Summary of the Amendment of the Stock Exchange of Thailand (SET) Trading Regulations

The Stock Exchange of Thailand ("**SET**") has implemented the New Trading System to enhance the system to be align with global practice. The new system is developed by trading software vendor which provide trading system to many Exchanges. SET has revised the regulations to suit the current business environment, better align with international practices and support a new trading system. The key trading regulations which have been amended are:

1. Opening price / closing price of securities
2. Adjusting Ceiling and Floor of securities held by foreigners (-F securities)
3. Cancelling odd lot trade of Derivatives Warrant (DW)
4. Adjusting order types
5. Adding trading suspension sign: P (Pause)
6. SET may cancel trading order any time when there is a system failure

Subject	Amended Regulations in the New Trading System	Remarks

1. Opening price / closing price of securities
 	
1.1 Opening price / closing price calculation method
	In the New Trading System, calculation of opening price and closing price (auction price) apply the same principle where the system will aggregate all orders during pre-open and pre-close period and match once in one price. The auction price calculation in the new system is as follows:
	1. The price that generates the maximum executable volume (same as current system).
	2. If there is more than one price as mentioned in 1, the price with minimum unexecuted volume ("Minimum imbalance") is selected. (same as current system).
	3. If there is more than one price with minimum imbalance as mentioned in 2, the following prices is applied:
	  3.1 If the aggregate buy volume is greater than the aggregate sell volume (Positive Imbalance), the highest price under item 2. is selected. (same as current system).
	  3.2 If the aggregate sell volume is greater than the aggregate buy volume (Negative Imbalance), the lowest price under item 2. is selected. (same as current system).
		In accordance with the Core Algorithm in the New Trading System.

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	3.3 If the aggregate buy volume is equal to the aggregate sell volume in all price levels, price closest to the last trading price (Last Sale), IPO Price or the lowest price is selected respectively. (The highest price is selected in the current system.) (Cancel the following condition in the New Trading System: If the imbalances are on both buy and sell, select the two prices nearest to the price level where the imbalance changes sign. Between those two prices, the one closest to Last Sale or IPO Price or higher respectively is used as the auction price. (Examples of Opening price / closing price calculation are available in the Appendix)	

1.2 ATO / ATC Order handling	ATO / ATC[1] order handling in the New Trading System will be changed slightly from current system. The new system work as follows:
	• ATO / ATC buy order = the higher price between the following price:
	  - Highest bid price + 1 tick
	  - Highest offer price + 1 tick (The current system applies the highest offer price.)
	• ATO / ATC sell order = the lower price between the following price:
	  - Lowest bid price - 1 tick (The current system uses the lowest bid price.)
	  - Lowest offer price - 1 tick
		In accordance with the Core Algorithm in the New Trading System.

1.3 Opening price / closing price may fall outside the Ceiling & Floor price ±1 tick size	Due to the different handling of ATO / ATC orders in the New Trading System, the opening price / closing price can fall outside ceiling & floor but not exceeding ±1 tick. Investors can avoid this event by sending Limit order instead of ATO / ATC order (The current system require the price to be within the range not exceeding the ceiling and floor.)	In accordance with the Core Algorithm in the New Trading System.
2. Adjusting Ceiling and Floor of securities held by	Ceiling and floor of foreign shares will be adjusted to ±60 percent of reference price for all trading methods as Trade Report method of foreign share's large transaction (with size of at least 1 million shares or THB 3 million (approx. USD 88,547)) is inconsistent with other trading methods.	Adjust Ceiling & Floor to be in line with securities type.

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[1] At the Open (ATO) / At the Close (ATC) means order to trade at opening price / closing price. If there is unmatched volume, the system will cancel the remaining volume when the market opens / closes and ATO / ATC order will be matched before Limit Order.

Subject	Amended Regulations in the New Trading System	Remarks
foreigners (-F securities)	(In current trading system, ceiling and floor of Trade Report of foreign share's large transaction mentioned above is ±30 percent of reference price, while ceiling and floor of Automated Order Matching and Trade Report with less than 1 million shares and THB 3 million are ±60% of reference price.)	
3. Cancelling odd lot trade of Derivatives Warrant (DW)	An odd lot, of which transaction size is less than 100 units, will be cancelled for the trading of derivative warrants (DWs) because the trading value is very low. In addition, when the underlying shares declare benefits such as dividends where DW issuer will pass on such benefits to DW holder by adjusting exercise ratio or exercise price instead of adjusting the number of DW units, resulting in no odd lot DW.	After launching the New Trading System, investors can hold odd lot of DW to exercise the rights at maturity date.

4. Adjusting Order types
4.1 Allow Overnight Order
	Allow Overnight Order to be kept in SET's trading system. The queue for Overnight Order is based on order entry time at first place. The allowed order types are:
	
	1. Good till Cancel (GTC): Orders are valid until cancelled.
	2. Good till Date (GTD): Orders are valid until specified date or cancelled.
	
	The additional conditions for Overnight Order are:
	• The order will be kept in SET's trading system for 30 calendar days at maximum. (The order entry date is the first date.)
	• Overnight Orders will be cancelled:
	  ○ If the order price is outside ceiling and floor of each day.
	  ○ On The first day when the ex-beneficial sign is posted on the securities or detail of securities is changed (Corporate Action) such as dividend payment (XD), Right to subscribe newly issued shares (XR), change of par (Par Split), change of ticker symbol
	• Overnight Order for odd lot trade is not permitted.
	• In case SET imposes a measure to buy securities with advanced fully-deposit cash (or Case Balance account) due to trading supervision measures or where C (Caution) sign is posted etc., members need to supervise the overnight order to comply with such measures.
		To facilitate investors with more order types and consistent with order types of Thailand Future Exchange (TFEX).

Subject	Amended Regulations in the New Trading System	Remarks
4.2 Cancelling of Special Market Order	Cancel of Special Market Order[2] in the new trading system.	No such order type in new trading system and in global practice. Special Market Order can be replaced with market order[3]
4.3 Improving Iceberg Order	Improving Iceberg Order[4] as follows: • Iceberg Order can be used with Limit Order, Market Order or Market to Limit Order[5] (in current system, Iceberg Order is allowed with Limit Order) • No cancellation of iceberg orders when the securities is suspended trading or when iceberg orders are not matched in the same session as order is placed. (in current system, Iceberg Order will be cancelled).	Improve to be align with international practices
4.4 Changing the Order condition's name of IOC to FAK	Changing the Order condition's name of Immediate or Cancel (IOC)[6] to Fill and Kill (FAK)	Adjust to be in line with international practice.
4.5 Additional order type and order condition combined	In the New Trading System, investors can combine order type and order condition as follows: Pre-open session and Pre-close session • Limit Order can be placed with Day[7], Fill and Kill (FAK), Good till Date (GTD) and Good till Cancel (GTC) (in the current system, Limit Order must be placed with Day only). • ATO / ATC can still be placed the same as in current system. Open Session	Amended in accordance with the standard software of the New Trading System and provide investors more alternatives.

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[2] The feature of Special market order is the same as market order except when there is unmatched volume bid or offer, it will be set as bid at last price +1 tick or offer at last price -1 tick respectively.

[3] Market Order is an order with no specified price. The system will match with the opposite order at every price level until all specified volume is matched. If there is unmatched volume, the system will immediately cancel such remaining.

[4] Iceberg Order is an order that aims the system to slice trading volume into smaller portions and publish to the orderbook, once the previous smaller portion is matched, the system will gradually publish the next smaller portion into the system automatically.

[5] Market to Limit is an order with no specified price to only bid at the lowest offer price or only offer at the highest bid price. If there is unmatched volume, the Unmatched volume (if any) will be converted to a limit order of bid or offer at price equal to the last executed price.

[6] IOC or FAK is an order that will be matched immediately and if all or some lots are unmatched, the unmatched lots will be immediately cancelled.

[7] Day condition means an order which is valid in the trading system within the day the trading order is placed.

Subject	Amended Regulations in the New Trading System	Remarks
	• Limit Order can be placed with Day, FAK, FOK, GTD and GTC (in current system, Limit Order must be placed with Day, FAK and FOK.) • Market Order can be placed with FAK and FOK (in current system, Market Order must be placed with FAK). • Market to Limit Order can be placed with Day, FAK, FOK, GTD และ GTC. (in current system, Market to Limit Order must be placed with Day).	
5. Introduce new suspend trading sign (P: Pause)	Introduce new suspend trading sign P (Pause) due to abnormal trading condition.	Regulations of trading halt (H) and suspension (SP) is still the same.
6. SET may cancel trading order any time when there is a system failure	SET may cancel trading orders during any period of system disruption to cope with emergencies or prevent damage to overall trading. The SET guidelines are as follows: • In case of system failure which may widely affect the trading and if trading is continued, may damage or be unfair for investors, SET may temporarily suspend trading of any or all securities. • When system failure is solved and ready for recommence trading, SET may consider to cancel unmatched orders for any or all securities in the market. In such case, SET will inform the members and investors in advance via communication channels of SET. • SET will send details of cancelled orders to the relevant members for their reconciliation apart from normal daily operation data.	To accommodate emergency case and prevent damages on overall trading and improve the regulations to be align with international practice.

Appendix: Example of Opening price / closing price calculation method

Example 1: Maximum Executable and Minimum Imbalance

Bid		Offer	
Volume	Price	Price	Volume
200	ATO	ATO	100
100	10.90	10.50	100
200	10.80	10.70	100
100	10.70	10.90	100

Last sale = 10.70

	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
	11.00	ATO =200	200		400	200	-200
Auction price	10.90	100	300	100	400	300	-100
	10.80	200	500		300	300	200
	10.70	100	600	100	300	300	300
	10.60		600		200	200	400
	10.50		600	100	200	200	400
	10.40		600	ATO = 100	100	100	500
	10.30		600		0	0	600

ATO buy side = the higher price between Highest bid price + 1 tick and Highest offer price + 1 tick = 10.90 + 0.10 = 11.00

ATO sell side = the lower price between Lowest bid price - 1 tick and Lowest offer price - 1 tick = 10.50 - 0.10 = 10.40

Example 2: Positive Imbalance, the highest price is selected.

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	100
200	11.00	10.30	100
5,000	10.70	10.40	100
500	10.30	10.50	100
		10.90	100

Last sale = 10.70

	Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
					Positive imbalance		
	11.10	ATO =100	100		500	100	-400
	11.00	200	300		500	300	-200
	10.90		300	100	500	300	-200
	10.80		300		400	300	-100
Auction price	10.70	5000	5,300		400	400	4,900
	10.60		5,300		400	400	4,900
	10.50		5,300	100	400	400	4,900
	10.40		5,300	100	300	300	5,000
	10.30	500	5,800	100	200	200	5,600
	10.20		5,800	ATO = 100	100	100	5,700
	10.10		5,800		0	0	5,800

ATO buy side = the higher price between Highest bid price + 1 tick and Highest offer price + 1 tick = 11.00 + 0.10 = 11.10

ATO sell side = the lower price between Lowest bid price - 1 tick and Lowest offer price - 1 tick = 10.30 - 0.10 = 10.20

Example 3: Negative Imbalance, the lowest price is selected.

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	300
100	11.00	10.20	100
100	10.90	10.40	100
200	10.80	10.60	100
200	10.50	10.90	100
200	10.30	11.00	100

Last sale = 10.70					Negative imbalance	
Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
11.10	ATO =100	100		800	100	-700
11.00	100	200	100	800	200	-600
10.90	100	300	100	700	300	-400
10.80	200	500		600	500	-100
10.70		500		600	500	-100
10.60		500	100	600	500	-100
10.50	200	700		500	500	200
10.40		700	100	500	500	200
10.30	200	900		400	400	500
10.20		900	100	400	400	500
10.10		900	ATO = 300	300	300	600

Auction price → 10.60

ATO buy side = the higher price between Highest bid price + 1 tick and Highest offer price + 1 tick = 11.00 + 0.10 = 11.10

ATO sell side = the lower price between Lowest bid price - 1 tick and Lowest offer price - 1 tick = 10.20 - 0.10 = 10.10

Example 4: Imbalance = 0, the price closest to the last traded price is selected.

Bid		Offer	
Volume	Price	Price	Volume
100	ATO	ATO	200
100	10.90	10.40	100
100	10.80	10.80	100
100	10.20		
100	10.10		

Last sale = 10.70

Price	Bid	Accumulated Bid	Offer	Accumulated Offer	Matched Vol.	Imbalance
11.00	ATO =100	100		400	100	-300
10.90	100	200		400	200	-200
10.80	100	300	100	400	300	-100
10.70		300		300	300	0
10.60		300		300	300	0
10.50		300		300	300	0
10.40		300	100	300	300	0
10.30		300		200	200	100
10.20	100	400		200	200	200
10.10	100	500		200	200	300
10.00		500	ATO = 200	200	200	300

(Auction price = 10.70)

ATO buy side = the higher price between Highest bid price + 1 tick and Highest offer price + 1 tick = 10.90 + 0.10 = 11.00

ATO sell side = the lower price between Lowest bid price - 1 tick and Lowest offer price - 1 tick = 10.10 - 0.10 = 10.00