SFC reprimands and fines Instinet Pacific Limited $17.3 million for failures concerning its electronic and algorithmic trading systems and alternative liquidity pool

13 Apr 2018

The Securities and Futures Commission (SFC) has reprimanded and fined Instinet Pacific Limited (IPL) $17.3 million after resolving concerns over IPL's breaches of the Code of Conduct in relation to its electronic and algorithmic trading systems and alternative liquidity pool (ALP)(Notes 1 & 2).

In November 2016, the SFC and IPL jointly engaged independent reviewers to review IPL's electronic and algorithmic trading systems and ALP. The review findings revealed that IPL failed to ensure:

- reasonable controls were in place to prevent its algorithmic trading system from generating and passing erroneous and disorderly orders to the market on three occasions between December 2014 and January 2016 (Note 3);
- non-proprietary orders received execution priority over proprietary orders in its ALP before May 2016 (Note 4);
- compliance with documentary requirements of the Code of Conduct, including:
    - the incident reports concerning its electronic trading system did not contain the minimum details as required (Note 5);
    - the access log for its ALP was not adequately maintained (Note 6);
    - the guidelines for its ALP was not sufficiently comprehensive, accurate and up-to-date (Note 7); and
    - the documentation on the design, development, risk management controls, order cancellation function, pre-trade risk controls as well as smart order router controls of its electronic and algorithmic trading systems and ALP was not sufficiently comprehensive (Note 8).

In reaching the resolution, the SFC took into account all relevant circumstances, including that IPL:

- involved their senior management in the liaison with the SFC about the regulatory concerns;
- took the initiative to bring this matter to a conclusion by cooperating with the SFC to address the regulatory concerns in the disciplinary action; and
- engaged independent reviewers to conduct a review of the SFC's regulatory concerns and identify the deficiencies in its internal controls.

The SFC also took into consideration an undertaking by IPL's board of directors that reasonable steps will be implemented to ensure the failures set out above will be rectified within 12 months; otherwise, similar failures would have resulted in a substantially higher level of fine.

End

Notes:

1. IPL is licensed under the Securities and Futures Ordinance to carry on business in Type 1 (dealing in securities), Type 4 (advising on securities) and Type 7 (providing automated trading services) regulated activities.
2. Code of Conduct for Persons Licensed by or Registered with the SFC (Code of Conduct).
3. General Principle 2 of the Code of Conduct provides that a licensed corporation should exercise due skill, care and diligence in carrying on its business in regulated activities in the interests of market integrity. Paragraph 3.3.1 of Schedule 7 to the Code of Conduct provides that a licensed corporation should have controls that are reasonably designed to monitor and prevent the generation of or passing to the market for execution order instructions from its algorithmic trading system which may be erroneous or may interfere with the operation of a fair and orderly market.
4. Paragraph 19.6 of the Code of Conduct provides that irrespective of the time when orders are placed, a licensed corporation operating an ALP should ensure that orders of users which are not proprietary orders have priority over proprietary orders when such orders are being transacted at the same price.
5. Paragraph 1.3.1(d) of Schedule 7 to the Code of Conduct provides that a licensed corporation should keep incident reports for all material system delays or failures of its electronic trading systems. Annex to Schedule 7 sets out the minimum details that should be included in the incident reports.

6. Among others, paragraph 16(b) of Schedule 8 to the Code of Conduct provides that an ALP operator should maintain an adequate access log that records any approval given for staff members' access to its ALP and the basis upon which such access was permitted in each case.

7. Among others, paragraph 19.7(a) of the Code of Conduct provides that a licensed corporation should, by means of ALP Guidelines (as defined in paragraph 19.2(a) of the Code of Conduct), provide sufficiently comprehensive information to the ALP users to ensure that they are fully informed as to the manner in which the ALP operates. Paragraph 9 of Schedule 8 to the Code of Conduct provides that an ALP operator should prepare and publish comprehensive and accurate ALP Guidelines concerning its ALP on its website. Paragraph 11 of Schedule 8 to the Code of Conduct provides that an ALP operator should revise or update its ALP Guidelines as necessary and publish the same on its website and circulate them to ALP users, identifying and explaining the amendments that have been made.

8. Among others, paragraph 18.6 of and paragraphs 1.3 and 3.4 of Schedule 7 to the Code of Conduct, and paragraph 19.10 of and paragraph 20 of Schedule 8 to the Code of Conduct provide that a licensed person should keep, or cause to be kept comprehensive documentation of the design, development, deployment and operation of, and the risk management controls for its electronic and algorithmic trading systems and ALP.

A copy of the Statement of Disciplinary Action is available on the SFC website

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STATEMENT OF DISCIPLINARY ACTION

The Disciplinary Action

1. The Securities and Futures Commission (**SFC**) has publicly reprimanded and fined Instinet Pacific Limited (**IPL**) $17.3 million pursuant to section 194 of the Securities and Futures Ordinance (**SFO**).

2. The disciplinary action is taken according to an agreement pursuant to section 201 of the SFO dated 12 April 2018 for IPL's failures to comply with the regulatory requirements in relation to its electronic and algorithmic trading systems and alternative liquidity pool (**ALP**).

3. IPL is licensed under the SFO to carry on business in Type 1 (dealing in securities), Type 4 (advising on securities) and Type 7 (providing automated trading services) regulated activities.

Summary of facts

Background

4. In November 2016, the SFC and IPL jointly engaged independent reviewers (**Reviewer**) to review IPL's electronic and algorithmic trading systems and ALP. The independent reviewers reported their findings in August 2017 (**Report**).

Failure to have reasonable controls to prevent its algorithmic trading system from generating and passing erroneous or disorderly orders to the market

5. IPL is expected to exercise due skill, care and diligence in carrying on its business in regulated activities in the interests of market integrity.[1] In addition, IPL is required to have controls reasonably designed to monitor and prevent the generation of or passing to the market for execution order instructions from its algorithmic trading system which may be erroneous or may interfere with the operation of a fair and orderly market.[2]

(i) Trading of shares of Renhe Commercial Holdings Company Ltd (stock code: 1387) (Renhe)

6. Prior to the pre-opening session on 29 December 2014, Instinet received an erroneous order from a client to buy 10 million Renhe shares at the limit price of $3.05. The last closing price was $0.325.

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[1] General Principle 2 of the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission (**Code of Conduct**)
[2] Paragraph 3.3.1 of Schedule 7 to the Code of Conduct

7. IPL executed the order using its trading algorithm, Auction Asia. The design of Auction Asia was such that it placed orders that tracked the indicative equilibrium price (**IEP**). Failing to detect the erroneous client order price, Auction Asia placed orders[3] to the market at the highest price permitted.[4] These orders moved the IEP higher and caused Auction Asia to repeatedly place orders at higher prices to the market. Within two seconds, a series of buy orders ranging from $0.425 to $0.760 were successively placed and then cancelled in the market. The process repeated until the IEP stopped escalating.

8. After examining the order execution, the Reviewer found that the execution logic of Auction Asia created a price dislocation. Controls were inadequate to prevent a fat finger error. Headroom for IEP appreciation was given because the erroneous client order price was significantly above the market level. The control of "IEP + 20 ticks" was not effective to restrict order prices and there was no control to prevent Auction Asia from acting on prices it generated. IPL had misunderstood what pre-trade controls were in place for Auction Asia for a long time, and therefore, remediation steps were not taken until February 2016.

9. In summary, IPL failed to detect if the order it received from client was erroneous and the controls of Auction Asia did not prevent it from acting on the erroneous orders, causing undue and irregular price movements.

(ii) *Trading of shares of Greatview Aseptic Packaging Company Ltd (stock code: 468) (Greatview)*

10. The Market-On-Close (**MOC**) was a trading algorithm under Auction Asia that aimed at execution targeting the closing price. A control called the flash crash detector (**FCD**) would pause the trading of the MOC and issue an alert if the stock price moved a certain percentage more than the Hang Seng Index in the past 5 minutes.

11. On 18 September 2015, in the execution of a client order to buy 348,000 Greatview shares near market close, the stock price increased from $3.81 to $5.00 in 36 seconds. During the 36 seconds, the FCD paused the trading of the MOC three times but in each case the alert was dismissed by the relevant trader and the execution was resumed within seconds.

12. The Reviewer found that the orders were allowed to continue in the market and the escalating order prices caused irregular price movements due to inadequate governance of the FCD. Subsequent to the event, trading resumption was disallowed after order execution was stopped by the FCD.

13. Although the FCD paused the trading as designed, allowing an immediate resumption of execution completely defeated its purpose. Accordingly, the FCD in place at the time of execution of the Greatview order was not effective in preventing disorderly orders from passing to the market.

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[3] Given the Hong Kong Stock Exchange's board lot restrictions, the order was sliced into a pair of child orders of 6 million and 4 million in size
[4] The highest price permitted by Auction Asia for buy orders was the last IEP plus 20 ticks

*(iii) Trading of shares of Guangdong Investment Limited (stock code: 270) (**Guangdong**)*

14. On 21 January 2016, IPL executed an order to sell 346,000 Guangdong shares using its trading strategy, PART Asia. Within 28 seconds at around 9:30 am, 13 orders to sell 66,000 shares were executed with the share price being driven down by 14%.[5]

15. The Reviewer found IPL did not know that the FCD did not function at the relevant time because no opening price was formed for Guangdong shares on the day. It was a design flaw in which the possibility of a stock without an opening price was not contemplated. Again, IPL failed to put in place effective controls to prevent disorderly orders from passing to the market.

16. The deficiencies identified in relation to the algorithmic trading systems in the three incidents show that IPL failed to exercise due skill, care and diligence to implement reasonable controls to prevent its algorithmic trading system from generating and passing erroneous or disorderly orders to the market, in breach of General Principle 2 and paragraph 3.3.1 of Schedule 7 to the Code of Conduct.

Failure to ensure non-proprietary orders have priority over proprietary orders

17. Paragraph 19.6 of the Code of Conduct provides that irrespective of the time when orders are placed, a licensed corporation operating an ALP should ensure that orders of users which are not proprietary orders have priority over proprietary orders when such orders are being transacted at the same price.

18. Under paragraph 19.2(e) of the Code of Conduct, "proprietary orders" are orders for the account of any user, which is a company within the same group of companies as the ALP operator trading as principal. Given IPL is an entity within the Nomura group of companies, orders from other entities within the Nomura group of companies trading as principal would fall within this definition.

19. The Reviewer found a test case which indicated that proprietary orders were not placed at the end of the order queue in the ALP before May 2016. In addition, the Reviewer found that 117 trades conducted in the ALP by a Nomura entity on two consecutive days in December 2015 were actually proprietary trades. IPL blocked the access of the entity to the ALP after discovering the trades in the morning of the second day.

20. IPL's failure to ensure that non-proprietary orders received execution priority over proprietary orders in its ALP is a breach of paragraph 19.6 of the Code of Conduct.

Failures in relation to documentary requirements of the Code of Conduct

(i) Minimum details in incident reports concerning its electronic trading system

21. Paragraph 1.3.1(d) of Schedule 7 to the Code of Conduct provides that a licensed corporation should keep incident reports for all material system delays or failures of its electronic trading systems. Annex to Schedule 7 sets out the minimum details

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[5] From $9.30 to $8.00

that should be included in the incident reports, including the steps taken by the licensed corporation to ensure that the problem does not occur again.[6]

22. The Reviewer found 12 incident reports that do not contain the minimum details as required. In particular, they do not set out the steps IPL took to rectify the problems or ensure that the problem does not reoccur.

(ii) Adequate access log for its ALP

23. Paragraph 16(b) of Schedule 8 to the Code of Conduct provides that an ALP operator should maintain an adequate access log that records, among others, any approval given for staff members' access to its ALP and the basis upon which such access was permitted in each case.

24. IPL failed to provide to the Reviewer the access logs evidencing approvals given for staff members' access to its ALP and the basis upon which such access was permitted.

(iii) Comprehensive, accurate and up-to-date ALP Guidelines

25. The Code of Conduct requires ALP users to be fully informed about the manner in which the ALP operates by means of the ALP Guidelines[7] and the ALP operator should publish the ALP Guidelines on its website.[8] In addition, the ALP Guidelines should be revised and updated to ensure that they remain comprehensive, accurate and current, and the ALP operator should, as soon as reasonably practicable, publish the revised or updated ALP Guidelines on its website and circulate them to the ALP users.[9]

26. In respect of the guidelines for IPL's ALP, the Reviewer found that they did not contain all the details required under the Code of Conduct, such as information related to user priority, order routing, and execution methodology and order cancellation.

27. In addition, the matching logic under IPL's ALP was changed in June 2016 but the change was not reflected in its guidelines and the revised guidelines was not published until September 2016. The revised guidelines also failed to identify and explain the amendments that have been made in accordance with the regulatory requirement.

(iv) Comprehensive documentation for the electronic and algorithmic trading systems and ALP

28. The Code of Conduct requires a licensed corporation to keep, or cause to be kept, comprehensive documentation on the design and development (including any

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[6] Paragraph (ii) of Annex to Schedule 7 to the Code of Conduct
[7] Defined in paragraph 19.2(a) of the Code of Conduct
[8] Paragraph 19.7(a) of and paragraph 9 of Schedule 8 to the Code of Conduct
[9] Paragraph 11 of Schedule 8 to the Code of Conduct

testing, review, modification, upgrade or rectification) and risk management controls of its electronic and algorithmic trading systems and ALP.[10]

29. Inadequate system documentation is a theme that appears throughout the Report common to IPL's electronic and algorithmic trading systems and ALP. In particular, the Reviewer found inadequate documentation in respect of the design, development, risk management controls, order cancellation function, pre-trade risk controls and smart order router controls.

30. It is critical for licensed corporations to keep proper records on the design, development, deployment and operation of its electronic and algorithmic trading systems and ALP, especially when regulatory concerns arise. The relevant record keeping requirements came into force for electronic and algorithmic trading on 1 January 2014 and ALP on 1 December 2015. Yet, until November 2016, i.e. almost three years after the implementation of the electronic and algorithmic trading requirements and one year after the implementation of the ALP requirements, the keeping of the relevant documentation at IPL was still inadequate. IPL has therefore failed to comply with the relevant record keeping requirements under the Code of Conduct.

Conclusion

31. In reaching the resolution, the SFC took into account all relevant circumstances, including that IPL:

(a) involved their senior management in the liaison with the SFC about the regulatory concerns;

(b) took the initiative to bring this matter to a conclusion by cooperating with the SFC to address the regulatory concerns in the disciplinary action; and

(c) engaged independent reviewers to conduct a review of the SFC's regulatory concerns and identify the deficiencies in its internal controls.

32. The SFC also took into consideration an undertaking by IPL's board of directors that reasonable steps will be implemented to ensure the failures set out above will be rectified within 12 months; otherwise, similar failures would have resulted in a substantially higher level of fine.

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[10] Paragraph 18.6 of and paragraphs 1.3.1 and 3.4 of Schedule 7 to the Code of Conduct and paragraph 19.10 of and paragraph 20 of Schedule 8 to the Code of Conduct