Transition & Default Study

CY11-CY23

"One accurate measurement is worth a thousand expert opinions"

31st January 2024

The Pakistan Credit Rating Agency Limited

PACRA
Together. Creating Value.

Contents

Section I: Concept of Transition & Default Study

Section II: PACRA Transition & Default Trends

Annexures

SECTION I: CONCEPT OF TRANSITION & DEFAULT STUDY

Concept of Transition and Default Study

What is a Transition & Default Study?

A Set of Standardized Tools & Analyses for a Credit Rating Company's (CRC) ratings' performance appraisal

Need for a Transition & Default Study

- Self Assessment of CRC
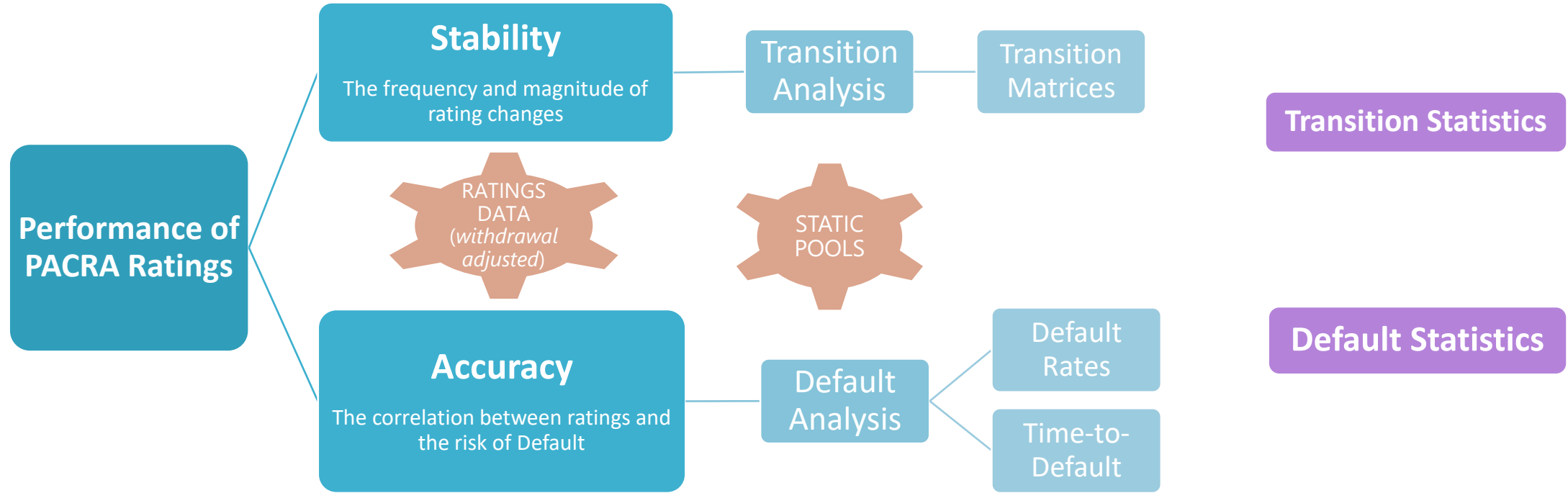- Peer Analysis with other CRCs
- Regulatory Requirement

Concept of Transition and Default Study

Credit Rating Companies Regulations, 2016 (as amended on September 19th, 2022)

Chapter III, Section 11-A-(I):

"A credit rating company shall.- publish annually, within one month of calendar year, a comprehensive default and transition study developed in line with methodologies practiced by credit rating agencies globally. The annual default and transition study must contain cumulative default rates (CDRs) and transitions for each rating grade for periods 1, 3 and 5 years."

Schematic – A Typical Transition & Default Study

Performance of PACRA Ratings

Stability
The frequency and magnitude of rating changes

Transition Analysis

Transition Matrices

RATINGS DATA (*withdrawal adjusted*)

STATIC POOLS

Transition Statistics

Accuracy
The correlation between ratings and the risk of Default

Default Analysis

Default Rates

Time-to-Default

Default Statistics
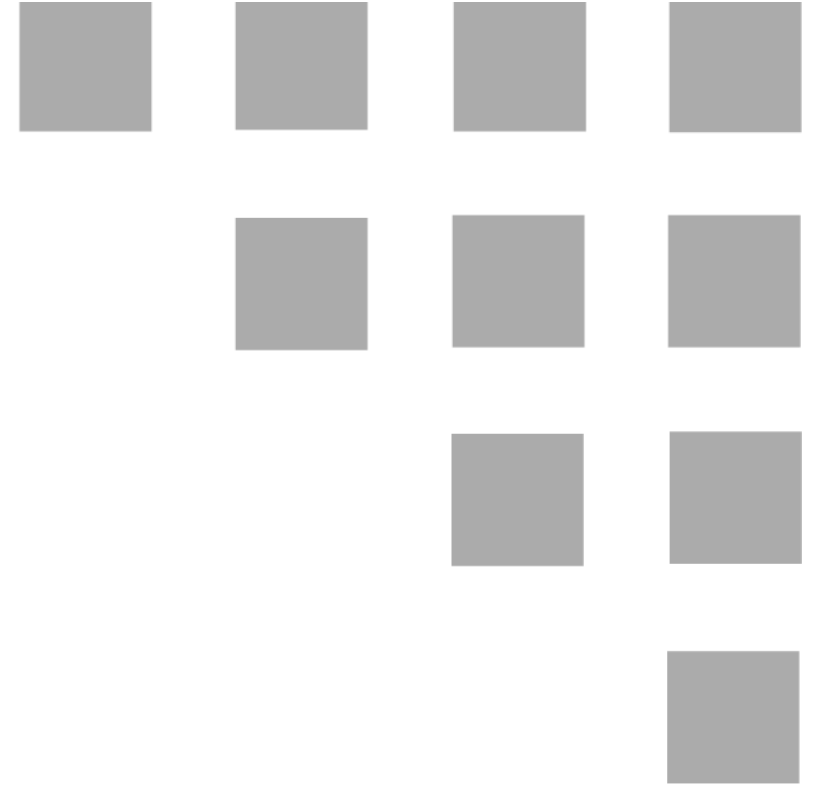
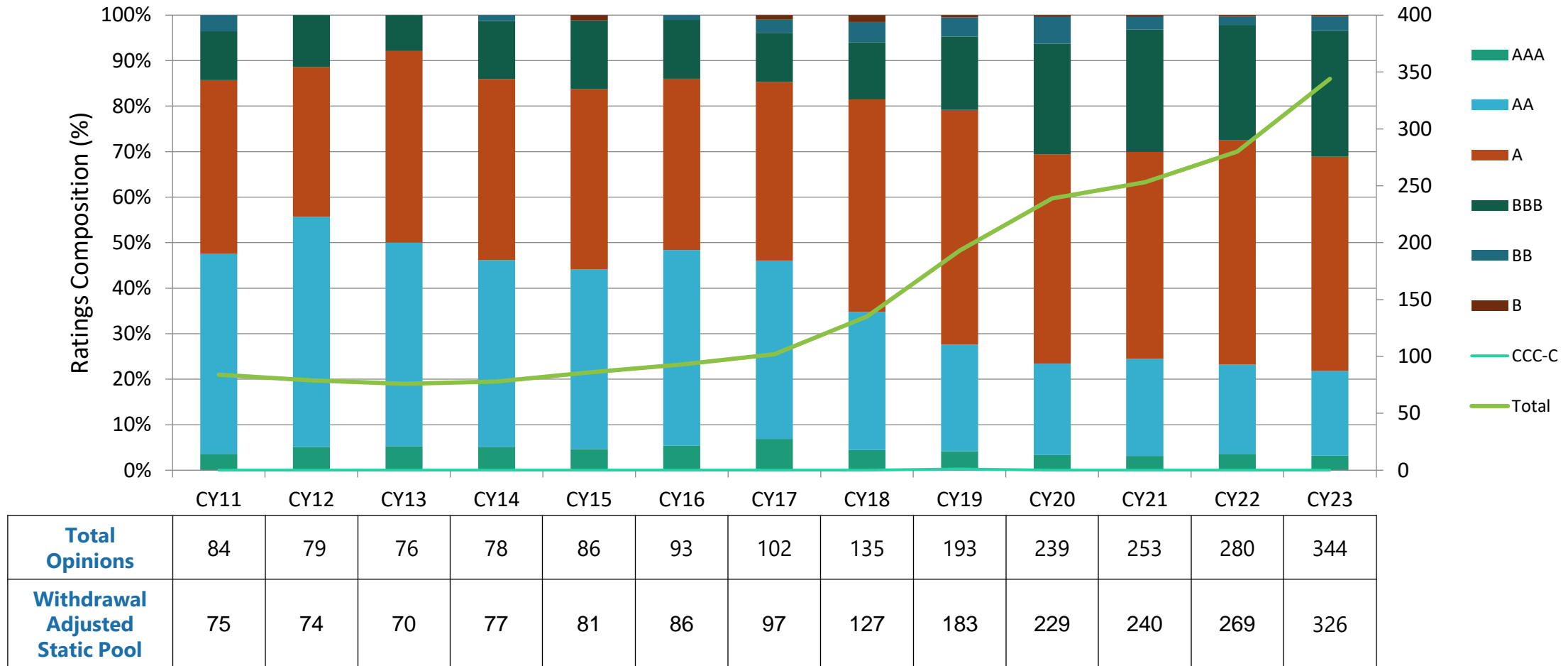PACRA Transition Study → What the Study Measures → Study Analysis → Study Tools → Study Output

SECTION II: PACRA TRANSITION & DEFAULT TRENDS

NOTE: PACRA's ongoing enhancement of the database used to generate the results contained in this study may lead to some differences compared to previous studies.

Rating Distribution

PACRA Original Static Pools Composition (CY11-CY23)

	CY11	CY12	CY13	CY14	CY15	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
Total Opinions	84	79	76	78	86	93	102	135	193	239	253	280	344
Withdrawal Adjusted Static Pool	75	74	70	77	81	86	97	127	183	229	240	269	326

- ➢ PACRA's rating universe was quite limited in size until CY17 which posed limitations to the interpretation of study results.
- ➢ Significant growth in rating opinions over the past 5 years has made the results of the study statistically more meaningful.

Rating Distribution

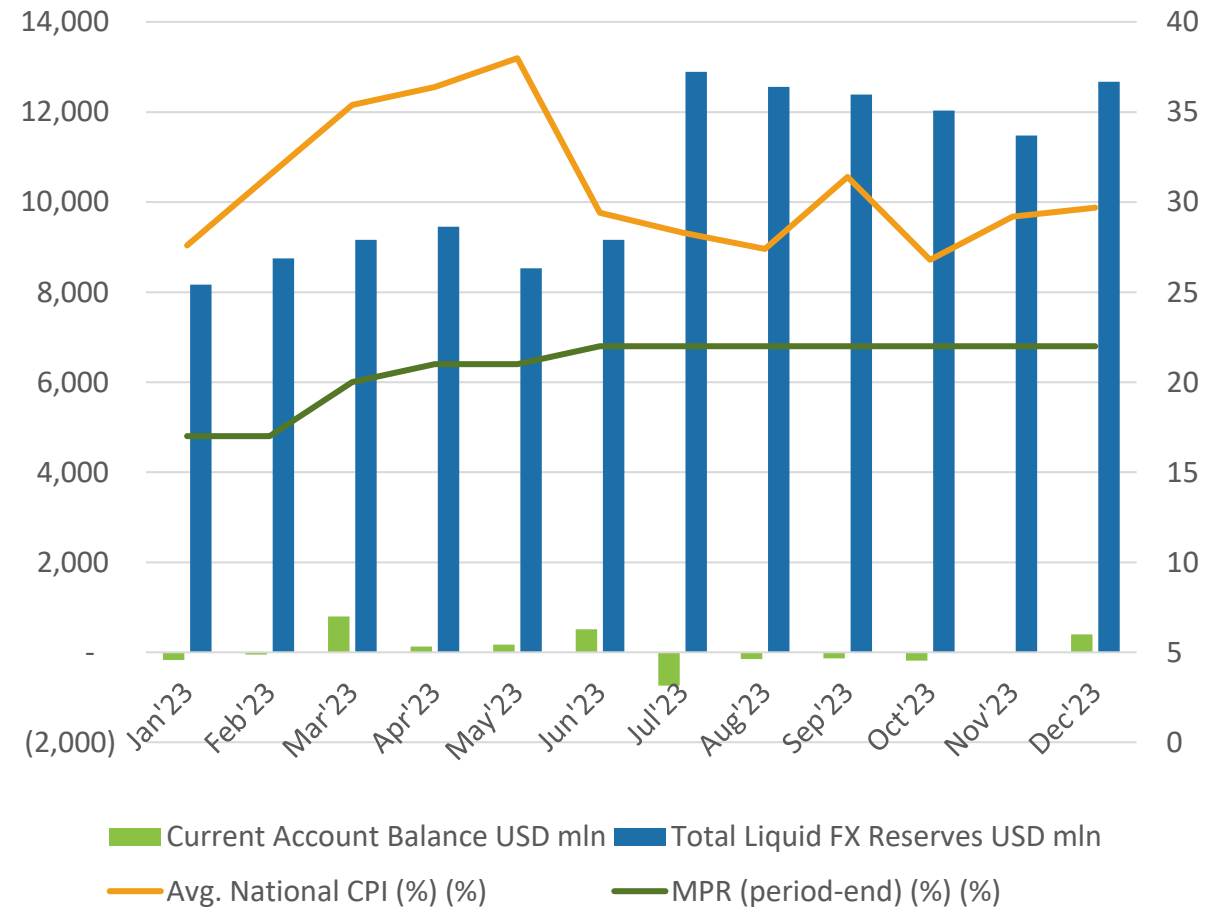## PACRA Ratings' Composition
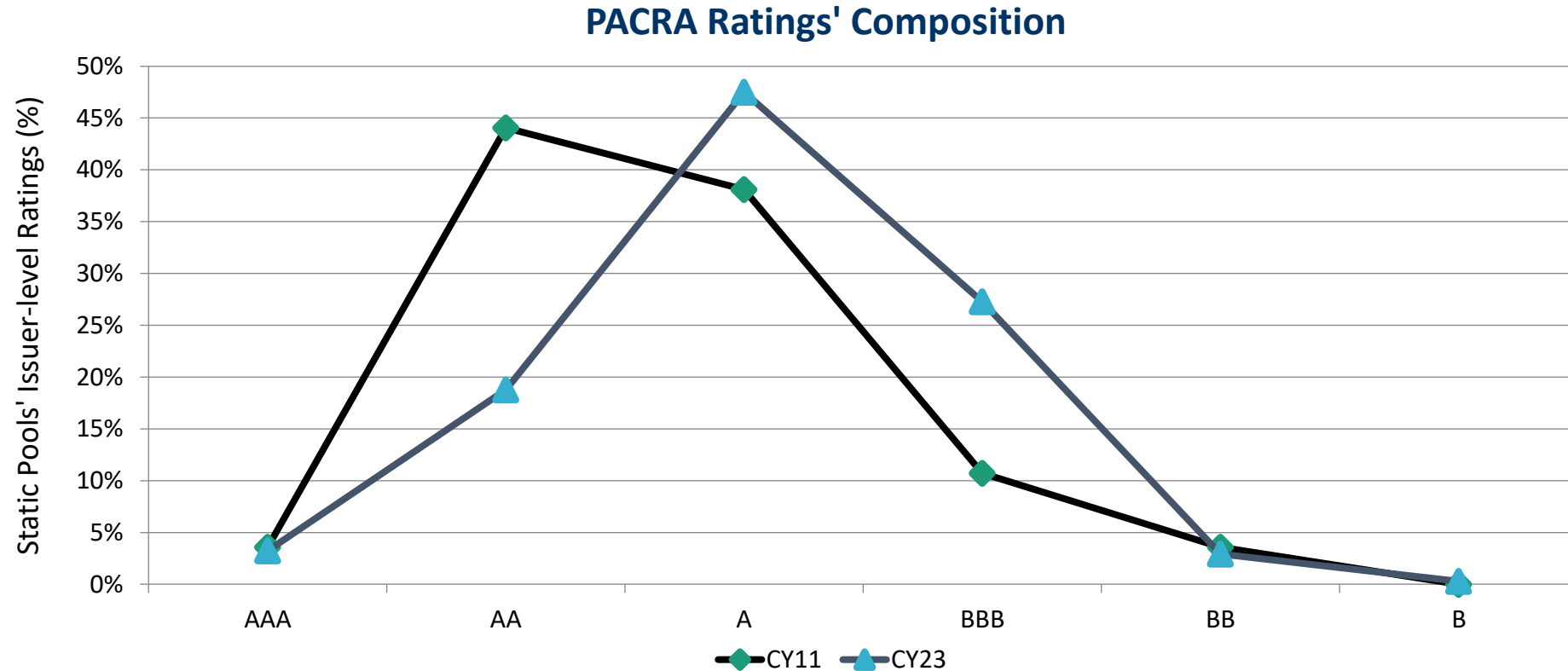
- ➢ The mean rating for PACRA has shifted from "AA" to "A" category between CY11 and CY23 while the median rating category during CY23 has largely remained unchanged at "A".
- ➢ The decline in the mean rating is attributable to the rating universe having expanded threefold over the decade and addition of relatively lower rated clients, resulting in a more balanced rating mix.
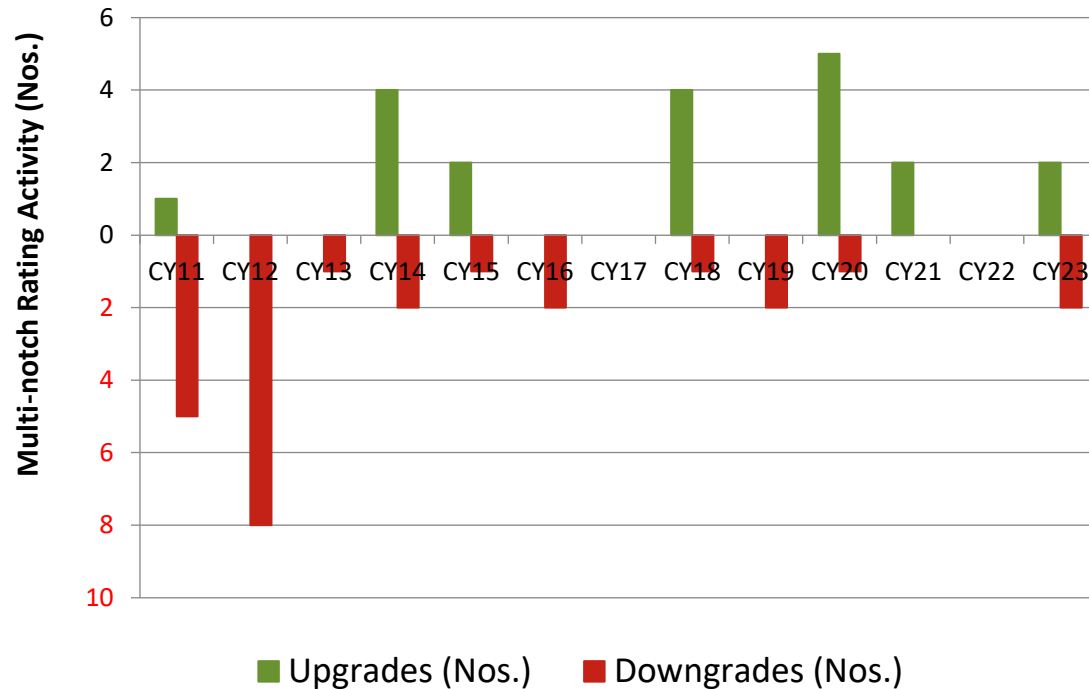
Overview of Economy

- Pakistan's economic growth in CY23 was negative, with the country experiencing a 9% fall in GDP. In CY23, a continued trend in high domestic inflation driven by soaring food prices, energy costs, and devaluation of the Pakistani rupee was witnessed. The average YOY CPI Inflation for December CY23 clocked in at 29.7% against 24.5% in CY22.

- Meanwhile, Pakistan ended CY23 with a current account surplus of $397mln (CY22: -$11,981mln) with lower imports mainly on account of reduced energy prices internationally and better exports.

- The policy rate witnessed an upsurge of 500bps during CY23, standing at 22% at year-end, reflecting the State Bank's efforts to counter inflationary pressures and contain the current account initial deficit.

- In the foreign exchange market, PKR saw a devaluation of 20.5% against USD during CY23. However, the exchange rate has recovered and stabilized around 1 USD = 280 PKR by year end, after various measures taken by the government and regulators.

Trends in Key Policy Indicators

Legend:
- Current Account Balance USD mln
- Total Liquid FX Reserves USD mln
- Avg. National CPI (%) (%)
- MPR (period-end) (%) (%)

Impact on PACRA rating universe

Annual Multi-notch Rating Activity

■ Upgrades (Nos.) ■ Downgrades (Nos.)

Annual Single-notch Rating Activity

■ Upgrades (Nos.) ■ Downgrades (Nos.)
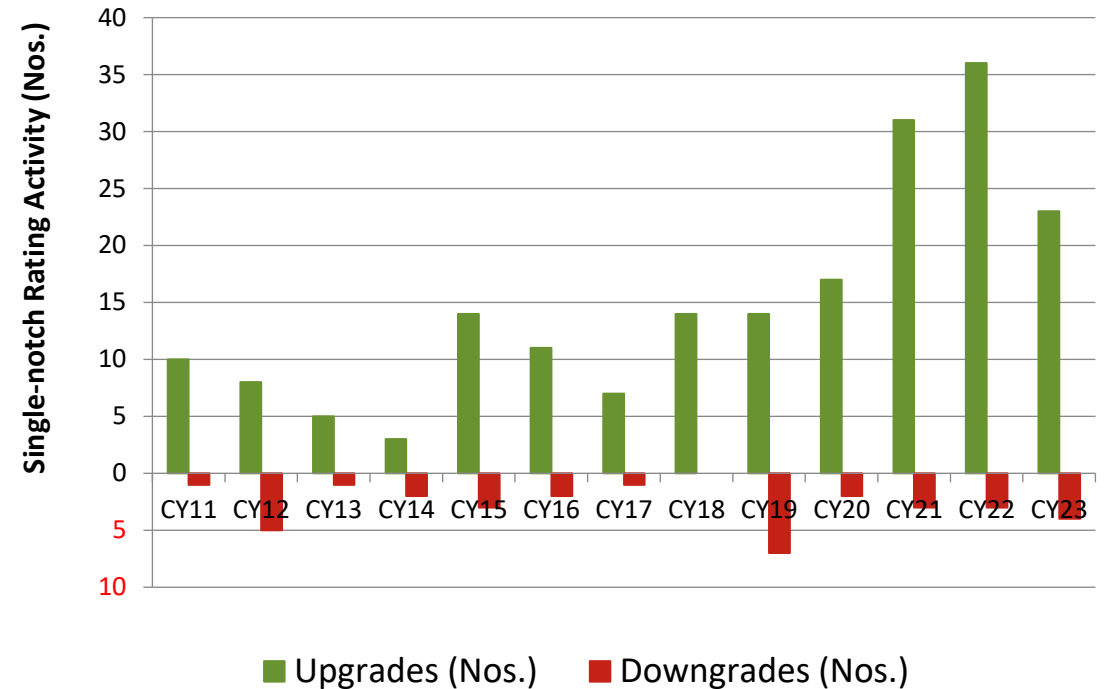
➢ PACRA's rating universe displayed high resilience in CY23 despite numerous challenges, reflecting our forward-looking approach. The restrained/laggard impact of economic turmoil had largely been taken into account beforehand in 'through the cycle' opinions.

➢ PACRA witnessed a slight fall in its upgrade rate, which stood at ~7.7% in CY23 (CY22: ~13.4%). The downgrade rate saw a slight uptick to ~1.8% in CY23 (CY22: ~1.1%).

➢ Moreover, CY23 experienced two instances of multi-notch upgrades along with two instances of multi-notch downgrades. Meanwhile, 23 single-notch upgrades were recorded versus 4 single-notch downgrades.

10

Upgrades in Focus

➤ The top 3 sectors that witnessed the highest number of upgrades were energy, textiles, and consumer goods & services.

➤ The Textile sector displayed strong performance with various players upholding and improving gross and operating margins despite attrition in global demand due to rising cotton prices. The sector recorded 4 rating upgrades.

➤ PACRA upgraded a total of 5 entities in the energy sector in CY23. These upgrades were backed by companies achieving their Commercial Operations (COD) and successfully contributing to the national grid.

➤ Conversely, the microfinance sector alone contributed to 50% of total downgrades (single- and multi-notch downgrades). The reversal of policy relief measures in response to the floods of 2022 contributed to this, along with the dampened growth within the sector.

➤ The microfinance sector experienced heightened NPLs due to the impact from the devastating floods of 2022

Annual Rating Activity Trend
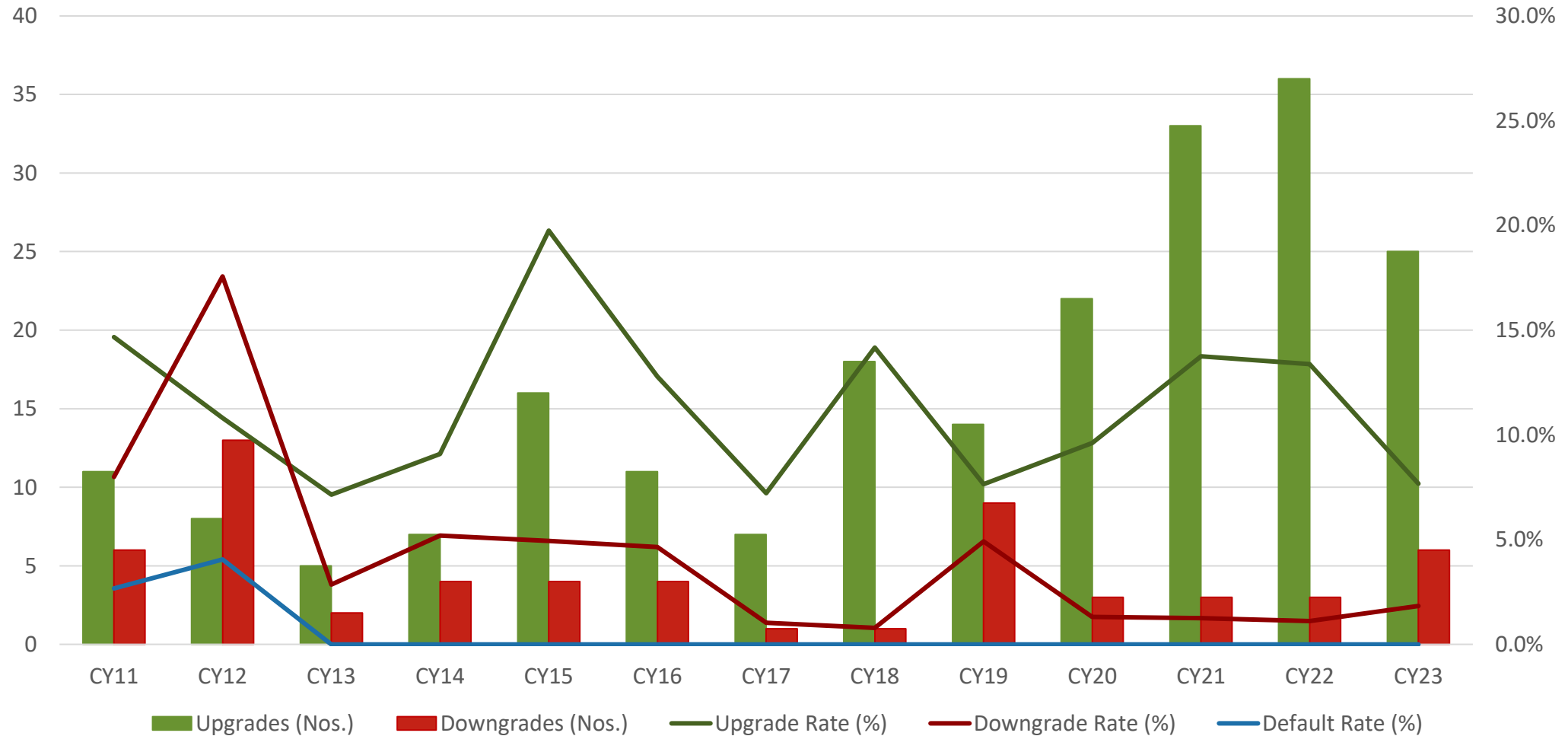
- The default rate has remained unchanged at 0% after CY12.
- Upgrade rate slowed down to almost 5-year low, while downgrade rate picked up slightly.

12

CY23 Transition Matrix

Beginning of CY23	End of CY23																		Withdrawal Adjusted Static Pool (T = 326)	Withdrawals (T = 18)
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D		
AAA	100%																		11	0
AA+		100%																	13	0
AA		8.0%	92.0%																25	0
AA-			3.8%	96.2%															26	0
A+				9.7%	87.1%	3.2%													31	0
A					4.7%	90.7%	2.3%				2.3%								43	0
A-			2.5%		4.9%	91.4%	1.2%												81	7
BBB+							20.0%	76.0%		4.0%									25	3
BBB							10.3%	87.2%	2.6%										39	2
BBB-								8.7%	91.3%										23	3
BB+										100%									5	1
BB											100%								4	1
BB-												-							0	0
B+													-						0	0
B														-					0	0
B-															-				0	1
CCC-C																-			0	0

➢ Upgrades exceeded downgrades in CY23 where a higher proportion of rating upgrades were observed in rating categories (AA to BBB-).

One-year Average Transition Matrix - Corporates

Beginning of CY23	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D	Withdrawal Adjusted Static Pool (T = 278)	Withdrawals (T = 15)
AAA	100%																		4	0
AA+		100%																	7	0
AA		10.0%	90.0%																20	0
AA-			4.3%	95.7%															23	0
A+				7.4%	88.9%	3.7%													27	0
A					5.3%	92.1%						2.6%							38	0
A-					3.0%	6.1%	90.9%												66	6
BBB+							20.8%	79.2%											24	2
BBB								11.1%	88.9%										36	2
BBB-									9.1%	90.9%									22	3
BB+											100%								5	1
BB												100%							4	1
BB-													-						0	0
B+														-					0	0
B															-				0	0
B-																-			0	0
CCC-C																	-		0	0

End of CY23

➢ One-year average rating transition of Corporates is consistent with its overall trend of migration to higher rating categories.

One-year Average Transition Matrix – Financial Institutions

Beginning of CY23	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D	Withdrawal Adjusted Static Pool (T = 50)	Withdrawals (T = 3)
AAA	100%																		7	0
AA+		100%																	6	0
AA			100%																5	0
AA-				100%															3	0
A+				25.0%	75.0%														4	0
A					80.0%	20.0%													5	0
A-						93.3%	6.7%												15	1
BBB+							0.0%		100%										1	1
BBB									66.7%	33.3%									3	0
BBB-										91.3%									1	0
BB+											100%								0	0
BB												-							0	0
BB-													-						0	0
B+														-					0	0
B															-				0	0
B-																-			0	1
CCC-C																	-		0	0

(Column header span: **End of CY23** over AAA … D)

- One-year average rating transition of Financial institutions did not follow the trend of upward ratings migration. Majority rating movements in CY23 were downgrades.

One-year Average Transition Matrix

Beginning of Year (Average CY11 to CY23)	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D	Withdrawal Adjusted Static Pool	Data Counts
AAA	98.8%	1.2%																	6.23	81
AA+	3.2%	96.0%	0.8%																9.62	125
AA		4.9%	92.8%	0.4%	1.3%	0.4%													17.15	223
AA-			9.8%	87.7%	2.0%		0.5%												15.69	204
A+				9.9%	85.5%	3.6%													14.77	192
A				1.9%	10.9%	84.2%	1.9%		0.4%			0.4%						0.4%	20.46	266
A-				0.5%	0.2%	7.5%	88.9%	1.2%	1.2%	0.5%									32.00	416
BBB+							20.5%	75.8%	3.0%	1%									10.15	132
BBB						0.7%	1.3%	11.9%	81.5%	2.0%	0.7%		0.7%					1.3%	11.62	151
BBB-							2%	1.1%	19.5%	73.6%	1.1%	1.1%						1.1%	6.69	87
BB+									8.1%	37.8%	54.1%								2.85	37
BB							8.3%		8.3%	25.0%	41.7%				8.3%			8.3%	0.92	12
BB-												100%	-						0.08	1
B+														50.0%	50.0%				0.15	2
B															50%	25.0%	25.0%		0.31	4
B-																100%			0.08	1
CCC-C																	-		0.00	0

Average One-Year Transition (CY11 to CY23)

➢ PACRA's higher rating categories (AAA-AA) have exhibited high level of stability within one-year period.
➢ Stability rates of PACRA's higher rating categories have generally been higher than those for the lower rating categories.

13

Three-year Average Transition Matrix

Beginning of Year (Average CY11 to CY23)	Average Three-Year Transition (CY11 to CY23)																		Withdrawal Adjusted Static Pool	Data Counts
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D		
AAA	95.0%	5.0%																	5.45	60
AA+	10.5%	86.3%	3.2%																8.64	95
AA		12.8%	82.0%	2.3%	2.3%	0.6%													15.64	172
AA-		2.0%	21.8%	68.0%	6.8%	0.7%	0.7%												13.36	147
A+			1.6%	23.0%	68.9%	6.6%													11.09	122
A			1.8%	4.9%	30.1%	57.7%	4.3%		0.6%		0.6%							0.4%	14.82	163
A-			0.4%	2.4%	1.6%	20.0%	69.2%	2.8%	2.8%	0.8%									22.73	250
BBB+						3.0%	41.8%	49.3%	4.5%	1.5%									6.09	67
BBB					1.5%		10.6%	31.8%	47.0%	3.0%		3.0%		0.7%				1.3%	6.00	66
BBB-						2.5%	12.5%	7.5%	42.5%	32.5%								1.1%	3.64	40
BB+									31.8%	59.1%	9.1%								2.00	22
BB					14.3%		28.6%		28.6%	14.3%		-			8.3%			8.3%	0.64	7
BB-							100.0%						-						0.09	1
B+														50.0%	50.0%				0.18	2
B															50%	25.0%	25.0%		0.09	1
B-																100%			0.00	0
CCC-C																	-		0.00	0

➤ The three-year average rating stability, similar to the trend observed for one-year average rating stability manifests that higher rating categories shows greater stability as compared to the lower rating categories.

Five-year Average Transition Matrix

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D	Withdrawal Adjusted Static Pool	Data Counts
							Average Five-Year Transition (CY11 to CY23)													
AAA	93.2%	6.8%																	4.89	44
AA+	16.9%	77.5%	5.6%																7.89	71
AA		18.6%	74.4%	4.7%	2.3%														14.33	129
AA-		2.9%	31.4%	54.9%	10.8%														11.33	102
A+			3.6%	36.9%	52.4%	6.0%						1.2%							9.33	84
A		1.0%	3.1%	10.4%	36.5%	40.6%	6.3%			2.1%									10.67	96
A-			2.4%	3.3%	4.1%	19.5%	61.8%	7.3%	0.8%	0.8%									13.67	123
BBB+						20.7%	31.0%	41.4%	3.4%	3.4%									3.22	29
BBB						4.5%	36.4%	40.9%	9.1%			4.5%					4.5%		2.44	22
BBB-						7.1%	28.6%		50.0%	7.1%		7.1%							1.56	14
BB+							12.5%	12.5%	37.5%	37.5%	-								0.89	8
BB					25.0%		50.0%		25.0%			-							0.44	4
BB-							100%						-						0.11	1
B+														-	100%				0.11	1
B															-				0.00	0
B-																-			0.00	0
CCC-C																	-		0.00	0.

➢ Due to an increase in the proportion of upgrades, rating category (A) witnessed relatively lower stability in five year average rating transitions.

Ten-year Average Transition Matrix

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D	Withdrawal Adjusted Static Pool	Data Counts
AAA	80.0%	20.0%																	3.75	15
AA+	37.5%	62.5%																	6.00	24
AA	3.8%	26.9%	57.7%	9.6%	1.9%														13.00	52
AA-		7.9%	47.4%	28.9%	10.5%	5.3%													9.50	38
A+		5.0%	20.0%	65.0%	10.0%														5.00	20
A		8.3%		16.7%	54.2%	20.8%													6.00	24
A-			14.8%		3.7%	18.5%	51.9%	11.1%											6.75	27
BBB+						20.0%	40.0%	40.0%											1.25	5
BBB						37.5%	50.0%	-	12.5%										2.00	8
BBB-						100%			-										0.25	1
BB+										-									0.00	0
BB											-								0.00	0
BB-												-							0.00	0
B+													-						0.00	0
B														-					0.00	0
B-															-				0.00	0
CCC-C																-			0.00	0

Average Ten-Year Transition (CY11 to CY23)

Beginning of Year (Average CY11 to CY23)

➢ Ten year average rating transition exhibits an overall trend of migration to higher rating categories.

Transition Rates – Financial Institutions vs. Corporates

		CY11	CY12	CY13	CY14	CY15	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
Upgrade Rate (%)	**Financial Institution**	8.3%	16.2%	14.7%	5.6%	11.8%	13.2%	7.9%	9.8%	-	2.4%	4.3%	8.0%	2.0%
	Corporate	20.5%	5.4%	-	12.2%	25.5%	12.5%	6.8%	16.3%	9.9%	11.2%	16.1%	14.6%	8.7%
Downgrade Rate (%)	**Financial Institution**	5.6%	8.1%	-	11.1%	2.9%	5.3%	2.6%	2.4%	7.3%	-	2.1%	4.0%	8.0%
	Corporate	10.3%	27.0%	5.6%	-	6.4%	4.2%	-	-	4.2%	1.6%	1.0%	0.5%	0.7%
Maintain Rate (%)	**Financial Institution**	86.1%	73.0%	85.3%	83.3%	85.3%	81.6%	89.5%	87.8%	92.7%	97.6%	93.6%	88.0%	90.0%
	Corporate	64.1%	62.2%	94.4%	87.8%	68.1%	83.3%	93.2%	83.7%	85.9%	87.2%	82.9%	84.9%	90.6%
Default Rate (%)	**Financial Institution**	-	2.7%	-	-	-	-	-	-	-	-	-	-	-
	Corporate	5.1%	5.4%	-	-	-	-	-	-	-	-	-	-	-

➢ Since CY11, financial institutions have exhibited greater stability overall in comparison to corporates.

PACRA Average Cumulative Default Rates (CDRs) - CY11-CY23
(%, Notch Level)

	1-Year	2-Year	3-Year	4-Year	5-Year	6-Year	7-Year	8-Year	9-Year	10-Year	11-Year	12-Year	13-Year
AAA	-	-	-	-	-	-	-	-	-	-	-	-	-
AA+	-	-	-	-	-	-	-	-	-	-	-	-	-
AA	-	-	-	-	-	-	-	-	-	-	-	-	-
AA-	-	-	-	-	-	-	-	-	-	-	-	-	-
AA	-	-	-	-	-	-	-	-	-	-	-	-	-
A+	-	-	-	-	-	-	-	-	-	-	-	-	-
A	0.4%	0.9%	1.1%	1.4%	1.7%	2.2%	3.0%	3.7%	4.5%	5.4%	6.9%	9.2%	16.9%
A-	-	0.3%	0.4%	0.5%	0.7%	1.1%	1.5%	1.8%	2.2%	2.9%	4.2%	7.1%	12.5%
A	0.1%	0.4%	0.5%	0.7%	0.8%	1.1%	1.5%	1.8%	2.3%	2.9%	4.2%	6.6%	11.7%
BBB+	-	-	-	-	-	-	-	-	-	-	-	-	-
BBB	1.3%	1.8%	2.4%	3.3%	5.4%	7.1%	8.0%	8.7%	9.5%	11.8%	20.0%	33.3%	-
BBB-	1.1%	3.3%	4.1%	6.2%	9.0%	16.1%	21.3%	28.6%	40.0%	-	-	66.7%	-
BBB	0.8%	1.4%	1.9%	2.6%	4.0%	5.6%	6.6%	7.8%	10.0%	13.2%	18.7%	26.1%	20.0%
BB+	-	-	-	-	-	-	-	-	-	-	-	-	-
BB	8.3%	12.5%	12.5%	12.5%	14.3%	20.0%	25.0%	-	-	-	-	-	-
BB-	-	-	-	-	-	-	-	-	-	-	-	-	-
BB	2.0%	2.4%	2.8%	3.2%	5.6%	9.1%	16.7%	-	-	-	-	-	-
B+	-	-	-	-	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-	-	-
B-	-	-	-	-	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-	-	-
CCC – C	-	-	-	-	-	-	-	-	-	-	-	-	-
Investment Grade (AAA-BBB)	0.2%	0.5%	0.6%	0.7%	0.8%	1.1%	1.3%	1.6%	1.9%	2.4%	3.3%	4.9%	5.7%

- For investment grade categories , CDRs peaked in the 13th year at 5.7%.

- CDRs increase with the progression of time across all rating grades. This is to be expected as the probability of pure survival diminishes across time (i.e. the probability of default increases across a longer time horizon).

- In certain cases, the CDRs, themselves, appear to be inflated and above PACRA's realistic expectation. That is because PACRA's rating universe is undergoing constant expansion, while there are no events of default following CY12. Thus, the number of defaulting entities occupy a greater proportion of the sample space in older periods.

NOTE: "-" notation appears in one of two situations: (i) if the CDR for a rating grade happens to be exactly zero, or, (ii) if there is absence of data to have undergone maturity or "seasoning" for the purpose of CDR calculation.

Default Trends – Time to Default (since inception)

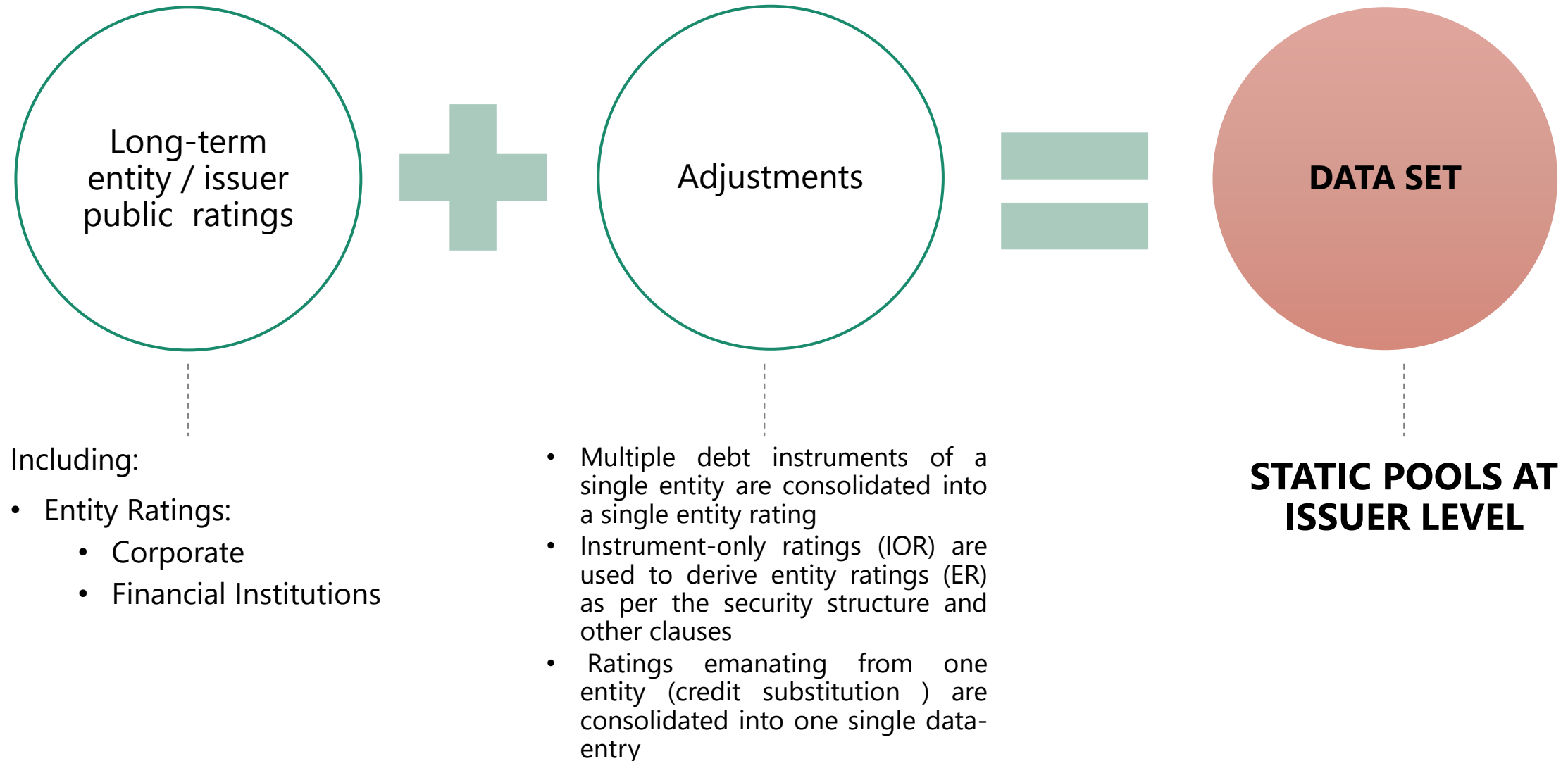| Rating Category	Time to default *(in months)*	
	Initial Ratings	**All Ratings**
AAA	N/A	N/A
AA	N/A	81
A	53 (7)*	47
BBB	74 (3)*	41
BB	81 (2)*	17
		* Default Counts

- ➢ There are no defaults in the AAA category
- ➢ The AA category has one (1) default from an entity that attained its lifetime-high rating within this category that was re-affirmed twice
- ➢ The A category has an average time-to-default from the initial rating of 53 months and from all ratings of 47 months
- ➢ For the BBB category, it is 74 months from initial ratings and 41 months from all ratings
- ➢ The time-to-default for initial ratings is not representative at the BB category. This is so as PACRA has only two defaults emanating from this category widely varying in the time elapsed pre-default - One entity defaulting after 148 months and the other only after 14 months, hence skewing the data

ANNEXURES

Glossary
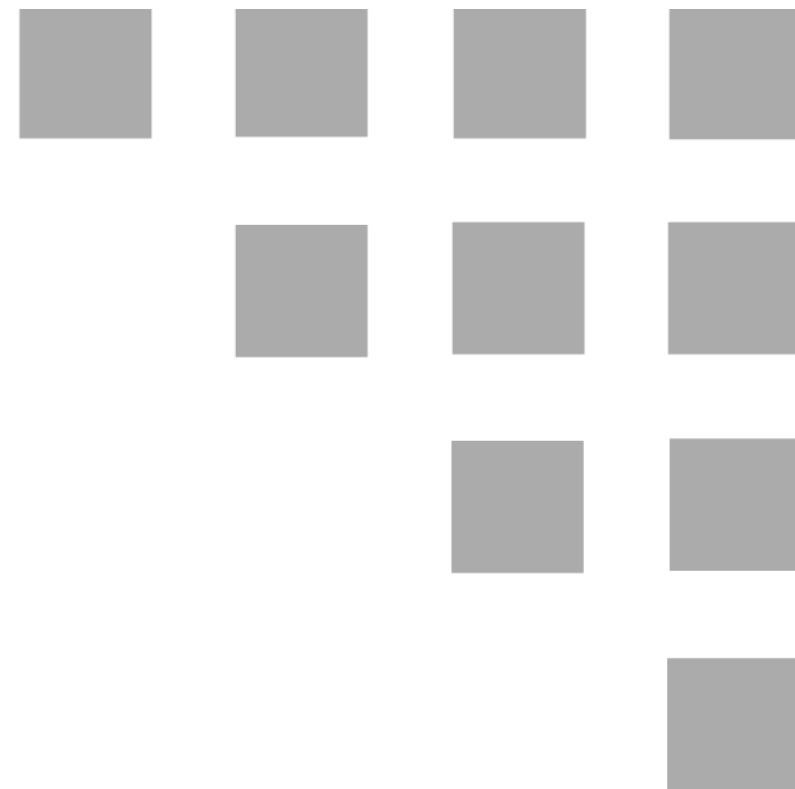
Key Terms	Definition / Explanation
Static Pool	Groupings of data that stay together in the group for the entire length and breadth of the measurement period of the pool
Upgrade Rate	The rate of upward rating transition (Ceiling: Triple A "AAA")
Downgrade Rate	The rate of downward rating transition (Floor: Single C "C")
Default Rate	Proportion of entities / issuers that have been assigned a Default "D" rating (As per PACRA Default Policy "How PACRA Recognizes Default") to the total number of entities / issuers over the measurement period
Transition Rate	Statistics quantifying the transition of ratings on the rating scale between a certain time period
Time-to-Default	A term denoting how far a rating lies from the time of its default.

Study Inputs

Long-term entity / issuer public ratings

+

Adjustments

=

DATA SET

Including:

- Entity Ratings:
  - Corporate
  - Financial Institutions

- Multiple debt instruments of a single entity are consolidated into a single entity rating
- Instrument-only ratings (IOR) are used to derive entity ratings (ER) as per the security structure and other clauses
- Ratings emanating from one entity (credit substitution) are consolidated into one single data-entry

STATIC POOLS AT ISSUER LEVEL

Static Pools

Measurement period
- Annual (Single / Multiple)
- Monthly (Smallest measurement period)

Withdrawal Adjustment
Static Pools are adjusted for all withdrawals during a measurement period

Treatment of initial ratings
An initial rating of CY22 will form part of the next year (CY22) pool, if not withdrawn

Post-default withdrawals
A rating put in default & subsequently withdrawn is reported as "D" (Default) only

Understanding Rating Transition Analysis

Transition (Years): 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC-C	D
End of Year (CY20)																		
AAA	**75.0%**	25.0%	-	-	-	-					-	-	-	-	-	-	-	-
AA+	50.0%	**50.0%**	-	-	-	-					-	-	-	-	-	-	-	-
AA	-	-	**-**	-	-						-	-	-	-	-	-	-	-
AA-	30.0%	-	-	**30.0%**	-	-	-	-	-	-	40.0%	-	-	-	-	-	-	-
A+	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-
A	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	100.0%
A-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	100.0%
BBB+	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-
BBB	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-
BBB-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-
BB+	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-
BB	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-
BB-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-
B+	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-
B-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-
CCC-C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-

Beginning of Year (CY20)

Stability of ratings is measured along the diagonal of a transition matrix

Transition of ratings is measured on either side of the diagonal of a transition matrix

32

Understanding Default Analysis

ADRs and CDRs

- Annual Default Rates (ADRs) reflect the probability that an entity / issuer that has survived in a Static Pool in the beginning of a particular year will default by the end of the same year

- Cumulative Default Rates (CDRs) reflects the probability that an entity / issuer that has survived in a Static Pool up to the beginning of each subsequent year of the Measurement Period underlying the CDR will default by the end of last year of such Measurement Period.

Time-to-default Statistics

- Time-to-Default from **Initial** ratings: Measures the time elapsed between the initial rating (as assigned by PACRA) and default

- Time-to-Default from **All** ratings: Measures the rating path to default, tracking from the time of initial rating to all successive rating transitions on the rating scale prior to default

> **SECP | Credit Rating Companies Regulations, 2016 | August 05, 2016 (As Amended September 19, 2022)**

III-11-A-(I): A credit rating company shall, **-** publish annually, within one month of calendar year, a comprehensive default and transition study developed in line with methodologies practiced by credit rating agencies globally. The annual default and transition study must contain cumulative default rates (CDRs) and transitions for each rating grade for periods 1, 3 and 5 years

Annexure H: Other information to be disseminated on the website of a credit rating company/agency

3: Detail of transitions/changes in the credit ratings reviewed during the last five years. The detail should contain the ratings upgraded, downgraded and those remained unchanged. For ease of comparison both the rating i.e. before and after the review and the number of notches upgraded or downgraded should be disclosed.

6: Definition of the term, "default".

7: Entity-wise list of defaults for all the outstanding issues and for all the issues redeemed during the last five years.

8: Rating scale-wise list of default for all the outstanding issues and for all the issues redeemed during the last five years separately for structured instruments and non-structured instruments.

https://www.secp.gov.pk/document/credit-rating-companiesregulation-2016/?wpdmdl=16929

SBP | Eligibility Criteria for recognition of External Credit Assessment Institutions (ECAIs), July 2005

a) Objectivity of the methodology: ECAI should have methodology of assigning credit rating that is rigorous, systematic, continuous and subject to validation. To establish that ECAI fulfills this primary component of eligibility criteria, it must demonstrate that it meets minimum standards given below:

5. ECAI should demonstrate that the rating methodologies are subject to quantitative back testing. For this purpose, ECAI should calculate and publish default studies, recovery studies and transition matrices. For the purpose, the ECAI should have a definition of default that is equivalent to international standard and is relevant to domestic market.

d) Disclosure: ECAI should demonstrate that it provide access to information that are sufficient to enable its stakeholders to make decision about the appropriateness of risk assessments. The purpose of this disclosure requirement is to promote transparency and bring in market discipline. ECAI is therefore expected to make public following information:

2. Definition of default

6. Actual default rates experienced in each assessment category

7. Transition matrices

http://www.sbp.org.pk/bsd/Criteria_Rating_Agencies.pdf

> ## ACRAA | Code of Conduct Fundamentals for domestic Credit Rating Agencies – April 2011

ACRAA Explanation of Clause 3.8 -

1. Each rating agency should publish at least annually a default and transition study along with the methodology
2. The default study should provide details of the following:

- Annual default rates for each rating category;
- 3-year average cumulative default rates;
- 1-year transition rates

http://acraa.com/images/pdf/DCRA.pdf

IOSCO CODE OF CONDUCT FUNDAMENTALS FOR CREDIT RATING AGENCIES - REVISED MARCH 2015

3.18: To promote transparency and to enable investors and other users of credit ratings to compare the performance of different CRAs, a CRA should disclose sufficient information about the historical transition and default rates of its credit rating categories with respect to the classes of entities and obligations it rates. This information should include verifiable, quantifiable historical information, organized over a period of time, and, where possible, standardized in such a way to assist investors and other users of credit ratings in comparing different CRAs. If the nature of the rated entity or obligation or other circumstances make such historical transition or default rates inappropriate, statistically invalid, or otherwise likely to mislead investors or other users of credit ratings, the CRA should disclose why this is the case.

https://www.iosco.org/library/pubdocs/pdf/IOSCOPD482.pdf

Credentials

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