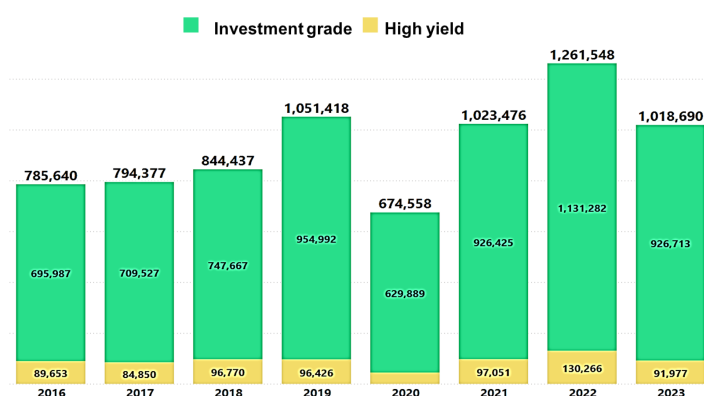


2023 Bond Market Highlights

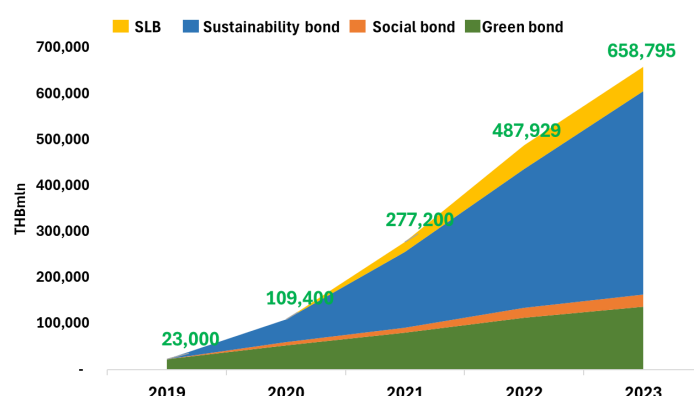
1. Long-term corporate bond

In 2023, Long-term corporate bond issuance reached THB 1.02 trillion, marking the fourth year out of the past five years in which issuances have surpassed THB 1 trillion. 91% of them were investment-grade, while the other 9% were high-yield.



2. ESG bonds

ESG bonds (Environmental, Social and Governance) outstanding become THB 659 billion increased by 35% from 2022, largely dominated by MOF's sustainability bond with the size of THB 442 billion. Corporates are the main issuers of green bonds and sustainability-linked bonds which have the size of THB 137 billion and THB 53 billion respectively.



3. Digital bond

Digital bond offerings totaled 6 issues worth THB 7,500 million in 2023. Digital bonds utilized blockchain technology and offered through the government "Pao Tang" mobile application. It provides greater accessibility for retail investors with a minimum investment of just THB 1,000 and can be traded 24 hours in real time.

ThaiBMA Symbol	Offering Size (THB Million)	Issue Term	Issue Date
IRPC265D	700	3	31/05/2023
IRPC285C	900	5	31/05/2023
IRPC305B	200	7	31/05/2023
IRPC335B	200	10	31/05/2023
BCP26NB	3,000	3	02/11/2023
SIRI25DC	2,500	2	01/12/2023
Total	7,500		

2023 Thai Bond Market Review

Outstanding Value

Total outstanding value of Thai bond market at the end of 2023 increased by 5.4% to THB 16.51 trillion. The largest portion came from government bonds, which accounted for 51% of the total outstanding. Corporate bond and Bank of Thailand (BOT) bond accounted for 29% and 13% respectively. The remaining were State Owned Enterprise (SOE) bond and foreign bond, which accounted for 6% and 1% respectively.

Classified by types of bonds, government bond outstanding grew 8.08%. Corporate bond outstanding increased 8.98% from 2022. In contrast, BOT bond outstanding declined 7.18% from last year to the outstanding value of THB 2.23 trillion (See Figure 2)

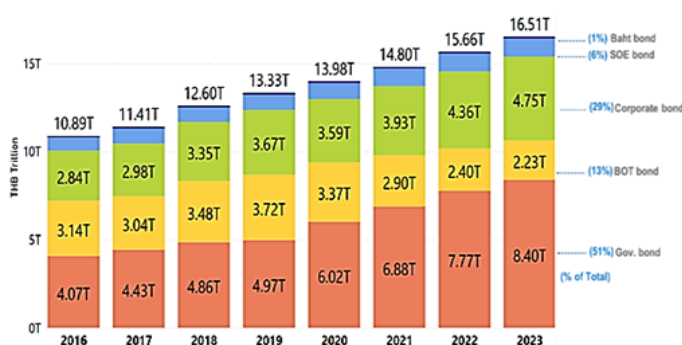


Figure 1: Outstanding Value of Thai Bond Market
(Unit: THB trillion)

Type	2022	2023	Growth(%)
Government Bond	7,771,716	8,399,956	↑ 8.08%
Corporate Bond	4,362,273	4,753,851	↑ 8.98%
Bank of Thailand Bond	2,403,266	2,230,610	↓ -7.18%
State Owned Enterprise Bond	1,037,747	1,046,202	↑ 0.81%
BAHT Bond	82,266	82,739	↑ 0.58%
Total	15,657,267	16,513,358	↑ 5.47%

Figure 2: Outstanding Value by Types of Bonds
(Unit: THB million)

Classified by sector, long-term corporate bond outstanding value was at THB 4.5 trillion, which accounted for 94% of the total outstanding value of corporate bond. The largest 5 business sectors of long-term corporate bond contributed 60% of the total. The top five sectors were Energy, Finance (non-bank), Property, Commerce, and ICT.

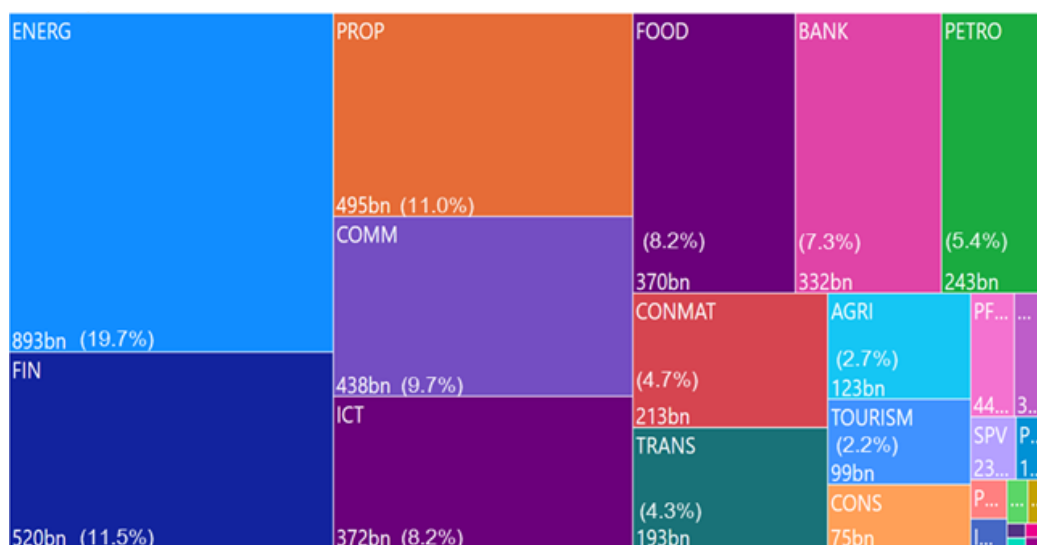


Figure 3: Long-Term Corporate Bond Outstanding Value Classified by Sector

Trading Value

Daily average trading value in 2023 was THB 65 billion, rose 10.17% from THB 59 billion in the previous year. This was mainly due to higher turnover in BOT bonds. BOT issues bonds as one of the monetary policy instruments to manage money market liquidity. In 2023 BOT adjusted the range of auction size for 3-month bills and 2-year fixed-coupon bonds, resulting in an increase in the maximum auction size. Accordingly, BOT bond remained the highest traded bond with a daily average trading value of THB 36 billion. The second most traded bond was government bond with a daily average trading at THB 23 billion. Trading in BOT and government bonds contributed 90% of daily trading activity. (See Figure 4). The average daily trading value of corporate bonds was THB 5.7 billion in 2023, slightly higher than last year. (See Figure 5).

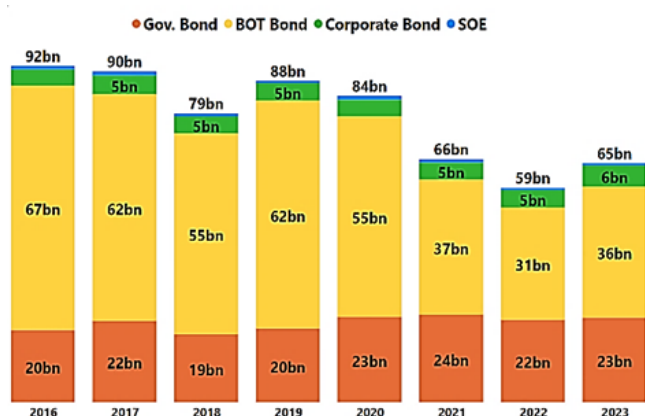


Figure 4: Average Daily Trading Value in Thai bond market (Unit: THB billion)

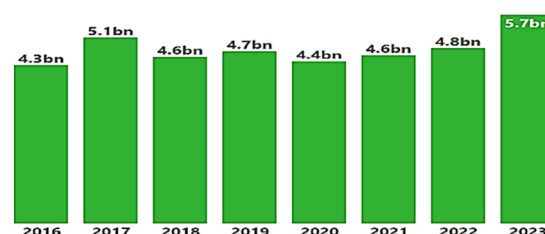


Figure 5: Average Daily Trading Value of Corporate Bond (Unit: THB billion)

Bond Issuance

The issuance of government bonds and State-Owned Enterprise bonds in 2023 declined by -7.83% and -33.42% respectively from last year, while BOT bond issuance increased by 11.69%.

Long-term corporate bond issuance declined 19.2% from last year but still exceeded THB 1 trillion level. Total issuance in 2023 was THB 1.02 trillion, with 91% being investment-grade. Top five sectors issuing corporate bonds were Finance, Energy, Property, Banking, and ICT.

Type	2022	2023	Growth(%)
Government Bond	2,343,174	2,159,686	↓ -7.83%
Treasury Bill	1,055,276	950,000	↓ -9.98%
Government Bond	1,287,898	1,209,686	↓ -6.07%
Bank of Thailand Bond	4,151,161	4,636,515	↑ 11.69%
Central Bank Bill	3,890,686	4,322,941	↑ 11.11%
State Agency Bond	260,475	313,574	↑ 20.39%
State Owned Enterprise Bond	159,600	106,265	↓ -33.42%
Corporate Bond	2,058,981	2,047,636	↓ -0.55%
Commercial Paper	813,300	1,041,108	↑ 28.01%
Long-Term Corporate Bond	1,245,681	1,006,528	↓ -19.20%
BAHT Bond	15,867	12,162	↓ -23.35%
Total	8,728,783	8,962,264	↑ 2.67%

Figure 6: Bond Issuance (Unit: THB million)

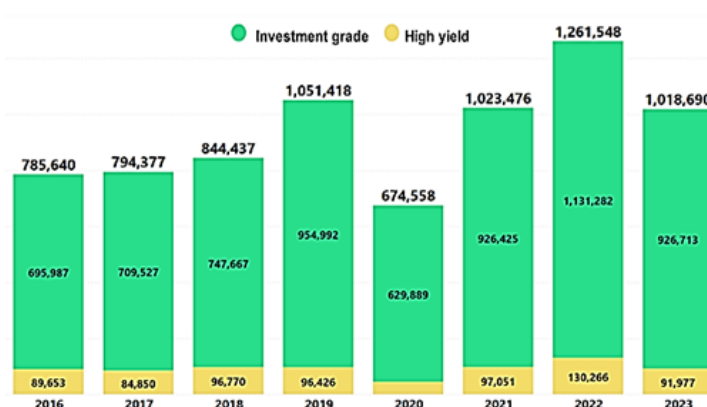


Figure 7: Long-Term Corporate Bond Issuance (Unit: THB million)

In 2023, there was a total issuance of THB 12,162 million of BAHT bond, which is BAHT denominated bonds offered in Thailand by foreign entities. 3 out of 6 issuers were from Lao PDR from both public and private sectors (Ministry of Finance of Lao PDR, EDL generation and Xayaburi Power) with total issue size of THB 7,862 million. Another 3 issuers were YOMA Holding (Myanmar), Hattha Bank (Cambodia) and HOPE Education (operated in China). (See Figure 8)

Issuance of FX bond (bond denominated in foreign currency) in 2023 were in EUR, JPY and USD offered to domestic institutional investors (II) by Thai entities (Kiatnakin Phatra Bank: KKP and Kasikorn Bank: KBANK). The total issue size was approximately equivalent to THB 59,692 million. (See Figure 9)

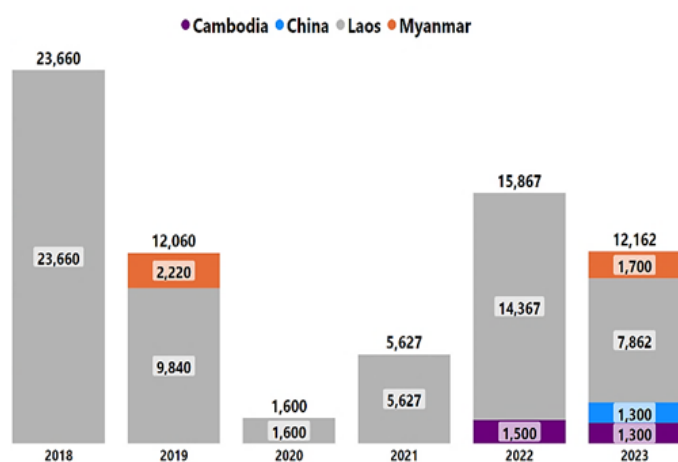


Figure 8: BAHT Bond Issuance
(Unit: THB million)

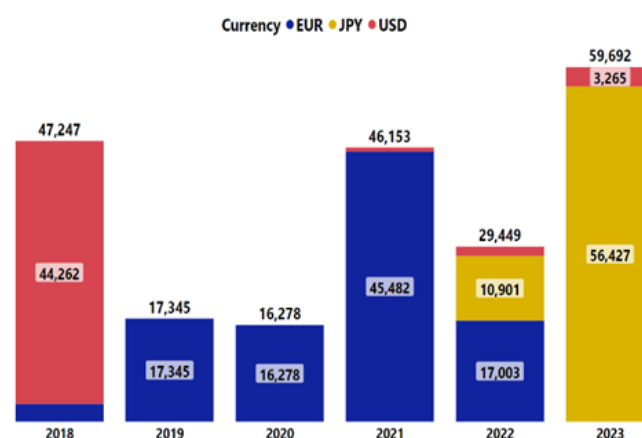


Figure 9: FX Bond Issuance
(Unit: THB million)

ESG bond

In 2023, total issuance of ESG bond amounted to THB 179 billion. Ministry of Finance (MOF) remains the main issuer of ESG government bonds, contributing over half of the total issuance (THB 135,000 million), which gradually increased from 2022.

There are 3 newcomers from the corporate sector: Gulf Energy Development PCL. (GULF), Electricity Generating PCL. (EGCO) and WHA Corporation PCL (WHA). GULF allocated the proceeds from its green bond towards investments in wind power projects. EGCO issued a green bond to finance its existing eligible green projects. The potential outcomes of these projects include the installation of renewable energy capacity, production of green energy and reduction of GHG emissions. WHA issued sustainability-linked bond (SLB), the first SLB issued by logistics, industrial estates, utilities, and power sectors, The company has set up 2 Key Performance Indicators (KPIs): the reduction of Scope 1 and Scope 2 GHG emission, and the augmentation of reclamation water production. Under SLB's condition, the bond's coupon rate can be adjusted upward if the companies fail to achieve KPIs by the specified timeframe.

	Green	Social	Sustainability	SLB
• Government sector	EXIM 3,500	GHB 4,000	MOF 135,000	
• Corporate sector	GULF 8,000		BEM 6,500	WHA 1,000
	WHAUP 500			
	EA 9,866			
	XPCL 3,500			
	EGCO 7,000			
	RATCH 1,000			
Total	33,366	4,000	141,500	1,000
Grand total				179,866

Figure 10: ESG Bond Issuers in 2023 (Unit: THB million)

The largest corporate ESG bond in 2023 was Energy Absolute PLC (EA)'s green bond with a value of THB 9,866 million, offered to both Institutional investors (II) and Public Offering (PO). EA issued green bonds for investment in electric vehicle public transportation (EV-buses).

At the end of 2023, the total outstanding value of ESG bonds was THB 658,795 million, of which 70% were issued by the government sector and 30% were issued by the corporate sectors. The government remains the largest issuers of ESG bonds, which included Thai government and state own enterprises. On the other hand, the outstanding value of corporate ESG bonds amounted to THB 197,895 million, representing 4.4% of the total outstanding value of long-term corporate bonds. Corporate ESG bond outstanding continued to rise over the year with total of 21 issuers at the end of 2023.

In late 2023, a significant development which could support further growth of ESG bonds is the emergence of Thai ESG funds. On November 21, 2023, The Cabinet granted approval for the tax-saving THAI ESG Funds scheme, for long-term saving mutual funds investing in eligible stocks and bonds. The purpose of THAI ESG Funds were to encourage investment in organizations or projects that support sustainability (ESG) and to foster long-term savings within the capital market. The Net Asset Value (NAV) of THAI ESG Funds at the end of 2023 amounted to THB 5,267 million. One of them was ESG Bond Fund, which valued at THB 481 million, accounted for 9.1% of total THAI ESG Funds.

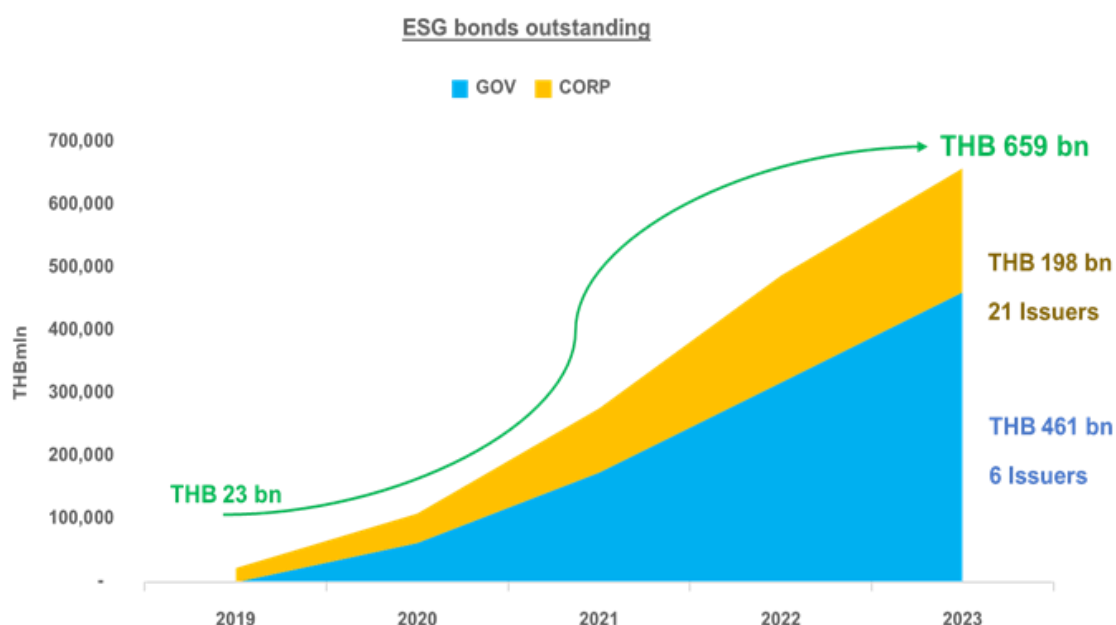


Figure 11: ESG Bond Outstanding as of 31 Dec 2023

A Challenging year of Thai bond market

Rising interest rates both globally and domestically were among the negative factors affecting bond issuance and investment decision in 2023. The Federal Reserve (Fed) raised interest rates 4 times from 4.25%-4.50% at the end of 2022 to 5.25%-5.50% at the end of 2023. Bank of Thailand (BOT) also increased interest rate 5 times from 1.25% at the end of 2022 to 2.50 at the end of 2023.

* As of the end 2023, CHO was not in condition of default payment; rather, it was in term of debt restructuring instead.

The rise in interest rates is also related to the ability to service debt, which typically affects the financial costs of corporate bond issuers. This is the other issue on top of challenges facing bond issuers leading to the maturity extension or payment defaults of some issuers. In 2023, there were 5 issuers with the condition of default payment such as All Inspire Development Public Company Limited (ALL), STARK Corporation Public Company Limited (STARK), CHO Thavee Public Company Limited (CHO), Destination Resorts Company Limited (DR) and JKN Global Group Public Company Limited (JKN). One of the biggest scandals was the default of STARK cooperation, one of 100 largest SET-listed companies, which particularly involved in issues of good governance. It has significantly impacted investor sentiment. Later, JKN Global group, who bought Miss Universe Organization in 2022, announced bond defaults in September 2023 which had worsened the market sentiment for bonds issued by mid-sized companies as well as raising question on the creditability of financial statements.

Holders of Government bonds and Bank of Thailand bonds (as of end 2023)

Holders of government bonds were mainly institutional investors. Banks (27.29%), long-term contractual funds (23.99%) and insurance companies (21.73% of total) were the top three holders of government bonds. Foreign investors held a proportion at 9.51%, whereas individual investors accounted for only 5.48% of total, mainly in saving bonds. (See Figure 12)

Banks were the largest holder of BOT bonds, accounting for 40.71% of BOT bond's outstanding. Mutual funds and long-term contractual funds ranked second and third with 38.61% and 11.64% respectively. (See Figure 13)

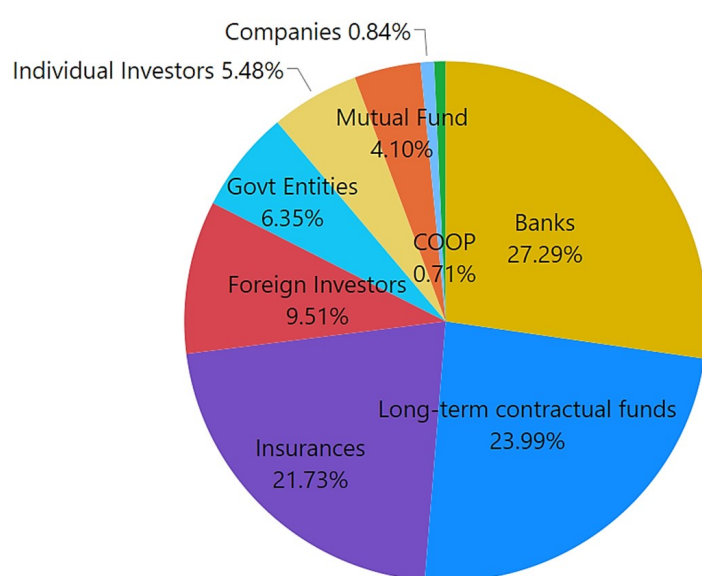


Figure 12: Holders of Government Bond

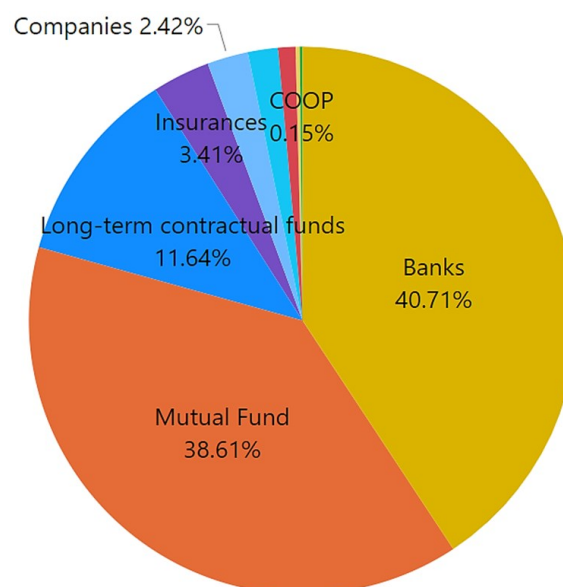


Figure 13: Holders of Bank of Thailand Bond

Holders of Corporate bonds (as of end 2023)

The main holder of corporate bonds was individual investors, who hold 38.95% of the market, followed by insurance companies and long-term contractual funds, accounting for 16.78% and 12.39% respectively. (See Figure 14)

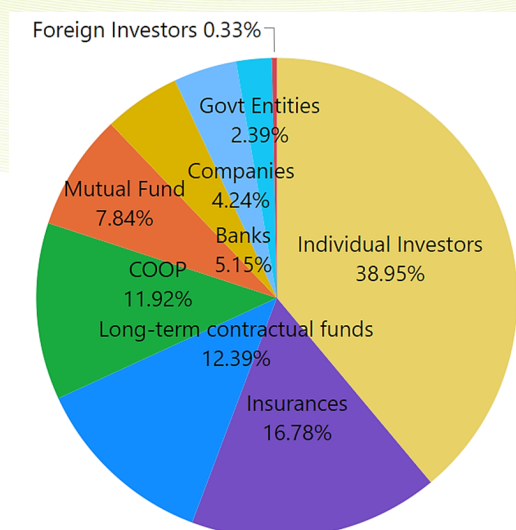


Figure 14: Holders of Corporate Bond

Fund Flows of non-resident investors (NR)

Non-resident investors reported net sell of THB 146 billion for the year 2023, in contrast to the previous year's net inflow of THB 46 billion. Capital flows displayed substantial volatility throughout the year, influenced by various global circumstances. In the first quarter, Thai bond market was affected mainly by Federal Reserve increasing interest rate, resulting in a net sell of Thai bond amounted to THB 23 billion.

Throughout the second and third quarters of 2023, the Federal Reserve (Fed) continued to raise its policy rate to 5.25%-5.50%, while the Bank of Thailand gradually increased its policy rate to 2.50%. This resulted in a widening yield gap between Thailand and the United States and had a considerable impact on the Thai bond market, contributing to net outflows totaling THB 126.2 billion in the second and third quarters (Q2 and Q3).

In the last quarter, market sentiment showed signs of improvement, partly attributed to the Fed maintaining its policy rate. As the government's economic stimulus policies became clearer, there has been a resurgence of capital flows into the Thai bond market, resulting in a net inflow of THB 3 billion in Q4.

The year 2023 ended with net outflows of THB 146 billion, of which THB 36 billion were inflows in long-term bonds and THB 180 billion net outflows from short-term bonds.

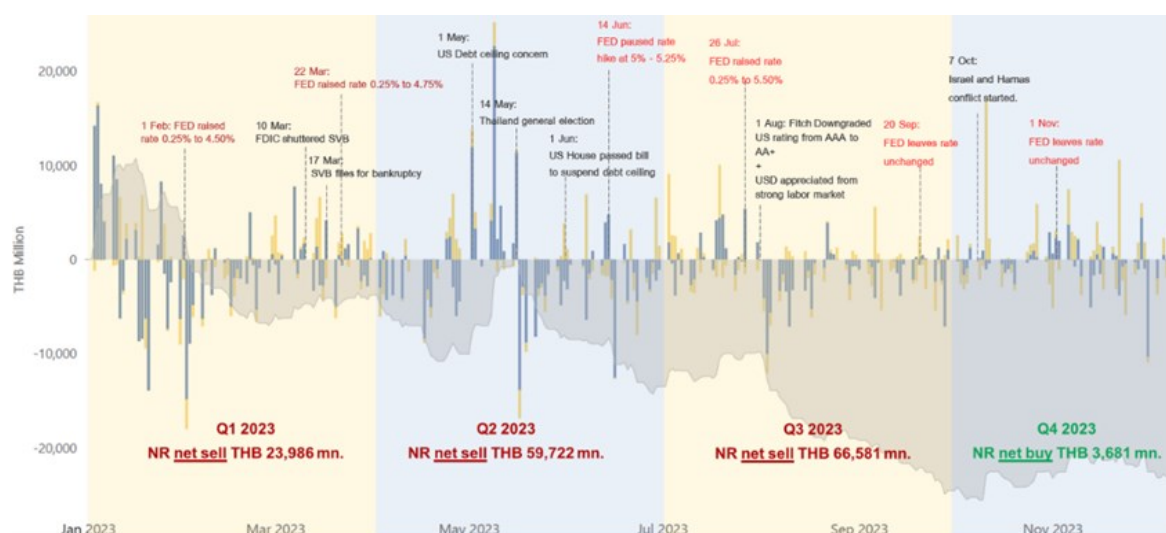


Figure 15: Daily Fund Flow of Thai Bond Market in 2023

NR Holding in Thai bonds

The non-resident holding of Thai bond at the end of 2023 was at THB 938 billion, accounting for 5.7% of total outstanding. The largest portion of holding was in government bonds with over 10-year maturity, accounting for 29% of the total holdings. The second portion of holding was in government bonds with a maturity range of 5 to 10 years. There was an increase in long-term bond holdings with a time to maturity of 3-5 years from THB 127 billion at the end of 2022 to THB 173 billion at the end of 2023.

In contrast, short-term bond holdings (with a time to maturity of less than one year) significantly decreased from THB 181 billion at the end of 2022 to THB 94 billion at the end of 2023. As a result, at the end of 2023 non-resident held Thai bonds has average time to maturity of 8.4 years, slightly longer than 8.0 years at the end of 2022.

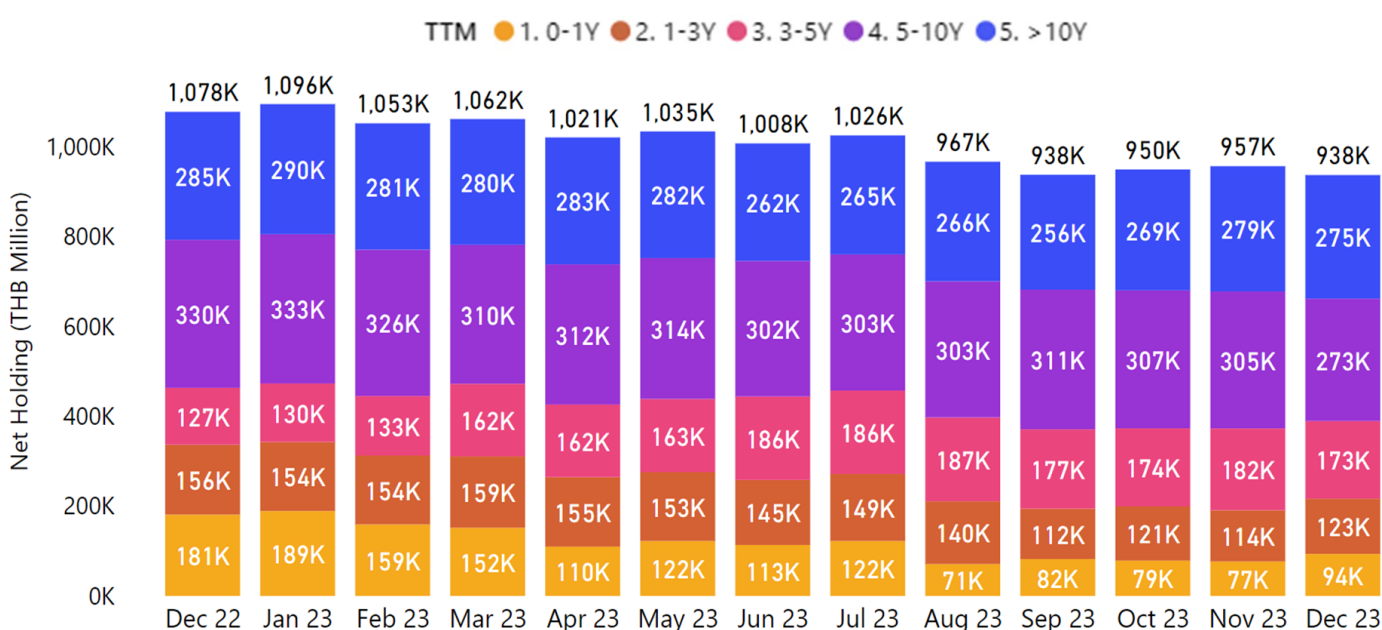


Figure 16: Monthly NR Holding of Thai Bond in 2023

Government Bond Yield Movements

To counteract inflation, the Fed continue to raise policy rates 4 times throughout the year 2023, reaching the rate at 5.25%-5.50%. US 10-year bond yields stood at 3.88% during the early 2023 and reached a peak at 4.99% in October 2023.

Thailand's government bond yield curve, influenced by US bond yields, exhibited a Bearish flattening movement in 2023. Short-term bond yields also adjusted upward in response to the MPC policy rate, which increased five times from 1.25% at the end of the previous year to 2.50% by the end of 2023. Meanwhile, long-term bond yields remained stable or experienced a slight decrease, aligning with the decelerating inflation trend. Amid slower inflation during the last quarter of the year, Thai government bond yield curve showed a tendency toward softening by the end of 2023. Specifically, the 2-year Thai bond yield increased by 71 bps from the end of 2022, reaching 2.34%, while the 10-year Thai bond yield increased by 6 bps, reaching 2.70% by the end of 2023.

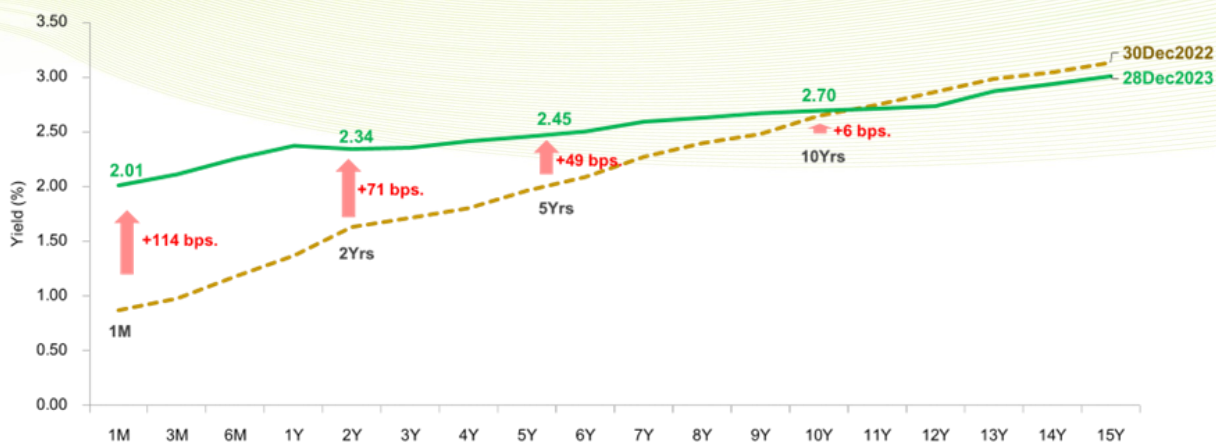


Figure 17: Thai Government Bond Yield Curve Movement in 2023

Corporate Bond Yields

In 2023, Corporate bond yields, representing the cost of funding for corporates, have increased in line with the rise of government bond yields. Corporate bond yield for 5-year bonds across all ratings group increased by 21-40 bps to 3.11% to 4.52% at the end of 2023. The yield for AAA-rated five-year bond increased from 2.72% to 3.11%, AA-rated from 3.07% to 3.32%, A-rated from 3.25% to 3.57% and BBB+ rated from 4.31% to 4.52%.

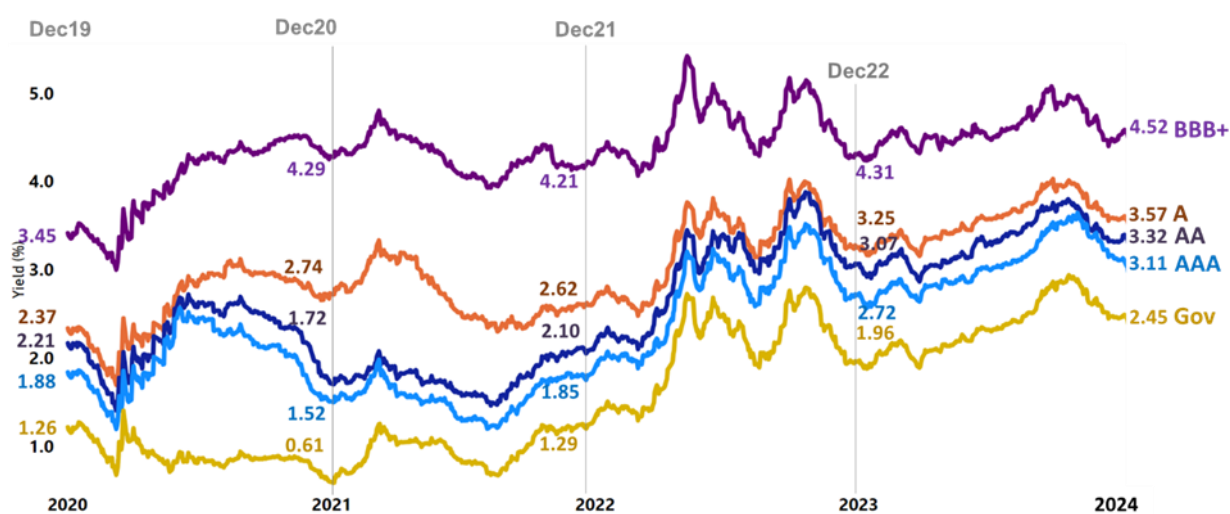


Figure 18: 5-year Corporate Bond Yield Movement in 2023

Summary

In 2023, the Thai bond market experienced a year of volatility, attributed to an increasing cycle of interest rates. Thailand's policy rate gradually rose from 1.25% at the end of 2022 to 2.5% at the end of 2023. Although market sentiment in small and medium-sized corporate issuers was negatively affected by the series of missed payments, there was minimal impact on bond issuance of well-known and high investment grade companies. In addition, abundant liquidity and solid fundamentals of Thai financial market contributed to the overall stability and resilience of the bond market.