traditional policies they sell, such as life insurance or pensions. In addition, they have a low tolerance on credit risk, which leads them to invest primarily in high-grade bonds for their corporate bond investments. In some ASEAN+3 countries, especially Indonesia, investment-linked insurance product (ILIP), which is a combination of insurance and mutual funds, has gained popularity. Mutual funds in ILIP can be one of the following types: equity, bonds, time deposits, mixed, or USD bonds. As a result, insurance companies invest in short-term bonds or USD bonds.

On the other hand, insurance companies in Singapore can invest in unrated bonds, given the abundant unrated corporate bonds supply in the country's corporate bond market. However, unrated bonds do not mean risky bonds because many of them are issued by Singapore government owned entities. In terms of currency, insurance companies can invest in other major currencies in addition to SGD, as Singapore is recognized as an international financial hub in ASEAN.

Mutual Funds

Investment appetite of mutual funds in ASEAN+3 can be different from each other. For instance, Indonesia's mutual fund industry has the Capital Protected Fund (CPF) product, which is recognized as the most popular product. CPF offers protection on capital by holding bonds until their maturity. Corporate bonds are preferred by CPF because of their higher yields.

Depending on the requirements and investment objectives of their clients, mutual funds can have a diverse appetite for credit ratings. Conservative clients generally require investment-grade ratings, while HNWIs may prefer investing in unrated or high-yield bonds to achieve higher returns.

Pension Funds

Pension funds are another important investor group in the ASEAN+3 corporate bond market. ASEAN+3 countries have their own mandated pension funds, with Malaysia having one of the established and successful pension fund systems in the region. The pension system in Malaysia is composed of three main bodies: the Retirement Fund

(KWAP), which is the pension fund for government employees; the Employees' Provident Fund (KWSP), which serves the private sector employees; and the Armed Forces Fund (LTAT), which is the pension fund for military personnel.

Pension funds prefer investing in long-term bonds because their liabilities are also long. One reason Malaysia has more long-term bonds than other ASEAN countries is that pension funds are significant investors on corporate bonds in the country. Especially, EPF is the seventh largest pension fund in the world, with total assets valued at USD238 billion as of 31 December 2020.

Individuals

Individuals are active investors for corporate bonds in some ASEAN+3 countries. They generally pursue higher yields than institutional investors at the cost of taking more risks. In Thailand where individuals are the most active for investing corporate bonds, they have also showed the appetite for CGIF-guaranteed bonds, although these are not their preferred high yield bonds.

In the Philippines, individuals are the main investors in bonds with maturities longer than 5 years, particularly those issued by banks (LTNCDs). This is because bonds issued by banks with an initial maturity of over 5 years are exempt from withholding tax. Individuals could benefit more from withholding tax exemptions than institutional investors, who are generally indifferent to withholding taxes because these taxes are deducted from the corporate taxes they owe at the end of the tax year. As the supply of LTNCDs has become scarce due to a regulatory change, individuals in the Philippines are now rarely investing in banks' long-term instruments.

3.3 Risk Weight and Risk Charge Regulations

The preceding sections show that banks and insurance companies are among the key investors of corporate bonds. To promote financial stability in the market, central banks and financial regulators implement regulations that require banks and insurance companies to maintain a certain level of capital, commonly referred to as capital adequacy ratios (CAR). This section focuses on risk weights and risk charges for the ASEAN countries.

Table 3.3 provides the references for the CAR regulations for banks in ASEAN countries. These regulations largely follow the Basel guidelines.

Table 3.3: List of Relevant Regulations on the Capital Adequacy Ratio Requirements for Banks in ASEAN

Country	Regulation for Credit Risk Weight Calculations	Implementing Agency / Regulator
Cambodia	NBC Prakas on Credit Risk for Capital Adequacy Ratios in Deposit-Taking Banks and Financial Institutions	National Bank of Cambodia (NBC)
Indonesia	OJK Circular No. 24/SEOJK.03/2021 Calculation of Risk-Weighted Assets for Credit Risks Through a Standard Approach for Commercial Banks	Financial Services Authority of Indonesia / Otoritas Jasa Keuangan (OJK)
Malaysia	Bank Negara Malaysia Capital Adequacy Framework (Basel II – Risk Weighted Assets), issued on 3 May 2019	Central Bank of Malaysia / Bank Negara Malaysia (BNM)
Philippines	Manual of Regulations for Banks 2020	Central Bank of the Philippines / Bangko Sentral ng Pilipinas (BSP)
Singapore	MAS Notice 637 Notice on the Risk Based Capital Adequacy Requirements for Banks Incorporated in Singapore	Monetary Authority of Singapore (MAS)
Thailand	Notification of the Bank of Thailand No. FPG. 9/2562 Re: Regulations on the Calculation of Credit Risk-Weighted	Bank of Thailand (BOT)

	Assets for Commercial Banks under the Standardized Approach (SA)	
Viet Nam	Circular No. 41/2016/TT-NHNN Capital Adequacy Requirements for Foreign-owned Banks and Branches of Foreign-owned Banks in Viet Nam Circular No. 22/2023/TT Amending and Supplementing a Number of Articles of Circular No. 41/2016/TT-NHNN	State Bank of Vietnam (SBV)

ASEAN = Association of Southeast Asian Nations
Sources: Circulars, memorandums, and notices of regulators in their respective websites.

Table 3.4 shows the relevant regulations on capital adequacy framework for insurance companies. One key point to note is that there is no one capital adequacy framework regime implemented across ASEAN, unlike that of the banking industry. ASEAN countries implement either a solvency margin or a risk-based capital (RBC) framework.

Table 3.4: List of Relevant Regulations on the Capital Adequacy Ratio Requirements for Insurance Companies in ASEAN

Country	**Type of Capital Adequacy Framework**	**Regulation**	**Implementing Agency / Regulator**
Cambodia	Solvency Margin	NBC Prakas on Determination of Solvency Ratio for Insurance Company (2022)	National Bank of Cambodia (NBC)
Indonesia	Risk-based	OJK Circular Letter No. 24/SEOJK.05/2017 Concerning Guidelines for Calculation of Risk-Based Minimum Capital Amount for Insurance and Reinsurance Companies	Financial Services Authority of Indonesia / Otoritas Jasa Keuangan (OJK)
Malaysia	Risk-based	Risk-Based Capital Framework for Insurers	Central Bank of Malaysia / Bank Negara Malaysia (BNM)
Philippines	Risk-based	IC Circular Letter 2016-68 Amended Risk-Based Capital (RBC2) Framework	Insurance Commission Philippines
Singapore	Risk-based	MAS Notice 133 – Notice on Valuation and Capital Framework for Insurers	Monetary Authority of Singapore (MAS)
Thailand	Risk-based	OIC Notification on Criteria, Procedures, and Conditions for Calculation of Capital Amount	Office of the Insurance Commission Thailand (OIC Thailand)
Viet Nam	From Solvency I to Risk-Based	New Insurance Business Law 2022 No. 08/2022/QH15	Ministry of Finance Viet Nam (MOF Viet Nam)

ASEAN = Association of Southeast Asian Nations.
Sources: Circulars, memorandums, and notices of regulators in their respective websites.

Risk Weight Regulations for Banks

Risk weights for banks depend on the asset class, the risk class and the type of issuer of the security. As this report centers on the corporate bond market, it would be of interest to focus on the risk weight to exposures to banks, including multilateral development banks, and corporates.

Exposures to Multilateral Development Banks

Before delving into the analysis of specific risk weights for banks and corporates, it is important to note that ASEAN countries allow a 0% risk weight for exposures to eligible and recognized multilateral development banks (MDBs) and international organizations. Most ASEAN countries follow the Basel guidelines in identifying which MDBs are eligible for a 0% risk weight. Under the Basel guidelines, other MDBs may be added to the list of 0% risk weight MDBs, provided they meet the AAA rating criterion at the time of application.[4] MDBs can enjoy 0% risk weight as long as their credit ratings stay AA- or higher. Otherwise, the risk weights of MDBs are adjusted based on their corresponding credit ratings.

Table 3.5*: List of Multilateral Development Banks and International Organizations Eligible for 0% Risk Weight*

Multilateral Development Bank / International Organization	Basel	KH	ID	MY	PH	SG	TH	VN
World Bank Group	✓	✓	✓	✓	✓	✓	✓	✓
Asian Development Bank	✓	✓	✓	✓	✓	✓	✓	✓
African Development Bank	✓		✓	✓	✓	✓	✓	✓
European Bank for Reconstruction and Development	✓	✓	✓	✓	✓	✓	✓	✓
Inter-American Development Bank	✓		✓	✓	✓	✓	✓	✓
European Investment Bank	✓		✓	✓	✓	✓	✓	✓
European Investment Fund	✓		✓	✓	✓	✓	✓	✓
Nordic Investment Bank	✓		✓	✓	✓	✓	✓	✓
Caribbean Development Bank	✓		✓	✓	✓	✓	✓	✓
Islamic Development Bank	✓		✓	✓	✓	✓	✓	✓
The Council of Europe Development Bank	✓		✓	✓	✓	✓	✓	✓
Asian Infrastructure Investment Bank	✓	✓	✓	✓	✓	✓	✓	
The International Finance Facility for Immunization	✓		✓	✓	✓	✓	✓	
New Development Bank			✓					
International Monetary Fund					✓	✓		✓
Bank for International Settlements					✓	✓		✓
European Central Bank					✓	✓		✓
European Community					✓	✓		✓

KH = Cambodia, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.
Note: World Bank Group includes International Bank for Reconstruction and Development, International Finance Corporation, Multilateral Investment Guarantee Agency, and International Development Association.
Source: Regulations of each ASEAN country in Table 3.3.

It is important to take note of Cambodia's list of MDBs with an assigned 0% risk weight. Cambodia assigns a 0% risk weight to New Development Bank despite the bank not having been rated AAA at its inception, which is a condition for 0% risk weight under the Basel guidelines. Malaysia, Philippines and Thailand assign 0% risk weight to International Monetary Fund, Bank of International Settlements, European Central Bank and European Community.

[4] The Basel guidelines are set by the Basel Committee on Banking Supervision (BCBS), which is the primary global standard setter for the prudential regulation of banks.

Exposures to other MDBs not included in the countries' lists would be subject to a risk weight according to the credit rating of the security of the MDB. For instance, across the seven countries included in this report, if the security of the MDB has AA rating, then the corresponding risk weight is 20%. The risk weight for unrated securities ranges from 50% to 150%, while those rated below the investment grade of BBB- will have risk weight ranging from 100% to 150%.

Table 3.6: Risk Weight for Exposures to Other Multilateral Development Banks (%)

Credit Rating	Basel	KH	ID	MY	PH	SG	TH	VN
AAA to AA-	20	20	20	20	20	20	20	20
A+ to A-	30	30	30	50	50	50	50	50
BBB+ to BBB-	50	50	50	50	50	50	50	50
BB+ to BB-	100	100	100	100	100	100	100	100
Below B-	150	150	150	150	150	150	150	150
Unrated	50	50	50	50	100	50	50	150

KH = Cambodia, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand, VN = Viet Nam.
Notes:
1. The credit rating is based on the rating scale of S&P Global.
2. "Other Multilateral Development Banks" refers to the MDBs that are not in the list of MDBs assigned with a 0% risk weight.
Sources: Local regulations of each country, as indicated in Table 3.3.

Exposures to Banks

Table 3.7 shows the risk weights for exposures to banks. Across ASEAN, there is uniformity in the risk weight for bonds rated AA- to AAA. However, the risk weights for bonds rated A+ or lower vary based on the region. For example, Cambodia and Indonesia follow the Basel guidelines by assigning a minimum 30% risk weight for bonds rated A- to A+, while other ASEAN countries assign a 50% risk weight for bonds in this credit rating category. Another implication based on the assigned risk weights is that unrated bonds generally have lower risk weight than bonds below investment grade of BBB-.

Table 3.7: Risk Weight for Exposures to Banks (%)

Credit Rating	Basel	KH	ID	MY	PH	SG	TH	VN
AAA to AA-	20	20	20	20	20	20	20	20
A+ to A-	30	30	30	50	50	50	50	50
BBB+ to BBB-	50	50	50	50	50	50	100	50
BB+ to BB-	100	100	100	100	100	100	100	80
B+ to B-	150	150	150	150	100	100	150	80
Below B-	150	150	150	150	150	150	150	100
Unrated	n/a	n/a	n/a	50	n/a	100	100	150

KH = Cambodia, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand, VN = Viet Nam.
Notes:
1. The credit rating is based on the rating scale of S&P Global.
2. "n/a" denotes not applicable, as the local regulations do not indicate a risk weight for the indicated credit rating.
3. The risk weights reflect those for long term bonds issued by banks.
Sources: Local regulations of each country, as indicated in Table 3.3.

Exposures to Corporates

Table 3.8 shows the risk weight for exposures assigned to bonds of corporates. This shows that ASEAN generally follows the Basel guidelines. Similar to banks, the bonds rated with AAA to AA- have a 20% risk weight across ASEAN. There is also consistency between Basel guidelines and ASEAN's regulations on the assigned risk weights to bonds with credit rating of A+ to A-, BB+ and below, as well as unrated bonds. On the other hand, there is divergence from the Basel guidelines for bonds with rating of BBB+ to BBB- in Malaysia, Philippines, Singapore and Thailand.

Table 3.8: Risk Weight for Exposures to Corporates (%)

Credit Rating	Basel	KH	ID	MY	PH	SG	TH
AAA to AA-	20	20	20	20	20	20	20
A+ to A-	50	50	50	50	50	50	50
BBB+ to BBB-	75	75	75	100	100	100	100
BB+ to BB-	100	100	100	100	100	100	100
Below BB-	150	150	150	150	150	150	150
Unrated	100	100	n/a	100	100	100	100

KH = Cambodia, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.

Notes:

1. The credit rating is based on the rating scale of S&P Global.
2. "n/a" denotes not applicable, as the local regulations do not indicate a risk weight for the indicated credit rating.

Sources: Local regulations of each country as indicated in Table 3.3.

Viet Nam has a different methodology for calculating risk weights for exposures to corporates. Circular No. 41/2016/TT-NHNN and Circular 22/2023/TT-NHNN state that the risk weight for exposures to corporates is determined based on factors, such as the revenue, leverage ratio, and equity of the corporate. According to the circulars, the revenue must come from the business performance report or financial statements of the corporate. The leverage ratio is the ratio of total debt to total assets, in which the total debt is determined by the sum of short-term and long-term loans and financial lease debt, in accordance with the current accounting regulations. Lastly, the equity must come from the balance sheet. Table 3.9 shows the assigned risk weights for exposures to corporates in Viet Nam.

Table 3.9: Assigned Risk Weights to Corporates in Viet Nam (%)

	Revenue under VND100 billion	Revenue from VND100 billion to less than VND400 billion	Revenue from VND400 billion to VND1,500 billion	Revenue of more than VND1,500 billion
Leverage Ratio of less than 25%	100	80	60	50
Leverage Ratio from 25% to 50%	125	110	95	80
Leverage Ratio of more than 50%	160	150	140	120
Businesses that do not provide financial statements: 200				
Newly established businesses operating for less than a year: 150				

VND = Viet Nam dong.

Sources: Circular 22/2023/TT-NHNN and Circular 41/2016/TT-NHNN.

Acceptance of Guarantor Ratings

In the case of an unrated bond with a guarantee from a guarantor, the credit rating of the guarantor can be used as the basis of the risk weight of the bond. Table 3.10 shows that all ASEAN countries follow the fundamental requirements in accepting the credit rating of bond guarantors as a credit risk mitigant.

Table 3.10: Acceptance of Credit Ratings of Bond Guarantors for Risk Weights on Banks

Basel's Requirements for Acceptance of Guarantor Ratings	KH	ID	MY	PH	SG	TH
Direct claim on the guarantor	✓	✓	✓	✓	✓	✓
Extent of the guarantee cover is clearly defined and incontrovertible	✓	✓	✓	✓	✓	✓
Irrevocable and unconditional	✓	✓	✓	✓	✓	✓

No clause in the contract that would allow the guarantor unilaterally to cancel the cover or change the conditions	✓	✓	✓	✓	✓	✓

KH = Cambodia, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.
Sources: Local regulations of each country, as indicated in Table 3.4.

Risk Charge Regulations for Insurance Companies

Exposures to Multilateral Development Banks

Insurance regulators in ASEAN also specify which MDBs have a preferential risk charge, as shown in Table 3.11.[5] Cambodia and Viet Nam are excluded in this table because insurance companies in these countries follow solvency frameworks, which do not consider risk charges.

Table 3.11: Multilateral Development Banks with Preferential Risk Charges

Multilateral Development Banks	ID	MY	PH	SG	TH
World Bank Group, including	✓	✓	✓	✓	✓
Asian Development Bank	✓	✓	✓	✓	✓
African Development Bank		✓	✓	✓	
European Bank for Reconstruction and Development		✓		✓	
Inter-American Development Bank	✓	✓	✓	✓	
European Investment Bank		✓	✓	✓	
European Investment Fund		✓			
International Monetary Fund	✓	✓		✓	
Bank for International Settlements		✓		✓	
Nordic Investment Bank		✓			
Caribbean Development Bank		✓			
Islamic Development Bank		✓			
Council of Europe Development Bank		✓			

ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.
Note: World Bank Group includes International Bank for Reconstruction and Development, International Finance Corporation, Multilateral Investment Guarantee Agency, and International Development Association.
Sources: Local regulations of each country, as indicated in Table 3.4.

Assigned Risk Charges

For insurers, risk charges for their bond investments vary across different countries. AAA-rated bonds have the lowest risk charge across ASEAN. However, there is a significant gap between Thailand and other ASEAN countries as Thailand only mandates a 0.01% risk charge on such high-grade investments.

Table 3.12: Risk Charges to Bond Investments in ASEAN (%)

Credit Rating	ID	MY	PH	SG	TH
AAA	1.6	1.6	1.5	0.5	0.01
AA+ to AA-	2.8	2.8	1.5	1.0	0.35
A+ to A-	4.0	4.0	4.0	2.0	0.4

[5] It is important to note that there is no one recognized international organization which set the global standards and guidelines on the insurance industry, unlike the banking sector which is covered by the BCBS. Some of the capital adequacy frameworks for risk management in insurance industry are the Risk-Based Capital Adequacy Framework, the Solvency Framework, and the Insurance Capital Standard.

BBB+ to BBB-	6.0	6.0	6.0	5.0	1.5
BB+ to BB-	12.0	12.0	12.0	10.5	4.0
B+ to B-	12.0	12.0	12.0	10.5	14.0
Below B-	12.0	12.0	25.0	20 to 48.5	14.0
Unrated	12.0	12.0	15-25	7.75	14.0

ASEAN = Association of Southeast Asian Nations, ID = Indonesia, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.
Sources: Local regulations of each country, as indicated in Table 3.4.

Acceptance of Guarantor Ratings

Upon reviewing the regulations, it may seem that some ASEAN countries allow the use of guarantor ratings, while others are still unclear on the use of guarantor ratings.

Table 3.13: Acceptance of Credit Ratings of Bond Guarantors for Risk Charges on Insurance Companies

Country	Acceptance of Guarantor Ratings in the Regulations	Conditions for the Use of Guarantor Ratings
Indonesia	Unclear	*The regulation does not mention the acceptance of guarantor ratings.*
Malaysia	Yes	• Direct claim on the guarantor. • Cover all payments of debt obligor for full term. • Irrevocable and unconditional.
Philippines	Unclear	*Amended RBC Framework does not mention any acceptance of guarantor ratings for RBC computations.*
Singapore	Yes	• When guarantee is: 1) direct, 2) explicit, 3) irrevocable, 4) unconditional, and 5) legally enforceable.
Thailand	Yes	• Unconditional, covering both principal and interest.

Sources: Local regulations of each country, as indicated in Table 3.4.

4 Issuers

Table 4.1 provides the profile of the corporate bond issuers in ASEAN+3. Among these countries, banks are the most active issuer group in the PRC. They mainly issue short-term bonds or the negotiable certificate of deposits. In Korea and Japan, other financial companies are more active than banks in tapping the corporate bond market for alternative financing.

In ASEAN, Thailand maintains to have a relatively balanced corporate bond market, where issuers from different industries have already tapped the corporate bond market. In contrast, the corporate bond issuances from the Philippines are concentrated on real estate and banking sectors.

Table 4.1: Corporate Bond Issuer Profile in ASEAN+3, 2023 (%)

Industry	CN	JP	KR	KH	ID	MY	PH	SG	TH	VN
Consumer Discretionary	3.57	12.22	5.86	31.72	6.30	4.90	-	9.56	14.08	27.07
Consumer Staples	0.51	5.30	1.40	-	2.09	1.40	-	1.06	10.17	27.07
Energy	0.99	0.69	2.22	-	3.12	2.78	-	7.79	5.34	-
Real Estate	4.57	4.64	0.41	4.68	1.14	12.67	44.05	35.02	13.02	-
Banks	59.02	6.44	31.89	-	10.82	25.88	44.91	19.82	11.07	11.76
Other Financials	12.11	30.52	46.51	-	38.07	29.78	-	21.80	18.69	15.46
Industrials	15.04	14.79	1.70	-	11.30	4.92	-	2.83	4.03	15.47

Materials	1.77	5.39	2.95	-	25.41	1.04	-	-	4.97	3.17
Utilities	1.77	8.31	1.72	-	-	12.59	9.18	-	9.86	-
Others	0.65	11.7	5.34	63.60	1.75	4.04	1.86	2.12	8.77	-

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CN = The People's Republic of China, ID = Indonesia, JP = Japan, KH = Cambodia, KR = Republic of Korea, MY = Malaysia, PH = Philippines, SG = Singapore, TH= Thailand, VN = Viet Nam.

Notes:

1. Industry classification is based on Bloomberg's industry classification.
2. Cambodia's industry classification is matched to Bloomberg's industry classification based on the company descriptions, which are found at Cambodia Securities Exchange (CSX).
3. The distribution of the issuer profile is computed based on the value of the corporate bonds issued in 2023, as expressed in the local currency of each market.

Source: Bloomberg, CSX, and Author's calculations.

Cambodia has a different corporate bond issuer profile, wherein the companies from the communications sectors (represented as "Others") are more active. Banks used to issue bonds in Cambodia. However, no bonds were issued by banks in 2023.[6]

It is also notable that in the Philippine corporate bond market, most of the issuers are listed in the local stock exchange of the country. As listed companies give investors an assurance on the level of transparency that these companies comply with (for instance, the recent business information is accessible in the local stock exchange and these companies are obligated to practice continuous disclosure), investors are more comfortable to invest in them. Being listed may also affect the issuers' decision to secure credit ratings separately for each of their bond issuances. As established names in the local market, listed companies may not feel the need to secure credit ratings for each bond.

In the case of the PRC, the local government financing vehicles (LGFVs) are active issuers of corporate bonds.[7] An LGFV is in the form of an investment company that raises capital by securing bank loans or issuing corporate bonds and other securities to finance real estate development and other local infrastructure projects. In return, the local government transfers the rights on land use and other existing assets, such as highways or bridges, as collateral to the LGFVs for equity ownership. LGFVs are still considered as corporate debt, but investors believe that the local governments are accountable for them. In the case of Korea, most government-related entities are not included in the corporate bonds data because most public corporations or state-owned enterprises (SOEs) are classified as government rather than corporates by Bloomberg. If government-related entities were included, the weights on banks and other financials would likely have been lowered in Korea.

[6] Cambodian banks that previously issued corporate bonds are Hattha Bank Plc. in 2018, Advanced Bank of Asia Limited in 2019 and Phnom Penh Commercial Bank in 2020.

[7] The LGFVs are established after the 2008 financial crisis when the Chinese government undertook a CNY4 trillion national stimulus plan. Bloomberg. 2023. *Why LGFV is a Growing Risk for China's Economy: QuickTake*. 4 July. https://news.bloomberglaw.com/capital-markets/why-lgfv-debt-is-a-growing-risk-for-chinas-economy-quicktake

5 Other Market Participants

5.1 Regulators

Table 5.1 lists the recent regulations for the corporate bond market in selected countries in ASEAN+3. The new regulations set forth in these countries indicate differences in the situations of the local bond market. Given Cambodia's nascent market, the new regulations aim to stimulate more activity in its corporate bond market. As such, Cambodia continues to offer tax incentives for three years for both issuers and investors. On the other hand, Thailand's new regulations are directed towards facilitating more cross-border bonds in their local market. Thailand provided clarity on the credit rating requirements for the Baht bonds and foreign currency bonds (FX bonds).

Table 5.1: List of Regulators and the Recent Regulations for Corporate Bond Market in ASEAN+3

Country	Corporate Bond Market Regulator	Recent Regulations on Corporate Bond Market	Key Contents
PRC	China Securities Regulatory Commission (CSRC) or the National Development and Reform Commission (NDRC)	New Securities Law (2020)	There will be a registration system for publicly issued securities (including corporate bonds). The revised law will also strengthen the processes and activities for better investor protection.
Cambodia	Securities and Exchange Regulator of Cambodia	Sub-Decree No. 42 dated 24 February 2022 on Tax Incentive on Securities Sector	Reduction in the annual income tax rates (or Tax on Income, ToI) for 3 years Tax incentives for issuers: • Applicable to issuers of bonds with a minimum tenor of 7 years. • 50% reduction of the ToI payable, if the issuance size in proportion to the total assets is at least 20.001%. • 49.998% to 2.5% reduction of the ToI payable, following a declining proportion if the issuance size in proportion to the total assets is within 20% to 1%. However, the ToI incentive shall not exceed KHR8 billion (approximately USD2 million). Tax incentives for public investors who are holding and/or trading government and corporate bonds listed at Cambodia Stock Exchange (CSX): • 50% reduction in withholding tax on interest for 3 years from the implementation date of the Sub-Decree.

			Tax incentives for public investors who are trading bonds listed at the CSX: • Exemptions from capital gains tax for 3 years from the implementation date of the Sub-Decree.
	Ministry of Economy and Finance	Prakas 346 on Capital Gains Tax	Imposition of 20% capital gains tax on non-government bonds (thus, corporate bonds), which will be effective starting from 1 January 2025.
Indonesia	Financial Services Authority of Indonesia / Otoritas Jasa Keaungan (OJK)	Issuance and Requirements for Debt Securities and Sukuk Based on Sustainability (POJK 18/2023)	Expanded the scope of eligible bonds to include green sukuk, social bonds and sukuk, sustainability bonds, waqf sukuk, and sustainability-linked bonds.
Philippines	Securities Commission Philippines	Guidelines on Eligible Blue Projects and Activities for the Issuance of Blue Bonds in the Philippines (2023)	Emphasizes the requirement of issuers of blue bonds in the Philippines to comply with the ASEAN Green Bond Standards and promotes the continuous reporting on the use of proceeds.
Thailand	Securities and Exchange Commission (SEC) Thailand	Notification of the Capital Market Supervisory Board No. TorChor. 60/2566 Re: Application for and Approval of the Offering for Sale of Newly Issued Debt Instruments to the Public in General (No. 5)	Offering of Baht bonds does not need to be approved by the MOF Thailand. The application for approval must be submitted to SEC Thailand only.
		Notification of the Capital Market Supervisory Board No. TorChor. 61/2566 Re: Application of and Approval of the Offering for Sale of Newly Issued Debt Instruments on a Private Placement Basis and the Offering of Convertible Debentures to Qualified Investors (No. 5)	Baht bonds and foreign currency-denominated bonds (FX bonds) must have credit ratings of investment grade from any international credit rating agency, except for those bonds offered under private placement for up to 10 investors (PP10). An investment grade rating must be maintained throughout the tenor of the bonds. FX bonds must be registered with the Thailand Bond Market Association (ThaiBMA).
		Notification of the Capital Market Supervisory Board No. TorChor. 62/2566 Re: Temporary Waiver on the Credit Rating Requirements for the Approval of the Offering for Sale of Baht-Denominated or Foreign Currency-Denominated Bonds or Debentures in	Baht Bonds and FX bonds which do not have an international investment grade rating may ask for a waiver, as long as the use of proceeds of the bonds is refinancing of existing bonds. The waiver is available to issuers with outstanding bonds as of 31 December 2023. Issuers must complete the issuance of new bonds until 31 December 2028.

		Thailand on a Private Placement Basis by Foreign Entities	
Viet Nam	Ministry of Finance Viet Nam	Decree 08/2023/ND-CP amending, supplementing, and suspending the effect of a number of articles of the Decrees prescribing private placement and trading of privately placed corporate bonds	In case of delays in payments of principal and interest of outstanding, the issuer can negotiate with the investors the payments due. Issuers can also change the terms and conditions of the bond. The issuer can ask for an extension of the term of the bond for up to 2 years, in addition to its original maturity. The introduction of professional investors concept and the mandatory credit rating requirement are suspended until 31 December 2023.

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Sources:
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The implementation of Decree 08/2023/ND-CP in Viet Nam is aimed to address the missed payments of bond principal and interests, particularly in the real estate sector. This regulation is expected to contribute to a reduction in the number of missed payments in recent months. Meanwhile, Indonesia's recent regulation is intended to increase issuances of sustainability bonds.

Table 5.2 enumerates the policies and programs implemented by Korea, Malaysia, and Singapore, which helped these countries maintain and further develop their bond market initiatives in recent years. These countries continue to implement the bond market programs to further strengthen and ensure the sustainability of bonds in their domestic markets.

Table 5.2: Continuing Policies and Programs on Corporate Bond Markets in Korea, Malaysia, and Singapore

Country	Corporate Bond Market Regulator	Continuing Policies and Programs on Corporate Bond Market	Key Contents
Korea	Korea Exchange (KRX)	Launch of the Socially Responsible Investment (SRI) Bonds Market (2020)	This initiative provides more transparency on the SRI bonds in Korea.
Malaysia	Securities Commission Malaysia	Sustainable and Responsible Investment (SRI) Sukuk and Bond Grant Scheme (2018)	The Scheme covers 90% of the costs incurred by issuers on independent

			expert reviews of eligible sustainable sukuk issuances.
Singapore	Monetary Authority of Singapore	Sustainable Bond Grant Scheme (SBGS)	The grant program covers up to SGD125,000 of expenses incurred for external reviews of eligible green, social, sustainability, sustainability-linked, and transition bonds.

Notes and Sources:

1. The SRI Sukuk and Bond Grant Scheme of Malaysia, formerly known as the Green SRI Sukuk Grant Scheme, was launched in 2018. To be eligible for the bond grant scheme, the sustainable bonds must align with the Securities Commission Malaysia's SRI Sukuk Framework or bonds issued in Malaysia under the ASEAN Green, Social and Sustainability Bond Standards and SRI-linked Sukuk under the SRI-linked Sukuk Framework or bonds issued under the ASEAN Sustainability-Linked Bond Standards. Other terms for the eligibility are enumerated in the Securities Commission Malaysia's website: https://www.sc.com.my/api/documentms/download.ashx?id=dbdf1bea-8612-4ead-a171-830b9257f24a
2. The SBGS encourages the adoption of internally recognized standards and taxonomies for potential sustainability bond issuers. The grant under the SBGS is valid until 31 December 2028. Additional information on the bond grant scheme is found in the Monetary Authority of Singapore website: https://www.mas.gov.sg/schemes-and-initiatives/sustainable-bond-grant-scheme
3. Korea Exchange (KRX) is technically not a regulator in the Korean corporate bond, but more of a self-regulatory organization (SRO). More information about the SRI Bond Market of Korea is found at https://sribond.krx.co.kr/en/01/01010000/SRI01010000.jsp#

5.2 Credit Rating Agencies

Credit rating agencies are important participants in the bond market, especially the corporate bond markets. The credit ratings provided by these agencies help investors manage risk exposure and make informed investment decisions by assessing credit risk. Table 5.3 lists the credit rating agencies (CRAs) that are active in the local currency corporate bond markets in ASEAN+3. The table shows that the PRC has the highest number of registered CRAs across the region. It is important to note that some local CRAs partner with internationally recognized CRAs to enhance their technical capabilities and knowledge.

Table 5.3: List of Recognized Credit Rating Agencies for LCY Corporate Bonds in ASEAN+3, 2024

Country	Credit Rating Agencies
PRC	China Chengxin Securities Rating China Chengxin International Credit Rating* United Credit Ratings China Lianhe Credit Rating* Dagong Global Credit Rating Shanghai Brilliance Credit Rating & Investors Service* CSCI Pengyuan Credit Rating China Bond Rating Fareast Credit Rating Co. Ltd.* S&P Global (China) Ratings Fitch (China) Bohua Credit Ratings Ltd.
Japan	S&P Global Ratings Japan, Inc. S&P Global SF Japan Inc. Moody's Japan K.K. Moody's SF Japan K.K. Fitch Ratings Japan Limited Rating and Investment Information, Inc. Japan Credit Rating Agency, Ltd.*

Korea	Korea Investors Service, Inc. Korean Ratings Corporation* NICE Investors Service Co. Ltd.
Cambodia	Rating Agency of Cambodia
Indonesia	PT Pemeringkat Efek Indonesia (PEFINDO)* PT Fitch Ratings Indonesia
Malaysia	RAM Ratings Services Berhad* Malaysian Rating Corporation Berhad (MARC)*
Philippines	Philippine Rating Services Corporation (PhilRatings)* Credit Rating and Investors Services Philippines Inc.
Singapore	Fitch Ratings Singapore Moody's Investors Service Singapore Standard & Poor's Singapore A.M. Best-Asia Pacific (Singapore)
Thailand	Thai Rating and Information Services (TRIS)* Fitch Ratings (Thailand) Limited
Viet Nam	Saigon Phat Thinh Rating* FiinRatings Joint Stock Company (FiinRatings) Vietnam Investors Service and Credit Rating Agency Joint Stock Company (VIS Rating)

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, LCY = local currency, PRC = The People's Republic of China.
* These credit rating agencies (CRAs) are members of the Association of Credit Rating Agencies in Asia, which was established in 2001 to promote mutual cooperation among the members for the purpose of improving rating quality.
Sources:
1. Asian Development Bank Bond Market Guide of each country.
2. For Japan: https://www.fsa.go.jp/en/regulated/licensed/cra.pdf

While credit ratings can be voluntarily secured by bond issuers to attract more investors, they are required mandatorily for corporate bond issuances under certain circumstances. Table 5.4 shows the circumstances of each country in ASEAN+3. In general, credit ratings are required more for public offering bonds than private placement bonds. Malaysia and Singapore do not have credit rating requirements.

Table 5.4: Credit Rating Requirements in ASEAN+3, as of end of 2023

Country	Application of mandatory credit rating requirement	Exemptions to credit rating requirements
PRC	In the exchange bond market, public offerings must be rated AAA in the domestic rating scale. Otherwise, bonds rated lower can be offered publicly to qualified investors only, which is subject to additional documentary requirements.	Bond offerings via private placement are not required to meet a specific credit rating level.
Japan	For corporate bonds listed under the Tokyo Pro-Bond Market	Public bond offerings are not necessarily required to be rated.
Korea	All bond issuances must be rated.	
Cambodia	For plain bonds under public offerings	Guaranteed bonds
Indonesia	For publicly offered bonds with at least 1 year maturity	Privately placed bonds
Malaysia	None	
Philippines	For bonds with issuance amounts of more than 25% of the issuer's net worth, or if there is an irrevocable committed credit line with a bank covering 100% of the proposed issuance	
Singapore	None	

Thailand	For bonds issued under public offerings For bonds issued to specific investors who are subject to investment regulations of their respective regulatory bodies	For bonds issued under private placement to Accredited Investors (PP-AI)
Viet Nam	For corporate bonds issued under public offerings or private placements Credit ratings are required for corporate bonds under Decree 155/2020/ND-CP and Decree 08, subject to conditions.	

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.

Notes:

1. Cambodia: Under the exempt conditions of the Prakas on Public Offering of Debt Securities, if there is no CRA accredited by the Securities and Exchange Regulator of Cambodia, the issuer must submit a report on the level of financial ratios such as cash flow ratio, leverage ratio, and coverage ratio, and others with certification of the appropriateness from its experts or underwriter.
2. Viet Nam: The implementation of mandatory credit ratings for bonds has been delayed from 2023 to 2024 to provide some time for issuers and other market participants to prepare for this new requirement in the bond market of the country.

Sources: Applicable regulations governing corporate bond issuance in each country; and Asian Development Bank Bond Market Guides.

Credit ratings must be secured from the licensed and recognized CRAs approved by the regulatory authority of each country to comply with the requirements outlined in Table 5.4. The regulatory authority of each country to approve credit rating agencies is listed in Table 5.5.

Table 5.5: Regulators for Credit Rating Agencies in ASEAN+3

Country	**Regulatory Authority for Credit Rating Agency**
PRC	People's Bank of China China Securities Regulatory Commission National Development and Reform Commission
Japan	Financial Services Agency
Korea	Financial Services Commission
Cambodia	Securities and Exchange Regulator of Cambodia
Indonesia	Otoritas Jasa Keaungan (OJK)
Malaysia	Securities Commission Malaysia
Philippines	Securities and Exchange Commission Philippines
Singapore	Monetary Authority of Singapore
Thailand	Securities and Exchange Commission of Thailand
Viet Nam	Ministry of Finance

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.

Source: Asian Development Bank Bond Market Guides and Author's research.

5.3 Bond Pricing Agencies

Bond pricing agencies play a crucial role in the financial markets by providing essential information and services related to bond pricing. These agencies calculate and publish the current market value of various bonds. In addition, they often provide the yield matrix which contains the information on the yields of bonds across different maturities and credit ratings. This helps investors and issuers make informed decisions when investing in or issuing bonds with specific maturities and credit ratings.

In the PRC, the ChinaBond Pricing Center Co. Ltd. serves as the bond pricing agency for the country's interbank bond market.[8] ChinaBond Pricing Center provides eight data categories that fully reflect the price and risk level of the CNY bond market: the ChinaBond yield curve, ChinaBond valuation, ChinaBond index, ChinaBond VaR, ChinaBond-implied market rating, ChinaBond statistics, ChinaBond SPPI, and ChinaBond Debt Management Tool. In addition, China Securities Index Company, a Chinese financial research firm and index provider, provides bond pricing among other services. The company was founded in August 2005 as a joint venture between Shanghai Stock Exchange and Shenzhen Stock Exchange.

In addition to the private bond pricing agencies in Table 5.6, Korea Exchange (KRX) and Korea Financial Investment Association (KOFIA) also provides information on bond prices. Private bond pricing agencies and KOFIA provides the daily yield matrix free of charge. Japan's bond pricing agency is the Japan Securities Dealers Association (JSDA).

Table 5.6: Agencies Providing Bond Prices in ASEAN+3, 2024

Country	Agency Providing Daily Corporate Bond Price Information	Remarks
PRC	ChinaBond Pricing Center Co. Ltd. China Securities Index Company	Available for comprehensive bond pricing functions
Japan	Japan Securities Dealers Association (JSDA)	Provides daily valuation on traded bonds
Korea	Korea Asset Pricing (KAP) KIS Pricing, an affiliate of Moody's NICE P&I FnPricing	Available for comprehensive bond pricing functions
Cambodia	Cambodia Securities Exchange (CSX)	Available only for book values of outstanding corporate bonds listed in CSX
Indonesia	PT Penilai Harga Efek Indonesia (PHEI)	Available for comprehensive bond pricing functions
Malaysia	Bond Pricing Agency Malaysia (BPAM)	Available for comprehensive bond pricing functions
Philippines	Philippine Dealing Exchange (PDEX)	Available for daily outstanding corporate bond prices listed in PDEX
Singapore	Singapore Exchange (SGX)	Available for daily outstanding corporate bond prices listed in SGX
Thailand	Thailand Bond Market Association (ThaiBMA)	Available for comprehensive bond pricing functions
Viet Nam	FiinRatings	Available for comprehensive bond pricing functions

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Source: Asian Development Bank Bond Market Guides; Websites of each Bond Pricing Agency; and Author's research.

[8] It is important to note that the PRC's corporate bond market is segmented into four segments, with the interbank bond market being the largest.

In ASEAN, Indonesia and Malaysia have dedicated local bond pricing agencies in their markets. These bond pricing agencies have comprehensive functions, such as providing the daily outstanding bond prices in their local markets and the daily yield matrix that covers all available maturities and credit ratings for various sectors in their markets.

Although Thailand and Viet Nam do not have domestic bond pricing agencies, these countries have other local institutions that perform comprehensive bond pricing functions. In Thailand, the Thai Bond Market Association (ThaiBMA) also acts as the country's bond pricing agency. In Viet Nam, FiinRatings, one of the domestic CRAs, recently developed a corporate bond pricing function that provides not only the fair values of outstanding corporate bonds, but also a credit spread matrix that corresponds to specific credit ratings and maturity groups.

Cambodia, Philippines, and Singapore do not have domestic bond pricing agencies, and the yield matrix of their respective local currency bonds is not available from any local institution. However, the exchanges of the Philippines and Singapore provide the daily prices of the outstanding corporate bonds listed in their respective exchanges. The Cambodia Securities Exchange (CSX) provides a page that displays the daily and the historical prices of each outstanding corporate bond listed in the exchange. It is important to note, however, that these prices represent only the book values.

Local currency corporate bonds can also be priced by Bloomberg, depending on their availability. Bloomberg provides the Bloomberg Valuation Service (BVAL) prices for bonds available on Bloomberg, regardless of whether they are denominated in major currencies or non-major currencies. According to market participants in Singapore, Bloomberg is widely used for pricing of SGD corporate bonds.

6 Credit Spreads

A credit spread indicates the price of a credit risk. As government bonds are considered free of credit risk in each country, a credit spread is calculated as the difference between the yield on a corporate bond and the yield on a government bond with the same maturity. Viet Nam is unique in that credit spreads are added to the 12-month deposit rate, rather than the government bond rate with same maturity, regardless of the tenor of corporate bonds. Credit spreads become wider as credit rating goes down because more compensation is required for investors to take more risk. Depending on countries, the availability of credit spread data is different based on their situations as described in Table 6.1.

Table 6.1: Availability of Credit Spread Data

Situations	Degree of credit spread data	Countries
• Benchmark government bonds corresponding to tenors of corporate bonds are unavailable.	• Credit spread is not available due to the absence of benchmark government bond rate.	Cambodia
• Benchmark government bonds corresponding to tenors of corporate bonds are available. • Credit ratings of corporate bonds are available. • No institution provides a yield matrix for local currency bonds.	• Credit spreads depending on credit ratings are available by calculating the spreads of different credit ratings. • Credit spreads are calculated by using only the actual transaction rate of corporate bond, hence, they are not available for all tenors and credit ratings.	Philippines and Singapore
• Benchmark government bonds corresponding to tenors of corporate bonds are available. • Credit ratings of corporate bonds are available.	• Credit spreads for specific tenors and credit ratings are provided by bond pricing agencies or institutions that have bond pricing functions.	PRC, Japan, Korea, Indonesia, Malaysia, Thailand, and Viet Nam

• An institution provides a yield matrix for local currency bonds.

PRC = The People's Republic of China.
Source: Author's research.

Based on the credit spread data available for each country, characteristics of credit spreads of each country in ASEAN+3 were investigated as follows.

PRC

China Securities Index Company releases the daily yield matrix for securities of different rating classes in different tenors. Table 6.2 shows the yield matrix for corporate bonds according to the rating classes in the PRC in selected key tenors. The yields of corporate bonds in the PRC increase as the tenors become longer and credit ratings get lower.

Table 6.2: Yield Matrix of CNY-denominated Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
Government	1.39	1.50	1.70	1.90	2.05
AAA	2.03	2.07	2.16	2.18	2.32
AA	2.16	2.28	2.44	2.49	2.73
A	7.05	7.35	7.65	7.69	7.88

CNY = Chinese yuan, Y = year.
Note: The yields for bonds rated BBB+ and below are not available.
Source: China Securities Index

Once the yield matrix is provided, the credit spread for each maturity and each credit rating can be calculated by subtracting the government bond yield that has the same maturity from the corporate bond yield. Table 6.3 shows the credit spread matrix composed of credit spreads that are calculated from the yields in Table 6.2. For example, AA 3-year spread, 0.78%, in Table 6.3 is calculated by subtracting the 3-year government bond yield of 1.50% from the 3-year AA yield of 2.28% in Table 6.2.

It is prominent that credit spreads jump dramatically from AA to A across all tenors. This implies that the companies in the PRC find issuing bonds difficult if they are rated A or below.

Table 6.3: Credit Spreads of CNY-denominated Corporate Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
AAA	0.64	0.57	0.46	0.28	0.27
AA	0.77	0.78	0.74	0.59	0.68
A	5.66	5.85	5.95	5.79	5.83

CNY = Chinese yuan, Y = year.
Source: China Securities Index; Author's calculations

China Securities Index Company separates the yields of corporate bond issuances and those of commercial bank bonds. Table 6.4 shows the difference between the yields of corporate bonds and commercial bank bonds. It is observed that banks can issue bonds at lower yields than corporations with the same credit rating and maturity. This difference becomes even more pronounced when credit ratings drop to A. This suggests that A-rated banks may still be able to issue bonds, while A-rated corporations could face more difficulty doing so.

Table 6.4: Comparison of Yields Between CNY-denominated Corporate Bonds and CNY-denominated Commercial Bank Bonds, as of 25 September 2024 (%)

Bond Type (Rating Class)	1Y	3Y	5Y	7Y	10Y
Corporate (AAA)	2.03	2.07	2.16	2.18	2.32
Bank (AAA)	1.88	1.95	2.01	2.1	2.24
Difference	0.15	0.12	0.15	0.08	0.08
Corporate (AA)	2.16	2.28	2.44	2.49	2.73
Bank (AA)	2.05	2.15	2.26	2.33	2.46
Difference	0.11	0.13	0.18	0.16	0.27
Corporate (A)	7.05	7.35	7.65	7.69	7.88
Bank (A)	2.69	3.25	3.34	3.44	3.56
Difference	4.36	4.10	4.31	4.25	4.32

CNY = Chinese yuan, Y = year.
Note: The difference is calculated by subtracting the yields of commercial bank bonds from the yields of corporate bonds with the same credit rating and maturity.
Source: China Securities Index and Author's calculations.

Japan

Table 6.5 shows the yield matrix of JPY-denominated corporate bonds and sovereign bonds of Japan across key tenors, as provided by Bloomberg. There is no dedicated bond pricing agency that provides a yield matrix of JPY denominated bonds in Japan. That said, Bloomberg offers a daily yield matrix of JPY bonds, based on the original sources from R&I or JCR, both of which are credit rating agencies in Japan. Table 6.5 shows that the yields increase as the tenor lengthens and the rating class downgrades.

Table 6.5: Yield Matrix of JPY-denominated Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
Government	0.19	0.35	0.46	0.55	0.81
AAA	0.42	0.59	0.73	0.85	1.23
AA	0.55	0.79	0.97	1.09	1.49
A	0.74	1.00	1.18	1.41	1.58
BBB	0.81	1.00	1.71	1.36	-

JPY = Japan yen, Y = year.
Note: There is no available yield data for 10-year BBB-rated bond in Japan.
Source: Bloomberg; Author's calculations

Table 6.6 presents the credit spreads of JPY-denominated bonds. The spread differences are not significant across rating classes and tenors. It is observed that 7-year spread of BBB rating is tighter than that of A rating. Although this anomaly is considered temporary, spreads of BBB rating are generally tight throughout the tenors in Japan compared with other countries. This implies that BBB rated issuers may issue bonds in Japan with reasonable credit spreads.

Table 6.6: Credit Spreads of JPY-denominated Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
AAA	0.23	0.24	0.27	0.30	0.42
AA	0.36	0.44	0.51	0.54	0.68
A	0.55	0.65	0.72	0.86	0.77
BBB	0.62	0.65	1.25	0.81	-

JPY = Japan yen, Y = year.

Note: The credit spread for BBB rating class for 20Y tenor is not available, as there are no yields for the BBB rating class beyond the 10Y tenor.
Source: Bloomberg and Author's calculations.

Korea

Table 6.7 shows the yield matrix for sovereign and corporate bonds in Korea based on the rating class and key tenors. The information presented is sourced from Bloomberg. The KRW yield matrix from Bloomberg is based on the simple average of yield contributions from private pricing providers.

Table 6.7: Yield Matrix of KRW-denominated Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	10Y	20Y
Government	2.84	2.85	2.87	3.02	2.93
AAA	3.24	3.25	3.30	3.61	4.31
AA	3.28	3.35	3.44	4.23	5.27
A	3.68	3.99	4.68	5.62	6.31
BBB	5.87	7.89	8.27	8.78	9.44

KRW = Korean won, Y = year.
Source: Bloomberg and Author's calculations.

Table 6.8 shows the credit spreads for the corporate bonds in Korea. The credit spread gaps between AAA- and AA-rated corporate bonds for 1-year and 3-year tenors are smaller compared to those for tenors of 5-year and above. The credit spread gaps between A- and BBB-rated corporate bonds are significantly high, implying that corporate bond investors in Korea are hesitant to invest in BBB-rated bonds unless they receive substantial compensation.

Table 6.8: Credit Spreads of KRW-denominated Corporate Bonds, as of 25 September 2024 (%)

Rating Class	1Y	3Y	5Y	10Y	20Y
AAA	0.40	0.40	0.43	0.59	1.38
AA	0.44	0.50	0.57	1.21	2.34
A	0.84	1.14	1.81	2.60	3.38
BBB	3.03	5.04	5.40	5.76	6.51

KRW = Korean won, Y = year.
Source: Bloomberg and Author's calculations.

Indonesia

Indonesia's local bond pricing agency, Penilai Harga Efek Indonesia (PHEI), provides a daily yield matrix. Table 6.9 shows the IDR yield matrix from PHEI as of 13 September 2024. The yield matrix indicates the yields that correspond to each maturity and each sector or credit rating.

Table 6.9: Yield Matrix of IDR-denominated Bonds, 13 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
Government	6.42	6.46	6.52	6.57	6.65
AAA	6.9	7.03	7.16	7.3	7.45
AA	7.31	7.57	7.83	8.09	8.32
A	8.27	8.9	9.39	9.74	9.97
BBB	10.33	11.06	11.66	12.19	12.69

IDR = Indonesian rupiah, Y = year.
Source: Indonesia Bond Pricing Agency/ Penilai Harga Efek Indonesia (PHEI).

Table 6.10 shows the credit spread matrix composed of credit spreads that are calculated from the yields in Table 6.9. The credit matrix of Table 6.10 provides the following implications about the credit spreads of the IDR corporate bond market. First, credit spreads become wider as the tenor increases, regardless of the credit rating. Second, as credit ratings drop from AAA to AA, A, and BBB, credit spreads tend to widen by approximately two times with each downgrade.

Table 6.10: Credit Spreads of IDR-denominated Corporate Bonds, 13 September 2024 (%)

Rating Class	1Y	3Y	5Y	7Y	10Y
AAA	0.48	0.57	0.64	0.73	0.80
AA	0.89	1.11	1.31	1.52	1.67
A	1.85	2.44	2.87	3.17	3.32
BBB	3.91	4.60	5.14	5.62	6.04

IDR = Indonesian rupiah, Y = year.
Source: Penilai Harga Efek Indonesia (PHEI).

Malaysia

Bond Pricing Agency Malaysia (BPAM) is the local bond pricing agency in Malaysia. BPAM provides daily yield matrix for both conventional and Islamic bonds in the domestic market.[9] The data provided by BPAM is further segmented into the following bond classes: government, quasi-government, financial, corporate, corporate guaranteed (i.e., corporate bonds with guarantees), and asset-backed securities. BPAM data provides the yields corresponding to the tenors from 3 months to 30 years, and credit ratings from AAA to C3 for the segmented bond classes. Table 6.11 shows the yield matrix from BPAM for conventional government and corporate bonds with ratings from AAA to BBB for key tenors as of 20 September 2024.

Table 6.11: Yield Matrix of MYR-denominated Corporate Bonds, as of 20 September 2024 (%)

Rating Class	3Y	5Y	7Y	10Y	15Y	30Y
Government	3.36	3.50	3.71	3.72	3.88	4.20
AAA	3.72	3.81	3.91	3.99	4.10	4.39
AA1	3.77	3.87	3.96	4.06	4.23	4.68
AA2	3.83	3.92	4.00	4.12	4.36	4.95
AA3	3.89	3.97	4.05	4.17	4.48	5.22
A1	4.68	4.95	5.21	5.54	5.94	6.81
A2	5.34	5.71	6.05	6.49	7.00	8.22
A3	5.96	6.46	6.88	7.43	8.07	9.63
BBB1	6.79	7.43	8.04	8.73	9.50	11.63
BBB2	7.17	7.81	8.42	9.11	9.88	12.01

MYR = Malaysian ringgit, Y = year.
Source: Bond Pricing Agency Malaysia (BPAM).

Table 6.12 shows the MYR credit spread matrix based on the data in Table 6.11 and provides the following implications on the credit spreads of the MYR corporate bond market. First, credit spreads increase marginally with each notch downgrade until they reach an AA3 rating, then increase substantially from AA3 to A1. This is correlated with the corporate bond market situation in Malaysia, where most corporate bonds are rated AAA or AA due to investors' risk aversion. Credit spreads significantly jump again from A3 to BBB1. This implies investors' reluctancy on BBB rating. Second, credit spreads become wider as the tenor increases for A1 or lower rated bonds However, the same does not apply to higher-rated bonds. A possible explanation for this observation is that the

[9] To note, BNM also provides the daily government bond curve and the weekly corporate bond curves.

demand for long-term bonds, especially those with a 7-year maturity, remains strong as long as the bonds are rated AA3 or higher.

Table 6.12: Credit Spreads of MYR-denominated Corporate Bonds, as of 20 September 2024 (%)

Rating Class	3Y	5Y	7Y	10Y	15Y	30Y
AAA	0.36	0.31	0.20	0.27	0.22	0.19
AA1	0.41	0.37	0.25	0.34	0.35	0.48
AA2	0.47	0.42	0.29	0.40	0.48	0.75
AA3	0.53	0.47	0.34	0.45	0.60	1.02
A1	1.32	1.45	1.50	1.82	2.06	2.61
A2	1.98	2.21	2.34	2.77	3.12	4.02
A3	2.60	2.96	3.17	3.71	4.19	5.43
BBB1	3.43	3.93	4.33	5.01	5.62	7.43
BBB2	3.81	4.31	4.71	5.39	6.00	7.81

MYR = Malaysian ringgit, Y = year.
Source: Bond Pricing Agency Malaysia (BPAM).

Philippines

The PHP credit spreads were computed from outstanding PHP corporate bonds since no yield or credit spread matrix is reported by any institution or association in the Philippines. The bonds included in the credit spread analysis are filtered based on the maturity type (straight bonds), coupon type (fixed coupon type), and issue price (par value). Credit spreads are calculated as the difference between the corporate bond's coupon rate and the yield of a government bond with the same maturity on the corporate bond's pricing date. To calculate the credit spreads, PDEX's published data on PHP BVAL reference rates for benchmark tenors are used.[10] However, the bonds that were issued before 29 October 2018 are excluded because PHP BVAL rates for government bonds are not available. In addition, bonds issued by banks with maturities longer than 5 years are excluded, as they are exempt from withholding tax. Their coupon rates may be lower than government bond rates, especially when they are heavily sold to retail investors who pursue after-tax returns. After applying these filters, only 31 corporate bonds remained for the credit spread analysis, as shown in Table 6.13.[11]

Table 6.13: Credit Spreads of PHP-denominated Corporate Bonds (%)

PhilRatings	Number of Bonds	Up to 2Y	> 2Y to 3Y	> 3Y to 4Y	5Y
Aaa	17	0.17	0.40	0.80	0.80
Aa+	2	0.46	-	-	-
Aa	1	-	-	1.55	-
Unrated (Banks)	8	0.31	0.27	-	-
Unrated (Others)	3	-	1.95	2.21	-

PHP = Philippine peso, Y = year.
Source: Bloomberg.

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[10] In terms of government bond yield data, PDST-R2 was the reference for government bonds issued prior to 29 October 2018. Starting 29 October 2018, the Bankers Association of the Philippines (BAP) launched its new reference rates, the PHP BVAL Reference Rates, which replaced the PDST-R reference data. As the benchmark administrator, the BAP engaged Bloomberg as the benchmark calculation agent. (PDS Group. 2018. Launch of the New BAP PHP BVAL Reference Rates. 27 October. https://www.pds.com.ph/index.html%3Fp=56409.html)

[11] The two bonds issued by Double Dragon Corporation were excluded despite meeting the filtering conditions. This is because their spreads are extremely high (3.26% and 3.27% above the Philippine government bond rates with the same maturity) despite their Aaa rating, which are considered outliers attributed to special reasons that have not been verified at the time of this writing.

Ratings were assigned to unrated bonds if their issuers are rated by PhilRatings and the bonds are senior unsecured. Thus, unrated bonds in Table 6.13 mean the ones whose issuers are also not rated by PhilRatings. However, unrated bonds issued by banks are the ones issued by major or government related banks in the country, such as BDO Unibank, Metropolitan Bank & Trust Company (Metrobank), and Development Bank of the Philippines. Although these banks are not rated by PhilRatings, they are rated Baa3 or higher, investment grades, by international rating agencies like Moody's. In this sense, although they are classified "unrated" in Table 6.13, they are not purely unrated entities.

The credit spreads in Table 6.13 provide the following implications for credit spreads of the PHP-corporate bond market. First, credit spreads become wider as credit ratings get lower. However, it is difficult to know the required additional spreads for entities rated below Aa due to limited availability of data. Second, more spreads are generally required for longer tenor bonds. As no bonds with maturity longer than 5 years are available for this credit spread analysis, it is also difficult to know the required additional spreads for them. Third, purely unrated entities and their bonds are considered riskier than entities rated Aa or higher based on the spreads for Unrated (Others) in Table 6.13. Lastly, top-tier banks are considered equivalent to, or even stronger than, Aaa-rated entities based on the spreads.

Singapore

Singapore does not have a local bond pricing agency that provides the yield matrix for SGD-government and corporate bonds with different maturities and different credit ratings. Instead, Bloomberg provides the SGD-government bond curve and SGD-Singapore corporate bond curve on a daily basis.[12] The SGD-Singapore corporate bond curve as of 25 September 2024 was fitted by 152 corporate bonds, 57 of which were rated by at least one of international credit rating agencies; Moody's, S&P and Fitch.

Table 6.14 shows the credit spread matrix using the rated corporate bonds. AA-, AA, A+, and A ratings are not included because there are no corporate bonds corresponding to these credit ratings at the time of observation. Bonds rated BB+ and below are also excluded for the same reason. Table 6.14 provides the following implications on SGD credit spreads. First, there is no significant difference in credit spreads between bonds rated AA+ and A-, despite a difference of five notches. AA+ rated bonds are mostly from government owned entities in Singapore and A- rated bonds are mostly from real estate investment trust (REIT) companies. Second, credit spreads do not widen as the tenor increases. Spreads of bonds with maturity longer than 6 years are tighter than those with maturity of 2 to 6 years throughout the credit ratings, except AAA. Third, credit spreads become wider as the credit rating lowers. As a result, the BBB- rating has the highest spreads among the ratings in Table 6.14. In Singapore, spreads with a rating of BBB- range from 1.0 to 1.5%. This is relatively low compared with BBB- spreads of other countries. This is because a BBB- rating in Singapore is still considered investment grade on the international rating scale, which can attract both global and local investors.

Table 6.14: Credit Spreads of SGD-denominated Corporate Bonds, as of 25 September 2024 (%)

Rating Scale	<= 2Y	2Y – 4Y	4Y – 6Y	> 6Y
AAA	0.38	0.43	0.64	0.55
AA+		0.59	0.87	0.56
AA	0.63	0.79	0.85	
A-	0.61	0.73	0.76	0.63
BBB+	0.95	1.14	1.09	0.90
BBB	0.97	1.00	0.97	

[12] For reference, the Bloomberg curve ID for SGD-government bond is BI593 and the curve ID for SGD-Singapore corporate curve is BF49.

BBB-	1.06	1.48

SGD = Singapore dollar, Y = year.
Source: Bloomberg and Author's calculations.

Thailand

Table 6.15 shows the credit spread table available from ThaiBMA. The following implications are observed from this table. First, the spread gap between A- and BBB+ is the largest among the one-notch differences. For bonds with maturities of 3 years or below, the spread between A- and BBB+ is 111 basis points only for one notch, which is much bigger than 44 basis points of the 6-notche difference between AAA and A-. The one-notch difference between A- and BBB+ is wider than the one between BBB+ to BBB or BBB to BBB-. This implies that there are corporate bond investors in Thailand who are only able to invest in bonds with a rating of A- or higher. Second, the credit spreads become wider as the tenor increases. This relationship is clearer for high ratings like A- and above but less clear for BBB+. Lastly, credit spread of AA+ is lower than that of AAA for some tenors and credit spread of A is lower than that of A+ for all tenors despite the fact that AA+ and A are lower than AAA and A+, respectively. According to ThaiBMA, this situation can happen because, among other factors, actual bonds in the cells are not identical in terms of industry, maturity or frequency of transactions which can sometimes override the effect from credit rating.

Table 6.15: Average Spread of THB-denominated Corporate Bonds, as of 23 September 2024 (bp)

Rating Scale	<= 3Y	3Y-5Y	> 5Y
AAA	45	68	93
AA+	42	72	79
AA	48	75	107
AA-	54	83	109
A+	95	127	131
A	74	104	127
A-	89	133	159
BBB+	200	248	242
BBB	269	-	335
BBB-	330	-	-

bp = basis point, THB = Thailand baht, Y = year.
Source: Thailand Bond Market Association (ThaiBMA).

Viet Nam

It is known that in Viet Nam, the 12-month deposit rate is used as the benchmark rate for corporate bonds, instead of the government bond rate with the same maturity. Table 6.16 provides three examples to confirm the benchmark rate for corporate bonds in Viet Nam. When credit spreads are calculated by using the government bond rate with the same maturity as the corporate bond at its issue date, the spreads are significantly different despite the same issuers. Given the fact that credit spreads are reflective of the credit risk of issuers, significantly different spreads from same issuer do not make much sense. On the other hand, credit spreads from same issuer become more stable when they are calculated against 12-month deposit rates. This confirms the market practice in Viet Nam where 12-month deposit rates are used as benchmark rates for corporate bonds.

Table 6.16: Examples of Credit Spread Computations in Viet Nam

Issuer	Asia Commercial Joint Stock Bank (ACB)		HCMC Infrastructure		Lien Viet Post Bank	
Issue Date	19Dec18	6Dec19	15Aug17	21Oct21	19Jul19	15Dec20
Maturity	10-year	5-year	2-year	3-year	10-year	5-year
Coupon	7.35%	7.10%	10.50%	9.50%	7.35%	6.50%
GBR	5.17%	2.10%	4.24%	0.54%	4.64%	1.09%
12MDR	6.80%	6.80%	6.50%	5.50%	6.80%	5.60%
SOGBR	**2.18%**	**5.00%**	**6.26%**	**8.96%**	**2.71%**	**5.41%**
SO12MDR	**0.55%**	**0.30%**	**4.00%**	**4.00%**	**0.55%**	**0.90%**

GBR = government bond rate with same maturity of the corporate bond at its issue date, 12MDR = 12-month deposit rate at issue date, SOGBR = spread over GBR, SO12MDR = spread over 12MDR.
Note: The issue date follows the day-month-year format.
Source: Bloomberg and Author's calculations.

In July 2024, FiinRatings, one of the local credit rating agencies in Viet Nam, published the report, "Yield Curves and Historical Default Analysis under Credit Ratings" which includes the credit spread curves from AAA to CCC ratings as shown in Table 6.17. This report implies that Viet Nam is also the country where a yield matrix or a credit spread matrix is available for local currency bonds.

Table 6.17 also shows the following implications on VND-denominated credit spreads. First, it was confirmed that the deposit rate is used as the benchmark rate for corporate bond pricing in Viet Nam. This practice is different from most countries where a government bond rate with the same maturity as the corporate bond is used as the benchmark rate. Second, significant differences are observed depending on tenors despite the same ratings. For example, a spread of A rating is 476 basis points for maturities of 2 years or below, but it is a range of 120 to 230 basis points beyond 2 years. It is presumed that an unusual transaction that happened to A-rated bond with less than 2-year maturity would result in a much wider spread only for this maturity group among A rated groups. Lastly, except for the spreads of bonds with maturities of 2 years or less, which show unusual patterns, credit spreads become wider as the credit rating decreases. The credit spreads of bonds belonging to the 3- to 5-year maturity group show the most reasonable pattern.

Table 6.17: Average Yield Spread over Deposit Rate (bp)

Rating Scale	<= 2Y	2Y-3Y	3Y-5Y	>= 5Y
AAA	-	-	-	131
AA	183	(49)	116	210
A	476	120	174	230
BBB	459	283	370	290
BB	918	429	525	250
B	526	679	768	600
CCC	439	-	-	-

( ) = negative, bp = basis point, Y = year.
Note: It was mentioned that the calculations are based on 381 transactions in the secondary market, with credit ratings from issuers, including both published results from FiinRatings Joint Stock Company (FiinRatings) and their preliminary estimates based on public information.
Source: FiinRatings Joint Stock Company (FiinRatings).

Table 6.18 summarizes the characteristics of credit spreads observed from each country in ASEAN.

Table 6.18: Summary of Credit Spread Characteristics by Country

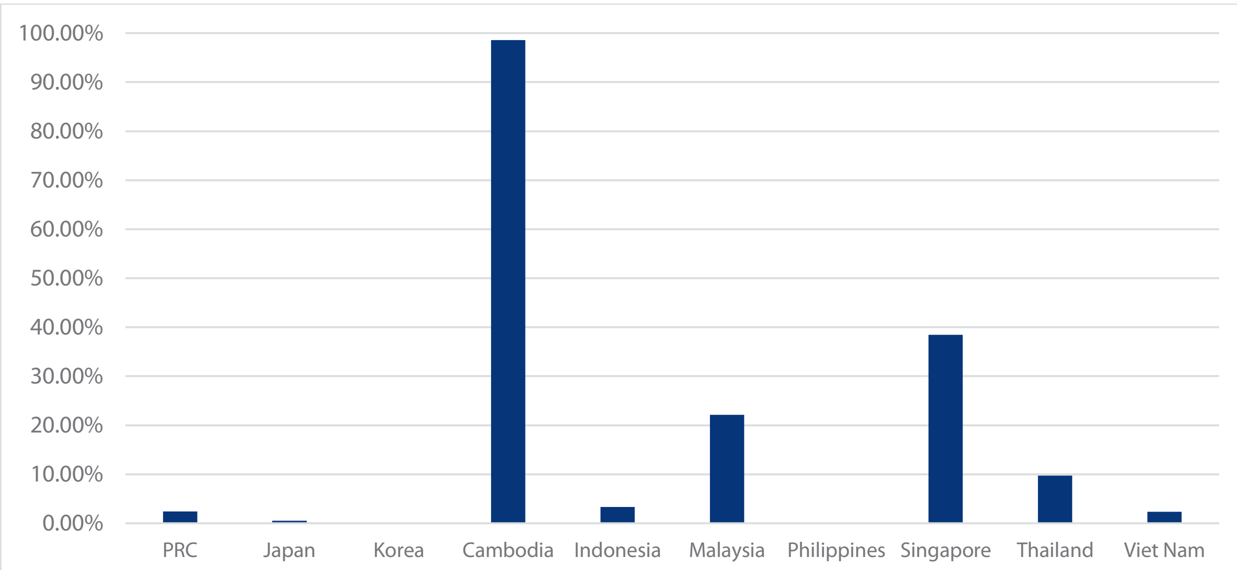
Country	Credit Spread Characteristics
PRC	• Additional spread from AA to A is dramatic, implying that investors in the PRC require significant compensation for their investment in A-rated bonds. • It is observed that banks can issue bonds at lower yields than corporations with the same credit rating and maturity. This difference becomes even more pronounced when credit ratings drop to A. This suggests that A-rated banks may still be able to issue bonds, while A-rated corporations could face greater difficulty in doing so.
Japan	• Additional spreads from a one-notch downgrade are not significant until the BBB rating. This implies that BBB-rated issuers can issue bonds in Japan with reasonable credit spreads.
Korea	• The credit spread gaps between A and BBB-rated corporate bonds are significantly high, implying that corporate bond investors in Korea are hesitant to invest in BBB-rated bonds unless they receive substantial compensation.
Cambodia	• The government of Cambodia first issued its 3-year and 5-year bonds in June and July 2023, respectively. • While their yields can serve as benchmark rates for corporate bonds, there has been no market practice in Cambodia where corporate bond rates are determined by adding a certain spread to government bond rate of the same maturity.
Indonesia	• Wider credit spreads are required as maturities become longer, regardless of credit ratings. • Additional spread from A to BBB is significant, implying that investors in Indonesia require significant compensation for their investment in BBB-rated bonds.
Malaysia	• Additional credit spread for each notch downgrade starts jumping significantly from AA3 to A1. This is correlated with the fact that corporate bonds in Malaysia are mostly rated AA3 or higher. • Credit spreads become wider as tenor increases for bonds rated A1 or lower, but the same does not apply to higher-rated bonds.
Philippines	• Due to a lack of data for credit spread analysis, it is difficult to get information about the credit spreads below Aa rating and beyond 5 years maturity.
Singapore	• The spreads of BBB- rating in Singapore range from 1.0% to 1.5%, which does not appear to be high compared to BBB- spreads in other countries. A possible reason for this is that BBB- in Singapore is still investment grade on the international rating scale, which may attract both global and local investors.
Thailand	• The spread gap between A- and BBB+ is the largest among the one-notch differences, even larger than the gap between BBB and BBB-. • Credit spreads become wider as the tenor increases. This relationship is clearer for high ratings like A- and above but less clear for BBB+.
Vietnam	• The 12-month deposit rate is used as a benchmark rate for corporate bonds, rather than the government bond rate with the same maturity. • A credit spread matrix became available recently. Regardless of maturities, all credit spreads are calculated against the 12-month deposit rate.

PRC = The People's Republic of China.
Source: Author's research and analysis.

7 Guaranteed Corporate Bonds

Figure 7.1 shows the ratio of newly issued guaranteed corporate bonds to the total newly issued corporate bonds of each country in ASEAN+3. The share of guaranteed bonds in the corporate bond market varies significantly among the countries in ASEAN+3. In Cambodia, almost all corporate bonds are guaranteed, whereas no guaranteed corporate bonds were issued in the Philippines in 2023. Guaranteed corporate bonds are relatively active in Singapore and Malaysia, but they are not in Korea, Japan, and Indonesia.

Figure 7.1: Ratio of Guaranteed Bonds of Each Local Currency Corporate Bond Market in ASEAN+3, for New Issuances in 2023



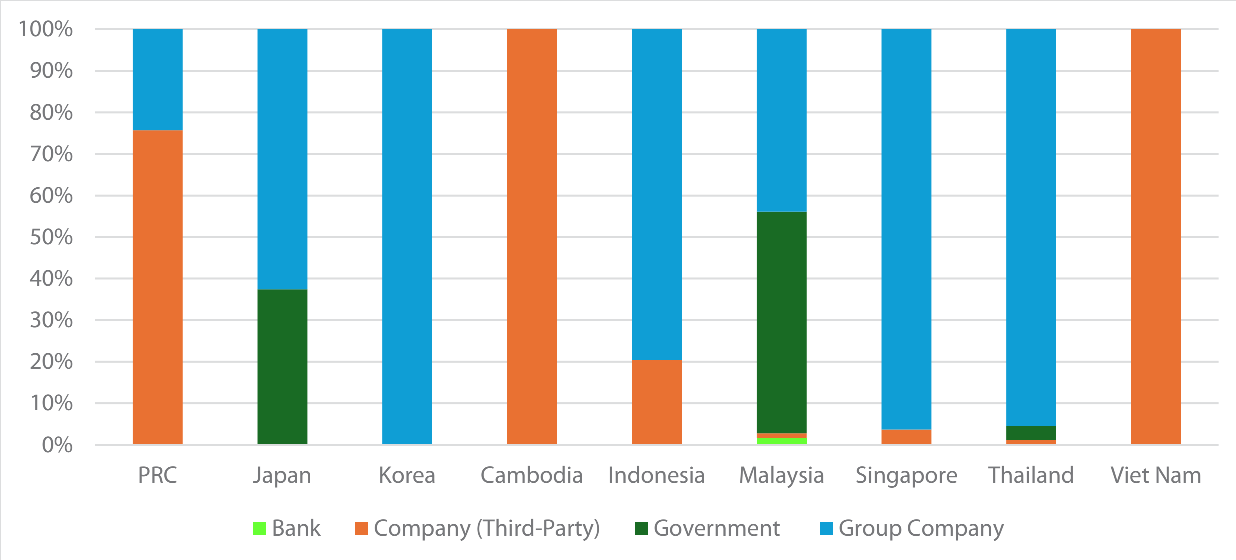
ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, PRC = The People's Republic of China.
Note: The ratio of the local currency guaranteed bond market is based on the issued amount of new corporate bond issuances in each country in 2023.
Source: Bloomberg and Author's calculations.

It is important to note that the guaranteed corporate bond ratio in Viet Nam was only 2.3% based on newly issued corporate bonds in 2023. This is significantly lower than the 13.6% ratio based on outstanding corporate bonds at the end of 2023. This implies that 2023 was a year when guaranteed corporate bond issuances were exceptionally low.

7.1 Type of Bond Guarantors in ASEAN+3

Figure 7.2 shows the diversity of guarantor types in ASEAN, which includes banks, governments, parent companies and subsidiaries, and third-party companies. The profile of the guaranteed bond market in ASEAN differs from one region to another. Malaysia and Japan see a high participation from the national government in guaranteeing the bonds issued by their SOEs. On the other hand, in Korea, Singapore, and Thailand, guarantors are mostly the group companies. Cambodia and Viet Nam are the countries where guarantors of corporate bonds are all third-party companies.

Figure 7.2: Types of Bond Guarantors in ASEAN+3, as of end of 2023



ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea
Notes:
1. "Group Company" refers to parent companies and/or subsidiaries. "Company" refers to third-party guarantors.
2. The Philippines is not included in the figure because it has no guaranteed PHP-denominated corporate bond issued in 2023.
Sources: Bloomberg and Author's calculations.

Of these, it is of greater interest to look into the guarantees provided by banks and third-party companies. It may seem like a natural business strategy for parent companies and subsidiaries to provide guarantees to each other or to those of their affiliates. Governments are considered parents because they guarantee the bonds issued by SOEs. Banks may consider providing the guarantees for bonds issued by third-party companies if this makes economic sense for them. As banks generally prefer loans over guarantees for economic reasons, it is rare for third-party banks to provide guarantees for corporate bonds. Third-party company guarantors are either national guarantors or international financial institutions, such as CGIF or GuarantCo, which specialize in providing credit guarantees for bonds issued by companies from their respective target economies. National guarantors generally provide guarantees not only for bonds but also for other types of financing, such as loans. Indonesia Infrastructure Finance (IIF) is a non-bank financial institution in Indonesia, serving as both a national and international guarantor. It was established by the government of Indonesia, along with the World Bank, ADB and other multinational institutions, to provide financing and advisory services for infrastructure projects.

7.2 National Guarantors in ASEAN+3

It is important to note that some ASEAN+3 countries have established their own national credit guarantors, as shown in Table 7.2. However, except national guarantors in the PRC, those from other countries in ASEAN+3 are inactive in guaranteeing corporate bonds. Malaysia used to have an active national guarantor for corporate bonds, which is Dananjamin Nasional Berhad. In 2021, Danajamin Nasional Berhad was merged with Bank Pembangunan Malaysia Berhad (BPMB), with BPMB as the surviving entity. Since then, BPMB, along with other commercial banks in Malaysia, has provided guarantees for corporate bonds. As of the time of writing, BPMB has yet to provide a stand-alone credit guarantee for corporate bonds issued in Malaysia.

Table 7.1: National Credit Guarantors in ASEAN+3

Country	National Guarantor	Mandate or Scope	Target Sectors	Application of the Guarantee
PRC	China Bond Insurance Company	Credit enhancement services, creation and trading of credit products, asset management, and investment consulting.	Not specifically mentioned	Bonds, CP, MTN, ABS, and trust plans
	China National Investment and Guaranty Corporation	Provide credit enhancement and guarantee services to support various sectors of the Chinese economy.	SMEs, Green & Sustainable projects, and Infrastructure development	Bonds, funds, interbank products, and ABS
	China United SME Corporation	Facilitate access to financing of SMEs.	SMEs	Loans, bonds, trade finance, project finance
Japan	Credit Guarantee Corporations	Provide credit guarantees that allow clients to borrow funds from established financial institutions.	SMEs and micro-enterprises	Loans and Bonds
Korea	Korea Credit Guarantee Fund	Provide credit guarantees for the repayment of liabilities assumed by business enterprises in transactions with other companies or institutions.	SMEs	Loans
Cambodia	Cambodia Credit Guarantee Corporation (CGCC)	Provide credit guarantees to lenders for loans made to businesses based on international standards.	SMEs	Loans and Bonds
Indonesia	Indonesia Infrastructure Guarantee Fund (IIGF)	Provide guarantees for projects promoting infrastructure development.	Infra projects	Public-private Partnership Projects
Philippines	PhilGuarantee	Provide credit guarantees to support trade and investment and priority sectors.	SMEs (primarily), large corporates	Loans
Thailand	Thailand Credit Guarantee Corporation	Provide credit guarantee schemes to enable eligible companies to secure higher financing.	SMEs	Loans

ABS = asset-backed securities, ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CP = commercial papers, MTN = medium term notes, PRC = People's Republic of China, SME = small and medium enterprises.

Notes:

1. "Application of the Guarantee" is related to the particular products or services for which the national guarantors can provide guarantees based on their respective mandate or scope.

2. The credit guarantee for SMEs of Japan is a recognized established system. Although there is no national credit guarantor in Japan like those in other countries, there are already 51 credit guarantee corporations in Japan – one for each prefecture and one in each of the cities of Yokohama, Kawasaki, Nagoya, and Gifu. For additional information, see the report of Japan Federation of Credit Guarantee Corporations: https://www.zenshinhoren.or.jp/jfg/wp-content/uploads/2024/10/Credit_Guarantee_System_in_Japan_2024.pdf.

Source: Websites of each national guarantor.

In the PRC, not only national guarantors but also provincial guarantors are active in guaranteeing corporate bonds. Unlike national guarantors, which operate across the entire country, provincial guarantors limit their services to issuers located within their respective provinces. These guarantors generally include the name of their province in their corporation names.

7.3 Multilateral Guarantors in ASEAN+3

Credit Guarantee and Investment Facility (CGIF) and GuarantCo are two multilateral financial institutions that guarantee corporate bonds in the ASEAN+3 region. While CGIF specializes in guaranteeing local currency corporate bonds issued by the entities of ASEAN+3 countries, GuarantCo guarantees local currency corporate bonds in ASEAN as part of its operations. Corporate bonds guaranteed by GuarantCo are concentrated on Viet Nam and Cambodia among ASEAN countries. As of December 2024, GuarantCo has guaranteed eight corporate bonds in the ASEAN region, which includes five in Viet Nam and two in Cambodia. On the other hand, as of end of 2024, CGIF has guaranteed 95 corporate bonds issued by the companies from 12 countries out of 13 ASEAN+3 countries. Table 7.2 shows the key characteristics of the two institutions.

Table 7.2: CGIF and GuarantCo as Multilateral Guarantors in ASEAN+3

Description	CGIF	GuarantCo
Established in	2010	2005
Funded by	Governments of ASEAN+3 countries and Asian Development Bank	Governments of the UK, Switzerland, Australia, Sweden, the Netherlands, Canada, and France
Mission	Promote financial stability and to boost long-term investments in the ASEAN+3 region by providing guarantees to local currency bonds issued by companies in the region	Financing infrastructure and developing capital markets in lower income countries across Africa and Asia
Target products and region	Guaranteeing local currency corporate bonds in ASEAN+3	Guaranteeing local currency corporate bonds and loans in Africa and Asia
Total guarantees	USD3.7 billion[1]	USD6.8 billion[2]
Total guarantees for corporate bonds in ASEAN+3	USD3.7 billion[1]	USD342 million[2]
International Credit Rating	AA (S&P)	A1 (Moody's) and AA- (Fitch)

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CGIF = Credit Guarantee and Investment Facility, USD = US dollar.
Notes:
1. As of 15 November 2024.
2. As of Q3 2024.
Sources: CGIF and GuarantCo's websites.

As a specialized corporate bond guarantor in ASEAN+3 with developmental mandates given by its contributors, CGIF is encouraged to play catalytic roles in the development of corporate bond markets in the region in various aspects. These roles include, among others, supports on first-time issuers, tenor extensions, cross-border issuances, infrastructure financing, and thematic bond issuances. Table 7.3 introduces some developmental contributions of CGIF and a number of transactions related to them, from the total 95 bonds guaranteed by CGIF by the end of 2024.

Table 7.3: Example of Developmental Contributions of CGIF, as of end of 2024

Developmental Area	Number of Transactions	Remarks
First-time Issuer	33	• First-time issuers are the entities which could not have issued bonds without CGIF guarantee.
Cross-border	22	• CGIF helps overcome the obstacle in cross-border bonds - investors in target markets being unfamiliar with the issuers - by leveraging its strong local reputation and AAA rating from local rating agencies.
Thematic Bond Issuance	13	• CGIF encourages the increased issuance of sustainable bonds to support sustainable development in ASEAN+3.

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CGIF = Credit Guarantee and Investment Facility.
Source: CGIF.

One important activity of CGIF is the market education events. Market education events have two main objectives. First, they serve to raise awareness to the public about the bond market development in ASEAN+3. Market education events also inform the public about how market players and institutions contribute to the overall development. Second, they provide updates to potential bond issuers and investors about new bond products in a given market. This enables them to explore potential new bond products.

7.4 Co-Guarantee and Partial Guarantee

While there are no co-guaranteed or partially guaranteed bonds based on outstanding corporate bonds as of end 2023, there used to be co-guaranteed or partially guaranteed bonds in some ASEAN countries. As they can be issued again depending on situation, two co-guaranteed bonds and three partial guaranteed bonds issued in ASEAN are introduced in Table 7.4 and Table 7.5 although they were already redeemed.

Table 7.4: Co-Guaranteed Bonds in ASEAN

Country	Transactions Details	Remarks
Philippines	• Issuer: Power Sector Assets and Liabilities Management Corp. (PSALM) • Guarantor: Philippine government and ADB • Issue Date: 13 Dec 2002 • Maturity: 10 years • Bond Currency: JPY • Issue Rating: Aaa by Moody's	• Issuer is a SOE in the Philippines and received guarantees from ADB (Aaa by Moody's) and the Philippine government (Baa2 by Moody's) for its JPY-denominated bond issue. • Both guarantors provided 100% guarantees. • Issue rating is Aaa as it follows the higher rating.
Thailand	• Issuer: Boonthavorn Ceramic 2000 • Guarantor: Kbank and CGIF • Issue Date: 17 Dec 2018 • Maturity: 5 years • Bond Currency: THB • Issue Rating: AA+ by TRIS	• Issuer is a private company and received guarantees from Kbank (AA+ by TRIS) and CGIF (AAA by TRIS) for its THB bond issue. • Each guarantor provided 50% guarantee, which made full amount guaranteed. • Issue rating is AA+ as it follows the lower rating.

ADB = Asian Development Bank, ASEAN = Association of Southeast Asian Nations, CGIF = Credit Guarantee and Investment Facility, JPY = Japan yen, THB = Thailand baht, TRIS = Thai Rating and Information Services.
Source: Bloomberg and Author's research.

Table 7.5: Partially Guaranteed Bonds in ASEAN

Country	Transactions Details	Remarks
Indonesia	• Issuer: Ciputra Residence (A- by Fitch National) • Guarantor: IFC • Issue Date: 2 Apr 2014 • Maturity: 3, 5, and 7 years (3 tranches) • Guarantee ratio: 20% • Issue Rating: A (by Fitch National)	• Issue rating was lifted to one notch (A- to A) due to the 20% partial guarantee from IFC. • A was the minimum rating required for Indonesian pension funds to invest in corporate bonds.
Thailand	• Issuer: True Corp. (BBB+ by TRIS) • Guarantor: Kbank (AA+ by TRIS) • Issue Date: 10 Nov 2015 • Maturity: 7 years • Guarantee ratio: 45% • Issue Rating: A- (by TRIS)	• Partial guarantees were mostly executed to the bonds issued by BBB+ issuers who could make the best use of partial guarantees due to significantly wide credit spreads between BBB+ and A- in comparison with other one notch differences in Thailand. • Two local banks (Kasikornbank and Siam Commercial Bank) were active on partial guarantees and CGIF provided two partial guarantees including the one left.
	• Issuer: Siamgas & Petrochemicals (BBB+ by TRIS) • Guarantor: CGIF • Issue Date: 7 Dec 2018 • Maturity: 5 years • Guarantee ratio: 70% • Issue Rating: A (by TRIS)	

ASEAN = Association of Southeast Asian Nations, CGIF = Credit Guarantee and Investment Facility, IFC = International Finance Corporation, TRIS = Thai Rating and Information Services.
Source: Bloomberg and Author's research.

8 Cross-Border Corporate Bonds

Cross-border bonds are present in ASEAN+3. The PRC, Korea, Indonesia, Lao PDR, Malaysia, Philippines, and Viet Nam have cross-border bonds in both the government and corporate bond market segments. Cambodia, Myanmar, Thailand, Japan, and Singapore are the countries where their companies issue corporate bonds in foreign markets, but their governments do not issue foreign currency bonds in foreign markets. Brunei has neither government bonds nor corporate bonds in foreign markets.

Figure 8.1: State of Cross-Border Markets in ASEAN+3

	Absence of government bonds issued in a foreign market	Presence of government bonds issued in a foreign market
Presence of corporate bonds issued in a foreign market	**Cambodia, Myanmar, Thailand, Japan, and Singapore**	**PRC, Korea, Indonesia, Lao PDR, Malaysia, Philippines, and Viet Nam**
Absence of corporate bonds issued in a foreign market	**Brunei**	

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, Lao PDR = Lao People's Democratic Republic, PRC = The People's Republic of China.
Note: Brunei, Lao PDR, and Myanmar are included in the illustration to show the extent of cross-border bonds in ASEAN.
Source: Author's illustration.

In fact, Figure 8.1 shows only one side of the cross-border bonds, which is outbound. Outbound bonds refer to bonds issued by local entities in foreign markets. There is the other side of the cross-border bonds, which is called inbound. Inbound bonds refer to bonds issued by foreign entities in the local market.

8.1 Inbound Bonds

Table 8.1 shows "inbound bonds" ratios in ASEAN+3. The inbound bonds correspond to the local currency corporate bonds that are issued by foreign entities in the local bond market. The ratio of this type of bonds to the total local currency corporate bonds reflects how much foreign entities are participating in the local currency bond market. Local currency bonds that are settled in foreign currencies, such as USD, are excluded in the calculation of this ratio to focus on the actual local market participation of foreign issuers because these bonds are neither issued nor traded in the local bond market. However, the bonds that are settled in foreign currencies are also included in Table 8.1 for reference.

Table 8.1: Inbound Bond Ratios in ASEAN+3, 2023

Country	Ratio of LCY corporate bonds issued by foreign entities to total LCY corporate bonds	
	Including bonds settled in FCY	Excluding bonds settled in FCY (Inbound Ratio)
PRC	1.66%	1.66%
Japan	18.69%	18.68%
Korea	0.16%	0.01%
Brunei	n/a	n/a
Cambodia	0%	0%
Indonesia	6.39%	0%
Lao PDR	n/a	n/a
Malaysia	0.49%	0.35%
Myanmar	n/a	n/a
Philippines	2.78%	0%
Singapore	62.88%	62.72%
Thailand	1.66%	1.09%
Viet Nam	3.21%	0%

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, FCY = foreign currency, Lao PDR = Lao People's Democratic Republic, LCY = local currency, n/a = not applicable, PRC = The People's Republic of China.
Note: The ratios are calculated based on the value of newly issued corporate bonds in 2023.
Sources: Bloomberg and Author's calculations.

As shown in Table 8.1, foreign issuers' participations in LCY-denominated corporate bond issuances in local markets are very marginal except in Singapore and Japan, which are considered as the global financial hubs. Indonesia is unique as foreign issuers' participations are rare in the local market although they are active in issuing IDR bonds in offshore bond markets. These offshore IDR bonds are settled in major currencies, mostly USD, and traded outside of Indonesia.

Table 8.2 shows the compositions of foreign countries participating each local currency corporate bond market in ASEAN+3. In the entire region, Japan has a diverse set of foreign issuers, followed by the PRC and Singapore. To note, out of the 13 ASEAN+3 countries, only 8 countries are included in Table 8.2 because there are no local currency bonds issued by foreign issuers in the local corporate bond markets of other countries.

Table 8.2: Composition of Foreign Countries for Inbound bonds in ASEAN+3, 2023

Market	Countries of Foreign Issuers
PRC	HK (19.42%), KY (15.905), VG (15.46%), SNAT (8.02%), and 19 other countries
Japan	FR (27.51%), GB (15.33%), US (12.62%), and 24 other countries
Korea	SNAT (38.20%), US (37.92%), FR (17.23%), GB (2.70%), NL (3.71%), and CN (0.24%)
Indonesia	US (100%)
Malaysia	TH (49.62%), AE (21.10%), SG (12.56%), VG (10.38%), and KW (6.34%)
Philippines	SNAT (100%)
Singapore	GB (26.39%), FR (15.02%), AU (10.69%), HK (6.96%), and 18 other countries
Thailand	LA (84.86%), MM (7.60%), KH (5.07%), KY (2.28%), and US (0.19%)

AE = United Arab Emirates, ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, AU = Australia, FR = France, GB = United Kingdom, HK = Hong Kong, KH = Cambodia, KW = Kuwait, KY = Cayman Islands, LA = Lao People's Democratic Republic, MM = Myanmar, SG = Singapore, SNAT = Supranationals, TH = Thailand, US = United States, VG = Virgin Islands.

Notes:

1. The percentages refer to the inbound bonds share of each foreign country.
2. The figures are calculated based on the 2023 issuances of cross border bonds in ASEAN+3.

Source: Bloomberg and Author's calculations.

Table 8.3 shows the inbound bonds in ASEAN issued by the entities of other ASEAN countries, based on the outstanding corporate bonds as of the end of 2023. These intra-regional inbound bonds are observed only in Malaysia, Singapore, and Thailand. The characteristics of the inbound bonds of each country are introduced as below although the number of samples may not be large enough to generalize them.

Malaysia: As the biggest sukuk market in the world, Malaysia welcomes the issuances of sukuk by foreign entities. The one issued by Bumitama Agri Ltd. in Table 8.3 is sukuk. In fact, the issuers from the United Arab Emirates and Kuwait also issue sukuk in Malaysia, as shown in Table 8.2.

Thailand: There are issuances from neighboring countries whose corporate bond markets are less developed or inactive. The regulations related to Baht bonds contribute to the clarity on the treatment of such bonds in the market, providing more confidence to both issuers and investors to explore cross-border bonds in the country. Some of the Baht bonds issued by Laotian entities are long-term in nature, which indicates that the Thai bond market is becoming an opportune place for Lao corporates seeking long-term financing.

Singapore: Singapore is the only active inbound bond market in ASEAN where many non-ASEAN issuers are participating as well as ASEAN issuers in Table 8.3. Together with Thailand, Singapore is the key issuance venue of CGIF's cross-border bonds, not only from other ASEAN countries but also from the +3 countries.

Table 8.3: Intra-Regional Inbound Bonds in ASEAN, as of end of 2023

Issue Market	Issuers	Issuer Country	Remark
Malaysia	Bumitama Agri Ltd.	Singapore	Sukuk
	CIMB Thai Bank PCL	Thailand	
Singapore	Ciputra Development Tbk PT	Indonesia	Issued twice with BB- and B+ rating from Fitch
	Profesional Telekomunikasi Indonesia PT	Indonesia	CGIF Guaranteed Bond
	Cagamas Global PLC	Malaysia	Rated by A3 by Moody's
	RHB Bank BHD/Singapore	Malaysia	
Thailand	Hattha Bank PLC[13]	Cambodia	

[13] Hattha Bank PCL Baht Bond Fact Sheet.
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwj7k6qG__WIAxXyZ_

	EDL-Generation PCL	Lao PDR	Rated BBB- by TRIS
	Nam Ngum 2 Power Co. Ltd.	Lao PDR	Rated A by TRIS
	Xayaburi Power Co. Ltd.	Lao PDR	
	Yoma Strategic Holdings Ltd.	Myanmar	CGIF Guaranteed Bond

ASEAN = Association of Southeast Asian Nations, CGIF = Credit Guarantee and Investment Facility, Lao PDR = Lao People's Democratic Republic, TRIS = Thai Rating Information Services.
Notes: Only issuers from ASEAN are shown in this table.
Sources: Bloomberg; Securities and Exchange Commission (SEC) Thailand; Bond+Sukuk Information Exchange (BIX) Malaysia, www.bixmalaysia.com; and Author's research and calculations.

8.2 Outbound Bonds

"Outbound bonds" correspond to the foreign currency (FCY) corporate bonds that are issued by local entities. The ratio of this type of bonds to the total bonds that are issued by local entities shows how much local entities rely on the offshore market for bond financing. Offshore local currency bonds[14] are excluded even if they are issued in offshore markets because outbound bonds here are limited to FCY bonds. Table 8.4 shows the outbound bond ratios in ASEAN+3. Low outbound bond ratios are observed in countries, such as the PRC, Korea, Malaysia, and Thailand where local currency corporate bond markets are relatively well developed. The outbound bond ratios of the Philippines and Indonesia are also very low at 0% and 13.43%, respectively. However, these figures rise to 37% and 63%, respectively, when calculated using outstanding bond data as of end 2023. This implies that it may be premature to conclude that companies from the Philippines and Indonesia rely less on offshore bond markets, as 2023 might represent an exceptional year for these countries in terms of FCY bond issuances.

Table 8.4: Outbound Bonds Ratio in ASEAN+3, 2023

Country	Ratio of FCY bonds issued by local entities to total bonds issued by local entities (Outbound Ratio)
PRC	7.05%
Japan	67.63%
Korea	14.19%
Brunei	n/a
Cambodia	44.16%
Indonesia	13.43%
Lao PDR	100.00%
Malaysia	11.55%
Myanmar	100%
Philippines	0.00%
Singapore	92.75%
Thailand	10.09%
Viet Nam	31.97%

ASEAN+3 = Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and Republic of Korea, FCY = foreign currency, Lao PDR = Lao People's Democratic Republic, n/a = not applicable (since there are no corporate bonds issued by local entities in both domestic and foreign markets), PRC = The People's Republic of China.
Note: The figures are calculated based on the 2023 issuances of cross border bonds in ASEAN+3.
Source: Bloomberg and Author's calculations.

ASEAN+3 corporates have used different currencies and tapped into the international market for financing. Table 8.5 shows that the US dollar is the most widely used FCY for bond issuances of companies in most ASEAN+3

UHHTqSLCEQFnoECBUQAQ&url=https%3A%2F%2Fmarket.sec.or.th%2Fpublic%2Fipos%2FIPOSGetFile.aspx%3FTransID%3D451154%26TransFileSeq%3D84&usg=AOvVaw1Acu2NowE7Zp-KBlXWG6RJ&opi=89978449
[14] The offshore local currency bonds include Dimsum bonds (offshore Renminbi bonds) and Komodo bonds (offshore IDR-denominated bonds issued by Indonesian entities).

countries. However, the US dollar is not widely used for outbound bonds among corporates in Cambodia, Lao PDR, and Myanmar. Instead, the Thailand baht is the main FCY for outbound bonds issued by companies in these three countries. In particular, the corporates in Lao PDR have been reliant on the bond market in Thailand for larger funding.

Table 8.5: Summary of Outbound Bonds from ASEAN+3, 2023

Country	Number of Currencies Used in Issuing FCY-denominated Bonds	Number of FCY-denominated Bonds	The most widely used FCY and its ratio
PRC	9	5,185	USD, 83.25%
Japan	8	1,162	USD, 94.07%
Korea	7	322	USD, 88.09%
Cambodia	1	1	THB, 100%
Indonesia	1	32	USD, 100%
Lao PDR	1	6	THB, 100%
Malaysia	3	24	USD, 58.49%
Myanmar	1	2	THB, 100%
Philippines	1	1	USD, 100%
Singapore	12	824	USD, 85.14%
Thailand	3	33	USD, 59.17%
Viet Nam	1	1	USD, 100%

ASEAN+3 = Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and Republic of Korea, FCY = foreign currency, Lao PDR = Lao People's Democratic Republic, n/a = not available, PRC = The People's Republic of China, THB = Thailand baht, USD = US dollar.
Notes:
1. The outbound bonds are based on new issuances in 2023.
2. The ratio in the last column is calculated by dividing the total bonds denominated in the most widely used FCY by the total bonds denominated in all FCYs. The bond amount is the USD-equivalent amount calculated using the exchange rate at time of issuance.
3. The values of issued bonds as of the end of 2023 are used for this table.
Source: Bloomberg and Author's calculations.

8.3 Recent Trends in Cross-Border Bonds

Cross-border bonds show the extent of regional integration in ASEAN+3. As shown in Table 8.6, various initiatives from regional cooperations contribute to the development of the regional cross-border bonds market. The ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) of the ASEAN+3 Bond Market Forum (ABMF) is a direct regional initiative to encourage more cross-border bonds. AMBIF ensures that the single submission form is honored in participating ASEAN+3 markets, so that there are less challenges for issuers wanting to explore regional bond issuance. On the other hand, the introduction of the Framework for Cross-Border Offering of ASEAN Collective Investment Schemes (ASEAN CIS) is an indirect way to introduce ASEAN bonds as part of a collective investment scheme, particularly to retail investors.

Table 8.6: Initiatives to Increase Cross-Border Bond Issuances in ASEAN+3

Initiative or Program	Regional Cooperations	Notable Features
ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF)	ASEAN+3 Bond Market Forum (ABMF)	• Provides a uniform set of guidelines to assist companies to issue cross-border bonds. • Introduces a "single submission form" which lists down the common set of information when applying for an ABMIF bond and note in participating markets in ASEAN+3.

Framework for Cross-Border Offering of ASEAN Collective Investment Schemes (ASEAN CIS)	ASEAN Capital Markets Forum (ACMF)	• The framework allows fund managers operating in a member jurisdiction to offer collective investment schemes, such as unit trust funds constituted and authorized in that jurisdiction, to retail investors in other member jurisdictions under a streamlined authorization process.

ASEAN+3 = Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and Republic of Korea.
Notes:
1. AMBIF: Countries which were considered for pilot issuance of AMBIF bonds were Hong Kong, China, Japan, Malaysia, Philippines, Singapore, and Thailand.
2. ASEAN CIS: Participating markets are Malaysia, Singapore and Thailand.
Sources: Asian Development Bank; ASEAN Capital Markets Forum (ACMF); and Author's research.

As a regional organization supporting the development of ASEAN+3's corporate bond market, CGIF also engages domiciled corporates in ASEAN+3 to explore cross-border bonds for their financing needs. In fact, one of the biggest obstacles in cross-border bonds is the unfamiliarity of issuers to investors in the target issuance market. Generally, investors are hesitant to invest in bonds issued by unknown entities due to the uncertainty of the risks involved. CGIF plays a significant role in cross-border bond transactions, as it is better known by local investors than foreign issuers and is rated AAA by local rating agencies. Table 8.7 shows the cross-border bonds guaranteed by CGIF, including the ones that have already matured. The table also shows that Singapore and Thailand are the main venues for CGIF-guaranteed cross-border bonds in ASEAN+3.

Table 8.7: CGIF-guaranteed Cross-Border Bonds, as of end of 2024

Bond Issuance Venue	Issuance Year	Issuer (Country)	Currency and Issue Size	Tenor
Singapore	2024	Daewoo Engineering & Construction Co. (Korea)	SGD150 million	5 years
	2024	PowerDC HoldCo Pte. Ltd. (Singapore)	HKD300 million	3 years
	2022	China Education Group (PRC)	CNH500 million	3 years
	2021	Hanwha Solutions Corp. (Korea)	CNH1 billion	3 years
	2014	Protelindo Finance BV (Indonesia)	SGD180 million	10 years
	2014	Kolao Holdings (Lao PDR)	SGD60 million	3 years
	2014	PT Astra Sedaya Finance (Indonesia)	SGD100 million	3 years
Thailand	2023	Hope Education Group (PRC)	THB1,300 million	3 years
	2019	Yoma Strategic Holdings (Myanmar)	THB2,220 million	5 years
	2016	KNM Group Berhad (Malaysia)	THB2,780 million	5 years
	2013	Noble Group Limited (Hong Kong)	THB2,850 million	3 years
Japan	2020	GLP (Singapore)	JPY 15,400 million	9 years

CGIF = Credit Guarantee and Investment Facility, CNH = offshore Chinese renminbi, HKD = Hong Kong dollar, JPY = Japan yen, Lao PDR = Lao People's Democratic Republic, PRC = The People's Republic of China, THB = Thailand baht.
Note: "Country" refers to the country of risk, rather than the country of incorporation. Hence, Yoma Strategic Holdings is classified under Myanmar where its businesses are mainly operated, and not Singapore where it is listed.
Source: Bloomberg and Author's research.

Local subsidiaries of parent companies are incorporated in countries different from where their parents are based. When these subsidiaries consider issuing bonds in their local markets, they face the same challenges as foreign issuers despite being legally considered as domestic entities. This occurs because, even though their parent companies may be well-known in their home countries, the subsidiaries themselves are not familiar to local investors. In this context, CGIF can play a significant role in facilitating such bond transactions, similar to its role in cross-border transactions. We refer to these types of bonds as quasi-cross-border bonds to distinguish them from pure cross-border bonds. CGIF has been active in promoting these quasi-cross border corporate bonds in the market, wherein Table 8.8 shows the list of quasi-cross-border corporate bonds guaranteed by CGIF.

Table 8.8: Quasi-Cross-Border Corporate Bonds with CGIF Guarantees

Issuer Name	Country of the Issuer's Parent Company	Issuance Year	Issuance Currency and Amount	Tenor (Y)	Status
IVL Singapore	Thailand	2015	SGD195 million	10	Issued
AEON Philippines	Japan	2018	PHP1 billion	3 /5	Matured
CJ Logistics Asia	Korea	2019	SGD70 million	5	Issued
Nexus International School	Malaysia	2019	SGD150 million	12	Issued
Hanwha Q Cells	Korea	2021	MYR150 million	3	Issued
Erajaya Digital Pte. Ltd.	Indonesia	2023	SGD50 million	3	Issued

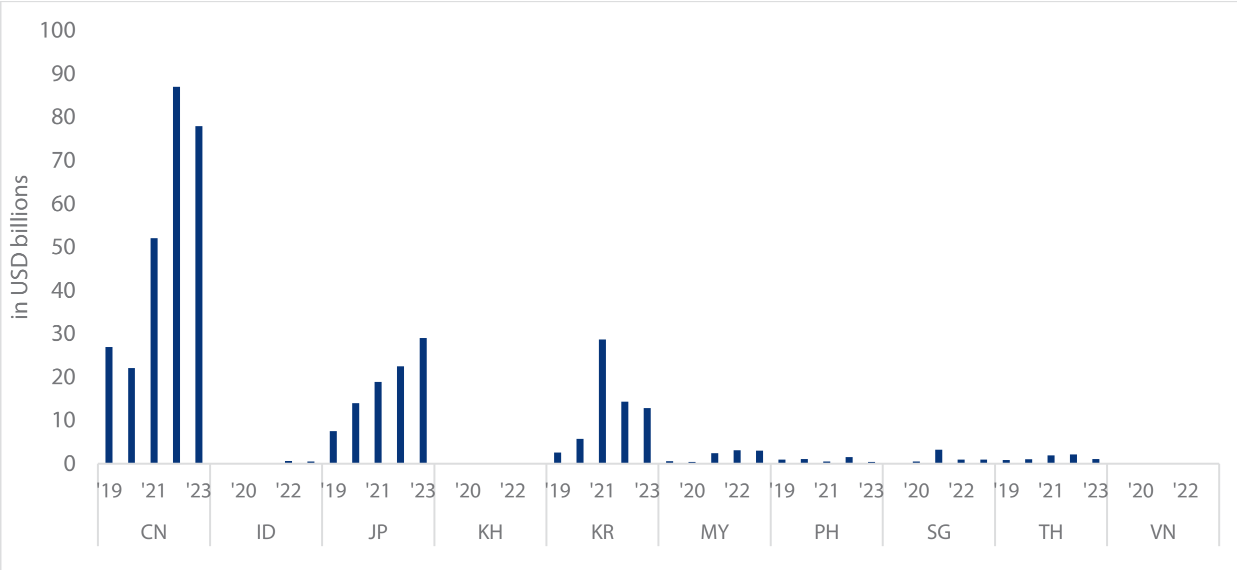
CGIF = Credit Guarantee and Investment Facility, MYR = Malaysian ringgit, PHP = Philippine peso, SGD = Singapore dollar, Y = year.
Note: The figures for AEON Philippines reflect the two tranches of bonds worth PHP900 million and PHP100 million, respectively.
Source: CGIF.

9 Thematic Corporate Bonds

9.1 Trends in Thematic Corporate Bonds Market of ASEAN+3

Thematic corporate bonds include green bonds, social bonds, sustainability bonds, sustainability-linked, and transition bonds. Issuances of thematic corporate bonds denominated in the local currency are more stable in the +3 markets of the PRC, Japan, and Korea. The PRC leads the annual issuance of thematic bonds in the wider market, followed by Japan and Korea.

Figure 9.1: Annual Issuances of Thematic LCY-denominated Corporate Bonds in ASEAN+3, by Country and Year, 2019-2023



ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea. CN = The People's Republic of China, ID = Indonesia, JP = Japan, KH = Cambodia, KR = Korea, LCY = local currency, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand, VN = Viet Nam

Notes:

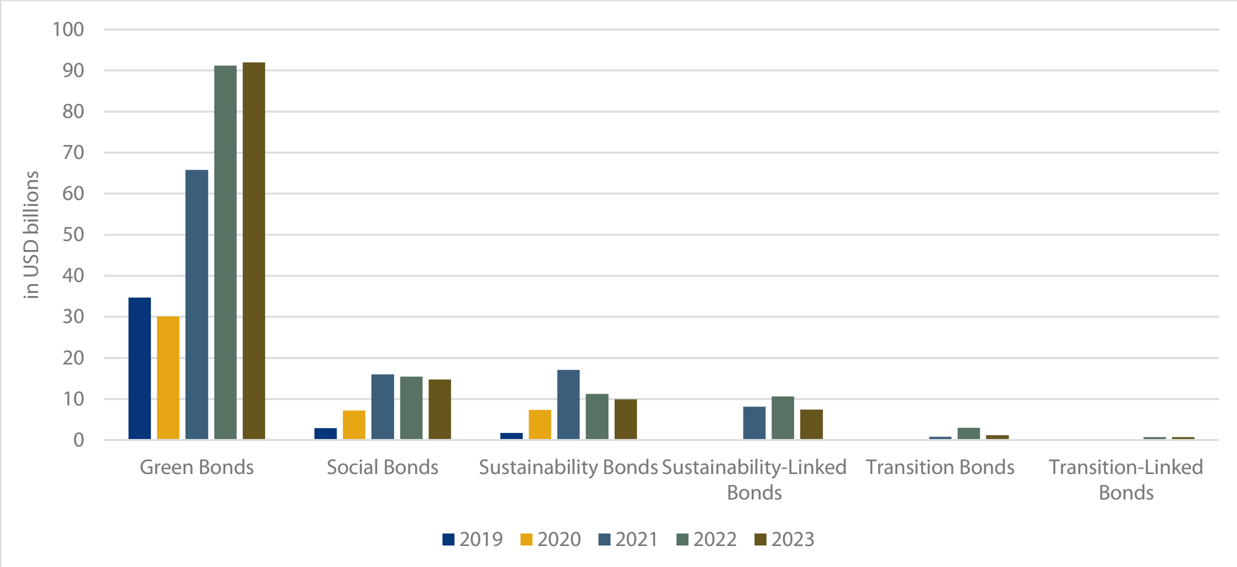
1. The figures reflect the values of new issuances of thematic bonds denominated in the local currencies of each country in each year.
2. Thematic bonds are composed of green bonds, social bonds, sustainability bonds, sustainability-linked bonds, and transition bonds.
3. Years are abbreviated to two-digit format.

Source: Asian Bonds Online and Author's calculations.

In the ASEAN market, a more stable annual issuances of thematic bonds are observed in Malaysia, where annual issuances of thematic bonds increased from nearly USD550 million in 2019 to USD3,060 million in 2023. Over the same five-year period, spikes of thematic bond issuances were observed in 2020 and 2022 in the Philippines, and in 2021 in Singapore. Notably, the emerging corporate bond markets of Viet Nam and Cambodia have also welcomed new thematic corporate bonds in 2022 and 2023, albeit having small issuance sizes.

In Figure 9.2, most of the thematic bonds that have been issued in ASEAN+3 are green bonds, which was the first thematic bond type introduced in the region. As of 2023, ASEAN+3 has also welcomed five more types of thematic bonds in the market: social bonds, sustainability bonds, sustainability-linked bonds, transition bonds, and transition-linked bonds. Social bonds take the far second, followed by sustainability bonds and sustainability-linked bonds. There are only a handful of issuances of other thematic bond types in the region.

Figure 9.2: New Issuances of Thematic LCY-denominated Corporate Bonds in ASEAN+3, by Type and Year, 2019-2023



ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, LCY = local currency, USD = US dollar.
Source: Asian Bonds Online and Author's calculations.

Compared to the +3 markets, the thematic corporate bond market in ASEAN seems to be smaller. However, it can still be said that thematic corporate bonds serve as the growth area for ASEAN's corporate bond market. Since 2019, the LCY thematic corporate bonds continue to increase its share in the LCY corporate bond market. Of the seven ASEAN countries under consideration, the Philippines has witnessed the PHP-denominated thematic bonds' share increase from 3.76% to 8.21%. Indonesia, Malaysia, Singapore, and Thailand recorded a modest increase of thematic corporate bonds, which can possibly indicate the growing interest for thematic bonds.

Table 9.1: Share of Thematic LCY Corporate Bonds to the Total LCY Corporate Bonds, 2019-2023 (%)

Year	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
2019	-	0.24	0.97	3.76	-	1.15	-
2020	-	0.09	1.12	5.35	0.40	1.83	-
2021	-	0.06	2.27	6.44	2.91	3.25	-
2022	-	2.41	3.76	7.54	3.53	4.38	0.14
2023	21.50	3.26	4.81	8.21	4.55	4.43	0.41

LCY = local currency.
Source: Asian Bonds Online and Author's Calculations

Cambodia shows a significant increase in the share of thematic bonds. By the end of 2023, 21.5% of Cambodia's KHR-denominated corporate bonds are thematic bonds. These are the green bond issued by Golden Tree Co. Ltd. and the sustainability bond of CAMGSM Plc.

A remarkable development in the ASEAN's thematic bond market is the push for more thematic bond issuances. It was already mentioned in Table 5.2 earlier that regulators in Malaysia and Singapore have maintained bond grant programs for thematic bonds in their respective domestic markets. Cambodia and Indonesia have embarked on their own "accelerator programs" for thematic bonds. These programs are well-acknowledged in the two countries, as there are many issuers who try to participate. These are described in Table 9.2.

Table 9.2: Bond Accelerator Programs in Cambodia and Indonesia

Country	Program Name	Implementing Agencies	Collaborating Organizations	Description
Cambodia	Cambodia Sustainable Bond Accelerator (CSBA)	SERC	CGIF, GGGI, GuarantCo, UNESCAP	Launched in March 2023, the CSBA aims to provide selected issuers with technical and financial assistance required to support green and sustainable bond issuances in the domestic market. In 2023, three issuers were selected to participate in the program.[1] In 2024, under the second phase of the program, three issuers were selected to participate.[2]
Indonesia	GSS+ Bonds Accelerator	OJK	CGIF, ADB	Launched in February 2024, this program aims to support pilot issuances of thematic bonds/sukuks and sukuk-linked waqf (a form of endowment under Islamic law) in Indonesia.

ADB = Asian Development Bank, CGIF = Credit Guarantee and Investment Facility, GGGI = Global Green Growth Initiative, OJK = Otoritas Jasa Keaungan (Financial Services Authority of Indonesia), GSS+ = Green, Social, Sustainability, and Sustainability-linked, SERC = Securities and Exchange Regulator of Cambodia, UNESCAP = United Nations Economic and Social Commission for Asia and the Pacific.

Notes:

1. UNESCAP. 26 June 2023. *UN, GGGI and Government of Cambodia announce support to green bond issuers.* https://www.unescap.org/news/un-gggi-and-government-cambodia-announce-support-green-bond-issuers.

2 GGGI. 21 June 2024. *Cambodia's Green Finance Takes Flight: Three local companies selected for the Sustainable Bond Accelerator Program Phase II.* https://gggi.org/cambodias-green-finance-takes-flight-three-local-companies-selected-for-the-sustainable-bond-accelerator-program-phase-ii/.

Source: Author's research.

9.2 CGIF in the Thematic Corporate Bond Market of ASEAN+3

Since 2016, CGIF has been actively supporting thematic corporate bond issuances. From its first climate project bond, CGIF was able to support issuers of green and social bonds in ASEAN+3, which are presented in Table 9.3.

Table 9.3: CGIF-Guaranteed Thematic Corporate Bonds in ASEAN+3, as of December 2024

Issuer Name	Bond Issuance Venue	Issuance Year	Issuance Size	Tenor (Y)	Type of Thematic Bond
AP Renewables	Philippines	2016	PHP10.7 billion	10	Climate Project Bond
Energy Absolute	Thailand	2020	THB3 billion	7	Green bond
Hanwha Solutions Corporation	Singapore	2021	CNH1 billion	3	Green bond
Hanwha Q Cells	Malaysia	2021	MYR150 million	3	Green bond
Thai Foods Group	Thailand	2021	THB1 billion	5	Social bond
First Real Estate Investment Trust	Singapore	2022	SGD100 million	5	Social bond
Apeiron Bioenergy	Singapore	2023	SGD50 million	5	Green bond
Royal Group Phnom Penh SEZ (RGPPSP)	Cambodia	2024	KHR41 billion	5	Green bond

Sabana Industrial REIT	Singapore	2024	SGD100 million	5	Sustainability-linked bond
PT Steel Pipe Industry of Indonesia (SPINDO)	Indonesia	2024	IDR1 trillion	3, 5, and 7	Sustainability-linked bond
Precious Shipping Company Limited	Thailand	2024	THB1,360 million	5 and 10	Sustainability-linked bond

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea, CGIF = Credit Guarantee and Investment Facility, CNH = offshore Chinese renminbi, IDR = Indonesian rupiah, KHR = Cambodian riel, MYR = Malaysian ringgit, PHP = Philippine peso, SGD = Singapore dollar, THB = Thailand baht, Y = year.
Source: CGIF.

As shown in Table 9.3, CGIF has a proven track record for supporting climate or green bonds and has expanded its support on other types of thematic bonds, such as social bonds and sustainability-linked bonds. In addition, CGIF has expanded the venues of thematic bonds from relatively well-developed corporate bond markets in ASEAN, such as Malaysia, Singapore, and Thailand to less-developed ones such as Cambodia and Indonesia.

Aside from the direct support for credit guarantees for local thematic corporate bond issuances, CGIF actively forging partnerships for the development of environmental, social, and governance (ESG) activities and awareness in the region. In 2023, CGIF entered into a Memorandum of Understanding with the China-ASEAN Investment Cooperation Fund II GP, which will help promote and support bond financing for infrastructure development with a focus on green financing.[15]

10 Outlook and Considerations

Fostering Corporate Bond Market Development in Emerging ASEAN+3 Economies

ASEAN+3 countries are at different stages in the development of their corporate bond markets. Among them, Brunei, Lao PDR, and Myanmar have yet to develop specific areas in their financial markets to foster their local currency corporate bond market. As mentioned earlier in this report, a corporate bond market emerges once a country's stock market has reached a certain level of maturity. Therefore, efforts should focus on the broader development of capital markets in these countries to foster the growth of corporate bond markets. To facilitate this process, they may consider implementing programs such as tax incentives, grant schemes, or streamlining of issuance processes for issuers. Cambodia, for example, has made notable progress in developing its corporate bond market, in part due to the tax incentives it has introduced.

An important aspect in fostering the corporate bond market development is the regulatory environment. Along with passing of relevant legislations and programs to encourage bond issuance as well as investor protection, applying these is crucial in overall bond market development. In addition, the supporting regulations must also be maintained and implemented. One example is the application of risk weights for eligible bond investments among investor banks and insurance companies. The corresponding risk weight of a bond may influence how investors perceive it as a viable instrument in their portfolio. If regulatory authorities regard guarantees as a credit mitigation factor for corporate bonds, then investors would have a good perception on guaranteed corporate bonds as safe investment instruments.

[15] CGIF Press Release. 2023. https://www.cgif-abmi.org/storage/2023/09/MOU_CGIF-x-China-ASEAN-Investment-Cooperation-Fund_Press-Release.pdf

Growing Role of Individual Investors and Digital Bonds in the Corporate Bond Market in ASEAN+3

Individuals are becoming a more significant investor group for corporate bonds in the region. They are already the largest investors in Thailand and Singapore, and significant investors in Japan and Korea. Unlike institutional investors, individuals are less constrained by minimum credit rating requirements and are often willing to prioritize yield over risk. This characteristic can facilitate more companies in issuing bonds by broadening the investor base.

However, some countries have regulations preventing non-professional individual investors from investing the corporate bonds which do not comply with certain requirements, aiming to protect them from excessive risk. Ideally, such regulations should strike a balance, providing reasonable investor protection without overly restricting access to corporate bonds, especially for those who are aware of and willing to accept the associated risks.

The participation of individual investors is expected to grow further with the advancement of financial digitalization, a trend likely to impact the corporate bond market in ASEAN. For instance, Thailand has been actively exploring the possibility of issuing more digital bonds. In 2023, the Thailand Bond Market Association reported that six digital bonds were offered in 2023, totaling to THB7.5 billion. These digital bonds, leveraging blockchain technology, offered retail investors greater accessibility with minimum investment requirement of only THB1,000 and the ability of trade anytime.

Another recent development for digital bonds is the Global-Asia Digital Bond Grant Scheme of the Monetary Authority of Singapore (MAS), which was introduced in early 2025 and will be valid until 31 December 2029.[16] This bond grant scheme aims to help the issuance of and the broader market adoption of digital bonds in Singapore. The funding under this bond grant scheme will be provided for up to two qualifying digital bond issuances.

Under this bond grant scheme, qualifying issuers are companies and non-bank financial institutions with an Asian nexus. The potential digital bonds must comply with the requirements of the MAS, for example, having a minimum issue size of SGD100 million, with at least 1 year of tenor (in which it must be joint-led by at least 2 specified licensed entities in Singapore), and denominated in Asian local or G3 currencies. The potential digital bonds must be listed on Singapore Exchange or any other recognized digital asset platform.

Promoting Intra-Regional Cross-Border Bond Issuances in ASEAN+3

Intra-regional cross-border bond issuances remain rare in the region despite active regional economic cooperation. To address this, various initiatives have been implemented to promote their development. AMBIF promotes the single submission form across the region, which reduces the challenges for issuers wanting to explore regional bond issuance. The Framework for Cross-Border Offering of ASEAN Collective Investment Schemes (ASEAN CIS) is an indirect way to introduce ASEAN bonds as part of a collective investment scheme, particularly for retail investors. In particular, CGIF plays a significant role in cross-border bond transactions as it can help overcome one of the biggest obstacles in cross-border bonds, investors in target markets being unfamiliar with the issuers, by leveraging its strong local reputation and AAA rating from local rating agencies. As regional market participants become more familiar with these initiatives, intra-regional cross-border bond issuances are expected to be more active.

As a related topic, digital bonds can also promote cross-border bond issuances in the region. Digital bonds present opportunities by reducing the need for multiple intermediaries such as custodians, clearinghouses and depositories which are required for cross-border transactions.

[16] Monetary Authority of Singapore. 2025. *Global-Asia Digital Bond Grant Scheme (G-ADBGS)*. https://www.mas.gov.sg/schemes-and-initiatives/global-asia-digital-bond-grant-scheme

Growing Potential of Sustainable Bonds in ASEAN

The discussions show gradual realization of the potential of sustainable bonds in ASEAN. Geographically, ASEAN is highly vulnerable to the effects of climate change and worsening natural disasters. Encouraging issuers to seek financing aligned with mitigating these negative effects is both beneficial and necessary.

Product diversification within the sustainable bond market segment is expected over the coming years. As the most common type, green bonds will continue to hold a significant share in the ASEAN+3 sustainable bond market. Nevertheless, the trends in the past three years pave the way for other types of sustainable bonds to be recognized. Sustainability bonds, which represent an intersection of green bonds and social bonds, are the immediate next growth area in the sustainable bond market. In fact, many outstanding green bonds can be refinanced as sustainable bonds in the market.

Social bonds, whose proceeds are intended to address or mitigate certain social issues in a location, also serve as timely instruments for issuers in the region, where many social issues are present. Recent social bonds in ASEAN aim to increase women's economic participation, provide better housing opportunities, expand access to formal financing channels as an alternative to informal lending, and create more gainful employment opportunities. As the importance of thematic bonds is increasingly being recognized by regulators and market participants, their issuances are expected to grow in the region. To support the rapid growth of these bonds, regulatory measures, such as tax incentives for investors, may be considered.

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