



# B3's Block Trading Solutions

Analysis of implicit costs of execution

B3's block trading solutions were developed to facilitate the trading of significant volumes of stocks, real estate investment funds (REITs), BDRs and Units, allowing investors, funds and companies to execute trades efficiently and privately, without impacting the central order book.

Investor confidence and knowledge of these tools have grown since the launch of block trading solutions in November 2023, reflecting an increase in trading volume. This year, over BRL13 billion have already been traded by October 2025 compared to BRL6.5 billion throughout 2024.

## Learn more about B3's Block Trading Solutions

B3's block trading tools include the Midpoint Order Book, Book of Block Trade (BBT) and Request for Quote (RFQ), each with specific features to meet different trading needs. These tools have minimum asset size rules defined by the regulator (starting at BRL500,000 for assets trading less than BRL5 million a day) and a maximum size of up to 1.99% of the asset's share capital.

The **Midpoint Order Book** allows trades to be executed at the exact midpoint between the best bid and ask, promoting trades at a fair and balanced price. The **Book of Block Trade (BBT)** offers greater flexibility by allowing trades at a premium or discount on the last traded price in the central order book. This is ideal for situations where volume is so significant that one party is willing to compromise on price to guarantee execution. Finally, the **Request for Quote (RFQ)** is geared to less liquid assets, where investors can request and receive quotes within a specified timeframe, facilitating the search for liquidity in situations where finding a counterparty in the central order book would be a long and uncertain wait.

The main benefits of B3's block trading solutions, in addition to trading privacy, mitigation of the impact on prices practiced in the central order book and greater flexibility, include the ability to **optimize implicit execution costs** by executing a significant transaction all at once in a tool separate from the central order book.

In this report, we will explore the relationship between **Transaction Cost Analysis (TCA)** and block trading solutions with a focus on implicit execution costs. While explicit costs are easily measurable and refer to explicit charges, such as brokerage fees and exchange fees, implicit costs are estimable and not measurable as they do not reflect a financial outlay,

but rather a loss of value incurred during a transaction. The main components of implicit costs include the spread, market impact and delay, which are affected by how execution is fragmented over time, while also incorporating the risk of asset price fluctuations.

Before the implementation of block trade solutions, it was common for investors in the Brazilian market to fragment block trades into a series of smaller trades to mitigate the impact on the central order book and protect the confidentiality of the transaction. This practice, however, exposed investors to price volatility during the execution period, affecting the implicit execution cost and not guaranteeing the full execution of the desired lot size. Now, with B3's block trading solutions, investors can execute significant volumes of trades simultaneously, maintaining a price reference at the time of the order separate from the central order book, which can mitigate the impact of price fluctuations during execution.

To study the benefits of block trading solutions compared to fragmented execution, B3 conducted a two-step analysis:

- 1)** Estimation of the implicit cost of execution and execution time of block trades in fragmented trades in the central order book.
- 2)** Comparison between block trading solutions (Midpoint and BBT) and similar block trade executions in the central order book using implicit cost.

We present the details of this analysis below.

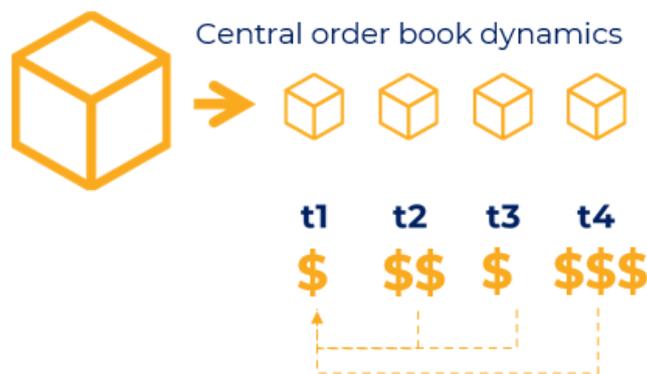
# 1. Estimation of the implicit cost of execution and execution time of block trades in fragmented trades in the central order book

The objective of this first step of the analysis was to estimate the implicit execution cost involved in executing a block trade in the central order book in a fragmented manner, considering trades executed in the central book, at the closing auction or via cross orders.

**The most common methodology for estimating implicit execution costs is slippage**, which consists of comparing the execution price with a price benchmark. This benchmark is typically the price in effect at the start of the execution, commonly used by vendors to simulate TCA calculation.

To analyze the slippage of fragmented block trades of stocks in the central order book, B3 identified, between January 2024 and July 2025, transactions that might be considered potential block trades. These transactions were executed by a single institution in a directional manner, i.e., as buy or sell operations, for the same asset, over a period that could span a single day or multiple subsequent days until the flow was interrupted. All transactions combined, considering trades in the central book, at the closing auction or via cross orders, needed to reach the minimum size for block trades defined by the regulator.

Below, this concept is visually represented whereby **a block trade is split into smaller orders, each executed at a specific time and at a specific price in the central book.**



Next, to calculate slippage, **the price of each transaction in a potential block was compared to the price of the first execution** (represented by t1 in the figure above), following the most common price benchmark and best market practices. Thus, the calculation of slippage per transaction was carried out as follows:

$$Nature * \frac{\text{Slippage|Effective Spread (bps)} = (Price_{average} - Preço_{initial}) * Quantity}{Volume} / 10.000$$

Where Nature is  $\begin{cases} 1 \text{ if Ask} \\ -1 \text{ if Bid} \end{cases}$

Using this methodology, approximately 310 thousand potential block transactions were identified in the central book during the study period. **To understand the impact of slippage on different liquidity levels and sizes**, the 60th percentile of slippage was calculated based on: (i) the liquidity tiers for block trading provided by the regulator, as shown in Table 1; and (ii) the transaction size in terms of number of blocks, with 1 lot being the minimum size for each tier.

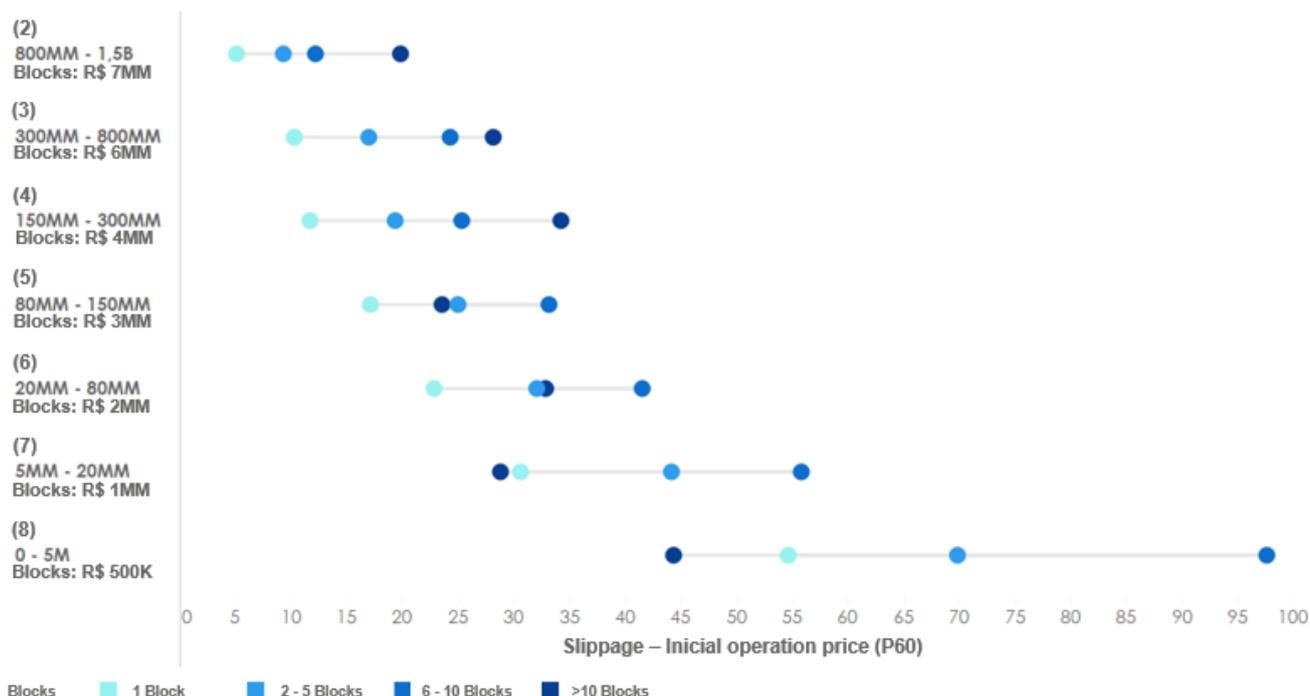
As can be seen in Table 1, the number of observations of potential block transactions in some tiers is lower, such as tier 8, given that very large transactions for assets in this liquidity tier are less common.

TIER	MEDIAN DAILY TRADED VOLUME (BRL)	MINIMUM block size ("1 lot")	# potential block transactions in the central book
1	> BRL1.5 billion	BRL8.5M	0 (there are no assets in this tier nowadays, given the liquidity)
2	Between BRL800M and BRL1,5B	BRL7M	22 thousand
3	Between BRL300M and BRL800M	BRL6M	44 thousand
4	Between BRL150M and BRL300M	BRL4M	55 thousand
5	Between BRL80M and BRL150M	BRL3M	54 thousand
6	Between BRL20M and BRL80M	BRL2M	85 thousand
7	Between BRL5M and BRL20M	BRL1M	34 thousand
8	< BRL5M	BRL500 thousand	19 thousand

**Table 1 – Liquidity tiers for trading block trading solutions as defined by CVM and the respective number of potential block transactions in the central book**

To view the assets belonging to each liquidity tier in Table 1, visit the B3 website at [Block Trading Solutions](#).

In this context, Graph 1 presents a slippage analysis in bps ("basis points") for each liquidity tier and different sizes, identified by color. Some cases are particularly interesting. For example, in tier 8, the minimum lot size is BRL500,000 and trading sizes greater than 10 lots results in lower slippage than trading just 1 lot. These distortions are reflected in the graph due to the low number of observations in certain cases, which can make it difficult to draw definitive conclusions.



**Graph 1 – Breakdown of the implicit execution cost (slippage) of potential block transactions in the central order book according to size and liquidity tier**

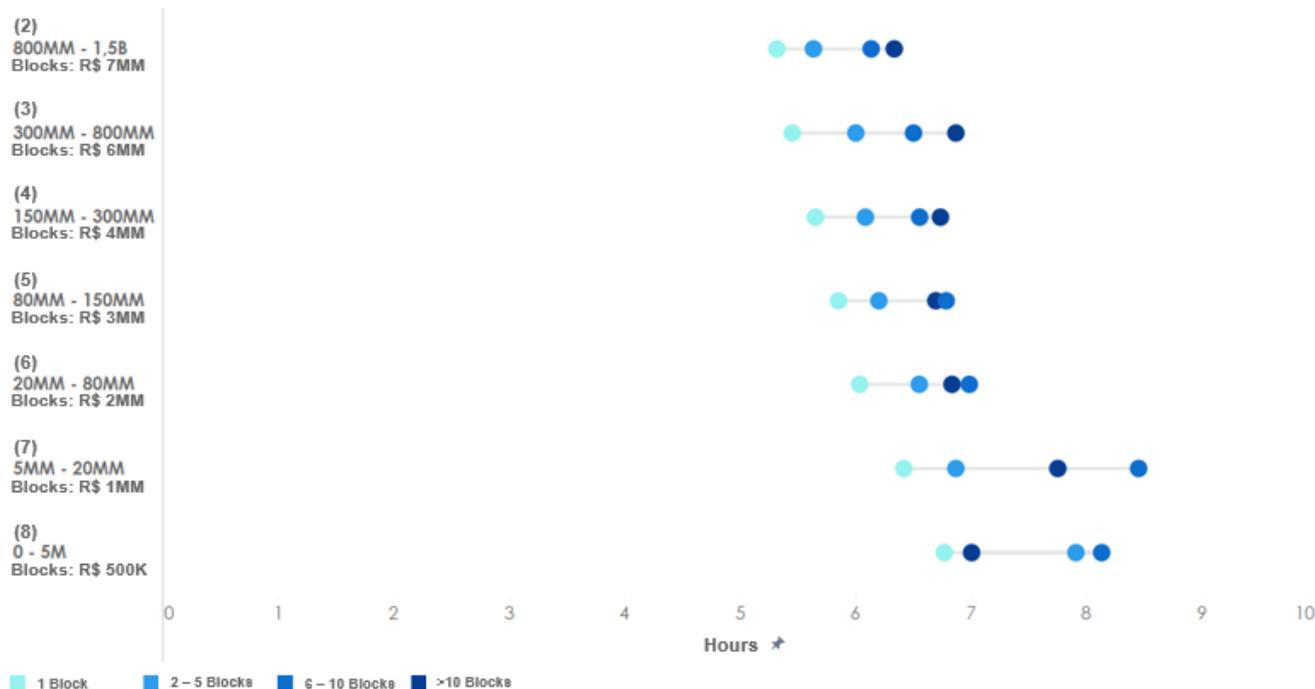
In general, it is observed that **the lower the asset's liquidity and the higher the volume of traded lots are, the higher the potential implicit execution cost of the transaction is in the central book.** This occurs because the transaction becomes more susceptible to the asset's price fluctuation in the central book, in assets and/or at times when there is less liquidity available.

It should be noted that the slippage analysis reflects the statistical breakdown of the transactions assessed. There are situations where slippage can be negative, that is, favorable to the investor (i.e., if during the execution of a bid transaction there was a drop in the asset's price). However, when evaluating a representative number of transactions, the breakdown reveals positive slippage measurements representing significant costs that, as can be seen, can reach almost 100 bps for assets in the last liquidity tier.

**Financially speaking, costs can reach thousands of Brazilian Reals per transaction.**

Consider, for example, trading 10 lots of a Tier 3 asset, whose minimum lot size is BRL6 million. Historically, the implicit execution cost reaches almost 30 bps, leading to a total of approximately BRL180,000.

It is also interesting to note the **time taken to execute these transactions in the central brook.** Graph 2 shows the variation in execution time, in hours, according to liquidity ranges and operation sizes, following the same approach as Graph 1. Considering all liquidity ranges and sizes, the operations took an average of 6.6 hours to be executed in the central book.



**Graph 2 – Breakdown of execution time in hours of potential block transactions in the central order book according to size and liquidity tier**

## 2. Comparison between block trading solutions (Midpoint and BBT) and similar block trading executions in the central order book using implicit cost

The implicit cost analysis of executing a block trade in the central book can be compared to executing the same transaction in B3's block trading solutions, which are executed separately from the central book.

**Regarding Midpoint, the implicit execution cost, or slippage, is always zero**, since the investor trades at the midpoint price between the best bid and best ask prices in the central book at the time of execution. For example, if the best bid price is BRL20 and the best ask price is BRL20.02, the execution price at Midpoint would be BRL20.01, allowing the investor to trade at a better price than the central book price at that time.

The BBT may present a premium or discount in relation to the price of the last trade executed in the central order book. **Its implicit cost is obtained by calculating this premium/discount.** Table 2 compares the implicit cost of executions carried out in the BBT, and the implicit cost of operations that were fragmented in the central order book. This analysis covers three liquidity ranges, representing high, medium, and low liquidity assets.

Liquidity level	Number of Blocks per operation	Implicit cost of fragmented operations in the central book (bps)	Implicit cost at Book of Block trade (bps)
<b>300MM – 800MM</b> (Minimum size per block: R\$6MM)	<b>1 Block</b>	10	22
	<b>2-5 Blocks</b>	18	10
	<b>6-10 Blocks</b>	26	33
	<b>&gt;10 Blocks</b>	30	9
<b>20MM – 80MM</b> (Minimum size per block: R\$2MM)	<b>1 Block</b>	23	33
	<b>2-5 Blocks</b>	32	20
	<b>6-10 Blocks</b>	43	22
	<b>&gt;10 Blocks</b>	33	10
<b>5MM – 20MM</b> (Minimum size per block: R\$1MM)	<b>1 Block</b>	31	27
	<b>2-5 Blocks</b>	44	22
	<b>6-10 Blocks</b>	56	26
	<b>&gt;10 Blocks</b>	29	90

**Table 2 – Comparison between the implicit execution cost (slippage) of fragmented block transactions executed in the central book and BBT transactions**

It is observed that, even with the possible application of a premium/discount in BBT, **in most cases, the execution resulted in a lower implicit cost than that observed in the central book.** For example, for a 10 lot trade in a Tier 3 asset, with a minimum of BRL6 million, the implicit execution cost in the central book was approximately 30 bps, while the BBT execution was only 9 bps, leading to a 21-bps benefit on the transaction.

It is worth reiterating that, just like in the central book, the slippage analysis in the BBT also reflects the statistical distribution of the evaluated operations. As can be seen in Table 2, in some cases the BBT resulted in a higher implicit cost compared to the central order book, however, it is important to consider that the number of observations in the BBT is smaller.

An interesting point to highlight is the change in the dynamics of Midpoint orders after the removal of messaging on the news channel in December 2024. This change led to an increase in the number of Midpoint orders for low-liquidity assets, suggesting that investors can use Midpoint with complete privacy, without giving visibility to the market, and avoid high implicit costs on less liquid assets, which, as discussed, have higher costs in the central book.

Furthermore, an analysis of the order dynamics reveals that BBT is, on average, used to trade more than 10 times the minimum lot size, while Midpoint is used for transactions corresponding to only one lot. This difference is due to BBT's price flexibility, ideal for large volumes, and the balanced nature of Midpoint trades, which favors smaller, more stable transactions.

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In summary, the provision of block trade solutions by B3 separately from the central order book represents a significant advance in the Brazilian equity market, demonstrating that, in most situations, **Midpoint and BBT trades can provide substantial benefits to investors due to the potentially lower implicit execution cost** compared to fragmented transactions in the central book.

Comparisons between the central book and separate solutions, such as Midpoint and BBT, show that these tools not only enable greater privacy and flexibility in block trading but can also lead to significantly lower implicit execution costs, especially in low-liquidity environments. Therefore, the **evolving use of Midpoint and BBT tools can effectively transform the dynamics of block trades in the Brazilian market** in line with best global practices, where solutions like these are used by investors to ensure greater efficiency in block trading.

Any questions about B3's block trade solutions? visit the B3 website at [Block Trading Solutions](#)

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