# PRICE VARIATION LIMITS
2007/06/15

STATIC LIMITS

Static limitations of price variation ("static limits") serve to protect against excessive price volatilities during trading sessions. They are used in practice on all stock exchanges in the world to protect investor interests.
Static limits define a channel (thresholds) of permissible price changes, within which prices of instruments listed during the sessions can change, preventing any abrupt price variations.
The lower limit of static limits constitutes a threshold, under which no transactions can take place, whereas the upper limit constitutes a threshold, above which price of the instrument cannot grow.

If the variation limits for shares are +/-10% of the reference price, then if 100 is taken as the reference price, the lower limit will be 90 and the upper 110.
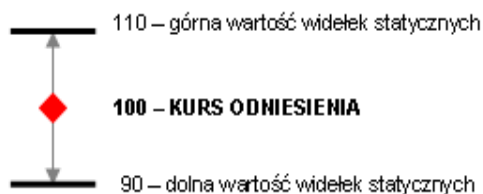
Any attempt to execute a transaction at a price higher than 110 or lower than 90 will automatically stop trading with this instrument, and the listings shall be suspended.

Static limits apply to majority of instruments listed on the stock exchange, and the principles of their determination may differ for each instrument type. Their range will differ for each instrument and their values are specified in percent, percent points, index points or in PLN. Static limits apply unchanged throughout the session, except for special situations described below in this document.
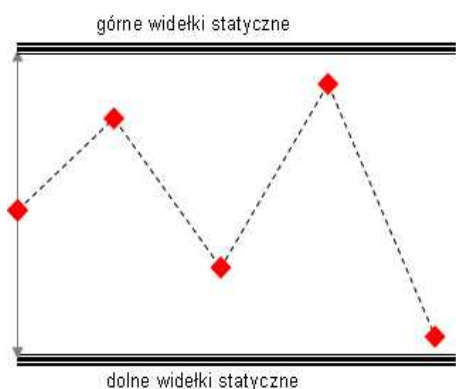
How static limits operate

1. Reference price

Static limits applicable at session opening are calculated based on the price, which - depending on the instrument - may be the closing price of the previous session, daily settlement price or theoretical price. Such price is called the reference price.

Detailed information about static trading and reference prices are given in Section 7.

2. Session opening

Static limits apply at opening of the session for each of the instruments (unless price variation limits had been removed), for which the reference price is set as:
   a. closing price of the previous session
   b. last daily settlement price, or
   c. theoretical value of instrument.

This means that the opening price of such instrument has to remain solely within the trading limit; trading limits can be changed only and exclusively on principles set forth in this document.
The reference price of static limits applicable during the given session to each instrument, for which an opening price had been defined, will be the opening price of such instrument.
If no opening price for static trading limits is fixed during opening of the session, the reference price for static limits of that instrument during the session will continue to be the reference price for trading limits on opening.

3. Session

Transactions during continuous trading may be executed only when the price remains within static limits. When a new order is entered during the trading, the system will verify its performance and even if only a part of it would be performed outside the trading limits, trading in the instrument will be suspended (frozen). This results in stopping of trading altogether (during that time no new orders may be introduced or already submitted orders withdrawn) in such instrument until balancing starts or trading is resumed by the session chairman. It is also possible at that time to change the trading limits.

Trading limits set after the opening will apply for each instrument up until end of the session, except for situations described in Section 5, below.

4. Session closing

Trading limits applicable during the session will apply also on closing of the session.
The reference price of the trading limits may be equal to:
   a. Closing price for the previous session - where opening price has not been determined at the opening phase and where the chairman did not change the trading limits throughout the entire session (see Sections 2 and 5)
   b. Opening price - where an opening price has been determined during the session opening stage and where the chairman did not change the trading limits throughout the entire session (see Sections 2 and 5)
   c. Another price - where the chairman changed the trading limits during the session (see Section 5)

Session closing prices, daily settlement prices for futures contracts and theoretical prices for options are fixed at end of the session, and they become reference prices for trading limits applicable on opening of the next session.

5. Change of static trading limits

Static trading limits may be changed only be changing the reference price (usually on opening or after freezing) or by changing range of the limits (usually where trading in the instrument is excessively unbalanced).

On session opening:

Change in static trading limits on session opening is possible during balancing on opening, which starts when the theoretical opening price exceeds the agreed fixed static trading limits.

In such case the session chairman may decide to change the trading limits, after what the balancing phase usually ends and opening takes place. From that time on, trading limits set by the session chairman during the balancing on opening will apply, and the opening price will become the reference price.

During the session:

Changing of static trading limits during the session is possible when the instrument is "frozen". Such freezing results from placing of an order that would lead to execution of a transaction at a price exceeding the fixed trading limits or submitting of a Must be Filled order that cannot be executed in its entirety.

In such case the chairman may decide to:
  a. Start market balancing for such instrument, accepting at the same time the order causing freezing of trading. Where during the balancing the theoretical opening price still exceeds the trading limits, chairman of the session may change the trading limits.
  b. Change the trading limits accepting at the same time the order causing freezing of trading, but without starting balancing (rarely applied, under exceptional conditions) - in such case the order is performed and trading limits set by the session chairman will apply.

Session chairman may also decide to resume continuous trading with rejection of the order causing freezing to take place (applied rarely, only when notification of an error containing order by a WSE Member is submitted). The trading limits will not change in such situation.

On session closing:

Changing of static trading limits during closing stage of the session is possible when at closing the theoretical closing price exceeds beyond trading limits applicable during the session. In such case, chairman of the session may change static trading limits and perform closing, after which post-auction trading opens (in respect to instruments for which post-auction trading is provided for in the session schedule).

6. Single price auction system

Static trading limits in single price auctions operate similarly as in continuous trading, provided that the most recent auction price of the instrument is the reference price.

Upon change of trading limits the maximum permitted deviation from the reference price may not exceed 21% in case of shares and rights to newly issued shares in the single price auction system with two auctions, unless chairman of the session decides to allow a larger price deviation.

An additional limitation of maximum price variations during the session exists in case of shares listed in the single price auction with two auctions (two fixings), i.e. the fixing price in case of the second fixing during the session may not be higher or lower from the first fixing price on the same day by more than 21%, and by not more than 33.1% of the fixing price of the previous session. The session chairman may decide to increase this range under exceptional circumstances.

## 7. Range of Static trading limits

Continuous trading

Instrument	Reference opening price	Permitted change of price on opening	Permitted change of rice during the session - where price was determined during the opening phase*
Shares	Closing price	+/- 10% of closing price	+/- 10% of opening price
Index futures	Daily settlement price	+/- 5% of daily settlement price	+/- 5% of opening price
Currency futures	Daily settlement price	+/- 3% of daily settlement price	+/- 3% of opening price
Stock futures	Daily settlement price	+/- 5% of daily settlement price	+/- 5% of opening price
Treasury note futures		+/- 1,5 percentage points of daily settlement price	+/- 1,5 percentage point of opening price
Bonds	Closing price	+/- 3 percentage points of closing price	+/- 3 percentage points of opening price
Subscription warrants (priority rights) attached to bonds	Closing price	+/- 100% of closing price	+/- 100% of opening price
Investment certificates	Closing price	+/- 10% of closing price	+/- 10% of opening price
Allotment certificates	Closing price	+/- 10% of closing price	+/- 10% of opening price
Subscription rights	Closing price	+/- 100% of closing price	+/- 100% of opening price
Index participation units	Closing price with consideration of offers on closing	+/- 5% of closing price	+/- 5% of closing price
Put/Call warrants	Closing price	+/- 100% of closing price	+/- 100% of opening price
Index options	Theoretical price	+/- 5% of average of the last 20 closing values of underlying index determined prior to first day of the given month, rounded off mathematically to full tenths of index points.	+/- 5% of average of the last 20 closing values of underlying index determined prior to first day of the given month, rounded off mathematically to full tenths of index points.
Stock options	Theoretical price	Same as above, but the rounded-off value is mathematically rounded-off to tenth part of listing currency unit and may not be less than one unit of listing currency.	Same as above, but the rounded-off value is mathematically rounded-off to tenth part of listing currency unit and may not be less than one unit of listing currency.

Single price auctions

Instruments with two fixings	
Instrument	**Permitted price change on fixing**
Shares and allotment rights to shares listed in the single price auction system	+/- 10% of reference price on last fixing (with option to expand to 21%)
Subscription rights to shares listed in the single price auction system	+/- 100% of reference price on last fixing (with option to expand)

DYNAMIC TRADING LIMITS – NEW!

Dynamic trading limits constitute a new, additional protection against abrupt changes in transaction prices during stock exchange sessions. They are in use e.g. on the Euronext, Deutsche Boerse, Eurex or Euronext-Liffe. As dynamic trading limits create a moving, narrower than static trading limits, channel of permitted price variations in which prices of instrument listed during the session can change, they will prevent excessive changes in prices. Depending on the solution adopted, they will be set according to the best buy and sell offers, theoretical price or last transaction price. Dynamic trading limits apply on the WSE to majority of listed instruments and their reference price changes during the session within the range defined by static trading limits. Dynamic trading limits considerably improve safety of trading because they allow narrower variability than static trading limits, prevent excessive price volatilities and greatly reduce the probability of a high value error containing order being performed.
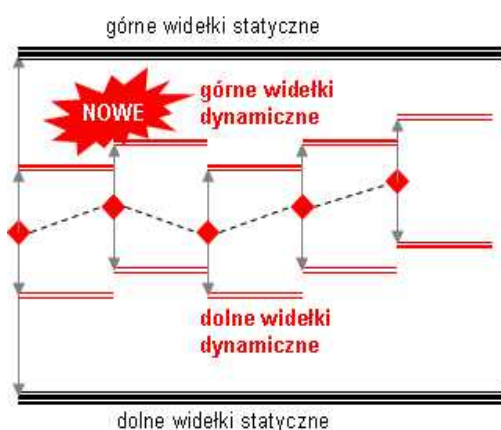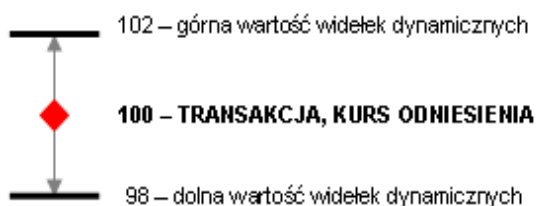

How do dynamic trading limits work?

1. Reference price

The reference price of dynamic trading limits comprises the price of the instrument listed on the stock exchange in respect to which a dynamic limitation of price changes is determined for the given session. The WSE reference price for dynamic trading limits is the price of the last transaction on the instrument, to which such limits apply.

If range of dynamic trading limits for bonds is +/-2 points from the reference price, then where a transaction is executed at 100, the lower trading limit for such bonds will be 98, and the upper 102.

Similarly to static trading limits, any attempt to execute a transaction outside the limits (here at more than 102 or less than 98) will stop trading.

2. Opening of session

Dynamic trading limits do not apply at opening of the session. The opening price is limited by static trading limits, only.

3. Session

The last transaction price is the reference price for dynamic trading limits. Dynamic trading limits do not apply until the first transaction takes place. Once the first transaction takes place during the session, dynamic trading limits for the next transaction are set based on the first transaction, and so on - price of each successive transaction becomes the reference prices for any subsequent transaction. If an order is introduced into the book that would require performance in a number of transactions, the reference price for dynamic trading limits will be modified only after the last of these transactions are performed.

If an order exceeding dynamic trading limits is placed, trading is suspended (frozen) and balancing or change of trading limits without balancing commences (similarly as in case of static limits).

It should be noted that transaction prices are at the same time limited by static trading limits, which have priority over dynamic trading limits.

4. Closing

Dynamic trading limits do not apply at closing of the session. Closing price is limited only by static trading limits.

5. Change of dynamic trading limits

The session chairman may change, suspend or refrain from using of dynamic trading limits during the session for any given instrument. Dynamic trading limits will not apply during balancing of an instrument, i.e., the price resulting from balancing becomes the reference price of any successive transaction with such instrument. Only static trading limits will apply during balancing and the procedure applied will be such, as if dynamic trading limits were not applicable.

6. Range of dynamic trading limits

Cash market instruments

Instrument	Range of dynamic trading limits
Shares making up the WIG20 index	+/- 3.5%
Shares making up the mWIG40 index	+/- 4.5%
Other shares	+/- 6.5%
Bonds	+/- 2 percent points
Allotment rights	For shares in the WIG20 or mWIG40 company shares, same as for those shares, otherwise +/- 6,5%
Subscription rights	6,5%, unless the WSE Management Board does not specify another range of dynamic trading limits no later than on day

	preceding first listing of allotment rights
Investment certificates	+/- 6.5%
Subscription warrants (priority rights) attached to bonds	+/- 35%
Warrants	+/- 40%
Index certificates	Determined by the WSE Management board no later than on day preceding first listing of certificates

Futures market instruments

Instrument	Range of dynamic trading limits and unit
WIG20 futures contracts	+/- 25 index points
mWig40 futures contracts	+/- 30 index points
TechWIG futures contracts	+/- 25 index points
Stock futures contracts	+/- 3,5%
Bond futures contracts	+/- 0.4 percent point
Currency futures contracts	+/- PLN 4
Index options	One half of static trading limits (see Table "Range of static trading limits")
Stock options	One half of static trading limits (see Table "Range of static trading limits")
Index participation units	+/- PLN 5