

## Default Statistics and Rating Transition Rates in Thailand (2023)

23 January 2024

### SUMMARY

The Thai bond market in 2023 faced several challenges during the year, particularly the impact of interest hikes, and the dent on investor confidence after the default of a large corporate issuer whose management allegedly committed fraudulent acts involving accounting falsification. These had drawn an impact on new corporate bonds (including foreign bonds denominated in Thai baht) issued and registered with the Thai Bond Market Association (ThaiBMA) in 2023 to drop to THB1.01 trillion from THB1.24 trillion in 2022, down by about 20% year-on-year (y-o-y). However, the value of outstanding long-term corporate debentures at the end of 2023 increased by 7.76% y-o-y to THB4.49 trillion.

In 2023, TRIS Rating rated and publicly announced the ratings on 254 issuers. The issuers can be categorized as 192 non-financial institution issuers (non-FI), 58 financial institutions (FI), one structured finance issuer, and three issuers in the “government” sector (including supranational institutions).

For the corporate default study, we did not include the structured finance issuer and the government sector issuers. We also excluded six non-FI and three FI issuers that issued only guaranteed bonds. Thus, the corporate default study included 241 issuers, comprising 186 non-FIs and 55 FIs.

In 2023, there were 215 issuers that had their ratings outstanding for the whole year (excluding nine issuers that withdrew their ratings in 2023 and 17 issuers that were assigned initial ratings in 2023). There were 12 upgrades and 25 downgrades, and two defaults. The downgrade (including defaults) to upgrade ratio increased to 2.25 times in 2023, from 0.76 times in 2022. The annual default rate in 2023 was 0.93%. There were 22 changes in outlook, comprising six upwards and 16 downwards.

The cumulative number of defaulters during 1994-2023 increased to 26 from 24 during 1994-2020 (including five issuers that defaulted after withdrawing their ratings more than one year). There were no defaults during 2021-2022. The one-, two-, and three-year cumulative default rates (CDRs) during 1994-2023 slightly changed to 0.840%, 1.799%, and 2.582% from 0.832%, 1.785%, and 2.592%, respectively, during 1994-2022.

To gain a perspective of where TRIS Rating’s default statistics stand in the region, we compared our CDRs with those of some prominent national rating agencies in ASEAN. Overall, our CDRs are relatively low in most rating categories, except for the “AA” category where two issuers defaulted during the 1997-1998 financial crisis and the number of rated issuers in this category was rather small. One key observation is that the distribution of our ratings is more symmetrical than most of other rating agencies in the region. The issuer ratings assigned by TRIS Rating in 2022-2023 were predominantly in the “A” and “BBB” rating categories. The ratings assigned by other rating agencies in the region, tend to gear toward higher rating categories, with more than 80% of issuer ratings in the “A” rating category and above.

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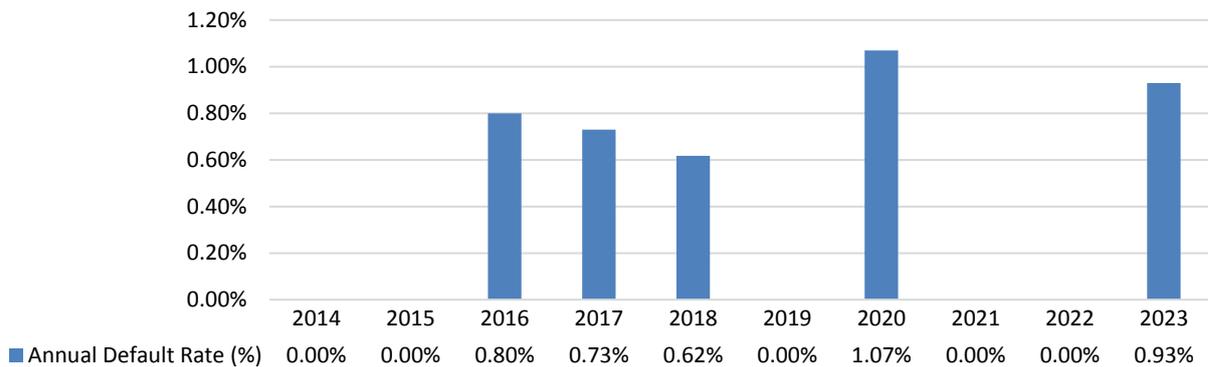
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**Chart 1: Annual Default Rates of Companies Rated by TRIS Rating in the Last Ten Years (During 2014-2023)**



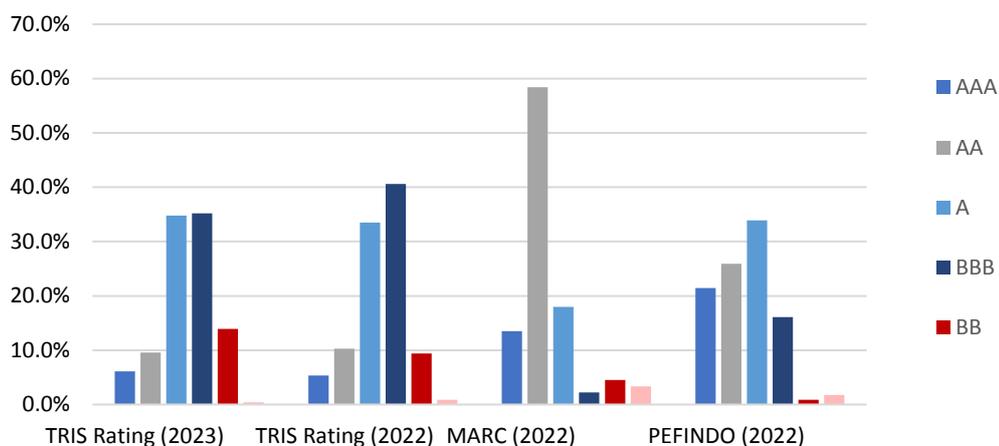
Source: TRIS Rating

**Table 1: One-year Average CDRs of Selected National CRAs in ASEAN**

Rating	Thailand	Malaysia	Malaysia	Indonesia
	TRIS Rating	MARC	RAM	PEFINDO
	During 1994-2023	During 1998-2022	During 1992-2022	During 2007-2022
	AAA	0.00%	0.00%	0.00%
AA	0.37%	0.00%	0.06%	0.00%
A	0.20%	2.30%	0.75%	0.70%
BBB	1.10%	7.90%	1.24%	2.74%
BB	2.68%	0.00%	8.03%	23.08%
B	37.50%	14.3%	3.13%	0.00%
C (CCC for PEFINDO)	100.00%	50.00%	18.03%	20.00%

Sources: 1) TRIS Rating  
2) MARC Ratings Berhad (MARC)  
3) RAM Rating Services Berhad (RAM)  
4) PT Pemeringkat Efek Indonesia (PEFINDO)

**Chart 2: Rating Distribution of Selected National CRAs in ASEAN\***



Sources: 1. TRIS Rating  
2. MARC  
3. PEFINDO

\* There were no details of rating distribution by issuers provided by RAM.

## CORPORATE DEFAULT STUDY

### Rating Actions in 2023

The corporate default study is based on 241 issuers, including 186 non-FIs and 55 FIs. In 2023, there were 215 issuers that had their ratings outstanding for the whole year (excluding nine issuers that withdrew their ratings in 2023 and 17 issuers that were assigned initial ratings in 2023). There were 12 upgrades and 25 downgrades, and two defaults. The upgrades comprised 10 non-FI and two FI issuers. Two FI and 23 non-FI issuers were downgraded. The downgrade (including defaults) to upgrade ratio increased to 2.25 times in 2023, from 0.76 times in 2022.

The one-year stability rate of publicly announced ratings in 2023 (excluding 17 new issuers and nine withdrawers) was 81.86%, down from 85.15% in 2022. There were 22 changes in outlook, comprising six upwards and 16 downwards. Eight companies were placed on CreditAlerts during the year, all were “negative” implications. Six “negative” CreditAlerts were resolved to “stable” outlook within 2023, one “negative” CreditAlert remained unresolved at the end of 2023, and one issuer with “negative” CreditAlert defaulted.

**Table 2: List of Issuer Rating Changes in 2023**

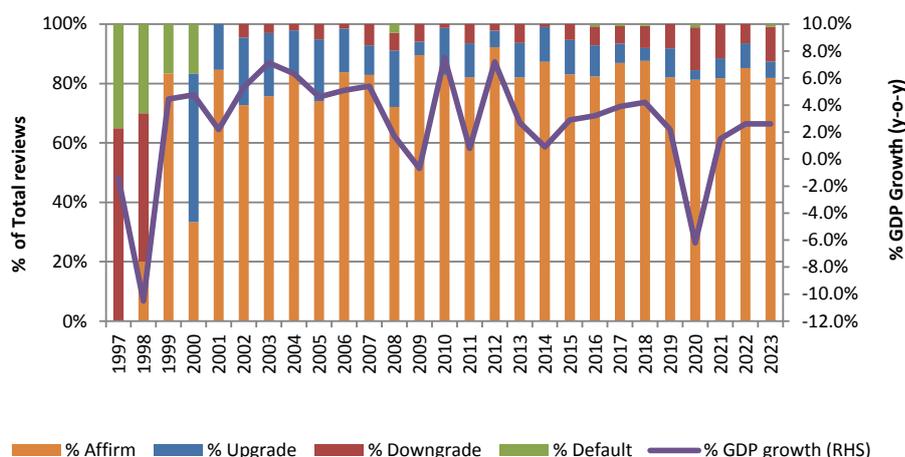
No.	Company	Industry	Rating Change		Rating Direction	Outlook Direction	CreditAlert
			From	To			
1	AGE	Commodity Trading	BB+/Stable	BBB-/Stable	Upgrade		
2	AH	Auto Suppliers	BBB+/Stable	A-/Stable	Upgrade		
3	ANAN	Homebuilders and Real Estate Developers	BBB-/Stable	BB+/Alert Negative	Downgrade		Negative
4	AP	Homebuilders and Real Estate Developers	A-/Positive	A/Stable	Upgrade		
5	AQUA	REITs and Real Estate for Rent	BBB-/Stable	BB+/Stable	Downgrade		
6	AREEYA	Homebuilders and Real Estate Developers	B+/Stable	B/Negative	Downgrade		
7	BEC	Media and Entertainment	BBB/Positive	BBB/Stable		Downward	
8	BEYOND	Leisure and Sports	BB/Negative	BB/Stable		Upward	
9	BSRC (Formerly ESSO)	Oil and Gas Refining and Marketing	A+/Stable	A/Stable	Downgrade		
10	BTS	Transportation Infrastructure	A/Negative	A-/Stable	Downgrade		
11	BTSC	Transportation Infrastructure	A/Negative	A-/Stable	Downgrade		
12	BWG	Environmental Services	BBB-/Stable	BB+/Stable	Downgrade		
13	CBG	Branded Nondurables	A/Stable	A/Negative		Downward	
14	CGH	Financial Holding Companies	BBB-/Stable	BBB-/Negative		Downward	
15	CPALL	Retailers	A+/Stable	A+/Positive		Upward	
16	CPAXT	Retailers	A+/Stable	A+/Positive		Upward	
17	CPF	Agribusiness and Commodity Foods	A+/Stable	A+/Negative		Downward	
18	CPFTH	Agribusiness and Commodity Foods	A+/Stable	A+/Negative		Downward	
19	CPNREIT	REITs and Real Estate for Rent	AA/Negative	AA-/Negative	Downgrade		
20	CHO	Automakers	B-/Negative	D	Default		
21	DOHOME	Retailers	BBB/Positive	BBB/Negative		Downward	
22	DUSIT	Leisure and Sports	BBB-/Negative	BBB-/Stable		Upward	
23	EA	Regulated Utilities	A/Stable	A-/Negative	Downgrade		
24	ECF	Consumer Durables	BB/Stable	BB-/Stable	Downgrade		
25	EDL-Gen	Regulated Utilities	BBB-/Stable	BB+/Negative	Downgrade		
26	ETP	Regulated Utilities	BBB-/Negative	BB+/Negative	Downgrade		
27	EP	Regulated Utilities	BBB-/Negative	BB+/Negative	Downgrade		
28	ETC	Regulated Utilities	BBB-/Stable	BB+/Stable	Downgrade		
29	GULF	Regulated Utilities	A/Stable	A+/Stable	Upgrade		

30	ITD	Engineering and Construction	BBB-/Stable	BB+/Negative	Downgrade
31	LHBANK	Bank	A-/Negative	A/Stable	Upgrade
32	LHFG	Bank Holding	BBB+/Negative	A-/Stable	Upgrade
33	LIT	Finance	BB/Negative	BB-/Stable	Downgrade
34	LOTUSS	Retailers	A+/Stable	A+/Positive	Upward
35	LPN	Homebuilders and Real Estate Developers	BBB/Stable	BBB/Negative	Downward
36	MICRO	Leasing	BB+/Stable	BB+/Negative	Downward
37	MK	Homebuilders and Real Estate Developers	BBB-/Negative	BB+/Stable	Downgrade
38	OISHI	Branded Nondurables	A+/Stable	AA-/Stable	Upgrade
39	PD	REITs and Real Estate for Rent	BBB-/Negative	BB+/Stable	Downgrade
40	PI	Securities Brokerage	BBB-/Stable	BBB-/Negative	Downward
41	PRIME	Regulated Utilities	BBB-/Stable	BBB-/Negative	Downward
42	PS	Homebuilders and Real Estate Developers	A/Negative	A-/Stable	Downgrade
43	PSH	Homebuilders and Real Estate Developers	A/Negative	A-/Stable	Downgrade
44	QH	Homebuilders and Real Estate Developers	A-/Negative	A-/Stable	Upward
45	RS	Retailers	BBB/Stable	BBB-/Stable	Downgrade
46	RT	Engineering and Construction	BBB-/Negative	BB+/Stable	Downgrade
47	SGP	Commodity Trading	BBB+/Stable	BBB+/Negative	Downward
48	SINGER	Consumer Finance	BBB/Stable	BB+/Stable	Downgrade
49	SPI	Branded Nondurables	AA/Stable	AA-/Stable	Downgrade
50	STARK	Capital Goods	BBB+/Stable	D	Default
51	SUPER	Regulated Utilities	BBB/Positive	BBB/Stable	Downward
52	TAA	Transportation Cyclical	BB/Negative	BB+/Stable	Upgrade
53	TPCH	Regulated Utilities	BBB-/Stable	BBB-/Negative	Downward
54	TIPL	Building Materials	BBB+/Positive	A-/Stable	Upgrade
55	TIPIP	Regulated Utilities	BBB+/Positive	A-/Stable	Upgrade
56	TPOLY	Engineering and Construction	BBB-/Stable	BBB-/Negative	Downward
57	TPRIME	REITs and Real Estate for Rent	A-/Negative	BBB+/Stable	Downgrade
58	TTCL	Engineering and Construction	BB+/Positive	BBB-/Stable	Upgrade
59	TU	Agribusiness and Commodity Foods	A+/Positive	A+/Stable	Downward
60	TUC	Telecommunication and Cable	BBB+/Alert Positive	A+/Stable	Upgrade
61	UNIQ	Engineering and Construction	BBB/Stable	BBB/Negative	Downward

Source: TRIS Rating

Notes: See full names of issuers in Appendix II

**Chart 3: Proportion of Rating Changes<sup>1</sup> and GDP Growth (1997-2023)**



Source: TRIS Rating

Note: % GDP growth in 2023 is projected.

**Table 3: Summary of Rating Changes**

Year	No. of issuers as of 1 Jan	Upgrades	Downgrades	Defaults	Withdrawals	(Downgrades + Defaults) Upgrades
1994	6	0%	0%	0%	0%	n.a.
1995	23	5%	0%	0%	9%	-
1996	31	4%	21%	0%	10%	6.00
1997	38	0%	65%	35%	47%	n.a.
1998	15	0%	50%	30%	33%	n.a.
1999	7	0%	0%	17%	14%	n.a.
2000	7	50%	0%	17%	14%	0.67
2001	13	15%	0%	0%	0%	-
2002	25	23%	5%	0%	12%	0.20
2003	33	21%	3%	0%	0%	0.14
2004	49	15%	2%	0%	4%	0.14
2005	60	21%	5%	0%	3%	0.25
2006	75	15%	1%	0%	9%	0.10
2007	74	10%	7%	0%	5%	0.71
2008	76	19%	6%	3%	11%	0.46
2009	74	4%	6%	0%	9%	1.33
2010	76	16%	1%	0%	0%	0.08
2011	82	12%	6%	0%	5%	0.56
2012	91	6%	2%	0%	1%	0.40
2013	99	12%	6%	0%	4%	0.55
2014	104	12%	1%	0%	2%	0.08
2015	119	12%	5%	0%	6%	0.46
2016	127	10%	6%	1%	2%	0.69
2017	141	7%	6%	1%	3%	1.00
2018	165	4%	7%	1%	2%	1.63
2019	189	10%	8%	0%	3%	0.83
2020	193	3%	14%	1%	3%	4.83
2021	198	7%	11%	0%	3%	1.69
2022	208	8%	6%	0%	3%	0.76
2023	224	5%	11%	1%	4%	2.25

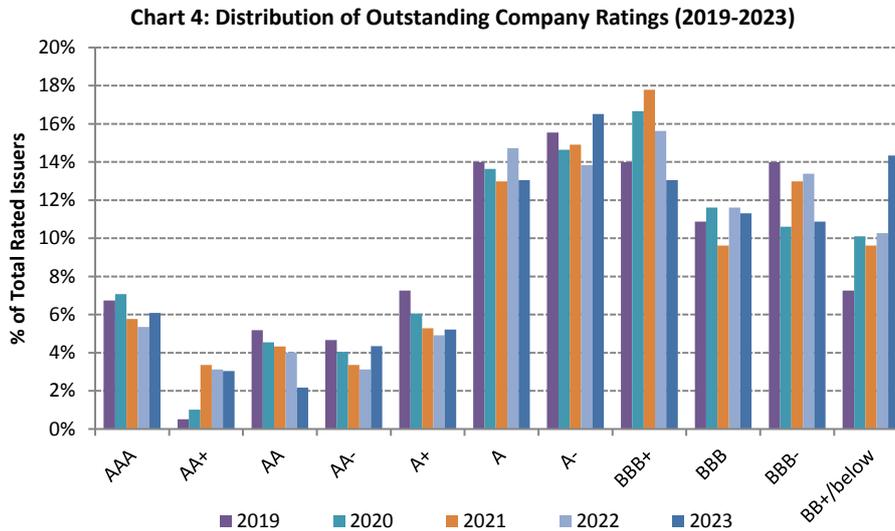
Source: TRIS Rating

Note: The figures have been rebased since 2004 after the removal of three FI issuers for whom we no longer assigned shadow ratings.

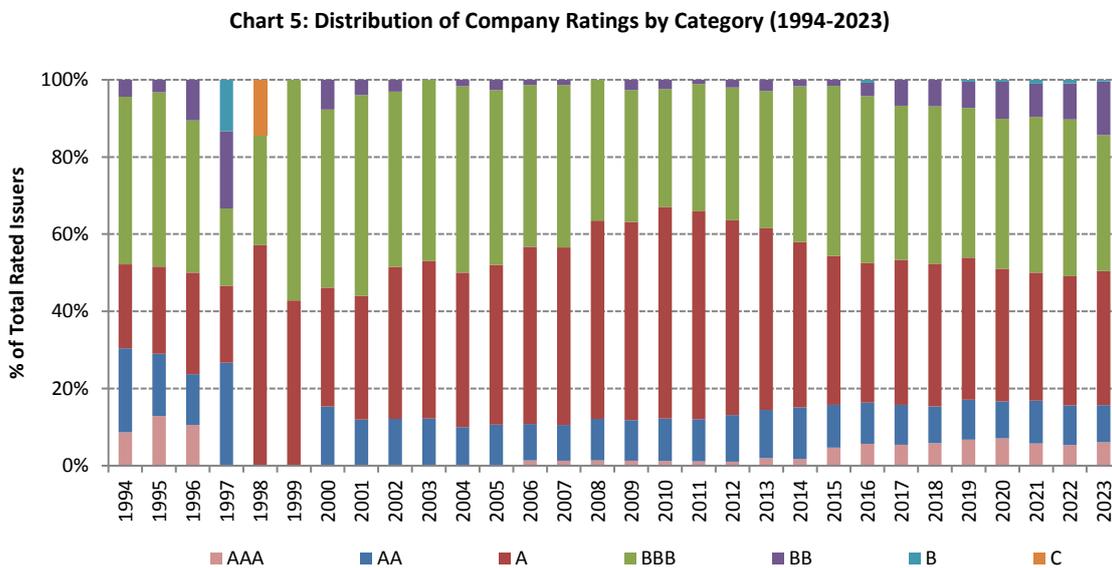
<sup>1</sup> Proportions of rating changes as a percentage of the total number of issuers, which ratings are outstanding for the whole year (excluding withdrawers and new issuers in that year).

- Ratings were mainly in the “A” and “BBB” categories**

At the end of 2023, companies rated in the “A” and “BBB” categories made up the largest proportion of TRIS Rating’s portfolio, accounting for 34.78% and 35.22% of publicly announced ratings (excluding withdrawals and defaults), respectively. The ratings of 17 new issuers were distributed across several rating categories: three “BB”, eight “BBB”, two “A”, two “AA”, and two “AAA” ratings. Issuers rated in the lower ranges (i.e., “BB”, “B”, and “C”) have consistently accounted for a small proportion of the rated companies. However, the number of issuers in these categories has increased over time. At the end of 2023, 33 issuers were rated below “BBB-”, accounting for 14.35% of publicly announced ratings (excluding withdrawals and defaults).



Source: TRIS Rating



Source: TRIS Rating

- Cumulative default rates changed slightly**

We calculated the average cumulative default rates<sup>2</sup> for each rating category to estimate the probability of default during a specified time period after a company was rated. The two defaulted issuers in 2023 have caused the one-, two-, and three-year average cumulative default rates during 1994-2023 to change slightly from the period during 1994-2022. The one-, two-, and three-year cumulative default rates during 1994-2023 slightly changed to 0.840%, 1.799%, and 2.582% from 0.832%, 1.785%, and 2.592%, respectively, during 1994-2022.

<sup>2</sup> The calculation methodology of the three-year cumulative average default rate is explained in Appendix I.

**Table 4: Annual Default Rates<sup>3</sup> of Rated Companies (1997-2023)**

% Annual Default Rate	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>AAA</b>	0%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>AA</b>	33%	0%	n.a.	n.a.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>A</b>	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%
<b>BBB</b>	50%	33%	0%	33%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	1.8%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%
<b>BB</b>	100%	100%	n.a.	n.a.	0%	n.a.	0%	n.a.	0%	0%	0%	n.a.	n.a.	0%	0%	0%	0%	0%	0%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>B</b>	n.a.	50%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.0%	0.0%	50.0%
<b>C</b>	n.a.	n.a.	100%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Investment Grade*</b>	31.6%	14.3%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%	0.0%	0.0%	0.6%	0.0%	0.0%	0.5%
<b>Non-investment Grade**</b>	100%	67%	100%	n.a.	0%	n.a.	0%	n.a.	0%	0%	0%	n.a.	n.a.	0%	0%	0%	0%	0%	0%	0.0%	0.0%	10.0%	0.0%	9.1%	0.0%	0.0%	4.8%
<b>Total</b>	35%	30%	17%	17%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0.80%	0.73%	0.62%	0.00%	1.07%	0.00%	0.00%	0.93%

Source: TRIS Rating

- Notes:
- 1) n.a. "not available", means there is no issuer rated in the rating category.
  - 2) \* Investment grade issuers are in the AAA, AA, A, and BBB rating categories.
  - 3) \*\* Non-investment grade issuers are in the BB, B, and C rating categories.

<sup>3</sup> Annual default rate is the proportion of the number of defaulted issuers in a rating category divided by the total number of rated issuers in that particular rating category.

**Table 5: Average Cumulative Default Rates (CDR) for Long-term Ratings (1994-2023) (%)**

Rating	--Time Horizon (Years)--									
	1	2	3	4	5	6	7	8	9	10
<b>AAA</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>No. of sample</b>	104	90	75	59	45	34	25	16	11	9
<b>AA</b>	0.37%	1.20%	2.14%	2.67%	3.26%	3.26%	3.26%	3.26%	3.26%	3.26%
<b>No. of sample</b>	273	239	210	185	164	145	127	112	98	83
<b>A</b>	0.20%	0.54%	0.91%	1.33%	1.81%	2.18%	2.39%	2.62%	2.90%	3.21%
<b>No. of sample</b>	999	891	795	707	620	537	466	408	356	310
<b>BBB</b>	1.10%	2.24%	3.17%	4.24%	4.77%	5.20%	5.44%	5.44%	5.44%	5.44%
<b>No. of sample</b>	1,003	862	741	634	537	449	383	327	277	232
<b>BB</b>	2.68%	7.26%	10.35%	10.35%	10.35%	10.35%	10.35%	10.35%	10.35%	10.35%
<b>No. of sample</b>	112	85	60	41	32	23	17	14	12	10
<b>B</b>	37.50%	68.75%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>No. of sample</b>	8	4	1	0	0	0	0	0	0	0
<b>C</b>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
<b>No. of sample</b>	1	0	0	0	0	0	0	0	0	0
<b>Total</b>	0.84%	1.80%	2.58%	3.24%	3.73%	4.05%	4.24%	4.35%	4.47%	4.62%
<b>Total no. of sample</b>	2,500	2171	1882	1626	1398	1188	1018	877	754	644

Source: TRIS Rating

**Corporate Rating Transitions (1994-2023)**

A rating transition is the probability of a given issuer rating moving to another rating category within a specified time period. Generally, the ratings of investment-grade issuers are more likely to remain at the same level over a one-year period than the ratings of non-investment grade issuers. The highlighted cells in Table 6 contain the stability rates of each rating category. For example, the stability rate for the “AAA” issuers is 95.19%.

The rating stability of the investment grade companies exceeded 90%. For the “A” rating category, 95.30% of the issuers in this category had their ratings maintained at this level in 2023. Around 2.50% of the “A” rated issuers were upgraded to “AA”, while 1.90% were downgraded to “BBB”. However, the rating stability of the “AA” rated issuers was lower than the rating stability of the “A” rated issuers. This was due to the relatively small sample size of issuers in the “AA” rating category.

As credit ratings should reflect risk of default, the higher the rating, the lower the probability of default. However, due to both the small sample size as well as the widespread and severe financial crisis that led to multiple defaults in the financial sector in 1997, the default rate of the “AA” rating category is abnormally higher than the default rate of the “A” rating category.

**Table 6: Average One-year Transition Rates (1994-2023)**

Ratings	No. of Sample	AAA	AA	A	BBB	BB	B	C	D	Cumulative Withdrawals
AAA	104	95.19%	4.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3
AA	273	2.56%	93.77%	3.30%	0.00%	0.00%	0.00%	0.00%	0.37%	15
A	999	0.00%	2.50%	95.30%	1.90%	0.10%	0.00%	0.00%	0.20%	40
BBB	1,003	0.00%	0.00%	3.89%	90.93%	3.89%	0.20%	0.00%	1.10%	43
BB	112	0.00%	0.00%	0.00%	8.04%	86.61%	2.68%	0.00%	2.68%	20
B	8	0.00%	0.00%	0.00%	0.00%	12.50%	37.50%	12.50%	37.50%	1
C	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	-
<b>Total</b>	<b>2,500</b>									<b>122</b>

Source: TRIS Rating

**Performances of One-year Relative Corporate Ratings**

To measure the relative accuracy of ratings assigned by TRIS Rating, we focus on the relation between credit ratings (ranked from the highest rating, “AAA”, to the lowest, “C”) and the default rates of issuers in each rating category. Normally, a higher-rated entity should have a lower default probability relative to a lower-rated entity.

TRIS Rating measures rating performance or rating accuracy by plotting the cumulative proportion of a universe of rated issuers (ordered from the lowest rating, “C”, to the highest rating, “AAA”) against the cumulative proportion of defaulted issuers across all rating categories, which are also ranked from the lowest to the highest rating. This curve is called the cumulative accuracy profile (CAP) curve, also known as the “Lorenz Curve”.

Chart 6 depicts the performances of one-year relative corporate ratings, based on 2,500 observations of issuers rated by TRIS Rating during 1994-2023. The upper curve (as represented by the left end of the horizontal axis), or the ideal curve, is derived from the assumption that defaults occur only among the lowest-rated entities. The middle curve, or the CAP curve, is derived from the actual default rate of each rating category, drawing from the 2,500 observations of issuers rated by TRIS Rating during 1994-2023. The lower curve is a random curve. The random curve assumes that the assigned ratings have no relation to the default rates. Therefore, the cumulative percentage share of defaulters grows at the same rate as the cumulative percentage share of rated issuers. Generally, the closer the CAP curve resembles the ideal curve, the greater the accuracy of the rating model.

The CAP curve is based to calculate the accuracy ratio or the “Gini Coefficient”. The closer the accuracy ratio is to one, the greater the rating accuracy it reflects of the rating model. The formula used to calculate the accuracy ratio is:

$$Accuracy\ ratio = \frac{area\ between\ CAP\ curve\ and\ random\ curve\ (Y)}{area\ between\ ideal\ curve\ and\ random\ curve\ (X+Y)}$$

If the credit ratings have no correlation with the defaulting cohorts, the CAP curve will resemble the random curve and the accuracy ratio will be equal to zero (0). On the contrary, if all defaults are concentrated among the lowest-rated issuers, the

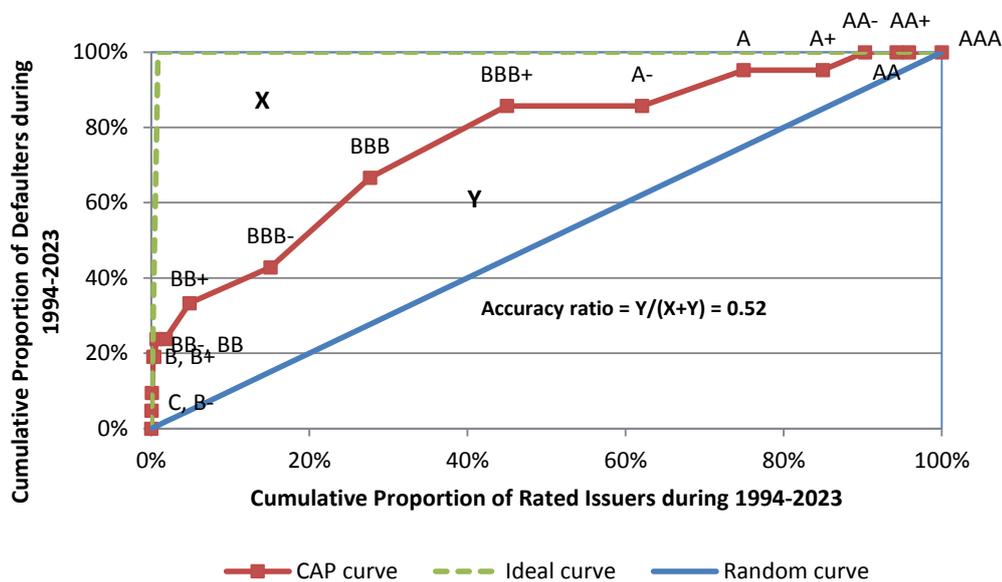
CAP curve will resemble the ideal curve and the accuracy ratio should be equal or close to one (1). If the accuracy ratio equals one, the assigned ratings are perfectly accurate.

From the 2,500 observations of issuers rated by TRIS Rating during 1994-2023, there were 21 observations in which an issuer defaulted in a one-year observation period. The default rate was 0.840%, a slight increase from 0.832% during 1994-2022. From the CAP curve, issuers rated at “BBB+” and below represent 45.0% of the overall observations. However, 85.7% of all defaulters (18 out of 21 defaulters) were in this group.

The accuracy ratio, calculated from the observations during 1994-2023, is equal to 0.52, flat compared with 0.52 obtained in the previous assessment covering 1994-2022. The relatively low accuracy ratios are attributed to two main reasons: the small number of observations and the financial crisis faced by all issuers in 1997. There were 12 defaults during 1997-2000.

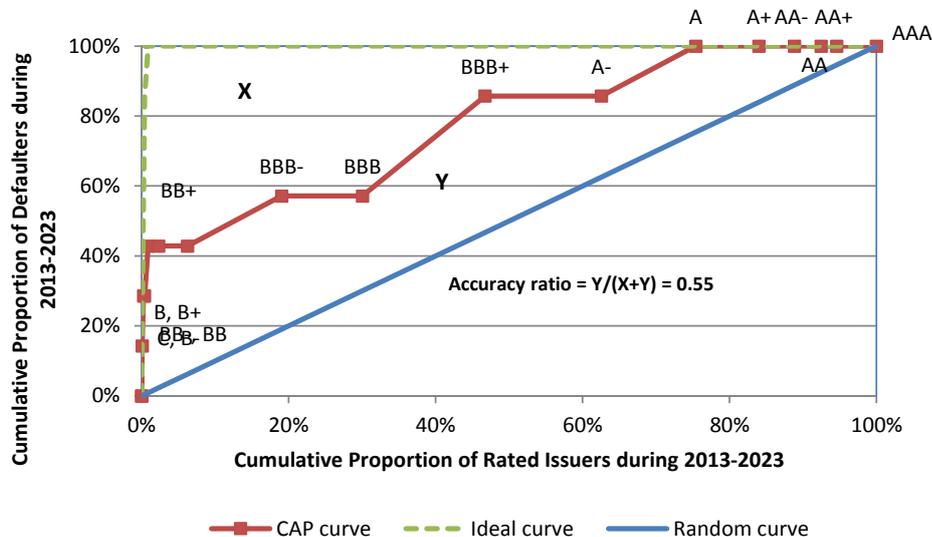
If we use observations during the last 10 years (2013-2023), the accuracy ratio improves to 0.55, up from 0.53 during 2012-2022. There were 1,618 observations in this cohort and only seven observations defaulted during this period. This implies an overall default rate of 0.43%, leaving the remaining 99.57% of the observations with no defaults.

**Chart 6: One-year Relative Corporate Rating Performance (1994-2023)**



Source: TRIS Rating

**Chart 7: One-year Relative Corporate Rating Performance (2013-2023)**



Source: TRIS Rating

## STRUCTURED FINANCE DEFAULT STUDY

There were only seven structured finance transactions rated by TRIS Rating. However, four were fully guaranteed by the originators and one transaction was partially guaranteed by the originator. These transactions are not included in this study. The two remaining transactions are LSPV Co., Ltd. and DAD SPV Co., Ltd. The first transaction, LSPV, is involved with an inventory securitization. This issue was rated “A-” in 1999 and was fully redeemed in 2002. The second transaction, DAD SPV, is a securitization program backed by a 30-year lease and service payment agreement from the Treasury Department. The rating of the second transaction has been maintained at “AAA”.

**Table 7: Average One-year Transition Rates for Structured Finance Ratings (1999-2023)**

Ratings	No. of Sample	AAA	AA	A	BBB	BB	B	C	D
<b>AAA</b>	<b>18</b>	100%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>AA</b>	<b>0</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>A</b>	<b>2</b>	0.00%	0.00%	100%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>BBB</b>	<b>0</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>BB</b>	<b>0</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>B</b>	<b>0</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>C</b>	<b>0</b>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	<b>0.00%</b>
<b>Total</b>	<b>20</b>								

Source: TRIS Rating

## Appendix I

### 1. Methodology and Definitions

#### 1.1 Definition of Default

TRIS Rating assigns a “Default (D)” or “Selective Default (SD)” rating to an entity or a company on the date the entity or the company misses a payment of a financial obligation, according to the terms and conditions stipulated in the borrowing agreement, irrespective of whether the financial obligation issue is rated or unrated.

#### 1.2 Cumulative Default Rates

The default rate is the number of defaulted issuers as a percentage of the total number of issuers in each rating category. Therefore, the default rate represents the default probability of companies in each particular rating category. The cumulative default rate tends to rise over time.

For example, the three-year cumulative default rate of any particular rating category is the probability that the companies rated in that category will default within three years. The average three-year cumulative default rate is computed by subtracting the average three-year cumulative survival rate from 100%. The average three-year cumulative survival rate is derived by multiplying the first-year survival rate by the second-year rate and the third-year rate. The survival rate for any given year is calculated by subtracting the default rate of that year from 100%.

#### 1.3 Rating Transition Rates

The rating transition rate is the percentage of the issuer ratings changing from a particular rating category at the beginning of a given year to another rating category by the end of that year. To compute a one-year rating transition rate, issuers rated in each rating category at the beginning of the year are tracked for any rating changes by the end of the calendar year.

### 2. Scope

#### 2.1 Credit Rating Inclusion:

##### ***Corporate Ratings***

2.1.1 For corporate ratings, the ratings used are the ratings of entities (companies or issuers) rather than ratings of the debenture issues (or debentures). The reason is to simplify the default rate calculation process, particularly the cases in which a company has issued several debentures. The different debenture issues might receive different ratings due to different priorities of claims and different expected losses in the case of default.

2.1.2 In the case that the issuer wants to publicly announce only its issue rating, TRIS Rating may also assign a shadow rating to the issuer. Previously, the shadow rating was assigned internally and used in the default study. However, due to the discontinuation of information, TRIS Rating will no longer include the shadow rating in the default study. Therefore, since 2020, we have excluded from our default study all shadow ratings assigned to three issuers during 2004-2020, 2013-2020, and 2018-2020, respectively.

2.1.3 The period of analysis covers ratings from the first year of TRIS Rating’s operation in 1993 until year-end 2023. The number of rated companies at the end of each year will be recorded as the static pool for the following year. For example, rated clients at the end of 1993 are recorded as the 1994 pool.

##### ***Structured Finance Ratings***

2.1.4 TRIS Rating also provides the one-year rating transition rates of structured finance securities. For the ratings of structured finance securities, TRIS Rating uses the ratings of the debentures or a series of debentures issued under the same program.

2.1.5 TRIS Rating will include rating transition rates of structured finance securities, e.g., asset-backed securities (ABS), collateralized debt obligations (CDO), commercial mortgage-backed securities (CMBS), and residential mortgage-backed securities (RMBS).

#### 2.2 Credit Rating Exclusion:

##### 2.2.1 *Ratings that are not publicly announced*

Ratings assigned by TRIS Rating can be categorized into those that are publicly announced and those that are kept private, based on the issuers’ wishes.

### 2.2.2 Selected structured finance ratings

This category includes ratings of project finance instruments, such as Khanom Electricity Generating Co., Ltd. (KEGCO), and partially or fully guaranteed debentures.

### 2.2.3 Local government ratings

This category includes the rating of Bangkok Metropolitan Administration (BMA).

### 2.2.4 Ratings that are withdrawn in the specified period

A company that was initially rated by TRIS Rating in mid-1994 but withdrew its rating in 1997 will be included in the static pools for 1995 and 1996 but not for 1997.

### 2.2.5 Supranational and sovereign ratings

This category includes the ratings of the Lao People's Democratic Republic (Lao PDR), Neighboring Countries Economic Development Cooperation Agency (NEDA), and Credit Guarantee and Investment Facility (CGIF).

## 2.3 Data Used to Calculate Default Rates

Static pools are established to represent the sample groups. In any given year, a static pool includes all entities with active ratings at the beginning of a year that remain rating clients at the end of that year. For example, there were 20 issuers rated by TRIS Rating on 1 January 1995 and all 20 issuers had remained clients through 31 December 1995. The 1995 static pool comprised 20 issuers. The default records of these 20 issuers are tracked in each subsequent year.

In any given year, the pool is static because no issuer is taken out of the pool even though the issuer may subsequently withdraw its rating. For example, Dhana Siam Securities Co., Ltd. (DS) was initially rated in 1993 but withdrew its rating in 1997, shut down operations, and then defaulted on 14 August 1998. In this circumstance, DS was included in the static pool for 1994, 1995, and 1996, but not for 1997. However, the subsequent default of DS in 1998 was counted as a two-year default for the 1996 static pool, a three-year default for the 1995 static pool, and a four-year default for the 1994 static pool.

## 3. Database Limitations

The corporate debenture market in Thailand is at the developing stage. The Thai bond market is largely dominated by debt instruments issued by the government, the Bank of Thailand (BOT), and state enterprises. These debt instruments are not required by law to have credit ratings. As a result, TRIS Rating has considerably fewer clients than the long-established international rating agencies.

One problem with the limited sample size is that it exaggerates the default rate statistics because the number of observations in each rating category is used as the denominator to calculate the default rate. Thus, the fewer the observations in any particular rating category, the higher the default rate.

## 4. Impact from the Financial Crisis on Cumulative Default Rates

The financial crisis in 1997 and 1998 forced the government to shift to a managed float exchange rate system. This action raised the value of foreign denominated debts in terms of local currency. The credit risks of many FIs and non-FIs rose significantly as a result. As shown in Table 4, the annual default rates of the companies rated by TRIS Rating in 1997 and 1998 were unusually high at 35% and 30%, respectively. The annual default rate of 33% in the "AA" rating category in 1997 was the result of a default by an FI that was ordered by the BOT to cease operations. The default rate is thus overstated because of the relatively small number of rated issuers in that particular rating category. In 1997, there were only three companies in the "AA" rating category and 10 companies rated "BBB". The default of one company rated "AA" and five companies rated "BBB" made the annual default rates equal to 33% and 50% in these two rating categories in 1997. Five out of six defaulting issuers in 1997 were FIs that defaulted after they were ordered to cease operations by the BOT.

**Appendix II**
**Full Names of Issuers**

<b>Abbreviation</b>	<b>Company Name</b>
AGE	Asia Green Energy PLC
AH	AAPICO Hitech PLC
ANAN	Asian Sea Corporation PLC
AP	AP (Thailand) PLC
AQUA	Aqua Corporation PLC
AREEYA	Areeya Property PLC
BEC	BEC World PLC
BEYOND	Bound and Beyond PLC
BSRC	Bangchak Sriracha PLC (Formerly ESSO (Thailand) PLC)
BTS	BTS Group Holdings PLC
BTSC	Bangkok Mass Transit System PLC
BWG	Better World Green PLC
CBG	Carabao Group PLC
CGH	Country Group Holdings PLC
CPALL	C.P. ALL PLC
CPAXT	CP Aextra PLC
CPF	Charoen Pokphand Foods PLC
CPFTH	CPF (THAILAND) PLC
CPNREIT	CPN Retail Growth Leasehold Real Estate Investment Trust
CHO	Cho Thavee PLC
DOHOME	DoHome PLC
DUSIT	Dusit Thani Freehold and Leasehold Real Estate Investment Trust
EA	Energy Absolute PLC
ECF	East Coast Furnitech PLC
EDL-Gen	EDL-Generation Public Company
ETP	Eternity Power PLC
EP	Eastern Power Group PLC
ETC	Earth Tech Environment PLC
GULF	Gulf Energy Development PLC
ITD	Italian-Thai Development PLC
LHBANK	Land and Houses Bank PLC
LHFG	LH Financial Group PLC
LIT	Lease IT PLC
LOTUSS	Ek-Chai Distribution System Co., Ltd.
LPN	L.P.N. Development PLC
MICRO	Micro Leasing PLC
MK	M.K. Real Estate Development PLC
OISHI	Oishi Group PLC
PD	Prospect Development Co., Ltd.
PI	Pi Securities PLC
PRIME	Prime Road Power PLC

PS	Pruksa Real Estate PLC
PSH	Pruksa Holding PLC
QH	Quality House PLC
RS	RS PLC
RT	Right Tunnelling PLC
SGP	Siamgas and Petrochemicals PLC
SINGER	Singer Thailand PLC
SPI	Saha Pathana Inter-Holding PLC
STARK	Stark Corporation PLC
SUPER	Super Energy Corporation PLC
TAA	Thai Airasia Co., Ltd.
TPCH	TPC Power Holding PLC
TPIPL	TPI Polene PLC
TPIPP	TPI Polene Power PLC
TPOLY	Thai Polycons PLC
TPRIME	Thailand Prime Property Freehold and Leasehold Real Estate Investment Trust
TTCL	TTCL PLC
TU	Thai Union Group PLC
TUC	True Move H Universal Communication Co., Ltd.
UNIQ	Unique Engineering and Construction PLC

Source: TRIS Rating

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