3º Workshop Duxus de Risco

Uma questão de controle.

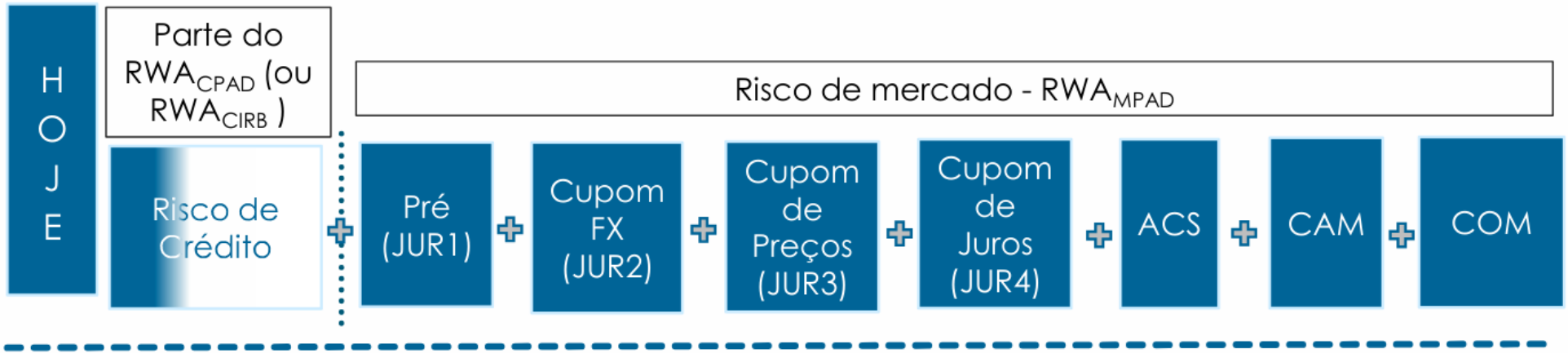
Élin Duxus

DRC – MAR 22

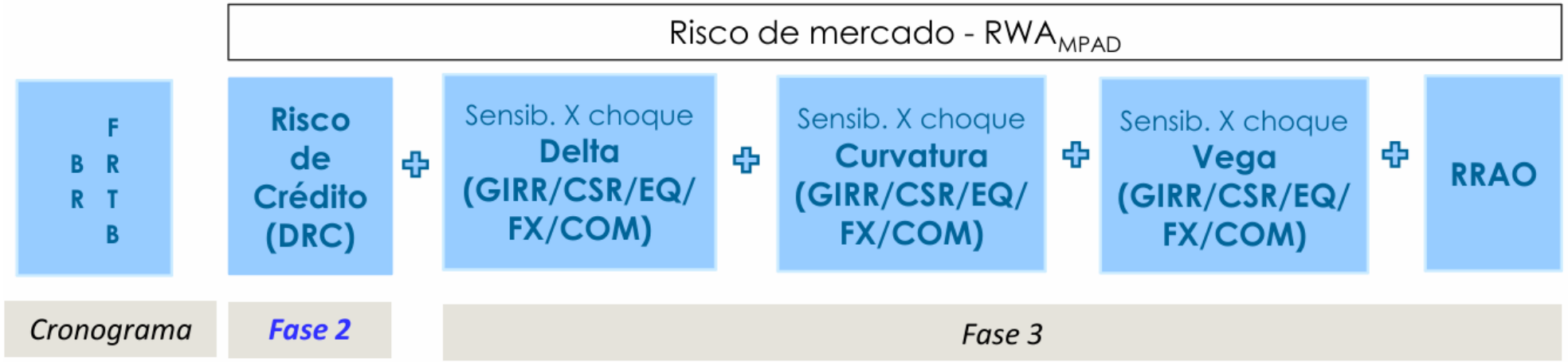
Ladislau Melo

Q&A

FRTB – Fundamental Review of Trading Book

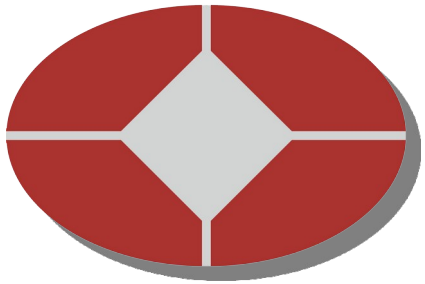


FRTB – Fundamental Review of Trading Book



MAR – Market

MAR – Market



CRE - Calculation of RWA for credit risk

MAR - Calculation of RWA for market risk

OPE - Calculation of RWA for operational risk

LEV - Leverage ratio

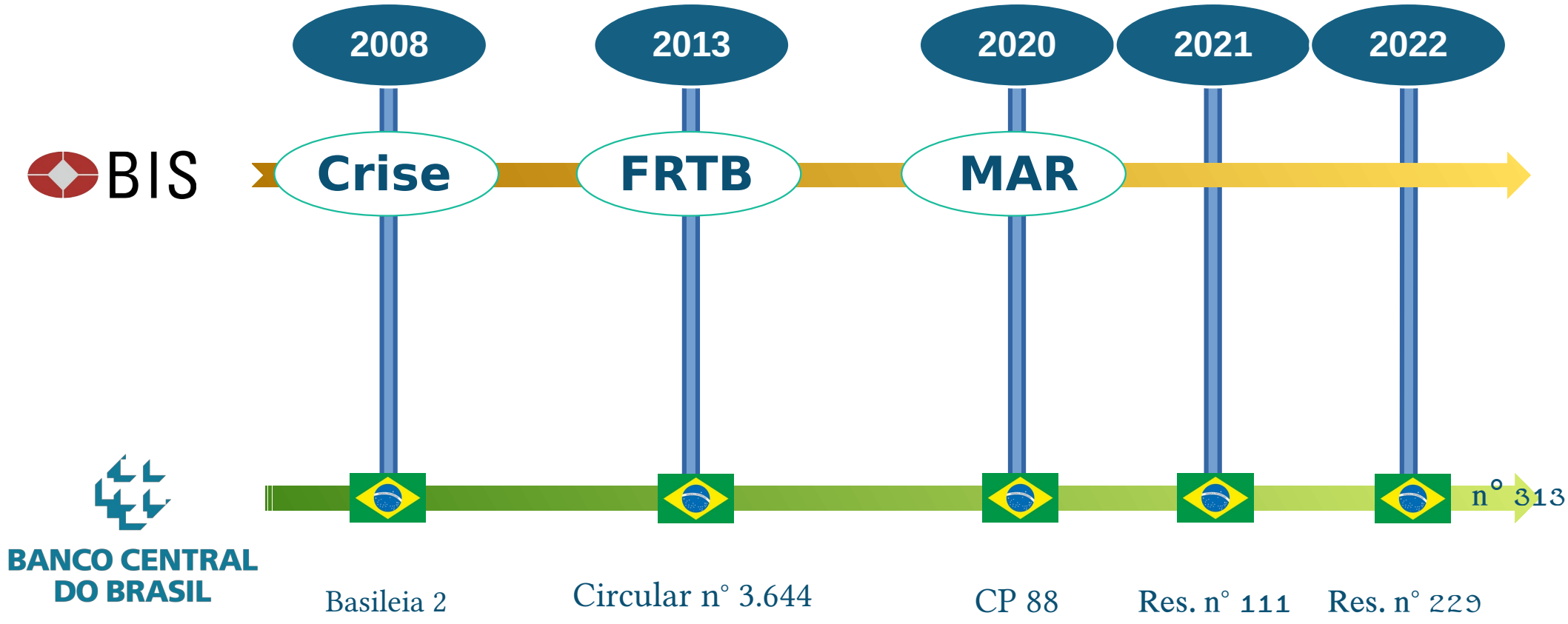
LCR - Liquidity Coverage Ratio

NSF - Net stable funding ratio

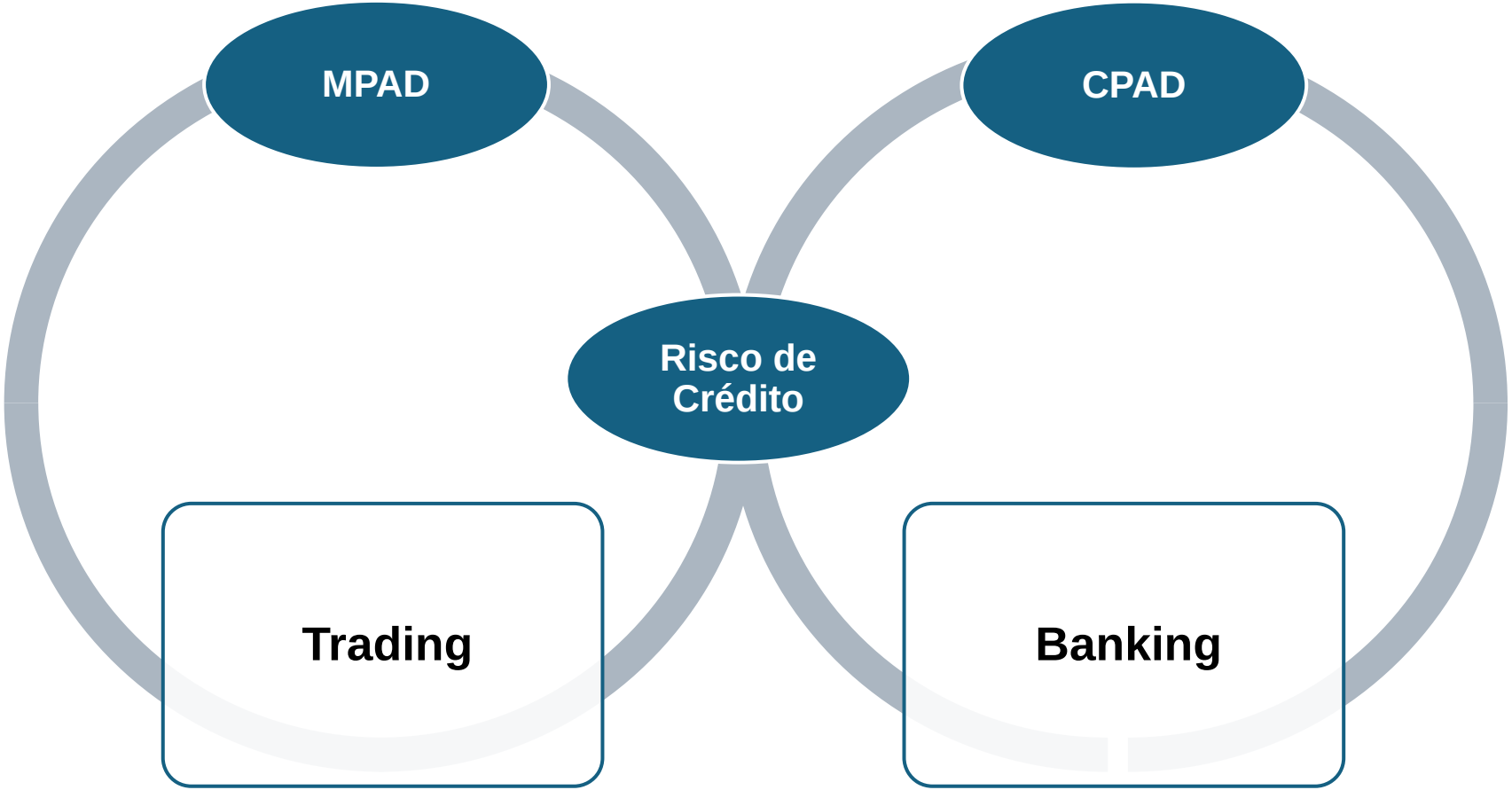
SCO – Scope and Definitions

SCO – Scope and Definitions

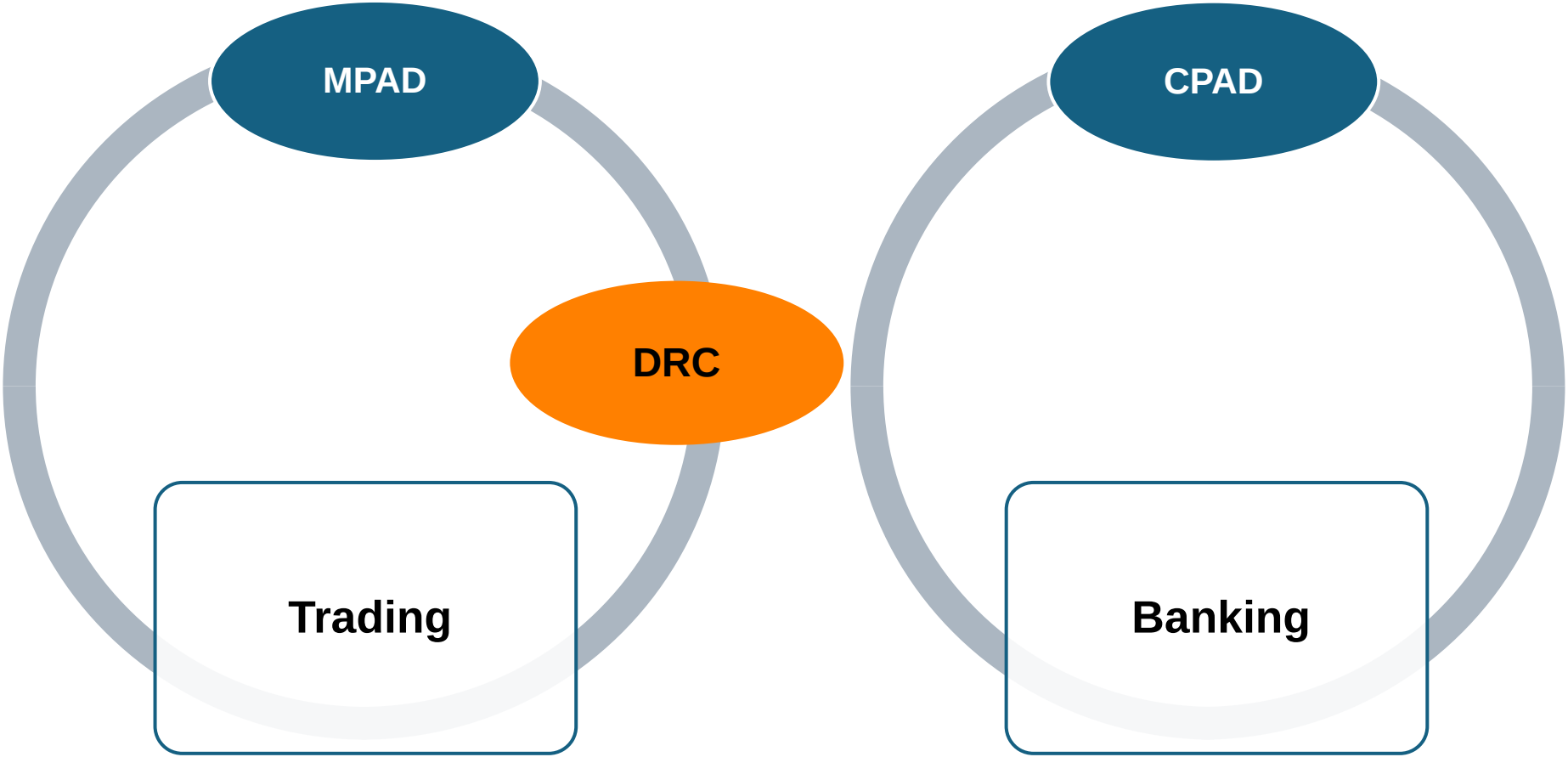
Linha do Tempo



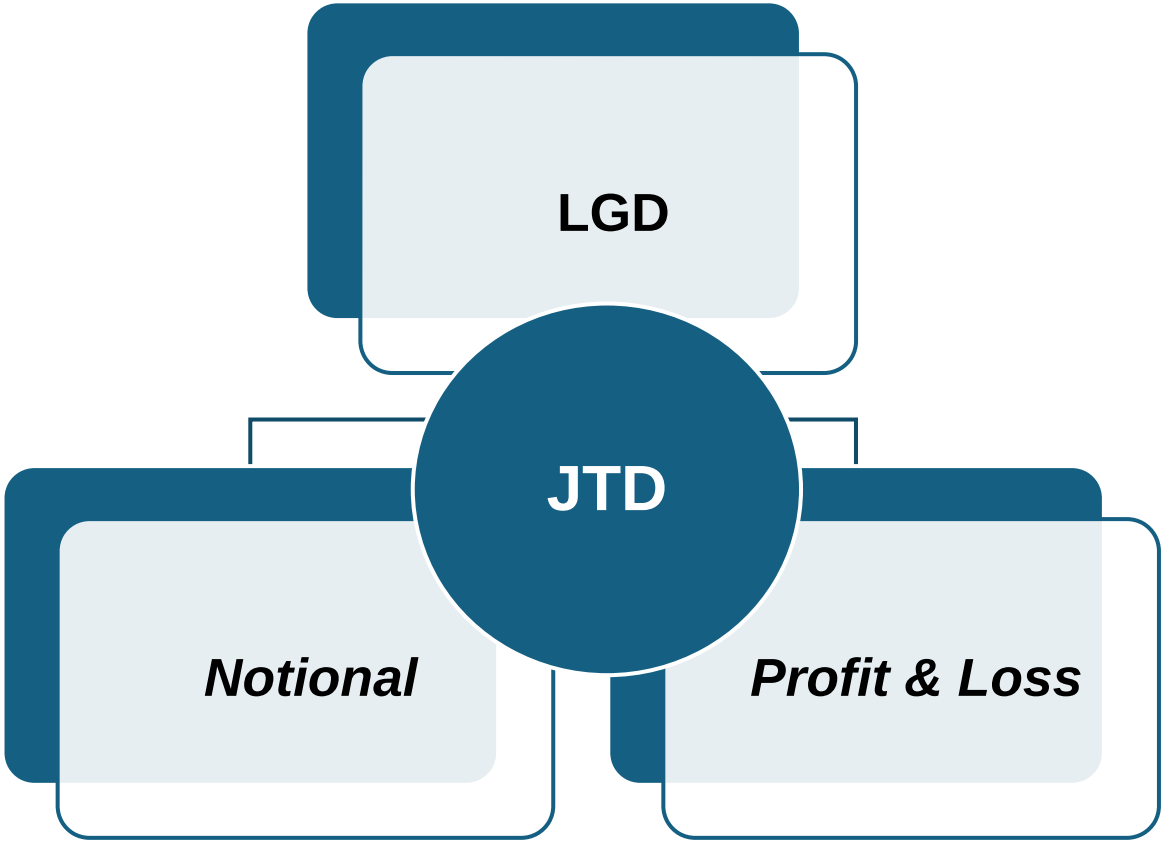
Intenção do MAR 22



Intenção do MAR 22



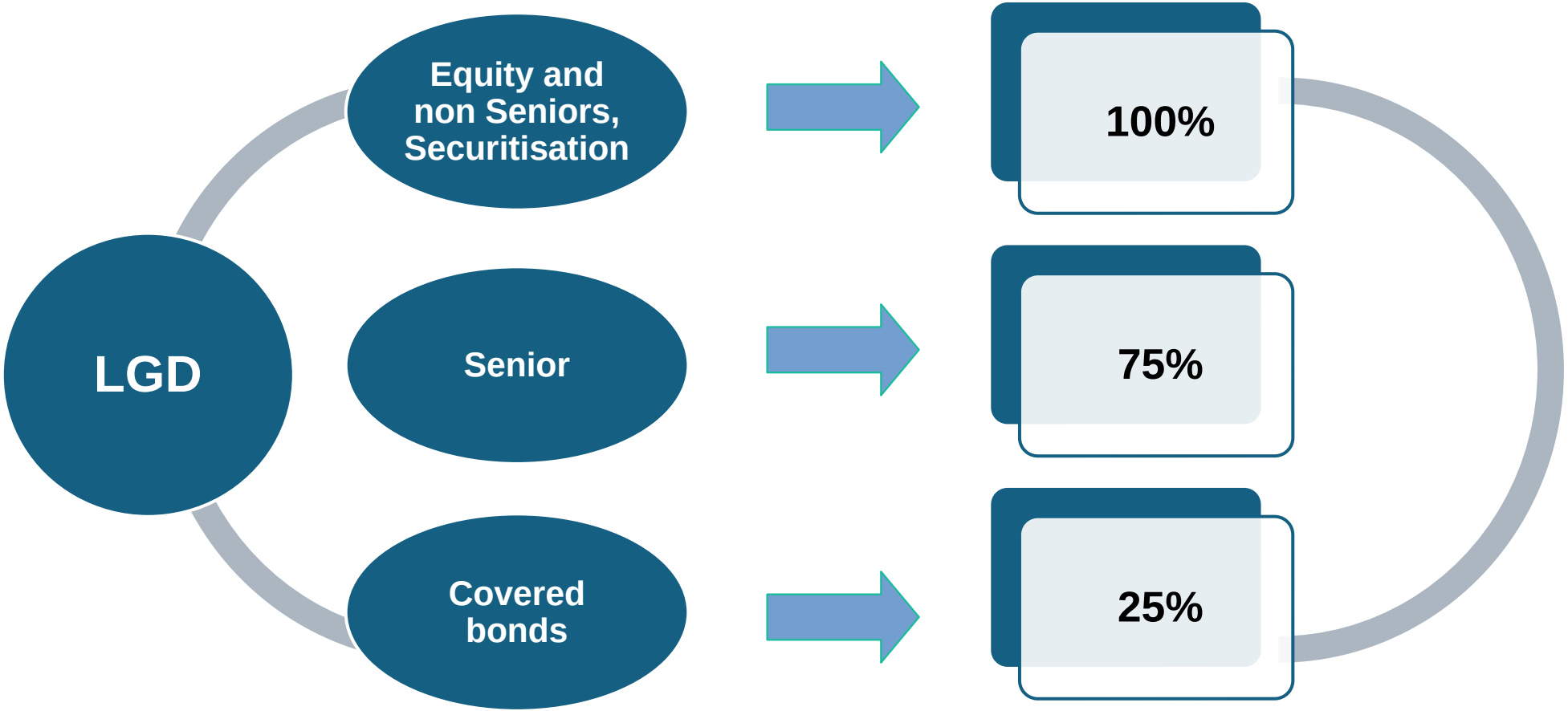
DRC – MAR 22



$$JTD(long) = MAX(LGD \times Notional + P\&L, 0)$$

$$JTD(Short) = MIN(LGD \times Notional + P\&L, 0)$$

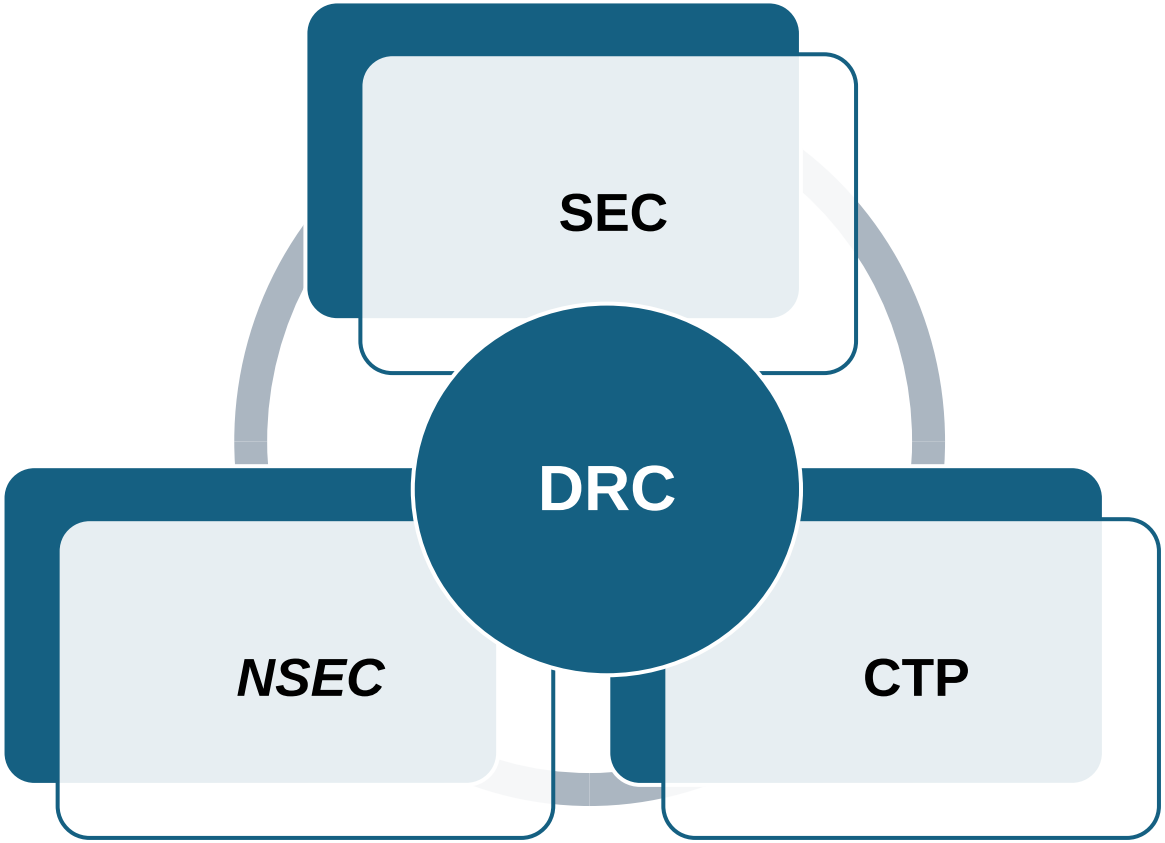
DRC – MAR 22


LGD
Equity and non Seniors, Securitisation
Senior
Covered bonds
100%
75%
25%

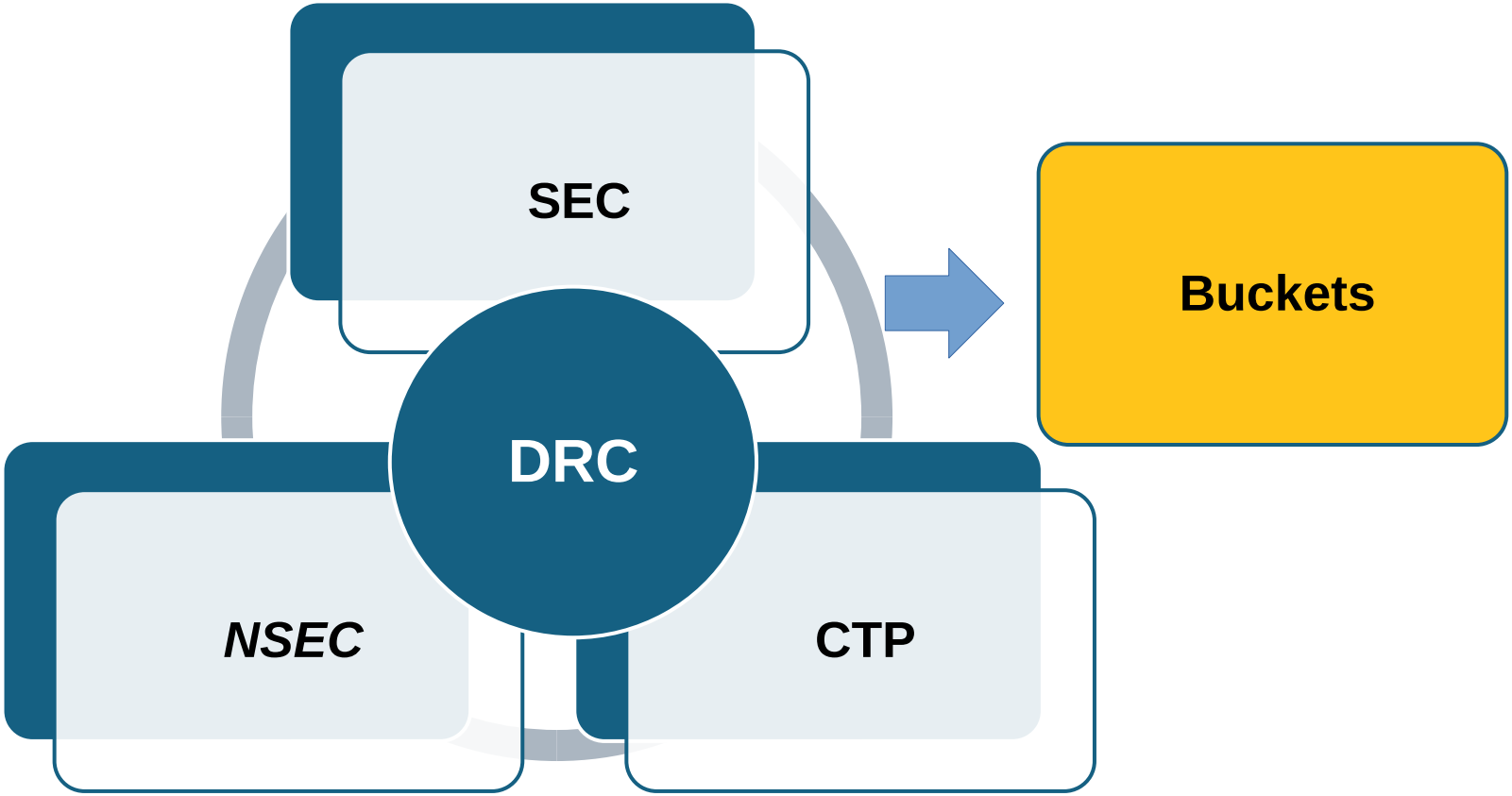
Instrument	Notional	Bond-equivalent market value	P&L
Bond	Face value of bond	Market value of bond	Market value - face value
CDS	Notional of CDS	Notional of CDS + mark-to-market (MtM) value of CDS	- MtM value of CDS
Sold put option on a bond	Notional of option	Strike amount - | MtM value of option |	(Strike - | MtM value of option |) - Notional
Bought call option on a bond	0	MtM value of option	MtM value of option

P&L = bond-equivalent market value - notional.

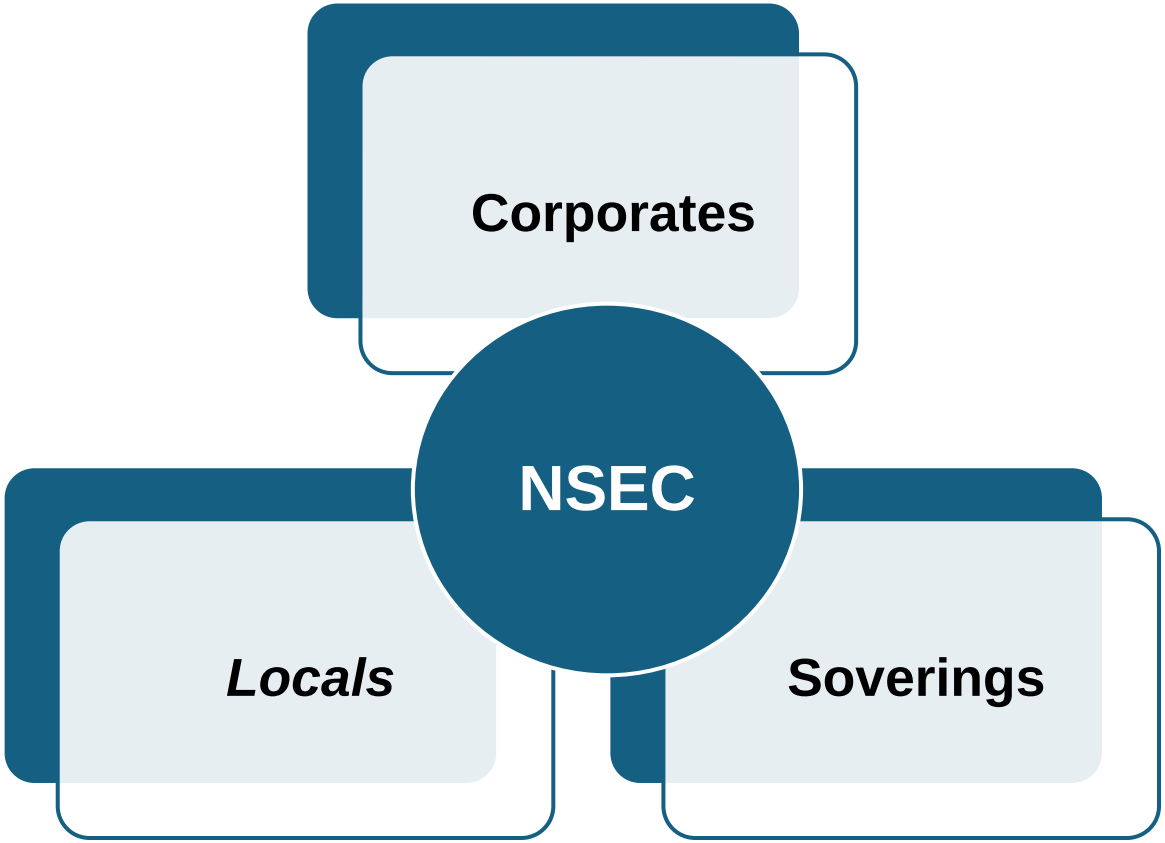
DRC – MAR 22



DRC – MAR 22



DRC – MAR 22



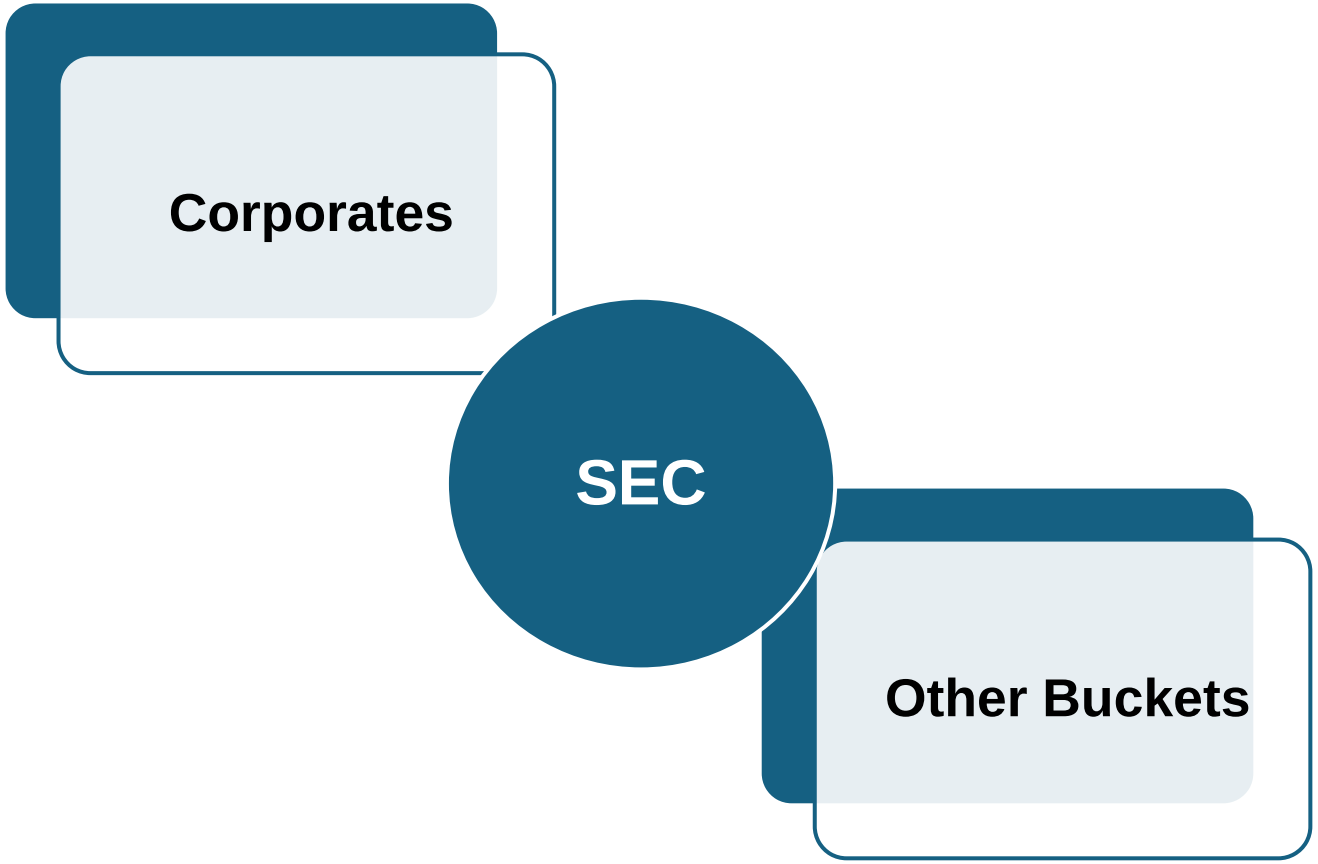
Bucket's Ratings

DRC – MAR 22 – Non-securitisation

$$HBR = \frac{\sum net\ JTDlong}{\sum net\ JTD\ long + \sum |net\ JTDshort|}$$

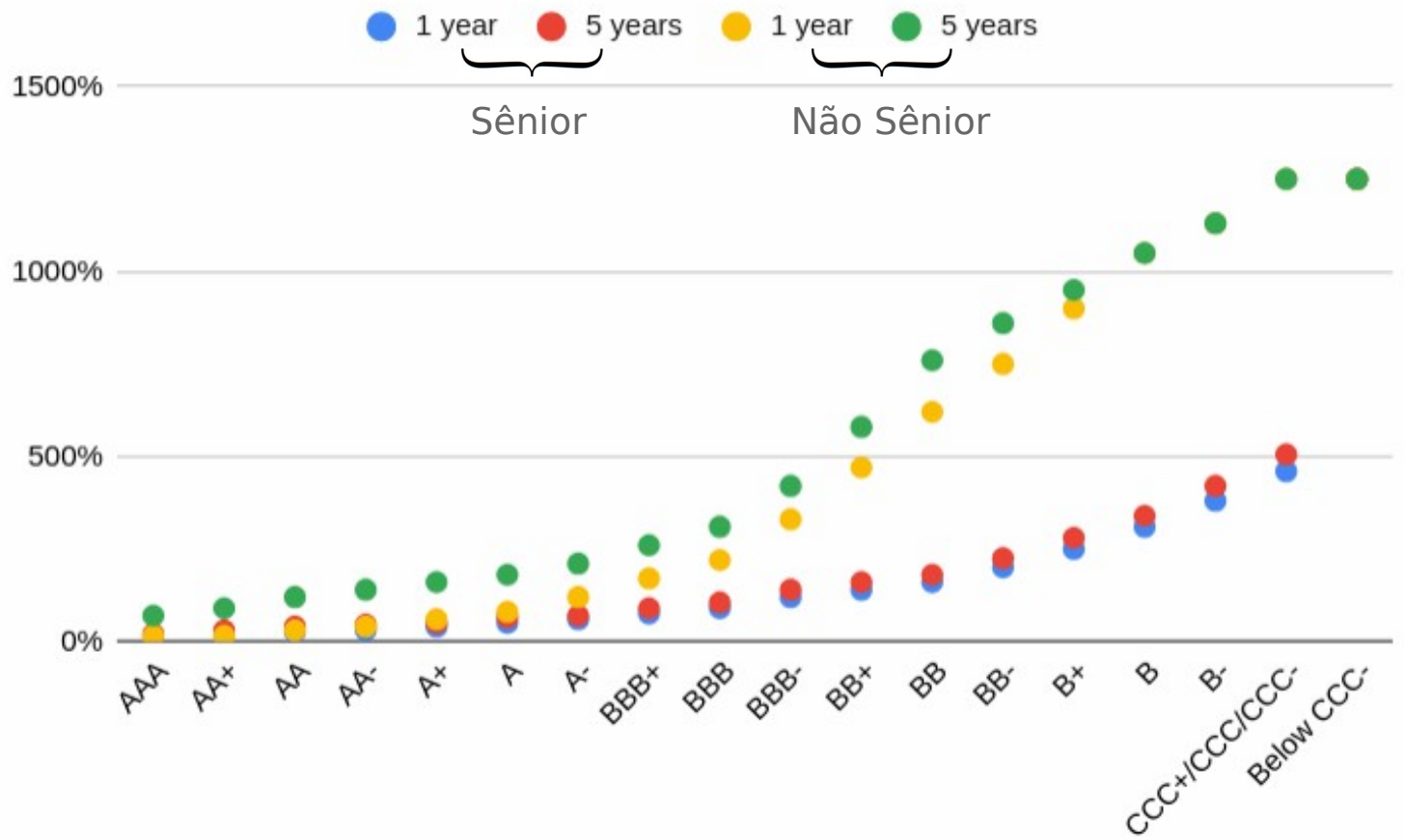
$$DRCb = max\left[\left(\sum_{i \in long} RW_i \times net\ JTD_i\right) - HBR \times \left(\sum_{i \in short} RW_i \times |net\ JTD_i|\right); 0\right]$$

DRC – MAR 22 – Securitisations



Rating	Senior tranche		Non-senior (thin) tranche	
	Tranche maturity (M_T)		Tranche maturity (M_T)	
	1 year	5 years	1 year	5 years
AAA	15%	20%	15%	70%
AA+	15%	30%	15%	90%
AA	25%	40%	30%	120%
AA-	30%	45%	40%	140%
A+	40%	50%	60%	160%
A	50%	65%	80%	180%
A-	60%	70%	120%	210%
BBB+	75%	90%	170%	260%
BBB	90%	105%	220%	310%
BBB-	120%	140%	330%	420%
BB+	140%	160%	470%	580%
BB	160%	180%	620%	760%
BB-	200%	225%	750%	860%
B+	250%	280%	900%	950%
B	310%	340%	1050%	1050%
B-	380%	420%	1130%	1130%
CCC+/CCC/CCC-	460%	505%	1250%	1250%
Below CCC-	1250%	1250%	1250%	1250%

CRE 42 – Securitisations (non-CTP)

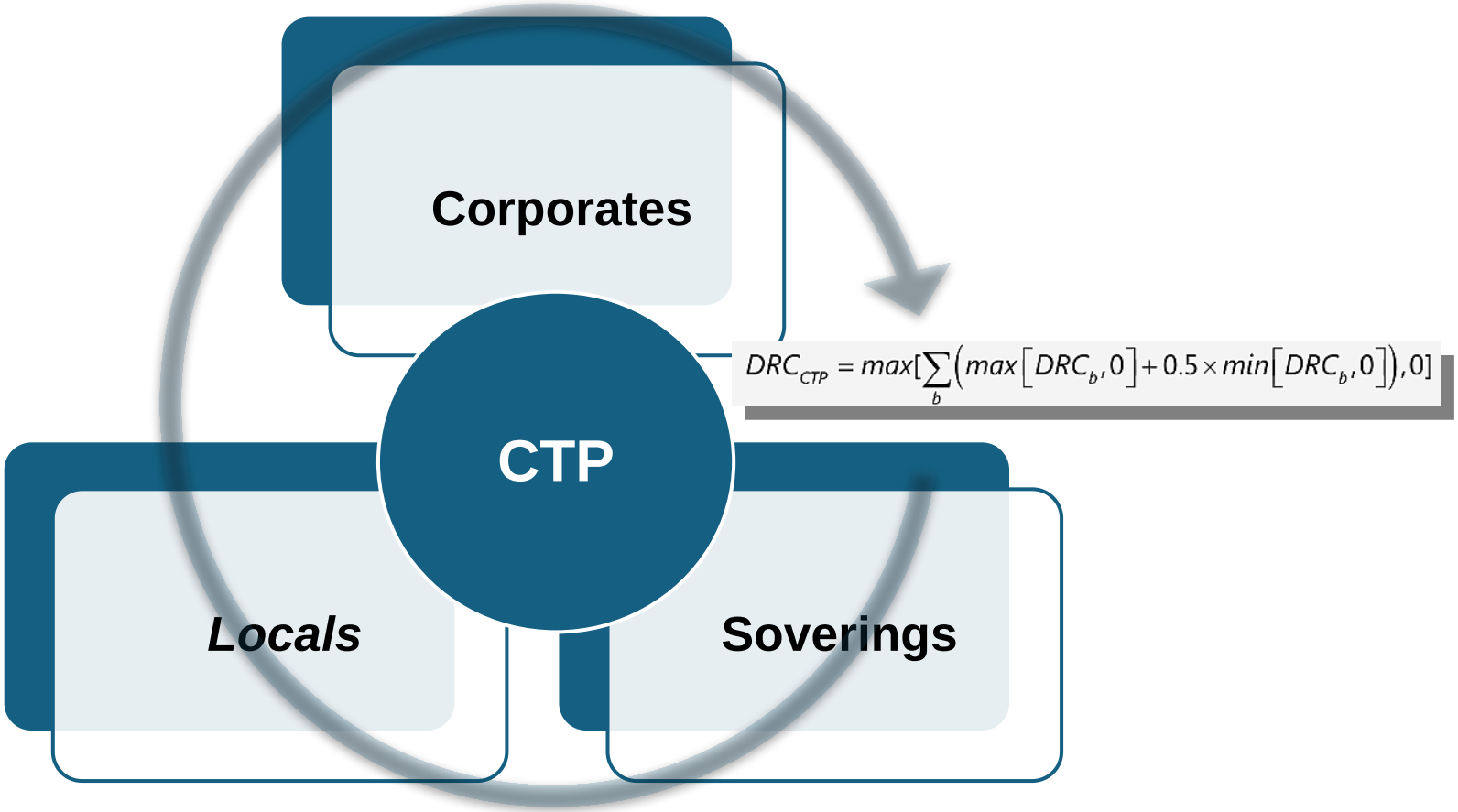


DRC – MAR 22 – Securitisations

$$HBR = \frac{\Sigma \, net\ JTD long}{\Sigma \, net\ JTD\ long + \Sigma \left| net\ JTD short \right|}$$

$$DRCb = max\left[\left(\sum_{i \in long} RW_i \times net\ JTD_i\right) - HBR \times \left(\sum_{i \in short} RW_i \times \left|net\ JTD_i\right|\right); 0\right]$$

DRC – MAR 22 – CTP



DRC – MAR 22 – CTP

Full Index Name	Index Family	Index Tenor	Fixed Rate/Coupon (bps)	Index Series	Index Version	Required for Clearing*	Date Included for Clearing	Scheduled Termination Date	Effective Date	Annex Date	Credit Derivative Definition	Markit Red
iTRAXX Europe S22	Main	10Y	100	22	3	Y	26/09/2023	20/12/2024	22/09/2014	07/09/2023	ISDA2014Credit	2I666VDD4
iTRAXX Europe S23	Main	10Y	100	23	3	Y	26/09/2023	20/06/2025	20/03/2015	07/09/2023	ISDA2014Credit	2I666VDE2
iTRAXX Europe S24	Main	10Y	100	24	3	Y	26/09/2023	20/12/2025	21/09/2015	07/09/2023	ISDA2014Credit	2I666VDF9
iTRAXX Europe S25	Main	10Y	100	25	2	Y	13/05/2019	20/06/2026	21/03/2016	29/04/2019	ISDA2014Credit	2I666VCN3
iTRAXX Europe S26	Main	10Y	100	26	2	Y	13/05/2019	20/12/2026	20/09/2016	29/04/2019	ISDA2014Credit	2I666VCO1
iTRAXX Europe S27	Main	10Y	100	27	2	Y	13/05/2019	20/06/2027	20/03/2017	29/04/2019	ISDA2014Credit	2I666VCP8
iTRAXX Europe S28	Main	7Y	100	28	2	N	13/05/2019	20/12/2024	20/09/2017	29/04/2019	ISDA2014Credit	2I666VCQ6
iTRAXX Europe S28	Main	10Y	100	28	2	Y	13/05/2019	20/12/2027	20/09/2017	29/04/2019	ISDA2014Credit	2I666VCQ6
iTRAXX Europe S29	Main	7Y	100	29	2	N	13/05/2019	20/06/2025	20/03/2018	29/04/2019	ISDA2014Credit	2I666VCR4
iTRAXX Europe S29	Main	10Y	100	29	2	Y	13/05/2019	20/06/2028	20/03/2018	29/04/2019	ISDA2014Credit	2I666VCR4
iTRAXX Europe S30	Main	7Y	100	30	2	N	13/05/2019	20/12/2025	20/09/2018	29/04/2019	ISDA2014Credit	2I666VCS2
iTRAXX Europe S30	Main	10Y	100	30	2	Y	13/05/2019	20/12/2028	20/09/2018	29/04/2019	ISDA2014Credit	2I666VCS2
iTRAXX Europe S31	Main	7Y	100	31	2	N	13/05/2019	20/06/2026	20/03/2019	29/04/2019	ISDA2014Credit	2I666VCU7
iTRAXX Europe S31	Main	10Y	100	31	2	Y	13/05/2019	20/06/2029	20/03/2019	29/04/2019	ISDA2014Credit	2I666VCU7
iTRAXX Europe S32	Main	5Y	100	32	1	Y	20/09/2019	20/12/2024	20/09/2019	18/09/2019	ISDA2014Credit	2I666VCV5
iTRAXX Europe S32	Main	7Y	100	32	1	N	20/09/2019	20/12/2026	20/09/2019	18/09/2019	ISDA2014Credit	2I666VCV5
iTRAXX Europe S32	Main	10Y	100	32	1	Y	20/09/2019	20/12/2029	20/09/2019	18/09/2019	ISDA2014Credit	2I666VCV5
iTRAXX Europe S33	Main	5Y	100	33	1	Y	20/03/2020	20/06/2025	20/03/2020	18/03/2020	ISDA2014Credit	2I666VCW3
iTRAXX Europe S33	Main	7Y	100	33	1	N	20/03/2020	20/06/2027	20/03/2020	18/03/2020	ISDA2014Credit	2I666VCW3
iTRAXX Europe S33	Main	10Y	100	33	1	Y	20/03/2020	20/06/2030	20/03/2020	18/03/2020	ISDA2014Credit	2I666VCW3
iTRAXX Europe S34	Main	5Y	100	34	1	Y	21/09/2020	20/12/2025	21/09/2020	17/09/2020	ISDA2014Credit	2I666VCX1

Considerações Finais

- ✔ Origem do FRTB
- ✔ Componentes novos
- ✔ Papel do BIS
- ✔ Intenção do DRC
- ✔ Buckets e Rws.

Agradecimentos

Obrigado!

3º Workshop Duxus de Risco

Uma questão de controle.

Élin Duxus

Res 313

Fábio Henrique Costa Corrêa

Q&A

Resolução 313

$$RWA_{drc} = \frac{1}{F} \times \left(DRC_{nsec} + DRC_{sec} + DRC_{ctp} \right)$$

Resolução 313

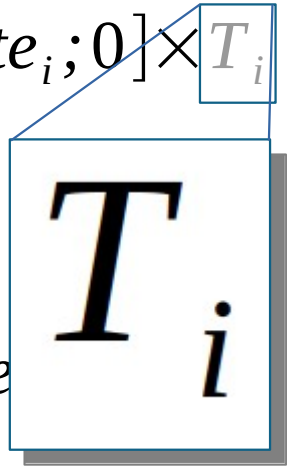
$$JTD_{Comprado} = max\left[\left(FP_i \times ValorBase_i\right) + \Delta\, Ajuste_i ; 0\right] \times T_i$$

$$JTD_{Vendido} = min\left[\left(FP_i \times ValorBase_i\right) + \Delta\, Ajuste_i ; 0\right] \times T_i$$

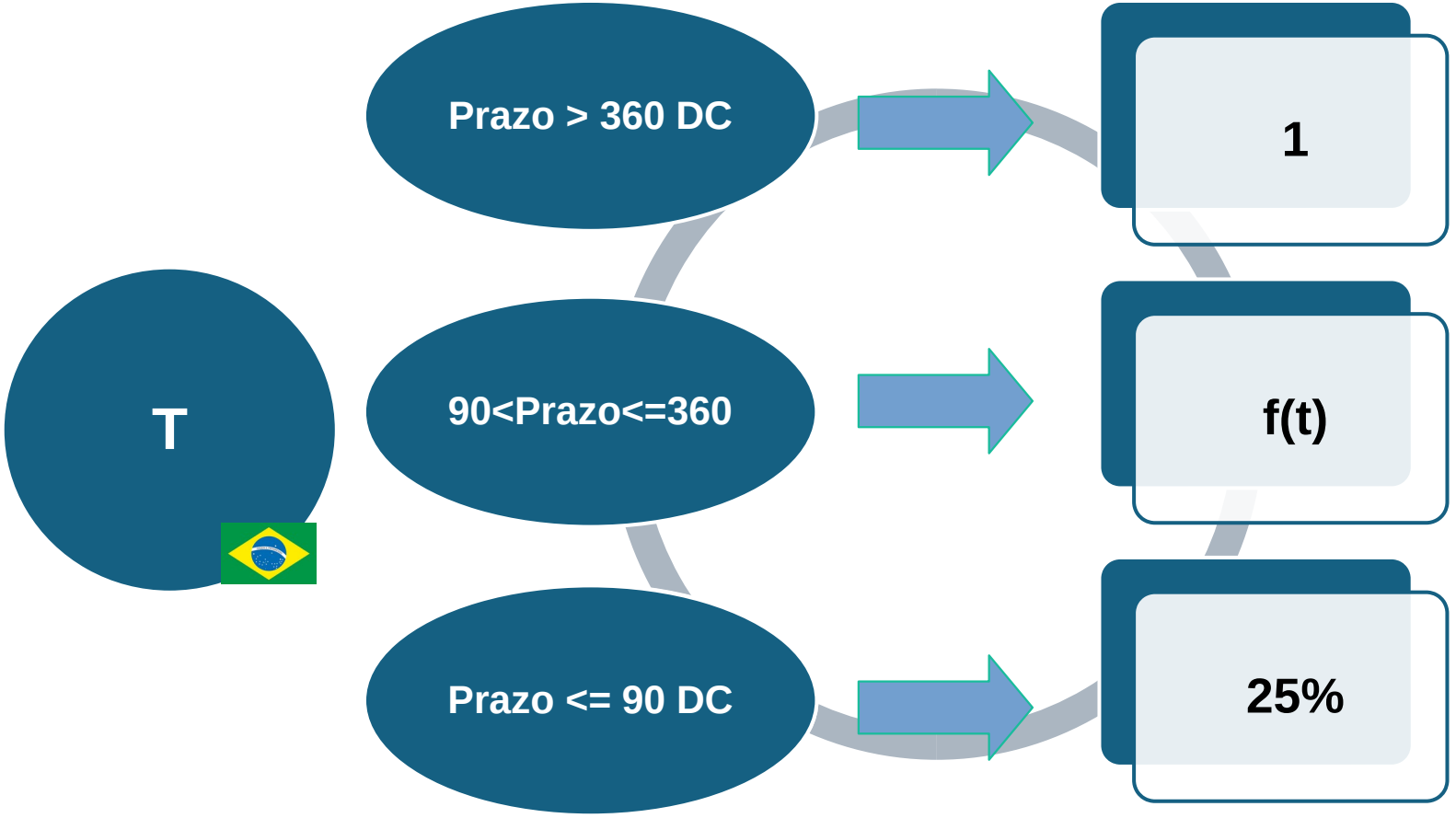
Resolução 313

$$JTD_{Comprado} = max\left[\left(FP_i \times ValorBase_i\right) + \Delta\, Ajuste_i ; 0\right] \times T_i$$

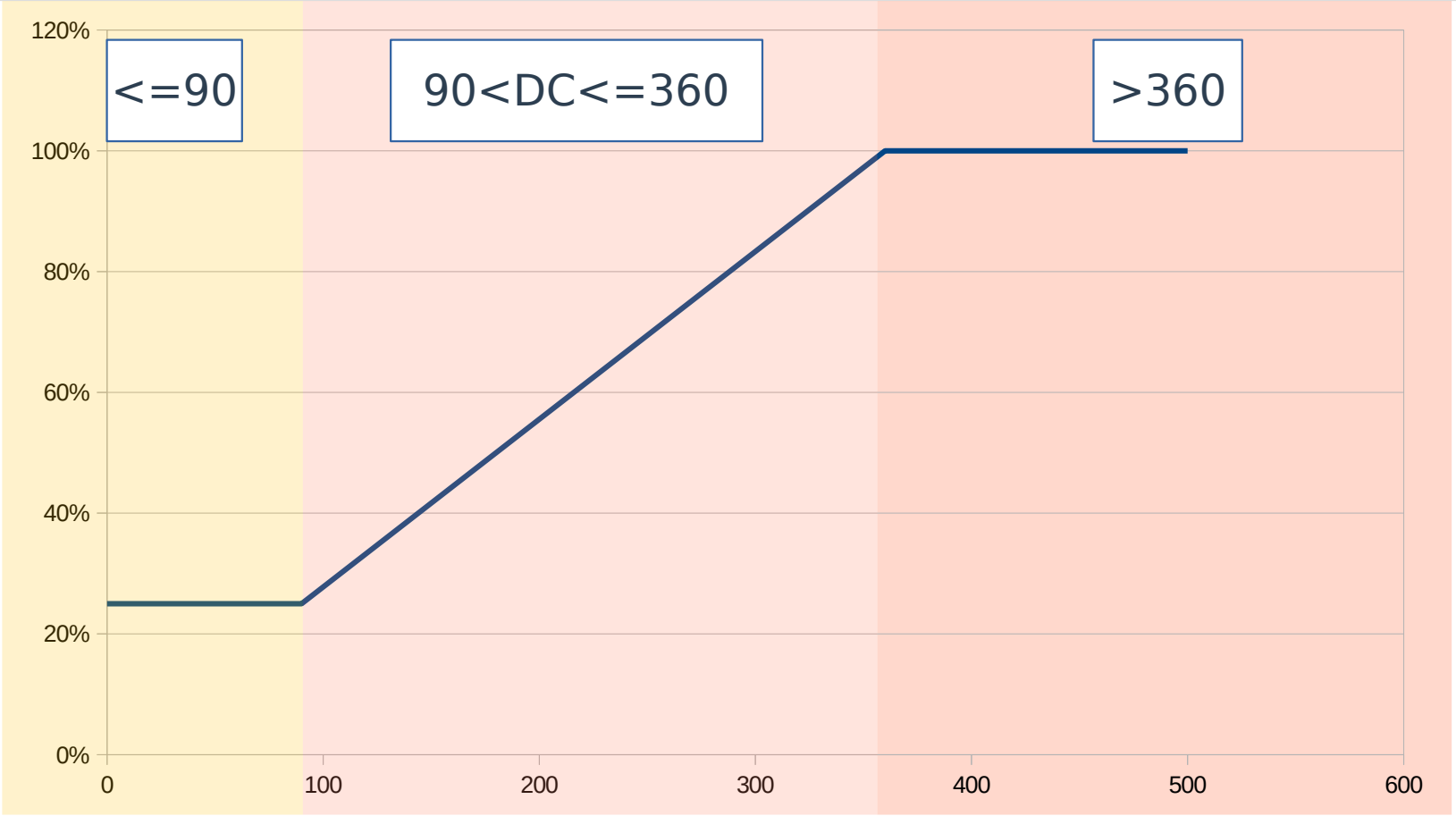
$$JTD_{Vendido} = min\left[\left(FP_i \times ValorBase_i\right) + \Delta\, Ajuste\right.$$



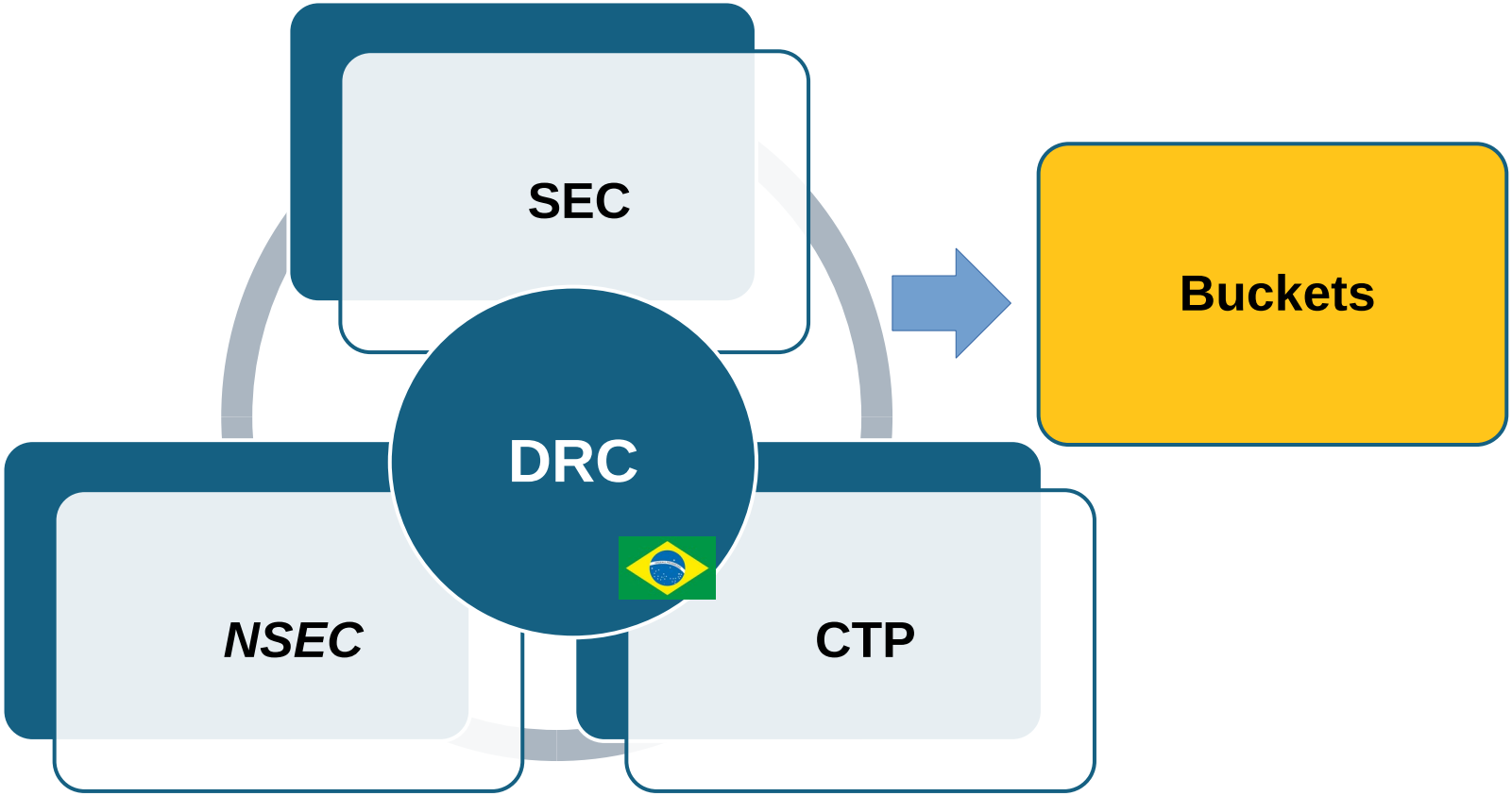
Fator T



Fator T

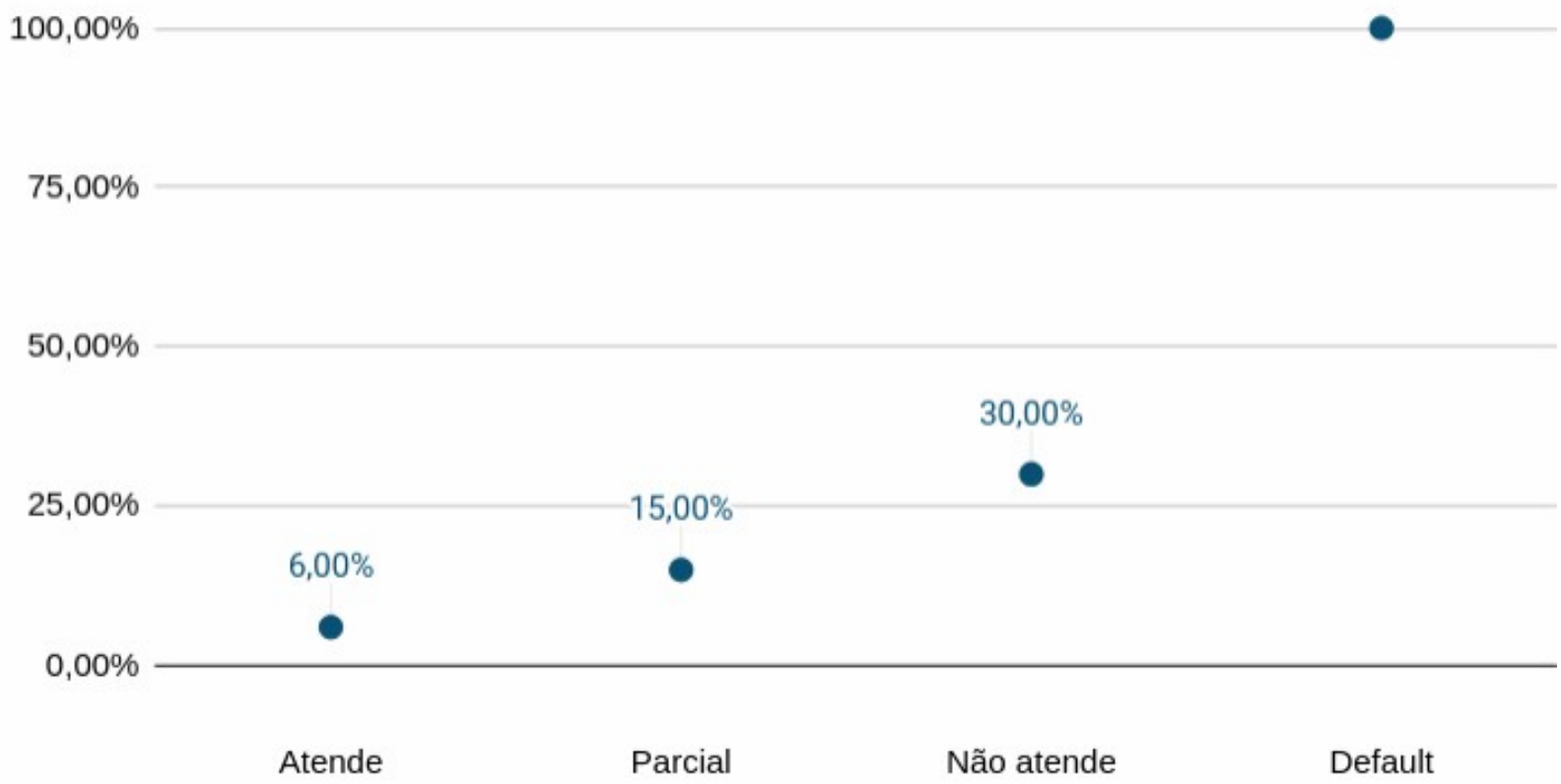


DRC – 313

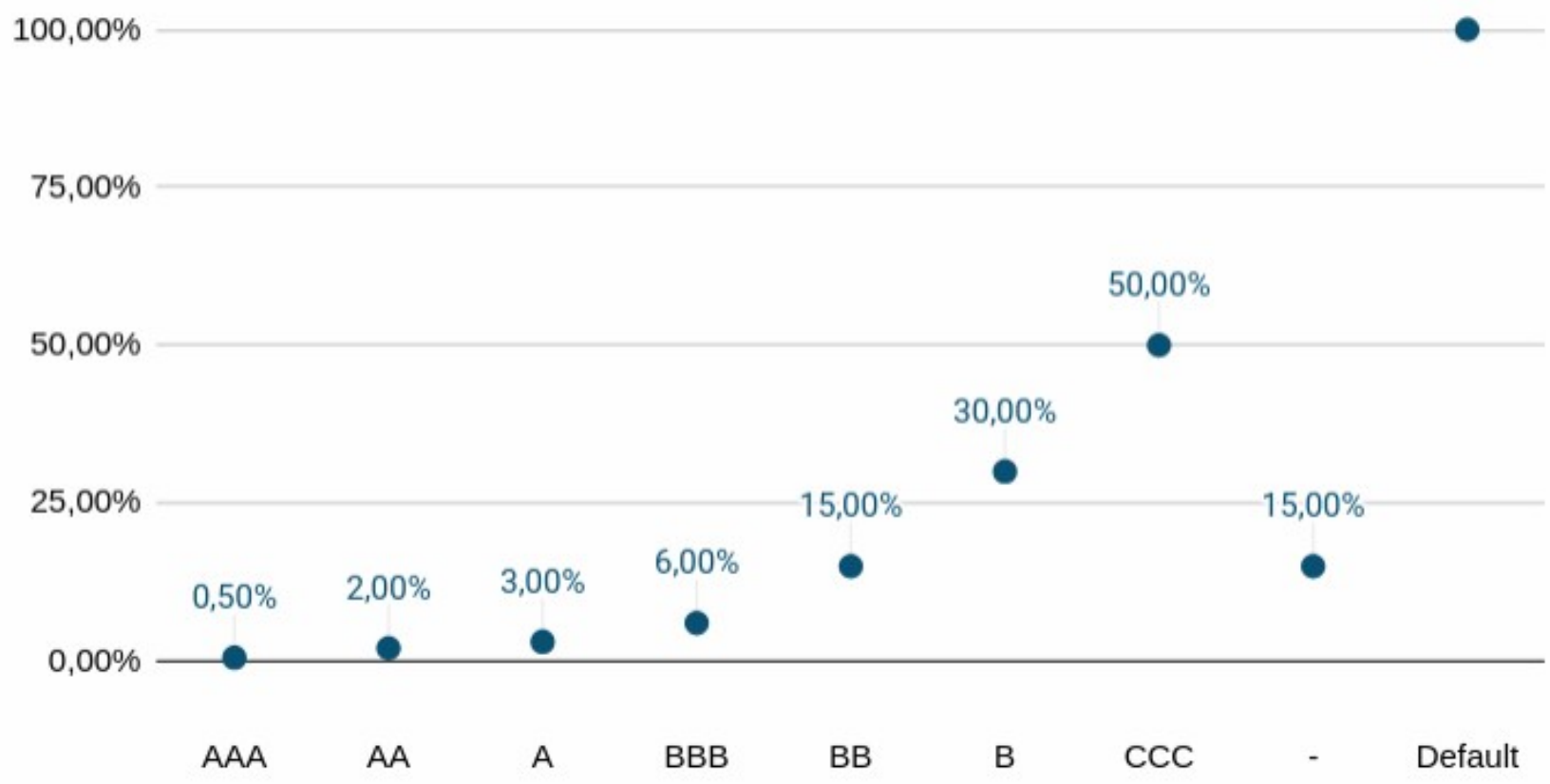


DRC – 313 – NSEC

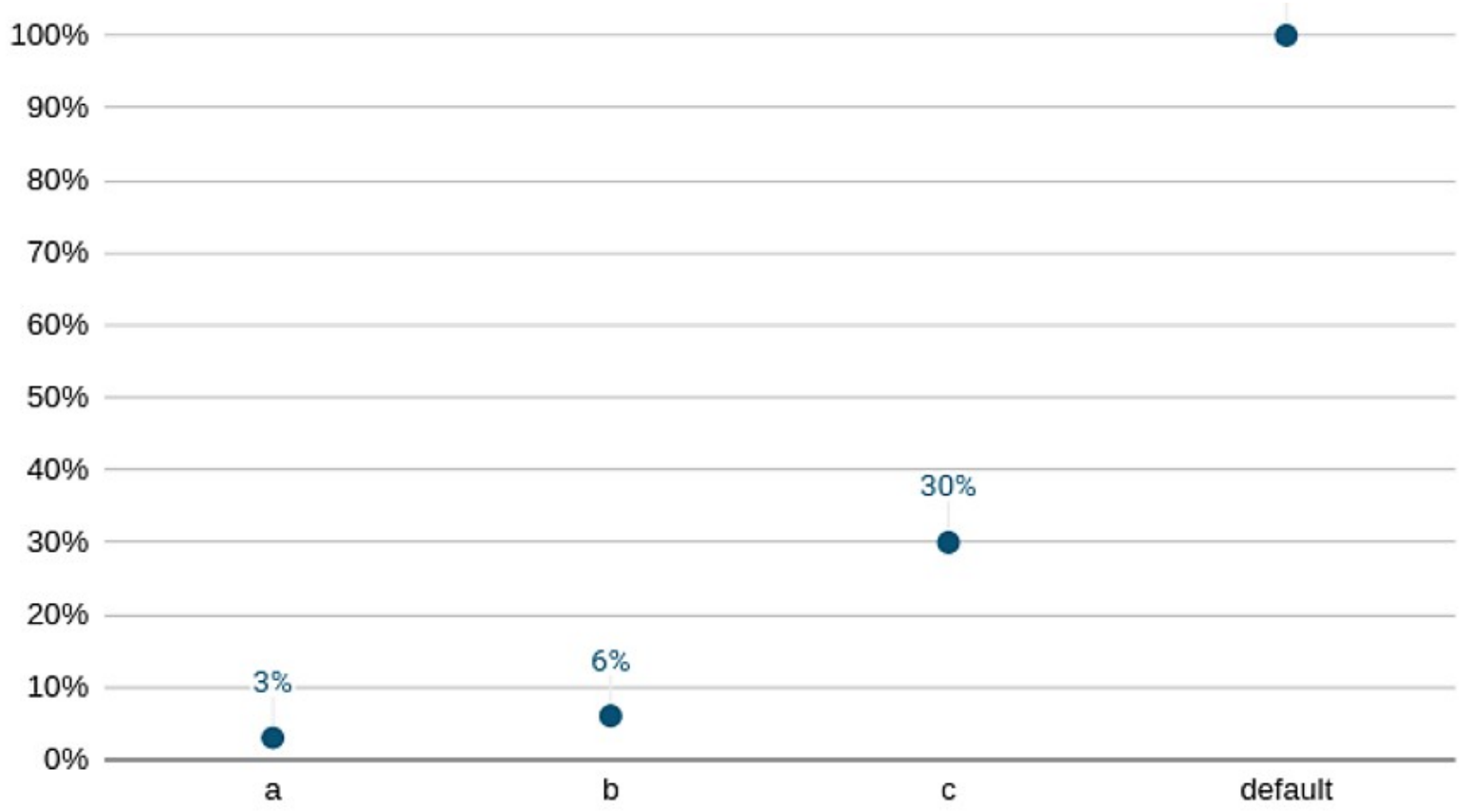
DRC – 313 – NSEC – Corporação não Financeira

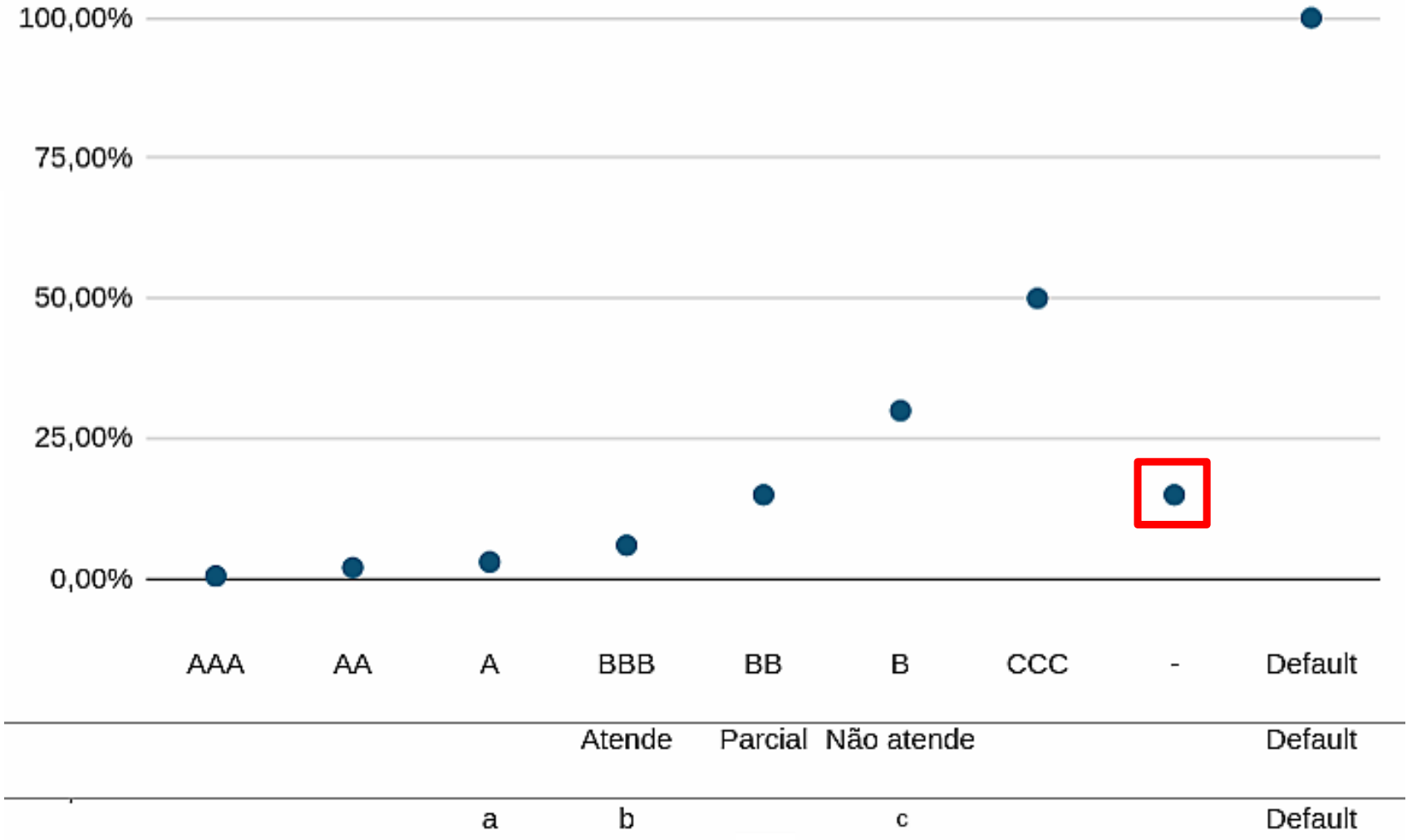


DRC – 313 – NSEC – Soberanos



DRC – 313 – NSEC – Instituições Financeiras



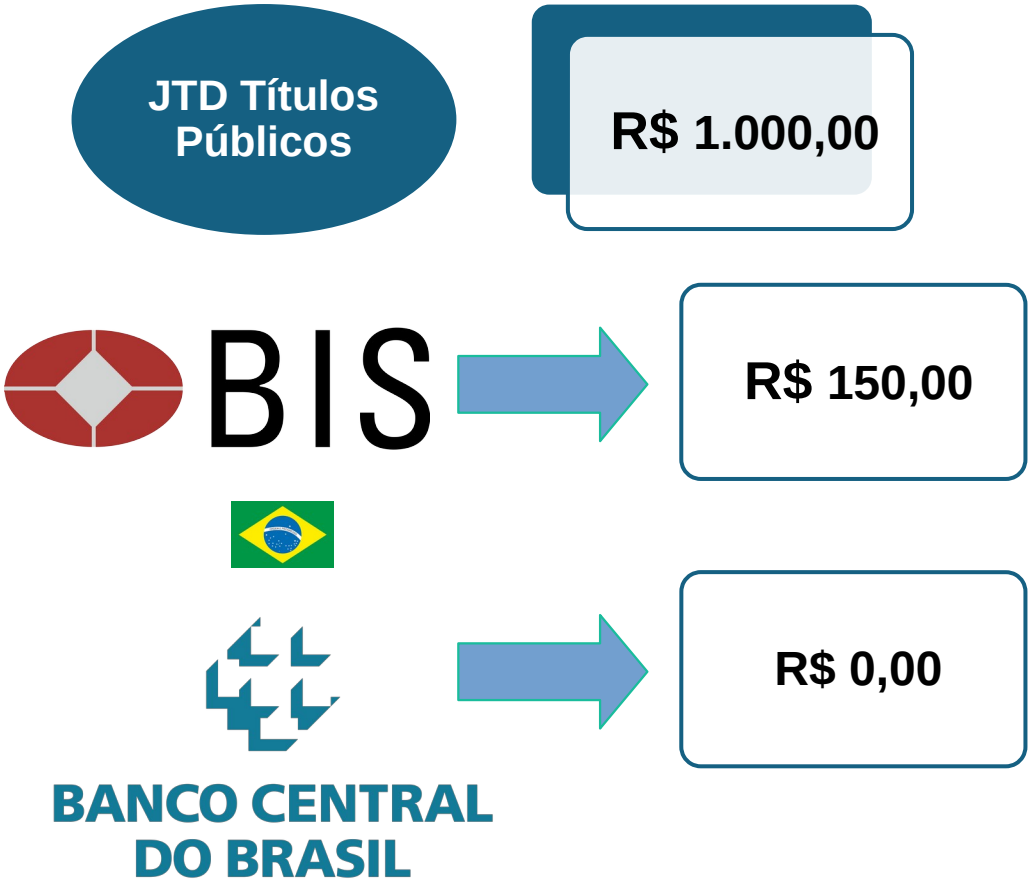

100,00%
75,00%
50,00%
25,00%
0,00%
AAA
AA
A
BBB
BB
B
CCC
-
Default
Atende
Parcial
Não atende
Default
a
b
c
Default

JTD Títulos Públicos

BIS

BANCO CENTRAL DO BRASIL

DRC – 313 – NSEC – Títulos Públicos

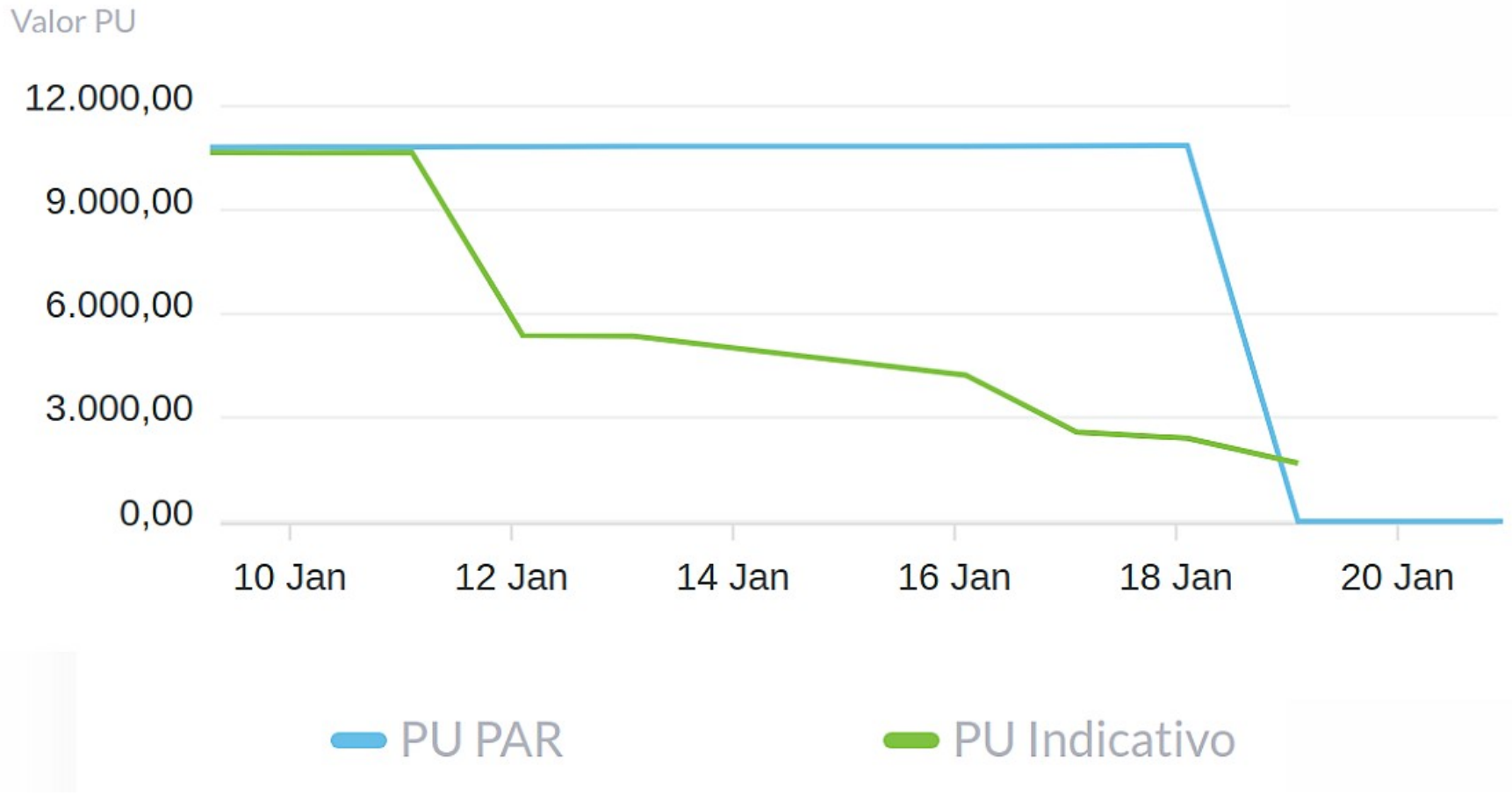


DRC – 313 – Non-securitisation

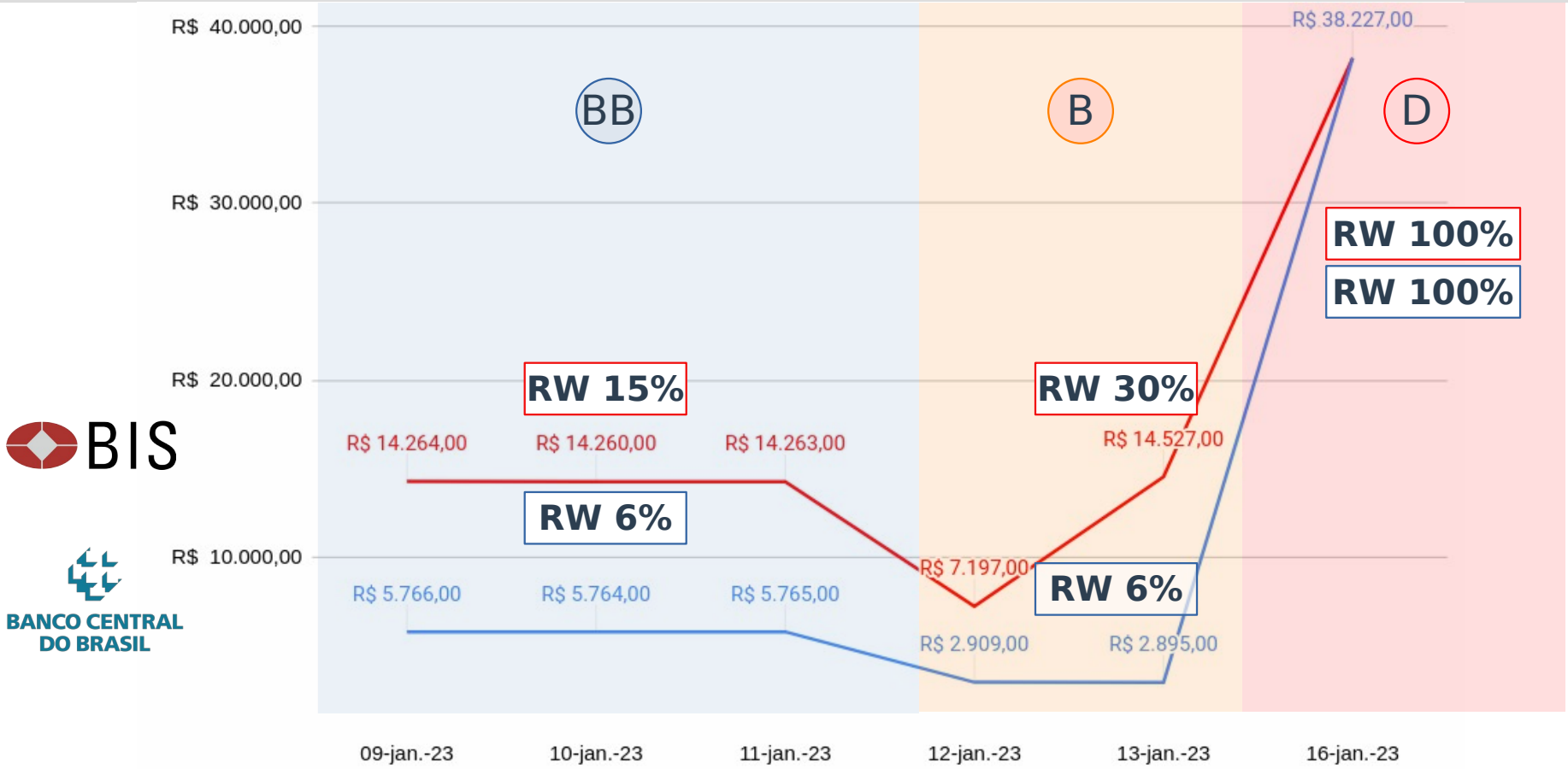
$$HBR = \frac{\sum JTDL_cpa_j}{\sum JTDL_cpa_j + \sum |JTDL_vda_j|}$$

$$DRC_{nsec\ cat_j} = max\left[\left(\sum_{i \in long} JTDL_{cpa_j} \times RW_i\right) - HBR_{nsec_j} \times \left(\sum_{i \in short} |JTDL_{vda_j}| \times RW_i\right); 0\right]$$

Case - Lamea 7


Valor PU
12.000,00
9.000,00
6.000,00
3.000,00
0,00
10 Jan
12 Jan
14 Jan
16 Jan
18 Jan
20 Jan
PU PAR
PU Indicativo

Case – Lamea 7



BIS

BANCO CENTRAL DO BRASIL

DRC – 313 – SEC

$$JTD = MTM * T$$

$$K_A = (1 - W) * K_{SA} + W * 0{,}5$$

$$K_{SA} = (RWA_{HIP} * F)/V$$

$$K_A = \theta * K'_A + (1 - \theta) * 1$$

$$K_{SSFA(KA)} = \frac{e^{-\frac{1}{K_A}*(D-K_A)} - e^{-\frac{1}{K_A}*\max(A-K_A;0)}}{-\frac{1}{K_A}*(D-K_A-\max(A-K_A;0))}$$

DRC - 313 - SEC

$$HBR = \frac{\sum JTDL_cpa_j}{\sum JTDL_cpa_j + \sum |JTDL_vda_j|}$$

$$RW_i = FPR_i \times F$$

$$DRC_{sec\,cat_j} = max\left[\left(\sum_{i \in long} JTDLcpa_j \times RW_i\right) - HBRsec_j \times \left(\sum_{i \in short} |JTDLvda_j| \times RW_i\right); 0\right]$$

DRC – 313 – Case Raízen

Títulos

1.000

MTM

R$
1.436.047,8

BANCO CENTRAL
DO BRASIL

DU

73

DRC – 313 – Case Raízen

Títulos

1.000

MTM

R$
1.436.047,8

RW

45%

BANCO CENTRAL
DO BRASIL

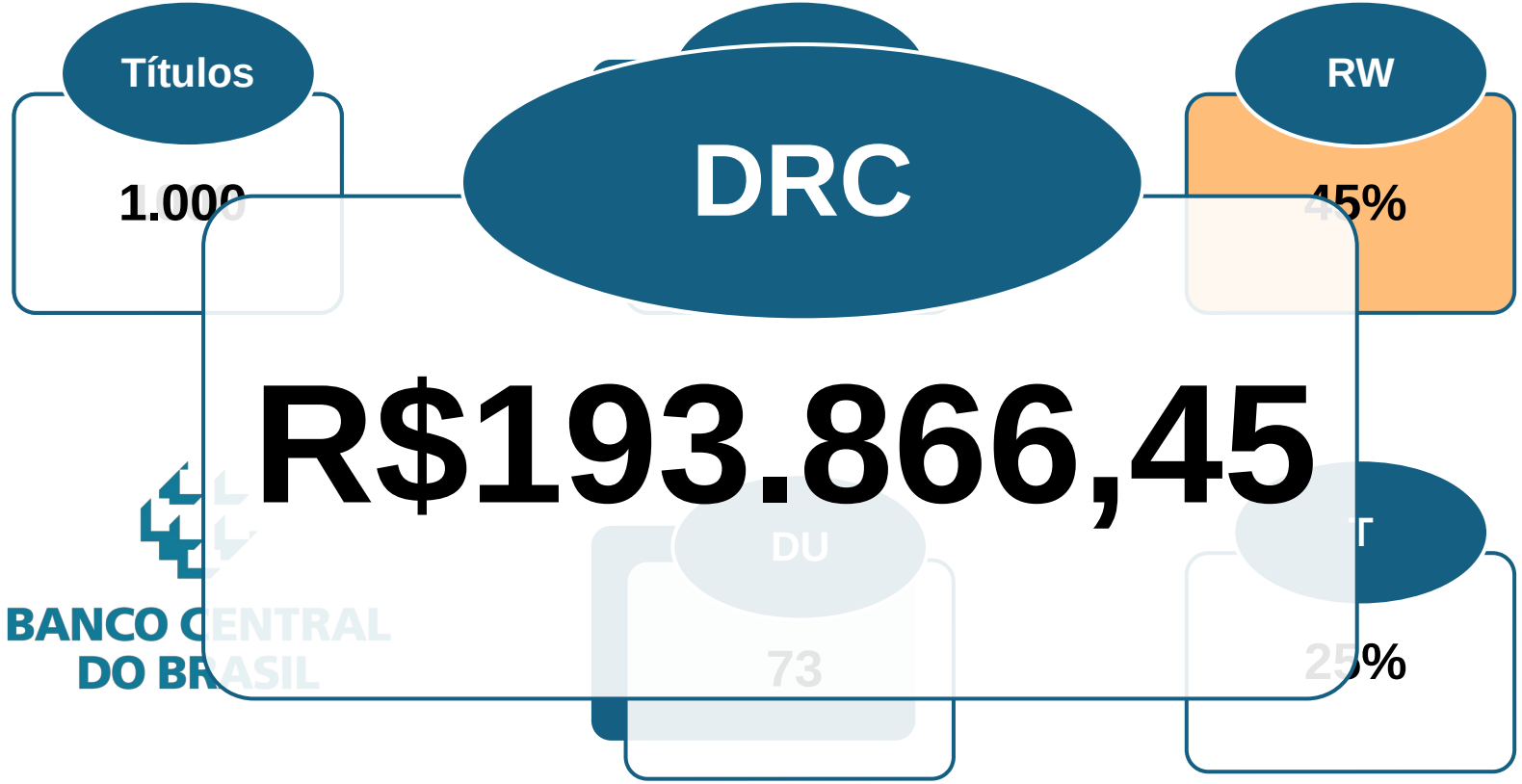
DU

73

T

25%

DRC – 313 – Case Raízen



DRC – MAR 22 – Case Raízen

Títulos

1.000

Principal

R$ 1.000.000,00

BIS

DU

73

DRC – MAR 22 – Case Raízen

Rating	Senior tranche		Non-senior (thin) tranche	
	Tranche maturity (M_T)		Tranche maturity (M_T)	
	1 year	5 years	1 year	5 years
AAA	10%	10%	15%	40%
AA+	10%	15%	15%	55%
AA	15%	20%	15%	70%
AA-				
A+				
A				
A-				
BBB+	45%	55%	150%	225%
BBB	55%	65%	180%	255%
BBB-	70%	85%	270%	345%
BB+	120%	135%	405%	500%
BB	135%	155%	535%	655%
BB-	170%	195%	645%	740%
B+	225%	250%	810%	855%
B	280%	305%	945%	945%
B-	340%	380%	1015%	1015%
CCC+/CCC/CCC-	415%	455%	1250%	1250%
Below CCC-	1250%	1250%	1250%	1250%

BBB 55%

DRC – MAR 22 – Case Raízen

Títulos

1.000

Principal

R$ 1.000.000,00

RW

55%

BIS

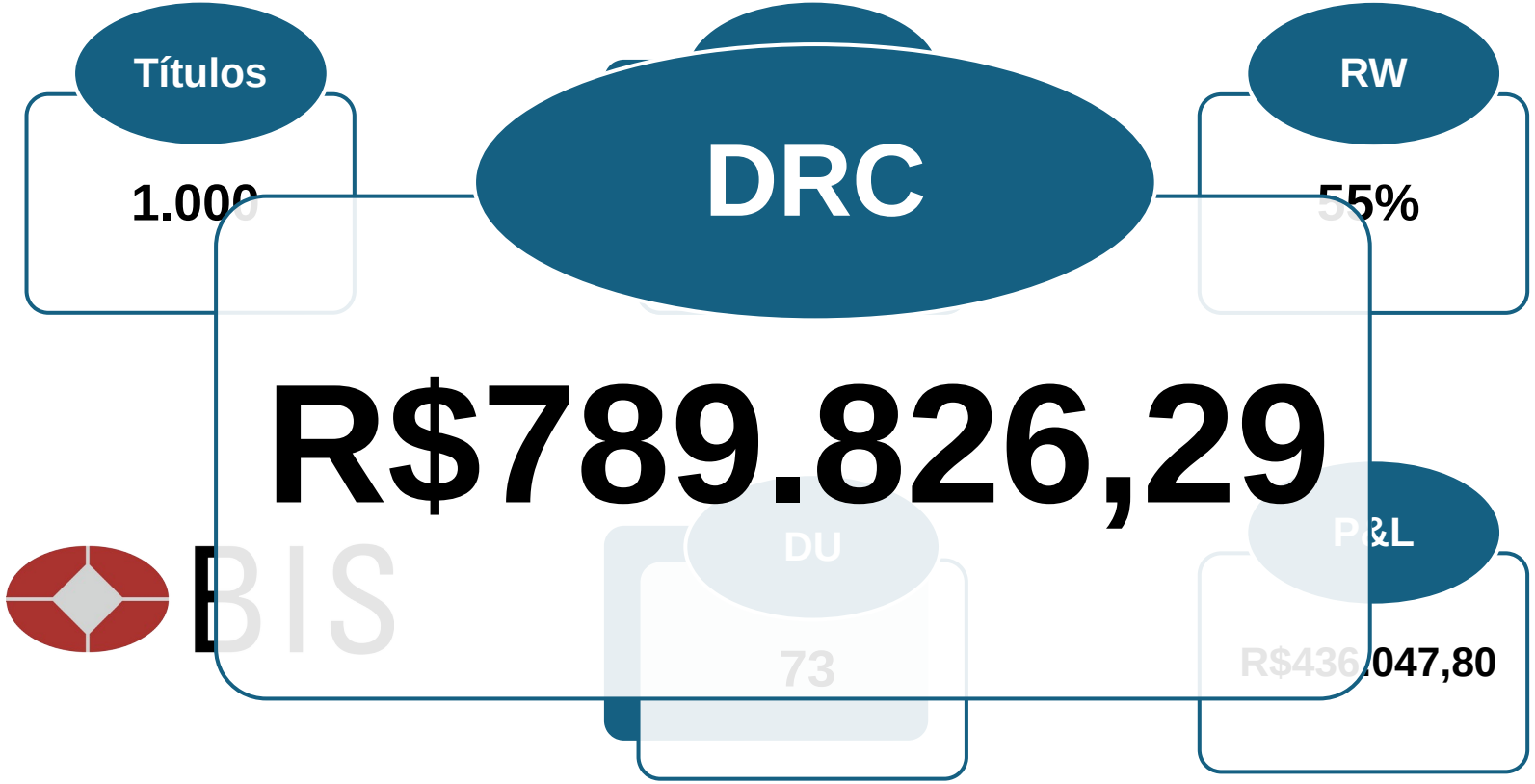
DU

73

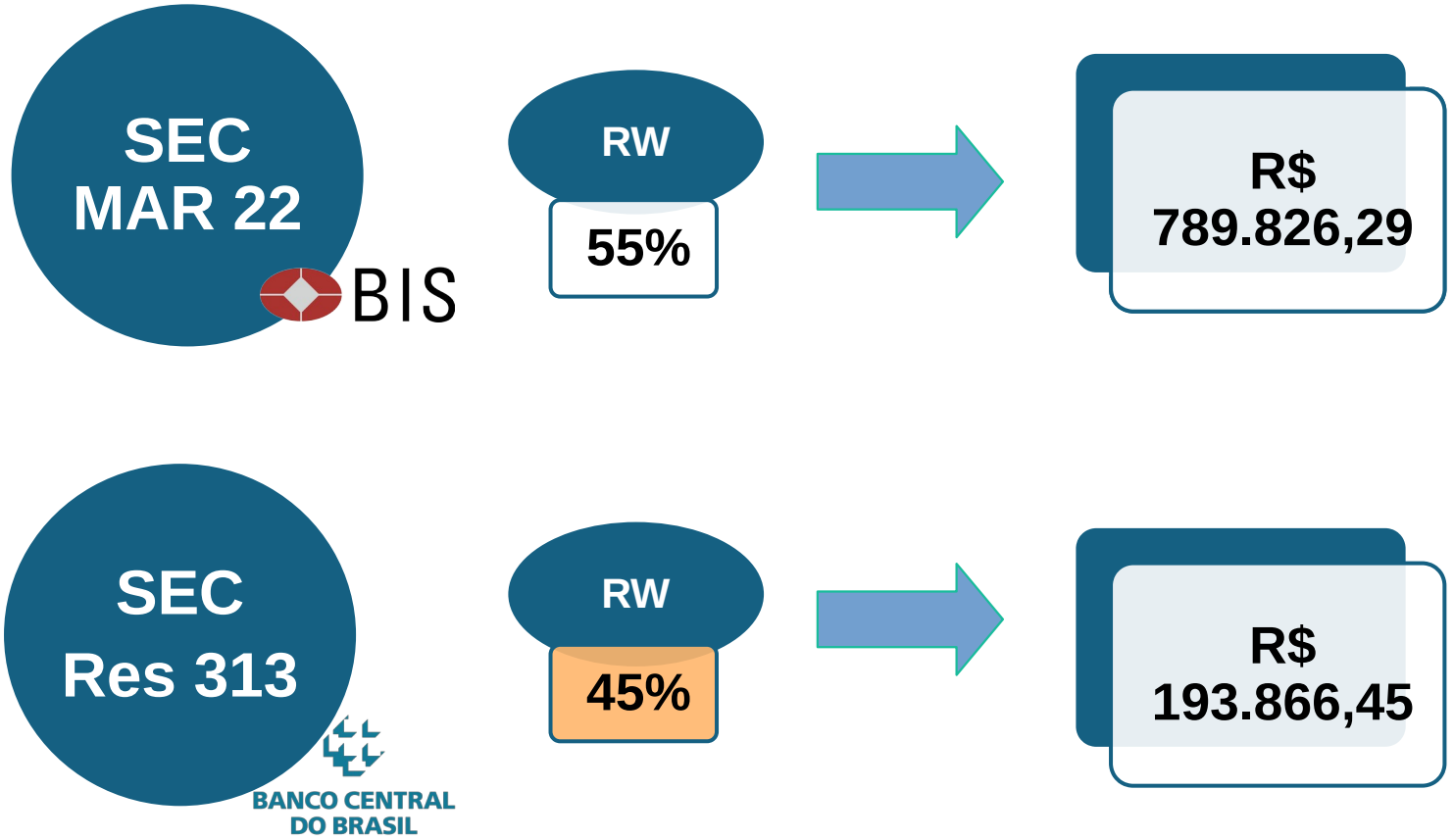
P&L

R$436.047,80

DRC – MAR 22 – Case Raízen

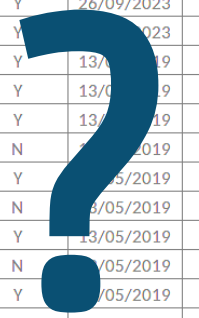


DRC – Case Raízen

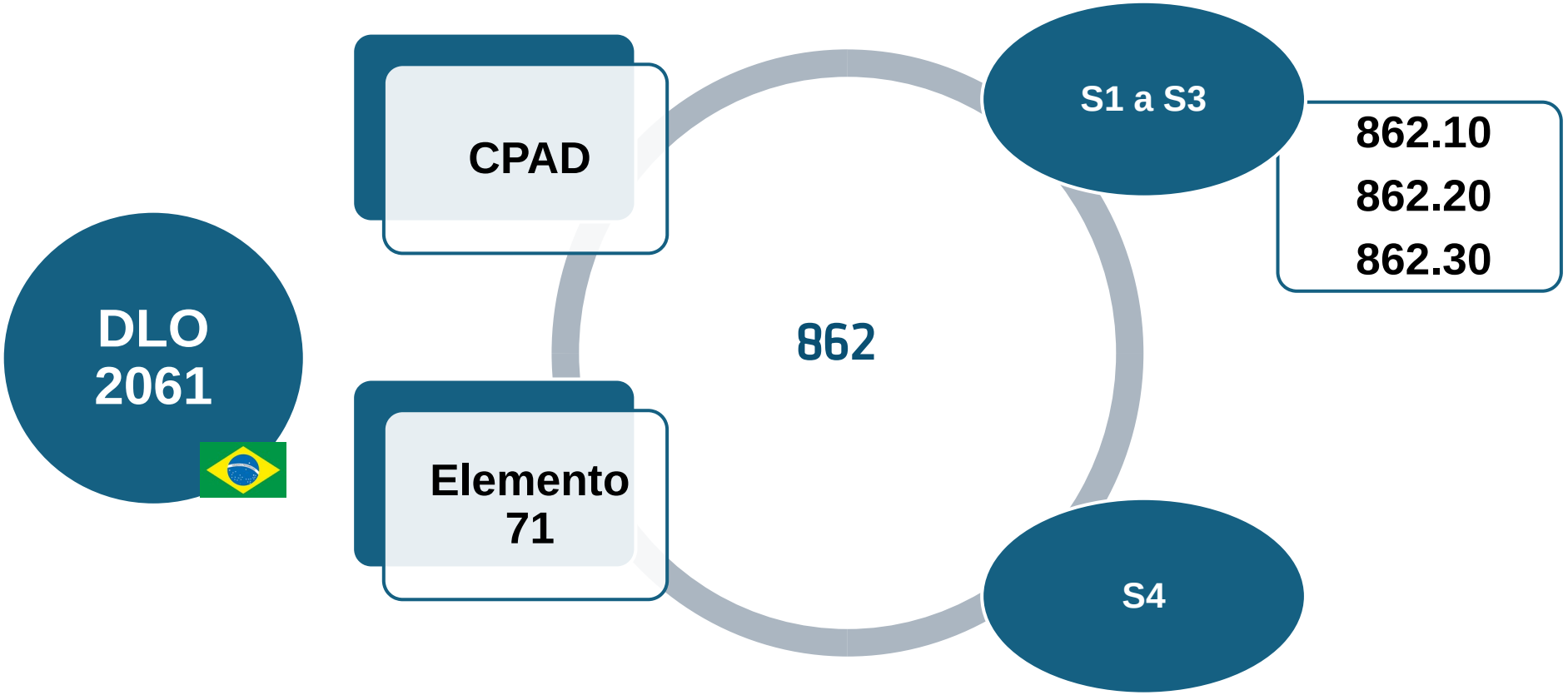


DRC – 313 – CTP

Full Index Name	Index Family	Index Tenor	Fixed Rate/Coupon (bps)	Index Series	Index Version	Required for Clearing*	Date Included for Clearing	Scheduled Termination Date	Effective Date	Annex Date	Credit Derivative Definition	Markit Red
iTRAXX Europe S22	Main	10Y	100	22	3	Y	26/09/2023	20/12/2024	22/09/2014	07/09/2023	ISDA2014Credit	2I666VDD4
iTRAXX Europe S23	Main	10Y	100	23	3	Y	26/09/2023	20/06/2025	20/03/2015	07/09/2023	ISDA2014Credit	2I666VDE2
iTRAXX Europe S24	Main	10Y	100	24	3	Y	023	20/12/2025	21/09/2015	07/09/2023	ISDA2014Credit	2I666VDF9
iTRAXX Europe S25	Main	10Y	100	25	2	Y	13/ 19	20/06/2026	21/03/2016	29/04/2019	ISDA2014Credit	2I666VCN3
iTRAXX Europe S26	Main	10Y	100	26	2	Y	13/ 19	20/12/2026	20/09/2016	29/04/2019	ISDA2014Credit	2I666VCO1
iTRAXX Europe S27	Main	10Y	100	27	2	Y	13/ 19	20/06/2027	20/03/2017	29/04/2019	ISDA2014Credit	2I666VCP8
iTRAXX Europe S28	Main	7Y	100	28	2	N	2019	20/12/2024	20/09/2017	29/04/2019	ISDA2014Credit	2I666VCQ6
iTRAXX Europe S28	Main	10Y	100	28	2	Y	5/2019	20/12/2027	20/09/2017	29/04/2019	ISDA2014Credit	2I666VCQ6
iTRAXX Europe S29	Main	7Y	100	29	2	N	3/05/2019	20/06/2025	20/03/2018	29/04/2019	ISDA2014Credit	2I666VCR4
iTRAXX Europe S29	Main	10Y	100	29	2	Y	13/05/2019	20/06/2028	20/03/2018	29/04/2019	ISDA2014Credit	2I666VCR4
iTRAXX Europe S30	Main	7Y	100	30	2	N	5/2019	20/12/2025	20/09/2018	29/04/2019	ISDA2014Credit	2I666VCS2
iTRAXX Europe S30	Main	10Y	100	30	2	Y	5/2019	20/12/2028	20/09/2018	29/04/2019	ISDA2014Credit	2I666VCS2
iTRAXX Europe S31	Main	7Y	100	31	2	N	13/05/2019	20/06/2026	20/03/2019	29/04/2019	ISDA2014Credit	2I666VCU7
iTRAXX Europe S31	Main	10Y	100	31	2	Y	13/05/2019	20/06/2029	20/03/2019	29/04/2019	ISDA2014Credit	2I666VCU7
iTRAXX Europe S32	Main	5Y	100	32	1	Y	20/09/2019	20/12/2024	20/09/2019	18/09/2019	ISDA2014Credit	2I666VCV5



Conta 862



Considerações Finais

- ✔ Versão tropicalizada
- ✔ Adaptações necessárias
- ✔ Ponderações mais capilares
- ✔ Rating menos impactante
- ✔ Securitização tradicional

Agradecimentos

Obrigado!

3º Workshop Duxus de Risco

Uma questão de controle.

Élin Duxus

DRC – Debate

Fábio Henrique Costa Corrêa
Ladislau Melo

Rafael Ortiz

Q&A