



The tick size of shares, ETFs, single-stock futures and currency futures changes as of 4 March 2019. The price of currency futures and single-stock futures will be determined with a precision of PLN 0.0001.

DETAILS OF THE CHANGE

The tick size applicable before the change depends on the price of the futures as follows:

- a) PLN 0.01 if the futures price is no more than PLN 200 and
- b) PLN 0.05 if the futures price is more than PLN 200.

The tick size applicable after the change is PLN 0.0001 irrespective of the price of the futures.

IMPACT OF THE CHANGE

i. Price of futures

The change of the tick size implies that the prices of single-stock futures will be determined with a greater precision than before. There will be a single tick size for all futures. The tick size will be under PLN 0.01, determined with a precision of PLN 0.0001, but the price of futures may not be less than PLN 0.01.

Example 1: *Examples of prices of single-stock futures with the tick size before and after the change.*

| EXAMPLE: FUTURES PRICE WITH A TICK SIZE [PLN] | | |
|---|-----------------------------------|---------------------------------------|
| | <i>Before the change</i> | <i>After the change</i> |
| <i>Futures price < 200</i> | 59.01 (Tick size 0.01) | 59.0111 (Tick size 0.0001) |
| <i>Futures price > 200</i> | 255.05 (Tick size 0.05) | 255.0511 (Tick size 0.0001) |

ii. Value of futures

The new tick size of single-stock futures implies a new precision of the determination of the value of futures. The value of futures is equal to the futures price times the number of shares per contract (multiplier). The value will be determined with a precision of PLN 0.0001.

Example 2: *Determination of the value of single-stock futures before and after the change of the tick size. The example uses a multiplier of 100 shares.*

| TICK SIZE | Example: futures price [PLN] | Futures value (futures price x multiplier) [PLN] |
|--------------------------|------------------------------|---|
| <i>Before the change</i> | 59.16 | 59.16 x 100 = 5916.00 |
| <i>After the change</i> | 59.1582 | 59.1582 x 100 = 5915.8200 |

iii. Settlement price

The change of the tick size of single-stock futures implies a change of the precision of the daily and the final settlement price. The daily and the final settlement price will be determined with a precision of PLN 0.0001, as well.

The daily and the final settlement price are determined by the Exchange and used by KDPW_CCP in the daily clearing of futures. The calculation algorithm of settlement prices and the terms and conditions of clearing are laid down in the Trading Rules of a Single-Stock Futures Programme available on the Exchange website at www.gpw.pl.

DETERMINING THE RETURN ON INVESTMENT IN FUTURES WITH THE NEW TICK SIZE

The change of the tick size of single-stock futures does not affect the terms and conditions of determining the return on futures, including the daily and the final settlement price.

Example 3: *Determination of the return on investment in single-stock futures after the change of the tick size. Assumptions: investment in 10 futures, the position is closed (the contracts are sold) at the same trading session, the futures multiplier is 100 shares.*

| | |
|---|---|
| <i>Futures buy price [PLN]</i> | 59.1582 |
| <i>Futures sell price [PLN]</i> | 61.2459 |
| <i>Transaction volume [# contracts]</i> | 10 |
| <i>Multiplier [# shares]</i> | 100 |
| <i>Profit (Loss) [PLN]</i> | (61.2459 – 59.1582) x 10 x 100 = 2087.70 |

Example 4: *Determination of the return on investment in single-stock futures after the change of the tick size using the daily settlement price, applicable where the position in contracts is maintained over more than one trading session. Assumptions: investment in 10 futures, the futures multiplier is 100 shares. The calculation below represents the trading session where the position is opened.*

| | |
|---|--|
| <i>Futures buy price [PLN]</i> | 60.1256 |
| <i>Futures daily settlement price [PLN]</i> | 61.2459 |
| <i>Transaction volume [# contracts]</i> | 10 |
| <i>Multiplier [# shares]</i> | 100 |
| <i>Profit (loss) [PLN]</i> | $(61.2459 - 60.1256) \times 10 \times 100 = 1120.30$ |

NOTE THE CHANGE OF THE MULTIPLIER

According to the standard specification of single-stock futures, the number of shares per contract (multiplier) may be 100 or 1000 shares. The multiplier set for a class of contracts applies to all series of the class subsequently introduced to trading on the exchange. For instance, if the multiplier for KGHM S.A. shares is 100, it applies to all series of such futures regularly introduced to trading on the exchange.

Please note that the multiplier may change as a result of corporate actions affecting shares which are the underlying of the futures, such as subscription rights, change of the par value or extraordinary dividend rights, so the multiplier may be different than 100 and 1000 shares. The multiplier may be atypical, for instance 102 or 108 shares. In that case, the calculation of the return on investment in futures may yield a result with a precision greater than PLN 0.01, which needs to be mathematically rounded off to PLN 0.01. The result is rounded off for investments per 1 contract. For details, see the example below.

Example 5: *Determination of the return on investment in single-stock futures after the change of the tick size using an atypical multiplier. Assumptions: investment in 10 futures, the position is closed (the contracts are sold) at the same trading session, the futures multiplier is 108 shares.*

| | |
|--|--|
| <i>Futures buy price [PLN]</i> | 59.1582 |
| <i>Futures sell price [PLN]</i> | 60.1256 |
| <i>Transaction volume [# contracts]</i> | 10 |
| <i>Multiplier [# shares]</i> | 108 |
| <i>Profit (Loss) per contract [PLN]</i> | $(60.1256 - 59.1582) \times 108 = 104.4792$ after rounding off 104.48 |
| <i>Profit (Loss) per transaction volume (10 contracts) [PLN]</i> | $104.48 \times 10 = 1044.80$ |

THE TICK SIZE OF SINGLE-STOCK FUTURES MAY BE DIFFERENT THAN THE TICK SIZE OF SHARES (UNDERLYING)

The tick size of shares is set on a case-by-case basis for each instrument depending on the current price and the liquidity of the shares. There will be a single tick size (PLN 0.0001) for all classes of single-stock futures independent of their trading parameters. Please note that the tick size of most single-stock futures will not be the same as the tick size of the shares which are the underlying. The tick size of the futures and of the underlying will be the same if the shares have a tick size of PLN 0.0001. The tick size of PLN 0.0001 applies to shares of a very low price and high liquidity (for details of the tick size of shares, see the GPW regulations).

Single-stock futures will have the greatest precision of the tick size available on the exchange at PLN 0.0001, which is why the precision for futures will always be greater than the precision for shares which are the underlying. Note that the precision of the tick size of shares and for single-stock futures may be significantly different. For instance, the price of shares may be determined with a precision of PLN 0.5 while the price of futures is determined with a precision of PLN 0.0001. This should be considered when investing in single-stock futures.

EFFECTIVE DATE OF THE NEW TICK SIZE

The new tick size of single-stock futures will be introduced on GPW as of 4 March 2019. Note that the trading session preceding the introduction of the new tick size will be cleared using the daily settlement price determined with a precision of the tick size from before the change. All broker's orders submitted to the exchange but not executed will become null and void after that trading session.