

Asia Pacific Alternative Liquidity Pools Disclosure

UBS operates its own non-displayed crossing networks, UBS Price Improvement Network ("**UBS PIN**") in Hong Kong, Japan and Australia and UBS Cross (together with UBS PIN, "**Crossing Systems**") in Japan.¹ Crossing Systems are automated services which match buy and sell orders electronically rather than executing orders on an exchange or market which displays a public quote. Crossing Systems do not publicly display orders or allow indications of interests (or "**IOIs**"). You can refer to our website <http://www.ubs.com/global/en/investment-bank/direct-execution/why-ubs/access-to-liquidity.html> to access the most current information about our liquidity and crossing philosophy and execution venues.

User Access

There are no regulatory restrictions on user access to Crossing Systems in Australia or Japan.

However under the Hong Kong SFC Code of Conduct ("**Code**"), only orders placed or originated by "qualified investors" as defined under the Code may access the Crossing Systems in Hong Kong. If you are eligible and wish for your orders to be routed to the Crossing Systems, please contact your UBS sales representative or agent (as applicable) for further information. If you cease to qualify as a "qualified investor" under the Code, you must notify us immediately.

Notwithstanding the above, UBS reserves its absolute discretion in permitting access to the Crossing Systems and orders will not be routed to the Crossing Systems unless we agree otherwise. All orders submitted to the Crossing Systems are subject to such controls determined by UBS as amended from time to time. Unless agreed otherwise, access to the Crossing Systems is granted subject to the UBS terms of business applicable to you and UBS reserves the right to suspend or withdraw access at its absolute discretion and without notice. See the country-specific schedules in this document for any other relevant information that may apply to you. You may discontinue or opt-out of access to all or any Crossing Systems by prior written notice to us.

"Users" of Crossing Systems in Hong Kong shall have the same meaning as "user" as defined under paragraph 19.2(g) of the Code.

Crossing Systems

- **UBS PIN** contains orders which are considered as agency client orders in the relevant markets^{2*}. UBS PIN can only be accessed by our algorithms and Smart Order Router. Low latency direct market access is not permitted in UBS PIN. UBS PIN is not accessible by broker dealers and market makers.
- **UBS Cross** may be accessed by a broad range of investors including broker dealers, market makers, active traders and agency clients. It may also contain UBS principal orders resulting from its market making and facilitation services, as well as UBS principal orders from certain over-the-counter hedging activity. UBS Cross is also enabled to receive orders from other third party brokers or liquidity aggregators.

Order Placing and Handling

Please note, this section should be read as being subject to any applicable country-specific schedule. You may choose to place an order with UBS electronically by FIX or other compatible order management systems or manually with a UBS Sales Desk.

UBS operates a smart order router ("**SOR**") enabled to transmit orders to exchanges and crossing systems (operated by UBS or third parties) according to the users' election (if applicable), with the aim to improve execution outcome.

UBS SOR will determine the manner in which an order will be submitted to UBS PIN considering factors including price and quantity.

¹ As system upgrade is being rolled out in phases, some of the stocks will still be matched in UBS Cross during system upgrade; upon the completion of the phased migration, UBS Cross in Japan will cease to operate.

² Under Japanese regulations, UBS swap hedge orders are considered as UBS agency client orders.

* Please refer to the Australia schedule in this document for a description of the user access to UBS PIN in Australia.

UBS Cross can be accessed in the same manner as UBS PIN, as well as directly via a FIX connection. For direct orders, users may enter limit orders and specify the price at which the order is to be executed.

Users may request for cancellation of an order or the part of an order in a Crossing System that has not been executed. A request to cancel an order shall not be effective until the user receives an acknowledgement from UBS that the order has been cancelled. Orders that remain unexecuted by the end of the day will be purged from the Crossing Systems.

The Crossing Systems are operational on the days that the exchanges in the relevant markets are open. The schedules below set out the time when orders may be matched. Orders received during such hours are handled by the Crossing Systems taking into account of price, time priority and account crossing restrictions (such as minimum execution quantity, etc).

Order Execution

Orders may be matched in the Crossing Systems:

- Australia: within the National Best Bid Offer ("**NBBO**") at the time of the cross
- Hong Kong: at mid-price³ of the primary market at the time of the cross
- Japan: at mid-price⁴ of the primary market at the time of the cross

With the exception of matching at the mid-tick⁵, the Crossing Systems do not evaluate orders at fractional tick.

If an order is only partially executed in the Crossing Systems, the unexecuted residual quantity of the order will remain in the Crossing Systems until it is executed, cancelled or expires. Once an execution occurs, the Crossing Systems will send electronic messages containing execution reports to the user.

There may be circumstances where the Crossing Systems may not identify crossing opportunities for an order (or portion thereof). For example, in Japan⁶, orders may be placed in the Crossing Systems while simultaneously posted to the relevant exchange. When a Crossing System identifies a crossing opportunity for such orders, it will request the relevant exchange to cancel or reduce the order posted to that exchange accordingly before being matched in the Crossing System. Until the relevant exchange confirms the requested cancellation or reduction, the remaining portion of such order may not be further executed.

The Crossing Systems do not aggregate orders for execution.

The Crossing Systems are set to prevent crossing against 'same account orders' (orders sent for the same brokerage account).

User Configuration

Depending on your arrangements with UBS, you can choose whether or not your orders are routed to the Crossing Systems. If you choose to route your orders to the Crossing Systems, there are a number of configuration options available including:

- prevent crossing where the number of shares available from a single eligible contra side order is below the Minimum Execution Quantity ("**MEQ**") specified. MEQ may be determined by you or by a UBS algorithm when accessing the Crossing Systems. Orders below the MEQ specified by you will not be matched.
- prevent crossing against orders of the same user legal entity where such entity maintains more than one brokerage account with UBS
- prevent crossing against orders of the users' affiliates

For a subset of algorithmic strategies, UBS may offer in some markets the ability to configure users to interact at best bid or offer within UBS Cross or at mid-price or better within the Crossing Systems for certain orders⁷.

³ Mid-price refers to the average of best bid and offer prices.

⁴ As system upgrade is being rolled out in phases, some of the stocks may still be matched at or within the best bid or offer in Japan during system upgrade.

⁵ Mid-tick refers to half of the minimal price movement of the stock

⁶ As system upgrade is being rolled out in phases, some of the stocks may still be simultaneously posted to the Crossing Systems and the relevant Exchange in Japan during system upgrade; upon the completion of the phased migration, simultaneous posting to the Crossing Systems and the relevant exchange will no longer apply.

⁷ This paragraph does not apply for Hong Kong market and will not apply to Japan post migration.

UBS does not offer the functionality for an order to interact with selective types of liquidity in the Crossing Systems. Depending on your arrangement with UBS, user configuration settings can be set at a user level and in some cases on an order by order basis.

Should you wish to discuss any of the configuration settings or change how your crossing settings are configured you should contact your UBS sales representative or intermediary (as applicable).

Regulatory Reporting

Once a crossing opportunity has been identified, the Crossing Systems will execute and report the trade to a recognized trade reporting facility of a self-regulatory organization. UBS will select the venue for reporting at its absolute discretion having regard to matters, including but not limited to its best execution obligations (if any) and administrative and procedural arrangements.

Risk Management

Controls, procedures and monitoring processes are designed and put in place to help ensure that the Crossing Systems are operating normally in an orderly manner and that any system failures are identified promptly and remediated in accordance with established and tested business continuity plans. The controls include:

- no crossing outside current market bid / offer range
- no crossing outside the daily high / low range
- no crossing if best bid / offer has not been stable for a period of time
- no crossing if stock is suspended

Confidentiality and Conflicts Management

Physical and electronic segregations are put in place within UBS for management of conflicts of interest. Information regarding orders directed to the Crossing System is appropriately safeguarded to avoid information leakage and only made available to certain UBS staff for legitimate and bona fide on a need to know basis. Certain Corporate Center IT staff has access to live trade data of orders in the Crossing Systems to provide technology support. Investment Bank Equities Sales and Trading only has access to live trade data of the order placed by such employee or shared desk (and not live trade data of other orders) for client servicing purposes. Equities Sales and Trading in the Electronic Trading team and Quant team have access to post trade data for monitoring purposes. Other Investment Bank or Corporate Center control and support functions such as Operations, Legal and Compliance & Operational Risk Control may have access to post trade data from time to time on a need-to-know basis. Below is a summary of access to Crossing System order trade data:

Department	Title	Access	Reason for Access
Investment Bank Equities	Electronic Trading Services	Live and post trade data	Client servicing and monitoring
Investment Bank Equities	Sales and Trading	Live trade data (only of orders placed by such employee or shared desk)	Client servicing
Investment Bank Equities	Quant	Live and post trade data	Monitoring
Corporate Center	Group Technology	Live and post trade data	Technology support
Corporate Center	Operations	Post trade data	Need to know basis
Corporate Center	Legal and Compliance & Operational Risk Control	Post trade data	Need to know basis (including monitoring purposes)

Policies and procedures are in place and employee training is conducted to deter improper sharing of confidential information – both outside UBS and to other areas of UBS. Compliance with information handling policies is monitored through standard supervisory channels.

No incentives are paid by UBS to any third parties for selecting Crossing Systems as execution venues.

Contingency Arrangements

The Crossing Systems are configured and operated, taking into account both the desirable capacity and redundancy provisions. In the event of systems delay or capacity issues, UBS will exercise reasonable endeavors to notify affected users of the system delay or outage where required under applicable regulations. In the event of an outage, orders will bypass the affected Crossing Systems and will be sent directly to market, unless such orders are

designated to be executed only in Crossing Systems, in which case they may be routed to third party non-displayed crossing networks for execution, subject to user instruction.

UBS has discretion to temporarily suspend any Crossing Systems during periods of expected or actual market volatility (such as shortly after market opens or shortly before market closes) and orders will be handled as described above.

Executions of some orders may be impacted in such events.

Potential risks associated with trades conducted in the Crossing Systems

The Crossing Systems source local market data from exchanges through third party vendors. If UBS is notified by the third party vendor or the Crossing Systems detect stale or delay in market data, UBS will take precautionary measures which may include orders bypassing the affected Crossing Systems. Delays in market data may mean that the execution price may be at a price worse than the price that could have been achieved on the exchange.

As with all electronic trading systems, the Crossing Systems are subject to technology risks relating to design, development, deployment and operation. Such technology risks may result in incidents or issues affecting or impacting order submission, execution, amendment, cancellation, priority or loss of orders.

Fees

You will not be charged additional fees as a result of your participation in the Crossing Systems, or to access Crossing Systems.

AUSTRALIA

This disclosure is made to you by UBS Securities Australia Limited ABN 62 008 586 481 AFS License No. 231098 ("**UBS Australia**") in relation to the Crossing System operated by UBS - UBS PIN (ASIC Identifier Code 1501).

This disclosure should be read in conjunction with the information that is published by UBS Australia in relation to Crossing System at the following UBS web site:

<https://www.ubs.com/global/en/investment-bank/australia/australia-investment-banking/australia-investor-client-services.html> A hard copy of any UBS Australia disclosure is available on request.

Capitalized words and terms used and not defined in this document have the meanings given to them in the market integrity rules made by ASIC in accordance with Part 7.2A of the Corporations Act 2001 "**ASIC Rules**".

Trading hours

Match orders: 10:00-15:58 Sydney time

User Access

- UBS PIN only contains orders placed by wholesale clients as that term is defined in the *Corporations Act 2001*.
- UBS Australia reserves the right to determine in its discretion which clients may access UBS PIN, and as a result, clients of certain UBS Australia service offerings may not be eligible.
- UBS PIN does not contain orders placed by third-party broker dealers or liquidity providers⁸. It does not contain UBS Australia principal orders arising from facilitation, market making or hedging activity. UBS PIN may contain orders placed by UBS Australia's international related bodies corporate that are client driven.

If eligible, you are required to notify UBS Australia if you wish to access one or more Crossing System for which you are eligible. If you do not elect to access a Crossing System, your orders will not be directed to the Crossing System.

Reporting

Transactions matched in the Crossing Systems in Australia are reported by UBS Australia to a Market operated by either ASX or Chi-X, of which UBS Australia is a Participant.

HONG KONG

The Crossing Systems in Hong Kong are operated by UBS Securities Hong Kong Limited under a Hong Kong Securities and Futures Commission Type 7 license.

Under the Code, "**qualified investors**" means:

- i) a person falling under paragraphs (a) to (i) of the definition of "professional investor" in section 1 of Part 1 of Schedule 1 to the Securities and Futures Ordinance; or
- ii) a person within the meaning of sections 3(a), (c), (d)(i), d(iii) or d(iv) of the securities and Futures (Professional Investor) Rules.

Trading hours

Match orders: 9:30- 11:59 and 13:00- 15:59 HK time

Order Execution

Short sell orders are excluded from Crossing Systems in Hong Kong.

For orders with the same price, priority is given to agency client orders over UBS principal orders as required by the Securities and Futures Commission. Currently, Crossing Systems in Hong Kong do not contain UBS principal orders in the ordinary course of business. "Principal order" shall have the same meaning as "proprietary order" as defined under paragraph 19.2(e) of the Code.

Crossing systems will only process transactions where the mid-price is within three decimal places.

JAPAN

We will execute all client orders in accordance with our best execution arrangements, which is available at https://www.ubs.com/global/en/legalinfo2/jp/disclaimer_1/ubs_securities_disclaimer/ubs_securities_disclaimer6.html. This summary provides that we will execute client orders only on primary exchanges, however should you request us for access to any execution venues and/or Crossing Systems, you understand and acknowledge that we will direct all of your orders to external order books and Crossing Systems of your choice in addition to the primary exchanges, unless you instruct us otherwise at the time such order is placed.

The Crossing Systems in Japan identify crossing opportunities but do not execute. Once a crossing opportunity is identified by a Japan Crossing System, it will send such opportunity to Tokyo Stock Exchange Trading NeTwork ("**ToSTNeT**") for execution on ToSTNeT.

Trading hours

Match orders: 9:00-11:30 and 12:30-15:00 Tokyo time

⁸ UBS's international related bodies corporate may be broker dealers or liquidity providers.

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