SGX

Consultation Paper

Proposed introduction of trade at close functionality for the SGX-ST market

21 September 2018

Singapore Exchange

Responding to this Consultation Paper

On behalf of Singapore Exchange Securities Trading Limited ("**SGX-ST**"), Singapore Exchange Limited ("**SGX**") invites comments on this consultation paper.

Please send your responses through any of the following means:

Mode	Correspondence Details
Email	rules@sgx.com
Mail	Singapore Exchange Regulation 11 North Buona Vista Drive #06-07, The Metropolis Tower 2 Singapore 138589 (Attention: Regulatory Development & Policy)

Responses should include a summary of the major points, a statement of interest, and reasoned explanations. Please identify the specific policy or rule proposal on which you are commenting. Please also include your full name and, where relevant, the organisation you are representing, as well as your email address or contact number so that we may contact you for clarification. Anonymous responses may be disregarded.

We may make public all or part of any written submission, and may disclose your identity. You may request confidential treatment for any part of the submission that is proprietary, confidential, or commercially sensitive, by clearly marking such information. You may request not to be specifically identified.

We may subject any policy or rule amendment to regulatory concurrence. For this purpose, you should note that notwithstanding any confidentiality request, we may share your response with the relevant regulator.

By sending a response, you are deemed to have consented to the collection, use, and disclosure of personal data that is provided to us for the purpose of this consultation paper or other policy or rule proposals.

We request all comments by **11 October 2018**.

Contents

I   Introduction

1   Scope of this consultation paper

1.1   SGX seeks public comment on proposed amendments to the SGX-ST Rules arising from its proposal to introduce a new functionality to allow participants in its securities market to "trade at close".

2   Overview

2.1   SGX reviews its market structure continually to find ways to bring value to and enhance trading for our market participants.

2.2   SGX proposes to introduce a new functionality whereby participants may, after an equilibrium price is determined at the end of the closing routine ("**closing auction price**") for a security, enter orders to trade at that price.

2.3   The functionality will be introduced for both the ready and unit share markets of SGX-ST. It is not intended to extend the price discovery process. It is meant solely to allow participants to trade additional volume at each day's closing price (represented by the day's closing auction price), after that price has been determined.

2.4   The functionality will benefit participants who want to close their positions at the end of the trading day at the closing price. It will also benefit participants, e.g. institutional investors, who want to trade large volumes but were unable to obtain those volumes in the closing auction.

II   Proposed new functionality

3   Features of new functionality

3.1   **New TAC market phase**. SGX proposes to introduce the new trade at close ("**TAC**") functionality in the form of a new TAC market phase in the ready market and unit share market. The new market phase will take place immediately after the closing routine ends for both normal and half-day trading, and last 5 minutes.

3.2   To accommodate the new market phase, the trading phase preceding the closing routine will be shortened by five minutes. This will allow the securities market to close at the same time as today i.e. 5.06pm for normal day trading and 12.06pm for half-day trading.

3.3   Figures 1 and 2 summarise the market phases for normal trading and half-day trading once the new TAC market phase is implemented.
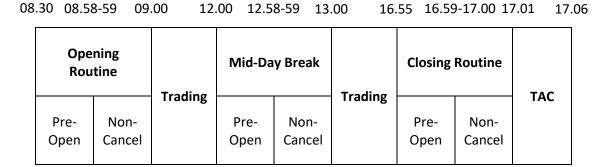
08.30   08.58-59   09.00   12.00   12.58-59   13.00   16.55   16.59-17.00 17.01   17.06

Opening Routine		Trading	Mid-Day Break		Trading	Closing Routine		TAC
Pre-Open	Non-Cancel		Pre-Open	Non-Cancel		Pre-Open	Non-Cancel	

Figure 1: Normal day trading

08.30   08.58-59   09.00   11.55   11.59-12.00   12.01   12.06

Opening Routine		Trading	Closing Routine		TAC
Pre-Open	Non-Cancel		Pre-Open	Non-Cancel	

Figure 2: Half-day trading

3.4   **No TAC market phase if no closing auction price**. There will only be a TAC market phase for a security on a trading day if the closing auction for that security on that trading day resulted in a closing auction price.

3.5   If no closing action price resulted, there will be no TAC market phase for that security on that trading day.

3.6   In the event there is no closing auction price, SGX does not propose to use any other price as the day's closing price for the purpose of the TAC functionality. This is because such a price may not accurately reflect the current market value of the security.

3.7   **Entering and matching of orders in new TAC market phase**. In order to trade at close, a participant may enter an order during the TAC market phase.

3.8   For the convenience of participants, orders (other than market orders) that are not matched during the closing routine will also be automatically included in the TAC market phase.

3.9   During the TAC market phase, orders will be matched according to time priority. Orders placed earlier will have higher priority over orders placed later. Market orders will not be considered for matching.

3.10   Any orders matched during the TAC market phase will be matched at the closing auction price, regardless of the price specified in the order.

3.11   Orders that are not matched during the TAC market phase will remain in the order book for such duration as specified in the order.

3.12   **Order management during TAC market phase**. Participants who enter an order during the TAC market phase may only do so at the closing auction price. Participants who wish to amend the price of an existing order automatically included in the TAC market phase may only amend it to the closing auction price.

3.13   Participants cannot enter orders at any other price, or amend orders to any other price, during the TAC market phase, even if they have no intention of trading during the TAC market phase.

3.14   Participants are however free to enter any volume or amend the volume of any order during the TAC market phase. They are also free to withdraw any order during the TAC market phase.

Question 1:

Do you agree with the proposed features of the new TAC functionality set out in paragraph 3?

Please provide reasons for your views/comments.

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4   Treatment of TAC trades if closing auction price is subsequently deemed invalid

4.1   The TAC functionality is intended to allow participants to trade at the closing auction price for the day (as a representation of the day's closing price) after the price has been determined.

4.2   There may be occasions however where SGX invalidates a closing auction price after it has been determined[1]. In the case of exchange-traded funds ("**ETFs**"), SGX may also determine an alternate closing price if there is no closing auction price (for example, if there was no closing auction or if it considers the closing auction price to be invalid)[2].

4.3   In such cases, the trades concluded in the TAC market phase ("**TAC trades**"), being based on the closing auction price, will no longer reflect the day's closing price. There are two alternative approaches that SGX may take with regard the TAC trades in such cases.

4.4   **Approach 1: Cancel the TAC trades**. If SGX invalidates a closing auction price, that price will no longer be the closing price for the day. TAC trades based on that price should accordingly be cancelled, as they will no longer reflect the day's closing price and participants' intention of trading at the closing price.

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[1] SGX may invalidate a closing auction price after it has been determined when, for example, SGX cancels all the trades during the closing auction because it determines that they were all error trades.
[2] Rule 8.2A of the SGX-ST Rules sets out how SGX-ST will determine an alternative closing price for ETFs. Respondents can find details on this pricing methodology on SGX's website at: http://www.sgx.com/wps/portal/sgxweb/home/faqs/#closing-price-for-exchange-traded-funds.

4.5   Likewise, if SGX determines an alternative closing price (in the case of ETFs), the original TAC trades based on the day's closing auction price should be cancelled, as they will no longer reflect the closing price for the day.

4.6   SGX recognises that there are challenges with Approach 1. Operationally, there may be occasions where the closing auction price for the day is invalidated only much later after the TAC trades for the day have been concluded. By then (especially if the closing auction price is invalidated only on the next trading day), participants may have closed off or managed their positions with respect to their TAC trades, which may result in losses if the TAC trades are cancelled.

4.7   **Approach 2: Allow the TAC trades to stand**. The rationale for this approach is that even if a closing auction price is invalidated, any TAC trade executed at that price would have been executed with the participant being fully aware of and intending to trade at that price. Also, the participant may have since closed off or managed their positions with respect to their TAC trades, in which case cancelling the TAC trade may result in losses. As such, the TAC trade should not be cancelled.

4.8   On balance, after taking into account the various considerations set out above, Approach 1 may be more appropriate as a whole for the market in the event that the closing auction price is subsequently deemed invalid.

Question 2:

(a)   Do you agree that Approach 1 (to cancel the TAC trades) is more appropriate in meeting the market's needs and better accords with participants' intentions and expectations compared to Approach 2 (to allow the TAC trades to stand)?

(b)   What considerations are relevant if Approach 1 is implemented? How can these considerations be addressed?

Please provide reasons for your views/comments.

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5   Implementation

5.1   SGX intends to implement the new TAC functionality together with the upgrade of its trading engine, Reach ST. The upgrade is targeted for July 2019.

6   Rule changes

6.1   Implementing the new TAC functionality will necessitate changes to the SGX-ST Rules. **Annex A** sets out the proposed changes.

Question 3:

Do you agree with the proposed rule changes to effect the implementation of the new TAC functionality?

Please provide reasons for your views/comments.

Annex A   Proposed amendments to the SGX-ST Rules

SGX has consulted on changes to the SGX-ST Rules in the Consultation Paper "*Proposed changes to the SGX-ST Rules and other rulebooks*" dated 10 October 2017. Those changes are marked in blue.

SGX is now consulting on changes to the SGX-ST Rules to implement the TAC functionality proposed in this consultation paper. The changes are marked in red.

8.5 Inviolability of Contracts Chapter 11 – Cancellation of Contracts and Error Trades

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8.5.211.1.2

SGX-ST may cancel a contract in any of the following circumstances:——

(1a)   if the contract arises from an Error Trade (as defined in Rule 11.2.1) and:

    (i)   the Trading Members to an error trade the contract (Rule 8.6) have agreed agree to the cancellation; or

    (2ii)   if a material mistake led to the error trade (Rule 8.6) and SGX-ST is satisfied that the trade should be cancelled;

[(aa)   the contract arises from a Trade at Close and subsequent to the trade, SGX-ST:

    (i)   invalidates the Closing Auction Price on which the trade is based; or

    (ii)   determines an alternate closing price for the security;]

*[**Note**: This new limb (aa) is proposed to be inserted only if Approach 1 as described in paragraphs 4.4 to 4.6 of the consultation paper is adopted.]*

(3b)   there is prima facie evidence of fraud or wilful misrepresentation in relation to the contract; or

(4c)   in SGX-ST's opinion, it is desirable to cancel the contract to protect the financial integrity, reputation or interests of the markets established or operated by SGX-ST.

13.1 Definitions

"Closing Auction Price": In relation to a security on a Market Day refers to the single price at which orders were matched at the end of the closing routine, as described in Regulatory Notice 8.2.1, for that security on that day.
…

"Trade at Close": A trade executed in the trade at close trading phase as described in Regulatory Notice 8.2.1.

Practice Note 8.2.1Regulatory Notice 8.2.1 — Trading Hours, Market Phases, Application of Market Phases and Algorithm Principles and Rules for Trade Matching

1. Introduction

1.1   Rule 8.2.1 states that the trading hours, market phases, application of the market phases and principles and rules for trade matching, are as published by SGX-ST.

1.~~1~~2   This ~~Practice Note explains~~ Regulatory Notice sets out the trading hours, market phases, application of the various market phases and the ~~algorithm~~ principles and rules used by SGX-ST ~~in computing the single price for the Opening Routine, Mid-Day Break, Closing Routine and Adjust Phase~~ for trade matching.

~~1.2   Rule 8.2.1 says the trading hours and the application of the market phases are as published by SGX-ST.~~

~~1.3   Rule 8.2.1 says SGX-ST may vary the trading hours and application of the market phases.~~

~~1.4   Rule 8.2.2 sets out the various market phases.~~

2.   Market Phases

2.1   Pre-Open / Pre-Close

    (a)   This phase allows order entry, order modification and withdrawal of orders but no matching of orders.

    (b)   The bid (offer) can be higher (lower) than the offer (bid).

2.2   Non-Cancel

    (a)   No order entry and amendment are allowed in this phase.

    (b)   All existing orders that can be matched are matched at a single price according to the algorithm set by SGX-ST.

    (c)   All unmatched orders, except at the close of trading, are carried over to the next phase.

2.3   Trading

    (a)   This phase allows order entry, order modification and withdrawal of orders.

    (b)   All orders are matched in accordance with price priority, subject to Rule 8.14, followed by time priority.

2.4   Adjust

    (a)   An Adjust Phase operates upon the lifting of a suspension of a security or futures contract pursuant to Rule 8.13.7, and may also be applied pursuant to Rule 8.13.2.

    (b)   The Adjust Phase sets in for 15 minutes unless a longer time is specified.

    (c)   Orders can be entered, modified or withdrawn.

    (d)   The bid (offer) can be higher (lower) than the offer (bid).

(e)   Orders that can be matched will be matched at the end of the Adjust Phase at a single price computed based on an algorithm set by SGX-ST before normal trading resumes. Unmatched orders at the end of the Adjust Phase are carried forward into the phase of the market applicable when the Adjust Phase ends, except in the following scenarios:

   (i)   When the end of the Adjust Phase coincides with the Opening Routine, Mid-Day Break or Closing Routine. In these circumstances, orders entered are carried forward into and matched accordingly in the respective Opening Routine, Mid-Day Break or Closing Routine.

   (ii)   When SGX-ST specifies that the Adjust Phase is to be followed immediately by a Non-Cancel Phase. In these circumstances, the Non-Cancel Phase will begin simultaneously with the end of the Adjust Phase, which may be at any time within a one minute window. Orders are carried forward into the Non-Cancel Phase. Orders that can be matched will be matched at a single price computed based on an algorithm set by SGX-ST before normal trading resumes. Unmatched orders at the end of the Non-Cancel Phase are carried forward into the phase of the market applicable when the Non-Cancel Phase ends.

   For illustrative purposes only:

10.00	10.15-10.16	10.17	
Suspension	Adjust	Non-Cancel	Trading

   SGX-ST specifies the Adjust Phase is to be followed immediately by a Non-Cancel Phase and further specifies that the Non-Cancel Phase will begin from 10:15 hours to 10:16 hours. In this case, the Adjust Phase will end simultaneously with the beginning of the Non-Cancel Phase at any time from 10:15 hours to 10:16 hours. Normal trading will begin at 10:17 hours.

   (iii)   When SGX-ST closes the market or suspends trading pursuant to Rule 8.13.1, at the end of the Adjust Phase. In this case, SGX-ST will inform participants on the status of unmatched orders.

2.5   Trade at Close

(a)   This phase will occur only if an Equilibrium Price (as defined in paragraph 4) is determined at the end of the Closing Routine.

(b)   This phase allows order entry, withdrawal of orders, and order amendment with regard to volume but not price.

(c)   Orders may be entered in this phase only at the Equilibrium Price determined at the end of the Closing Routine.

(d)   All orders are matched in accordance with time priority, at the Equilibrium Price determined at the end of the Closing Routine.

(e)   All unmatched orders are carried over to the next phase unless they expire.

23. **Trading hours and Aapplication of Mmarket Pphases**

2.13.1 **Summary of Market Phases** Summary

(1a)   Normal Day Trading

08.30   08.58-59*   09.00   12.00   12.58-59^   13.00   16.55   16.59-17.00   17.01   17.06
                                                                         17.00   17.04-05**   17.06

Pre-Open	Non-Cancel		Pre-Open	Non-Cancel		Pre-Open	Non-Cancel	**Trade at Close**
Opening Routine		**Trading**	**Mid-Day Break**		**Trading**	**Closing Routine**		

* Please see Point 2.2(2) and (3)
^ Please see Point 2.3A(2) and (3)
** Please see Point 2.5(3) and (4)

(2b)   Half-Day Trading

08.30   08.58-59*   09.00   11.55   11.59-12.00   12.01   12.06
                                                        12.00   12.04-05**   12.06

Pre-Open	Non-Cancel		Pre-Close	Non-Cancel	**Trade at Close**
Opening Routine		**Trading**	**Closing Routine**		

* Please see Point 2.2(2) and (3)
** Please see Point 2.5(3) and (4)

2.23.2 **Opening Routine** Opening Routine

(1a)   The Opening Routine is a 30-minute session before normal trading starts at 09:00 hours. It comprises a Pre-Open Phase and a Non-Cancel Phase.

(2b)   Pre-Open Phase (08:30 hours to 08:58–59 hours)

(a)   Orders can be entered, modified or withdrawn in the ready and unit share markets.

(b)   The bid (offer) can be higher (lower) than the offer (bid).

(c)   No matching of orders.

(d)   This phase will begins at 08:30 hours and ends randomly at any time from 08:58 hours to 08:59 hours.

(3c)   Non-Cancel Phase (08:58–59 hours to 09:00 hours)

(ai)   This phase will begins simultaneously with the end of the Pre-Open Phase, which may be at any time from 08:58 to 08:59 hours.

(aa)   No input, amendment and withdrawal of orders.

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(~~b~~ii) ~~Orders that can be matched are matched at a single price computed based on an algorithm set by SGX-ST.~~ The computed price will be the opening price for the day.

(~~c~~iii) Unmatched orders are carried forward into the morning trading session.

~~2.3~~3.3 ~~Trading Phase~~ Trading Session

(~~1~~a) ~~For n~~Normal day trading comprises ~~a, the~~ morning trading session and an afternoon trading session.

    (i) The morning trading session consists of a Trading Phase which begins ~~is will be from~~ at 09:00 hours ~~to~~ and ends at 12:00 hours.

    (ii) ~~, and the~~ The afternoon trading session consists of a Trading Phase which begins ~~is from~~ at 13:00 hours ~~to~~ and ends at ~~17:00~~ 16:55 hours.

(b) ~~For h~~Half day trading comprises one trading session which consists of a ~~, the~~ Trading Phase that begins ~~is~~ from 09:00 hours ~~to~~ and ends at ~~12:00~~ 11:55 hours.

(2) ~~Each The Trading Phase allows order entry, order modification and withdrawal of orders. Orders are matched in the order of price priority followed by time priority.~~

(~~2A~~c) ~~All u~~Unmatched orders after the ~~morning~~ Trading Phase in the morning trading session (for normal day trading) are carried forward to the Mid-Day Break.

(~~3~~d) ~~All u~~Unmatched orders after the Trading Phase in the afternoon t~~Trading Phase~~ session (for normal day trading) and after the Trading Phase (~~on~~for half day trading) are carried forward to the Closing Routine.

~~2.3A~~3.4 Mid-Day Break

(~~1~~a) The Mid-Day Break is a 60-minute session that begins after the morning ~~T~~trading ~~Phase~~ session ends at 12:00 hours, and ends before the afternoon trading session ~~Trading Phase starts~~ begins at 13:00 hours. It comprises a Pre-Open Phase and a Non-Cancel Phase.

(~~2~~b) Pre-Open Phase (12:00 hours to 12:58–59 hours)

~~(a)   Orders can be entered, modified or withdrawn in the ready and unit share markets.~~

~~(b)   The bid (offer) can be higher (lower) than the offer (bid).~~

~~(c)   No matching of orders.~~

    (~~d~~i) This phase will end randomly at any time from 12:58 hours to 12:59 hours.

(~~3~~c) Non-Cancel Phase (12:58–59 hours to 13:00 hours)

    (~~a~~i) This phase ~~will~~ begins simultaneously with the end of the Pre-Open Phase, which may be at any time from 12:58 hours to 12:59 hours.

~~(b)   No input, amendment and withdrawal of orders.~~

(~~c~~ii)   ~~Orders that can be matched are matched at a single price computed based on an algorithm set by SGX-ST.~~ The computed price will be the opening price for the afternoon trading session.

(~~d~~iii)   Unmatched orders are carried forward into the afternoon trading session.

~~2.4   Adjust Phases~~

~~(1)   An Adjust Phase operates upon the lifting of a suspension of a security or Futures Contract pursuant to Rule 8.10.6, and may also be applied pursuant to Rule 8.10.1A.~~

~~(a)   The Adjust Phase sets in for 15 minutes. A longer time can be specified.~~

~~(b)   Orders can be entered, modified or withdrawn for the ready and unit share markets.~~

~~(c)   The bid (offer) can be higher (lower) than the offer (bid).~~

~~(d)   Orders that can be matched will be matched at the end of the Adjust Phase at a single price computed based on an algorithm set by SGX-ST before normal trading resumes. Unmatched orders at the end of the Adjust Phase are carried forward into the phase of the market applicable when the Adjust Phase ends.~~

~~(2)   However, the behaviour in paragraph 2.4(1)(d) does not apply in the following scenarios:~~

~~(a)   When the end of the Adjust Phase coincides with the Opening Routine, Mid-Day Break or Closing Routine. In these circumstances, orders entered are carried forward into and matched accordingly in the respective Opening Routine, Mid-Day Break or Closing Routine.~~

~~(b)   When SGX-ST specifies that the Adjust Phase is to be followed immediately by a the Non-Cancel Phase. In these circumstances, the Non-Cancel Phase will begin simultaneously with the end of the Adjust Phase, which may be at any time within a one minute window. Orders are carried forward into the Non-Cancel Phase. Orders that can be matched will be matched at a single price computed based on an algorithm set by SGX-ST before normal trading resumes. Unmatched orders at the end of the Non-Cancel Phase are carried forward into the phase of the market applicable when the Non-Cancel Phase ends.~~

~~For illustrative purposes only:~~

~~10.00~~	~~10.15-10.16~~	~~10.17~~	
~~Suspension~~	~~Adjust~~	~~Non-Cancel~~	~~Trading~~

~~SGX-ST specifies the Adjust Phase is to be followed immediately by a the Non-Cancel Phase and further specifies that the Non-Cancel Phase will begin from 10:15h to 10:16h. In this case, the Adjust Phase will end simultaneously with the beginning of the Non-Cancel Phase at any time from 10:15h to 10:16h. Normal trading will begin at 10:17h.~~

~~(c)   When SGX-ST closes the market or suspends trading pursuant to Rule 8.10.1, at the end of the Adjust Phase.~~

~~(3)   [Deleted]~~

~~2.5~~3.5   ~~Closing Routine~~ Closing Routine

(~~1~~a) The Closing Routine is a ~~6~~six-minute session after trading stops at ~~17:00~~ 16:55 hours for normal day trading, or ~~12:00~~ 11:55 hours for half-day trading. It comprises a Pre-Close Phase and a Non-Cancel Phase.

(~~2~~b) All unmatched orders are carried forward to the Closing Routine at ~~17:00~~ 16:55 hours (for normal day trading) or ~~12:00~~ 11:55 hours (for half-day trading).

(~~3~~c) Pre-Close Phase (~~17:00~~16:55 hours to ~~17:04 05~~ 16:59-17:00 hours/~~12:00~~11:55 hours to ~~12:04 05~~ 11:59-12:00 hours)

~~(a) Orders can be entered, modified or withdrawn in the ready and unit share markets.~~

~~(b) The bid (offer) can be higher (lower) than the offer (bid).~~

~~(c) No matching of orders.~~

(~~d~~i) This phase will end randomly at any time from ~~17:04~~ 16:59 hours to ~~17:05~~ 17:00 hours (for normal day trading) or ~~12:04~~ 11:59 hours to ~~12:05~~ 12:00 hours (for half-day trading).

(~~4~~d) Non-Cancel Phase (~~17:04 05~~16:59-17:00 hours to ~~17:06~~ 17:01 hours/~~12:04~~11:59-12:00 hours to ~~12:05~~ 12:01 hours)

(~~a~~i) This phase will begin simultaneously with the end of the Pre-Close Phase, which may be at any time from ~~17:04~~ 16:59 hours to ~~17:05~~ 17:00 hours (for normal day trading) or ~~12:04~~ 11:59 hours to ~~12:05~~ 12:00 hours (for half-day trading).

~~(aa) No input, amendment and withdrawal of orders.~~

(~~b~~ii) ~~Orders that can be matched are matched at a single price computed based on an algorithm set by SGX-ST.~~ Unmatched orders are carried forward into the Trade at Close Phase.

~~(c) [Deleted]~~

(~~5~~e) ~~This~~ The Closing ~~r~~Routine is designed to reduce the risk of manipulating closing prices with a single transaction at an unusually high or low price, just before the trading session ends.

3.6 Trade at Close Phase

(a) The Trade at Close Phase is a five-minute session that begins after the Closing Routine ends at 17:01 hours (for normal day trading) and 12:01 hours (for half-day trading).

(b) Unless they expire, unmatched orders after the Trade at Close Phase will remain in the order book and will be carried forward to the Opening Routine of the next Market Day.

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