



MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES

Valid as of July, 01. 2021

[Data de Publicação]

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

SUMMARY

1	ELECTION OF SERIES INTERVAL	4
1.1	For Equity Options	4
1.2	For Index Options	4
2	DETERMINATION OF SERIES	5
3	CHANGE TO THE NUMBER OF SERIES	5
4	EQUITY OPTIONS AND ETF	ERRO! INDICADOR NÃO DEFINIDO.
4.1	Mandatory Series	5
4.2	Methodology for Defining Mandatory Series	6
4.3	Example of American Equity Call Options	7
4.4	Example of European Equity Put Options	8
4.5	Inclusion of Mandatory Additional Series (Additional Series)	9
4.6	Example of Additional Series for American Equity Call Options	10
5	INDEX OPTIONS	12
5.1	Mandatory Series	12
5.2	Methodology for Defining Mandatory Series	12
5.3	Example of Index Call Options	12
5.4	Example of Index Put Options	14

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

5.5	Inclusion of Mandatory Additional Series (Additional Series)	15
5.6	Example of Additional Series for Index Call Options	15
6	CHANGELOG	19

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

1 ELECTION OF SERIES INTERVAL

The selection of series interval for market maker activity shall function in an analogous manner to the standard interval for the creation of options series established by B3 but with a few changes.

1.1 For Equity Options

Market makers in equity options shall trade in American call options and European put options and shall comply with the intervals as shown in the table below:

Price of the underlying instrument (in BRL)	Exercise price interval	Minimum interval for opening new series
From 0.05 a 4.99	0.10	0.05
From 5.00 a 9.99	0.20	0.10
From 10.00 a 49.99	0.50	0.25
From 50.00 a 99.99	1.00	0.50
From 100.00 a 199.99	2.00	1.00
From 200.00 a 999.99	10.00	5.00
From 1.000.00 a 2.999.99	50.00	25.00
From 3.000.00 a 9.999.99	100.00	50.00
Above 10.000.00	1.000.00	500.00

1.2 For Index Options

Market makers in index options shall trade in European call and put options and shall comply with a series opening price interval of 1,000 points regardless of the underlying instrument price.

(...)

2 DETERMINATION OF SERIES

Series are determined at the end of the previous day, after market closing and during B3's overnight processing. In this way, exercise prices for the series with underlying assets to be traded with "ex-corporate action date" status on the following day will already be adjusted to that status.

3 CHANGE TO THE NUMBER OF SERIES

B3 may, at its sole discretion and upon advance notice, change the number of series and the methodology described in this document.

4 OPTIONS ON SINGLE STOCKS, ETFs AND BDRs

4.1 Mandatory Series

The quantity of Mandatory Series determined by B3 shall be defined in accordance with four (4) series of American call options, three (3) series of European put options, one (1) additional series of American call options and one (1) additional series of European put options.

Specifically for the PETR4 and VALE3 put options, the quantity of Mandatory Series determined by B3 will be defined according to:

- Eight (8) series of European put options and one (1) additional series of European put options for each of the first two contract months; and
- Six (6) series of European put options and one (1) additional series of European put options for each of the two subsequent quarterly contract months.

(...)

4.2 Methodology for Defining Mandatory Series

Mandatory Series shall be defined on the basis of the closing price of the option's underlying instrument on the immediately previous trading session (spot price) and shall comply with the minimum interval between exercise prices, depending on the option type.

For call options, four (4) Mandatory Series for the first and second contract month are established as shown below:

- 1 ATM** **a) 1st Mandatory Series:** authorized serie with the exercise price equal to or immediately higher than the spot price;
- 1 ITM** **b) 2nd Mandatory Series:** authorized serie with the exercise price lower than the spot price of the 1st Mandatory Series defined in item "a"; and
- 2 OTM** **c) 3rd and 4th Mandatory Series:** authorized series with exercise prices higher than that of the 1st Mandatory series defined in item "a".

For put options, three (3) Mandatory Series for each of the first two contract months, as below:

- 1 ATM** **a) 1st Mandatory Series:** authorized serie with the exercise price equal to or immediately lower than the spot price;
- 1 ITM** **b) 2nd Mandatory Series:** authorized serie with the exercise price higher than the spot price of the 1st Mandatory Serie defined in item "a"; and
- 1 OTM** **c) 3rd Mandatory Series:** authorized serie with exercise price lower than that of the 1st Mandatory series defined in item "a".

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

For the **PETR4** and **VALE3** put options, eight (8) Mandatory Series are established for each of the first two contract months and six (6) Mandatory Series for each of the two (2) subsequent quarterly contract months, as below:

First two contract months:

- 1 ATM** **a) 1st Mandatory Series:** authorized serie with the exercise price equal to or immediately lower than the spot price;
- 2 ITM** **b) 2nd and 3rd Mandatory Series:** authorized series with the exercise price higher than the spot price of the 1st Mandatory Serie defined in item "a"; and
- 5 OTM** **c) 4th, 5th, 6th, 7th and 8th Mandatory Series:** authorized series with exercise price lower than that of the 1st Mandatory series defined in item "a".

Quarterly contract months:

- 1 ATM** **a) 1st Mandatory Series:** authorized serie with the exercise price equal to or immediately lower than the spot price;
- 1 ITM** **b) 2nd Mandatory Series:** authorized serie with the exercise price higher than the spot price of the 1st Mandatory Serie defined in item "a"; and
- 4 OTM** **c) 3rd, 4th, 5th and 6th Mandatory Series:** authorized series with exercise price lower than that of the 1st Mandatory series defined in item "a".

4.3 Example of American Equity Call Options

Assuming a spot price (SP) of R\$20.35:

1st Mandatory Series: exercise price equal to R\$21.00

2nd Mandatory Series: exercise price equal to R\$20.00

(...)

3rd Mandatory Series: exercise price equal to R\$22.00

4th Mandatory Series: exercise price equal to R\$23.00

4.4 Example of European Equity Put Options

Assuming a spot price (SP) of R\$20.75:

1st Mandatory Series: exercise price equal to R\$20.00

2nd Mandatory Series: exercise price equal to R\$21.00

3rd Mandatory Series: exercise price equal to R\$19.00

Assuming a spot price (SP) of R\$32.14 for the first two contract months of European put options on PETR4 and VALE3:

1st Mandatory Series: exercise price equal to R\$32.00

2nd Mandatory Series: exercise price equal to R\$33.00

3rd Mandatory Series: exercise price equal to R\$34.00

4th Mandatory Series: exercise price equal to R\$31.00

5th Mandatory Series: exercise price equal to R\$30.00

6th Mandatory Series: exercise price equal to R\$29.00

7th Mandatory Series: exercise price equal to R\$28.00

8th Mandatory Series: exercise price equal to R\$27.00

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

Assuming a spot price (SP) of R\$15.65 for the three quarterly contract months of European put options on PETR4 and VALE3:

1st Mandatory Series: exercise price equal to R\$15.00

2nd Mandatory Series: exercise price equal to R\$16.00

3rd Mandatory Series: exercise price equal to R\$14.00

4th Mandatory Series: exercise price equal to R\$13.00

5th Mandatory Series: exercise price equal to R\$12.00

6th Mandatory Series: exercise price equal to R\$11.00

4.5 Inclusion of Mandatory Additional Series (Additional Series)

To minimize the effect of changes to Mandatory Series from one day to the next due to spot price fluctuations for the option's underlying assets, B3 may designate an Additional Mandatory Series whenever the spot price change entails an uptick or downtick to the price of the 1st Mandatory Series defined in the "a" items 2.2 and 2.3.

If the call exercise price for the 1st Mandatory Series on the day (T+0) is higher or lower than the exercise price for the 1st Mandatory Series on the previous business day (T-1), B3 shall designate an:

- **Additional call option:** the call that was mandatory on the previous business day (T-1) and ceased to be mandatory on T+0; and
- **Additional put option:** the put that was mandatory on the previous business day (T-1) and ceased to be mandatory on T+0.

(...)

4.6 Example of Additional Series for American Equity Call Options

- Closing spot price on xx/01/yy: spot price equal to R\$20.35.
- Mandatory Series to come into effect the next business day (xx/02/yy):

1st Mandatory Series: exercise price equal to R\$21.00

2nd Mandatory Series: exercise price equal to R\$20.00

3rd Mandatory Series: exercise price equal to R\$22.00

4th Mandatory Series: exercise price equal to R\$23.00

- Closing spot price on xx/02/yy: spot price equal to R\$20.96.
- Mandatory Series to come into effect the next business day (xx/03/yy):

1st Mandatory Series: exercise price equal to R\$21.00 (the same as the 1st Mandatory Series of a T-1 business day)

2nd Mandatory Series: exercise price equal to R\$20.00

3rd Mandatory Series: exercise price equal to R\$22.00

4th Mandatory Series: exercise price equal to R\$23.00

Therefore, the Mandatory Series would not be changed in relation to the previous day, as the spot price has not breached the defined price rules.

- Closing spot price on xx/03/yy: spot price equal to R\$21.20
- Mandatory Series to come into effect the next business day (xx/04/yy):

1st Mandatory Series: exercise price equal to R\$22.00

2nd Mandatory Series: exercise price equal to R\$21.00

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

3rd Mandatory Series: exercise price equal to R\$23.00

4th Mandatory Series: exercise price equal to R\$24.00

This would thus result in a change to the list of Mandatory Series and the inclusion of an Additional Series as the spot price was lower than the exercise price of the 1st Mandatory Series.

Additional Series: exercise price equal to R\$20.00 (mandatory call on the previous business day (T-1), but not on T+0).

– Closing spot price on xx/04/yy: spot price equal to R\$20.95

– Mandatory Series to come into effect the next business day (xx/05/yy):

1st Mandatory Series: exercise price equal to R\$21.00

2nd Mandatory Series: exercise price equal to R\$20.00

3rd Mandatory Series: exercise price equal to R\$22.00

4th Mandatory Series: exercise price equal to R\$23.00

Once again, this movement would result in a change to the list of Mandatory Series and the inclusion of an Additional Series as the spot price was lower than the exercise price of the 1st Mandatory Series.

Additional Series: exercise price equal to R\$24.00 (corresponding to the 4th Mandatory Series of T-1).

The same rationale should apply to the establishment of the Mandatory Series in reference to the put options for the following day, considering spot price fluctuations in either direction.

(...)

5 INDEX OPTIONS

5.1 Mandatory Series

The quantity of Mandatory Series determined by B3 shall be defined with fourteen (14) European call option series, fourteen (14) European put options, one (1) additional European call option series, and one (1) additional European put option series.

5.2 Methodology for Defining Mandatory Series

The Mandatory Series shall be defined on the basis of the closing price of the option's underlying instrument on the immediately previous trading session (spot price) and shall comply with the minimum interval between exercise prices depending on the option type. It should be noted that in the case of the IBOV index, the underlying instrument to be considered will be the settlement index (IBOV11).

In the case of **call** options, fourteen (14) Mandatory Series for the first, second and third even maturities and first odd maturity are established, as below:

- | | |
|---------------|---|
| 1 ATM | a) 1st Mandatory Series: authorized series with the exercise price equal to or immediately higher than the spot price; |
| 3 ITM | b) 2nd Mandatory Series: authorized series with the exercise price lower than the spot price of the 1 st Mandatory Series defined in item "a"; and |
| 10 OTM | c) 3rd, 4th, 5th, 6th and 7th Mandatory Series: authorized series with exercise price higher than that of the 1 st Mandatory Series defined in item "a". |

5.3 Example of Index Call Options

1st Mandatory Series: exercise price equal to 102,000

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

2nd Mandatory Series: exercise price equal to 101,000

3rd Mandatory Series: exercise price equal to 100,000

4th Mandatory Series: exercise price equal to 99,000

5th Mandatory Series: exercise price equal to 103,000

6th Mandatory Series: exercise price equal to 104,000

7th Mandatory Series: exercise price equal to 105,000

8th Mandatory Series: exercise price equal to 106,000

9th Mandatory Series: exercise price equal to 107,000

10th Mandatory Series: exercise price equal to 108,000

11th Mandatory Series: exercise price equal to 109,000

12th Mandatory Series: exercise price equal to 110,000

13th Mandatory Series: exercise price equal to 111,000

14th Mandatory Series: exercise price equal to 112,000

For **put** options, fourteen (14) Mandatory Series for the first, second and third even maturity and first odd maturity are established, as below:

- | | |
|--------------|--|
| 1 ATM | a) 1st Mandatory Series: authorized series with the exercise price equal to or immediately lower than the spot price; |
| 3 ITM | b) 2nd Mandatory Series: authorized series with the exercise price higher than the spot price of the 1 st Mandatory Series defined in item "a"; and |

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

10 OTM c) **3rd, 4th, 5th, 6th and 7th Mandatory Series:** authorized series with exercise price lower than that of the 1st Mandatory Series defined in item "a".

5.4 Example of Index Put Options

Assuming a spot price (SP) of 101,193 points:

1st Mandatory Series: exercise price equal to 101,000

2nd Mandatory Series: exercise price equal to 102,000

3rd Mandatory Series: exercise price equal to 103,000

4th Mandatory Series: exercise price equal to 104,000

5th Mandatory Series: exercise price equal to 100,000

6th Mandatory Series: exercise price equal to 99,000

7th Mandatory Series: exercise price equal to 98,000

8th Mandatory Series: exercise price equal to 97,000

9th Mandatory Series: exercise price equal to 96,000

10th Mandatory Series: exercise price equal to 95,000

11th Mandatory Series: exercise price equal to 94,000

12th Mandatory Series: exercise price equal to 93,000

13th Mandatory Series: exercise price equal to 92,000

14th Mandatory Series: exercise price equal to 91,000

(...)

5.5 Inclusion of Mandatory Additional Series (Additional Series)

To minimize the effect of changes to Mandatory Series from one day to the next due to spot price fluctuations for the option's underlying assets, B3 may designate an Additional Mandatory Series whenever the spot price change entails an uptick or downtick to the price of the 1st Mandatory Series defined in the "a" items 3.2 and 3.3.

If the exercise price for the 1st Mandatory Series on the day (T+0) is higher or lower than the exercise price for the 1st Mandatory Series on the previous business day (T-1), B3 shall designate an:

- **additional call option:** the call that was mandatory on the previous business day (T-1) and ceased to be mandatory on T+0; and
- **additional put option:** the put that was mandatory on the previous business day (T-1) and ceased to be mandatory on T+0;

5.6 Example of Additional Series for Index Call Options

Assuming:

– Closing spot price on xx/01/yy: spot price equal to 101,175 points.

– Mandatory Series to come into effect the next business day (xx/02/yy):

1st Mandatory Series: exercise price equal to 102,000

2nd Mandatory Series: exercise price equal to 101,000

3rd Mandatory Series: exercise price equal to 100,000

4th Mandatory Series: exercise price equal to 99,000

5th Mandatory Series: exercise price equal to 103,000

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

6th Mandatory Series: exercise price equal to 104,000

7th Mandatory Series: exercise price equal to 105,000

8th Mandatory Series: exercise price equal to 106,000

9th Mandatory Series: exercise price equal to 107,000

10th Mandatory Series: exercise price equal to 108,000

11th Mandatory Series: exercise price equal to 109,000

12th Mandatory Series: exercise price equal to 110,000

13th Mandatory Series: exercise price equal to 111,000

14th Mandatory Series: exercise price equal to 112,000

– Closing spot price on xx/02/yy: spot price equal to 101,198 points.

– Mandatory Series to come into effect the next business day (xx/03/yy):

1st Mandatory Series: exercise price equal to 102,000 (the same as the 1st Mandatory Series of a T-1 business day)

2nd Mandatory Series: exercise price equal to 101,000

3rd Mandatory Series: exercise price equal to 100,000

4th Mandatory Series: exercise price equal to 99,000

5th Mandatory Series: exercise price equal to 103,000

6th Mandatory Series: exercise price equal to 104,000

7th Mandatory Series: exercise price equal to 105,000

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

8th Mandatory Series: exercise price equal to 106,000

9th Mandatory Series: exercise price equal to 107,000

10th Mandatory Series: exercise price equal to 108,000

11th Mandatory Series: exercise price equal to 109,000

12th Mandatory Series: exercise price equal to 110,000

13th Mandatory Series: exercise price equal to 111,000

14th Mandatory Series: exercise price equal to 112,000

Thus, the Mandatory Series would not change in relation to the previous day, as the spot price did not breach the defined price rules.

– Closing on xx/03/yy: spot price equal to 102,230 points

– Mandatory Series to come into effect the next business day (xx/04/yy):

1st Mandatory Series: exercise price equal to 103,000

2nd Mandatory Series: exercise price equal to 102,000

3rd Mandatory Series: exercise price equal to 101,000

4th Mandatory Series: exercise price equal to 100,000

5th Mandatory Series: exercise price equal to 104,000

6th Mandatory Series: exercise price equal to 105,000

7th Mandatory Series: exercise price equal to 106,000

8th Mandatory Series: exercise price equal to 107,000

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

9th Mandatory Series: exercise price equal to 108,000

10th Mandatory Series: exercise price equal to 109,000

11th Mandatory Series: exercise price equal to 110,000

12th Mandatory Series: exercise price equal to 111,000

13th Mandatory Series: exercise price equal to 112,000

14th Mandatory Series: exercise price equal to 113,000

This would result in a change to the list of Mandatory Series and the inclusion of an Additional Series as the spot price was higher than the exercise price of the 1st mandatory series:

Additional Series: exercise price equal to 99,000 (mandatory call on the previous business day (T-1), but not on T+0).

– Closing spot price on xx/04/yy: spot price equal to 101,192 points

– Mandatory Series to come into effect the next business day (xx/05/yy):

1st Mandatory Series: exercise price equal to 102,000

2nd Mandatory Series: exercise price equal to 101,000

3rd Mandatory Series: exercise price equal to 100,000

4th Mandatory Series: exercise price equal to 99,000

5th Mandatory Series: exercise price equal to 103,000

6th Mandatory Series: exercise price equal to 104,000

7th Mandatory Series: exercise price equal to 105,000

MARKET MAKER – RULES FOR THE SELECTION OF CALL AND PUT OPTIONS SERIES



(...)

8th Mandatory Series: exercise price equal to 106,000

9th Mandatory Series: exercise price equal to 107,000

10th Mandatory Series: exercise price equal to 108,000

11th Mandatory Series: exercise price equal to 109,000

12th Mandatory Series: exercise price equal to 110,000

13th Mandatory Series: exercise price equal to 111,000

14th Mandatory Series: exercise price equal to 112,000

Once again, this would result in a change to the list of Mandatory Series and the inclusion of an Additional Series as the spot price was lower than the exercise price of the 1st Mandatory Series.

Additional Series: exercise price equal to 113,000 (mandatory call on the previous business day (T-1), but not on T+0).

The same rationale should be applied to the establishment of the Mandatory Series in reference to put options for the following day, considering spot price fluctuations in either direction.

6 CHANGELOG

Change	Date
Withdrawal of the obligation in the 3rd quarter and reduction of 1 series ITM and 1 series OTM for the remaining maturities for the put options of PETR4 and VALE3	July, 01. 2021
Inclusion of Options on BDRs in the rules of selection of series for Equity Options	June 09, 2022