**March 12, 2019**

**Part 1 – Introduction**

Like many jurisdictions globally, the Canadian equity market has evolved rapidly over recent years. Multiple competing marketplaces have launched operations, new participants have entered the market and the ways in which market participants interact have changed. The technology and tools available to achieve a variety of investing and trading objectives have modernized the Canadian market and made it more efficient. This evolution has in turn raised new issues to consider. On December 5, 2017, the Joint Canadian Securities Administrators (**CSA**)/Investment Industry Regulatory Organization of Canada (**IIROC**) Staff Notice 23-319 *Internalization in the Canadian Market*[1] was published to inform stakeholders that we were gathering information in order to understand current practices related to internalization and to consider how these activities fit within our current rule framework.

The purpose of this consultation paper (the **Consultation Paper)** is to seek feedback in response to concerns regarding the internalization of retail/small orders within the Canadian equity market. The CSA and IIROC, (collectively, **we)** are publishing the Consultation Paper for a 60-day comment period to solicit views. While there are a variety of competing interests, our underlying goal is to ensure the protection of investors, and to foster fair and efficient capital markets and confidence in capital markets. In addition to the specific questions put forth throughout the Consultation Paper, we invite any general comments you may have in relation to internalization.

The comment period will end on **Monday May 13, 2019.**

The remainder of the Consultation Paper is structured as follows:

- Part 2 provides background information, including a description of the relevant aspects of the current Canadian regulatory rule framework and the underlying objectives;

- Part 3 provides relevant data in relation to the magnitude of internalization in Canada;

- Part 4 identifies specific issues and concerns; and

- Part 5 describes other related issues.

**Part 2 - Background and History**

**2.1    Internalization**

The term "internalization" is broad. It can refer to different types of trading activities and may occur through a variety of means. For introductory and contextual purposes, a trade that has been

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[1] (2017) 40 OSCB 9649 (December 7, 2017).

"internalized" is generally considered to be a trade that is executed with the same dealer as both the buyer and the seller. A dealer may act as an agent on both sides of an internalized trade, or may act as principal in taking the other side of a client order. A trade can be internalized on a marketplace in multiple ways including intentionally, through the execution of an "intentional cross"[2], or through an "unintentional cross"[3] that occurs on a marketplace and is a result of trade matching priority methodologies. For further Canadian context, our rule framework does not permit internalization that results from order execution by a dealer without that execution occurring on a marketplace.

**Question 1:      How do you define internalization?**

As described above, internalization may occur either intentionally or unintentionally. The concept of a dealer intentionally taking steps to maximize the interaction between the orders of clients or between its clients and itself, is not new. In doing so, dealers may benefit from increased efficiencies, greater trading revenue and potentially achieve better outcomes for their clients. However, as technology and trading strategies continue to evolve, we have heard concerns regarding a perceived increase in the magnitude of dealer internalization on Canadian equity marketplaces, and the potential impact of any such increase on the quality of the Canadian market. While there may be some dealer-specific efficiencies and improved client outcomes associated with these changes, these must be weighed against other potential impacts. In section 4.1 of this Consultation Paper, we highlight the issue of the common good versus the individual good. Essential to a discussion about internalization, are questions related to activities and outcomes that may benefit the individual, but which may potentially detract from overall market quality.

It is important to establish at the outset that we have not reached any conclusions regarding internalization. There are a variety of market structure considerations that relate to internalization, and this Consultation Paper seeks feedback on several of these issues. When reviewing the feedback we will consider how evolving market structure and trading practices intersect with existing rules, with the goal of ensuring that the rule framework we have in place continues to protect investors and fosters a fair and efficient market.

## 2.2      Broker Preferencing

"Broker preferencing" is an important element of the concerns that have been raised in relation to internalization. Broker preferencing is a common order matching feature of many Canadian equity marketplaces, and allows an incoming order sent to a marketplace to match and trade first with other orders from the same dealer, ahead of orders from other dealers that are at the same price and

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[2] An intentional cross is considered to mean a trade that results from the simultaneous entry by a dealer of both the buy and the sell sides of a transaction in the same security at the same price.

[3] An unintentional cross is considered to mean the execution of a trade where the two orders (not simultaneously entered) are from the same dealer. In addition, and relevant to this Consultation Paper, the order matching methodology on many Canadian marketplaces will match and trade an incoming order with other orders from the same dealer first, even ahead of orders from other dealers that are at the same price and that have time priority. See section 2.2 of this Consultation Paper, under the heading *Broker Preferencing*.

that have time priority. This order matching methodology can facilitate internalization through the execution of unintentional crosses.

Broker preferencing is not new to the Canadian market and pre-dates modern electronic marketplaces in Canada by many years. Historically, its inclusion in the order matching priority of the Toronto Stock Exchange provided an incentive to encourage dealers to commit orders to the order book, rather than matching orders outside of the order book and then executing an intentional cross. It continues to be an order matching feature of many Canadian marketplaces.

## 2.3    History and Objectives of the Canadian Rule Framework

The purpose of our review of internalization is to consider how current trading practices fit within our rule framework, with the goal of ensuring that the rules continue to meet their intended objectives. While our rule framework currently accommodates some internalization, we want to ensure these rules continue to:

- meet the policy objectives;
- promote the functioning of a fair and efficient market; and
- reflect the evolution of the market.

In 2001, the CSA implemented rules designed to facilitate competition among marketplaces (the **Marketplace Rules**).[4] The Marketplace Rules consist of National Instrument 21-101 *Marketplace Operation* (**NI 21-101**), National Instrument 23-101 *Trading Rules* (**NI 23-101**) and their Companion Policies (**21-101CP** and **23-101CP**, respectively).

The Marketplace Rules were put in place with the objectives of:

- promoting competition and investor choice;
- improving price discovery;
- decreasing execution costs; and
- improving market integrity.

In the following subsections we outline certain key market attributes or characteristics that have guided the consideration of policy changes in the Canadian market for many years, and have been referenced not only in the continued development of the Marketplace Rules, but specific policy work in relation to dark liquidity[5] and the order protection rule[6]. We also provide a summary of the relevant aspects of our rule framework and the objectives sought through implementation.

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[4] Published at: http://www.osc.gov.on.ca/documents/en/Securities-Category0/rule_20010817_alternative_trading_systems.pdf

[5] Published at: http://www.osc.gov.on.ca/documents/en/Securities-Category2/csa_20091002_23-404_consultation-paper.pdf

[6] Published at: http://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20140515_23-101_rfc-pro-amd.htm

*2.3.1   Key Attributes of a Market*

The following key attributes of a market have been described in several publications including the 1997 TSE *Report of the Special Committee on Market Fragmentation: Responding to the Challenge*, and in Kirzner (2006)[7]. We continue to believe these attributes are relevant, especially in relation to concerns raised about internalization.

### 1.      Liquidity

Liquidity can be defined as the market's capacity to absorb trades from customers' buy and sell orders at, or near, the last sale price of a particular stock. The greater the number of orders and shares available at a particular price, the more liquid the market will be. Some of the characteristics of liquidity are market depth, market breadth, and resiliency.[8]

### 2.      Immediacy

Immediacy refers to how fast an order can be executed. This attribute is closely linked to liquidity, because as liquidity increases, the time to complete a trade should decrease.

### 3.      Transparency

Transparency refers to the degree to which there is real-time dissemination of information about orders and trades to the public.

### 4.      Price Discovery

Price discovery refers to the process through which the execution price for a security is established. The discovery of a security's fair market value is derived primarily from two sources: the supply of and demand for the security, which indicate a participant's willingness to transact at a given price, as well as information about transactions.

### 5.      Fairness

Fairness refers to the perception and the reality that all participants are subject to the same rules and conditions and that no individual or group has an unfair advantage or disadvantage over others. The "fairness" of a market may relate to fair access to either a specific marketplace or the entire market itself, fair access to trading information or the fair treatment of orders.

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[7] Kirzner, E., Ideal Attributes of a Marketplace (June 22, 2006). Task Force to Modernize Securities Legislation in Canada, Canada Steps Up, Volume 4 – Maintaining a Competitive Capital Market in Canada.

[8] Market depth refers to the number of orders at different prices that are in an order book. Market breadth is the number of shares that are wanted or offered at a particular price level and the ability to absorb an incoming large order. Resiliency refers to the ability for a market to attract offsetting orders relatively quickly when price changes occur.

**6.        Market Integrity**

The integrity of the market relates to the level of confidence in the market as a whole or in a particular marketplace. This confidence level is closely associated with both investors' perception of fairness in the market, and the effectiveness of the regulatory environment.

**Question 2:        Are all of these attributes relevant considerations from a regulatory policy perspective? If not, please identify those which are not relevant, and why.**

**Question 3:        How does internalization relate to each of these attributes? If other attributes should be considered in the context of internalization, please identify these attributes and provide rationale.**

*2.3.2    Marketplace Rules*

The Marketplace Rules were established with the objective of creating a rule framework to permit competition between exchanges and alternative trading systems (**ATSs**) that would:

- provide investor choice as to execution methodologies or types of marketplaces;

- improve price discovery;

- decrease execution costs; and

- improve market integrity.[9]

The various elements of the Marketplace Rules are guided by the key attributes of a market described above and impose requirements to ensure that trading is fair and efficient. Specific provisions that are relevant to internalization are described below.

*(a) Definition and Regulation of Marketplaces*

In furtherance of the objectives of the rule framework, the definition of a "marketplace" is a key element of the Marketplace Rules. The term is used throughout the Marketplace Rules to capture the different types of trading systems that match trades.[10]

NI 21-101 defines "marketplace" to be:[11]

- an exchange

- a quotation and trade reporting system (**QTRS**)

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[9] (2003) 26 OSCB 4377 June 13, 2003.

[10] Subsection 2.1(1) of Companion Policy 21-101CP.

[11] A similar definition of "marketplace" is included in the *Securities Act* (Ontario).

- a person or company that provides a market or facility that uses established, non-discretionary methods[12] to bring orders for securities of multiple buyers and sellers together[13]

- a dealer that executes a trade of an exchange-traded security outside of a marketplace.

With respect to internalization, 21-101CP provides relevant guidance in relation to the activities of a dealer. It provides the following clarifications:

- a dealer that internalizes orders for exchange-traded securities and does not execute and print the trades on an exchange or QTRS in accordance with the rules of the exchange or QTRS is considered to be a marketplace pursuant to the definition.[14]

- a dealer that uses a system to match buy and sell orders or pair orders with contra-side orders outside of a marketplace and routes the matched or paired orders to a marketplace as a cross may be considered to be operating a marketplace.[15]

*(b) Fair Access*

The fair access requirement prohibits marketplaces from unreasonably prohibiting, conditioning or limiting access to the services it offers.[16] The rule also prohibits unreasonably discriminating among clients, issuers and marketplace participants.[17] Where a system is determined to be a marketplace (including where dealer internalization activities might be considered as such), the fair access requirement applies.

*(c) Best Execution*

While marketplaces may implement additional rules, NI 23-101 also establishes basic common trading rules that apply across all marketplaces in order to ensure market integrity, including best execution. Securities legislation imposes a fundamental obligation on dealers to deal fairly,

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[12] Subsection 2.1(4) of Companion Policy 21-101CP explains that "established, non-discretionary methods" include any methods that dictate the terms of trading among multiple buyers and sellers entering orders on the system. Such methods include providing a trading facility or setting rules governing trading among marketplace participants. Rules imposing execution priorities, such as time and price priority rules, would be considered as "established, non-discretionary methods".

[13] Subsection 2.1(3) of Companion Policy 21-101CP clarifies that a person or company is considered to bring together orders for securities if it: (a) displays or otherwise represents to marketplace participants, trading interests entered on the system; or (b) receives orders centrally for processing and execution (regardless of the level of automation used).

[14] Subsection 2.1(1) of Companion Policy 21-101CP.

[15] Subsection 2.1(8) of Companion Policy 21-101CP.

[16] Section 5.1 of NI 21-101.

[17] Subsection 5.1(3) of NI 21-101.

honestly and in good faith with their clients. Best execution requirements stem from this obligation and require dealers to make reasonable efforts to obtain the most advantageous execution terms reasonably available when acting for a client.[18] While best execution is not assessed on a trade-by-trade basis, dealers are expected to establish and follow policies and procedures for achieving best execution and regularly review for the effectiveness of these policies and procedures.[19]

The objectives of these requirements are two-fold: (i) strengthen investor confidence and (ii) foster market fairness.

Where a dealer is taking steps to increase the magnitude of client orders that are internalized, best execution is an important element to consider for the dealer (in relation to their obligations), but also for the CSA and IIROC in the context of any future regulatory policy work.

### 2.3.3   Universal Market Integrity Rules

NI 23-101 also requires that exchanges regulate their members directly or through a Regulation Services Provider (**RSP**)[20] and that ATSs retain an RSP to monitor the conduct of the ATS and its subscribers.[21] IIROC acts as the RSP for all Canadian equity marketplaces and is also the self-regulatory organization that oversees all dealers and trading activity on these marketplaces. IIROC's Universal Market Integrity Rules (**UMIR**) were established to promote a fair and orderly market. UMIR is "universal" in that it applies to trading on all equity marketplaces and to anyone accessing these marketplaces,[22] and was established with the belief that the adoption of a single set of rules that is consistently applied and enforced is the best way to ensure market integrity.[23] The underlying policy objectives of UMIR are consistent with both the Marketplace Rules and the key attributes of a market. Relevant to internalization, there are a number of UMIR provisions that are discussed below.

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[18] Part 4 of NI 23-101 and IIROC Dealer Member Rule 3300.

[19] Subsection 4.1(3) of Companion Policy 23-101CP.

[20] Section 7.1 of NI 23-101.

[21] Section 8.3 of NI 23-101.

[22] Currently only Participants and Access Persons, as defined in UMIR, may access a marketplace for which IIROC is the RSP.

[23] https://www.bcsc.bc.ca/Securities_Law/Policies/Policy2/PDF/23-401_UMI_Rules/

*(a) UMIR 6.3 Exposure of Client Orders*

Subject to certain exceptions, Participants[24] must immediately enter client orders that are under a specific size threshold for display on a marketplace that displays orders.[25] The main policy objectives of exposing small orders to the market are:

- to strengthen liquidity;

- to help ensure small orders that can be filled on a marketplace are executed and are not unnecessarily withheld or delayed from being entered on the market; and

- to contribute to price discovery.

A dealer may however, withhold an order if immediately entering it on a marketplace would not serve the best interests of the client. If the Participant withholds the order, it must guarantee that:

- the client receives a price at least as good as the price the client would have received had the client order been executed on receipt by the dealer; or

- if traded against a principal order, a better price[26] than would have been received had the client order been executed on receipt by the dealer.

UMIR 6.3 is relevant to internalization in that where small orders are internalized by dealers, regulatory consideration must be given as to whether certain elements of the policy objectives are being met.

*(b) UMIR 6.4 Trades to be on a Marketplace*

UMIR 6.4 requires that trades by marketplace participants and related entities, subject to some exceptions, are executed on a marketplace. The main policy objectives of this provision are to strengthen liquidity, support price discovery and contribute to transparency.

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[24] "Participant" is defined in UMIR to mean (a) a dealer registered in accordance with securities legislation of any jurisdiction and who is: (i) a member of an Exchange, (ii) a user of a QTRS, or (iii) a subscriber of an ATS; or (b) a person who has been granted trading access to a marketplace and who performs the functions of a derivatives market maker.

[25] Subject to certain exceptions, all orders that are 50 standard trading units or less must be entered for display on a marketplace that displays orders.

[26] "Better price" is defined in UMIR to mean, in respect of each trade resulting from an order for a particular security: (a) in the case of a purchase, a price that is at least one trading increment lower than the best ask price at the time of the entry of the order to a marketplace provided that, if the best bid price is one trading increment lower than the best ask price, the price shall be at least one-half of one trading increment lower; and (b) in the case of a sale, a price that is at least one trading increment higher than the best bid price at the time of the entry of the order to a marketplace provided that, if the best ask price is one trading increment higher than the best bid price, the price shall be at least one-half of one trading increment higher.

UMIR 6.4 is relevant to internalization in the context that in jurisdictions such as the United States, the execution of retail orders can occur off-marketplace. This notable difference is a contributing factor in how the Canadian market has evolved and is a consideration in our review and discussion of any future policy work.

### (c) UMIR 8.1 Client-Principal Trading

UMIR 8.1 requires principal trades with small client orders to be executed at a better price in order to avoid conflicts inherent in the client-principal relationship[27] and to ensure that such conflicts are resolved in favour of the client. Part 2 of Policy 8.1 clarifies that:

- Some clients are in greater need of protection from the potential conflict of interest in client-principal trades and that the onus on the Participant usually will be reduced if the client is a fully informed institutional client with regard to the state of the market.

- If there was no prior discussion with the client concerning executing the client's order in a client-principal trade, or if there are no standing instructions on the handling of orders, the Participant must judge whether any steps need to be taken to ensure that a better price is not available.

UMIR 8.1 is relevant to internalization in that where a dealer may be taking steps to internalize small client orders, the trades must be executed in compliance with applicable provisions, including UMIR 8.1.

### (d) Definition of "Standard Trading Unit"

Both UMIR 6.3 and UMIR 8.1 use thresholds of 50 standard trading units[28] to determine whether the rule will apply to a specific order. This threshold is intended to capture smaller size orders that are representative of non-institutional orders.[29]

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[27] IIROC Rules Notice 12-0130 p. 7.

[28] "standard trading unit" is defined in UMIR to mean in respect of: (a) a derivative instrument, 1 contract, (b) a debt security that is a listed security or a quoted security, $1000 in principal amount; or (c) any equity or similar security: (i) 1,000 units of a security trading at less than $0.10 per unit, (ii) 500 units of a security trading at $0.10 or more per unit and less than $1.00 per unit, and (iii) 100 units of a security trading at $1.00 or more per unit.

[29] IIROC is in the process of assessing whether this threshold continues to meet the objectives of the UMIR provisions to which it is applicable. If this threshold is changed as a result of the review, this may result in capturing a greater number of orders subject to UMIR 6.3 and 8.1, and possibly affect how a dealer interacts with its client orders.

**Part 3 – Magnitude of Internalization in Canada**

As a starting point for the consideration of issues related to internalization, we believe that it is appropriate to understand the magnitude of trades that are internalized on Canadian marketplaces. For this purpose, a quantitative analysis is included as Appendix A. This analysis explores:

- intentional crosses,
- unintentional crosses, and
- the use of broker preferencing on certain Canadian marketplaces

Highlights of the statistics presented in Appendix A are set out below.

**3.1    Intentional and Unintentional Crosses**

Part 1 of Appendix A provides data regarding the magnitude of intentional and unintentional crosses for the period of January 2016 to June 2018. Among other elements provided, it separates the data into six-month buckets and shows the average of all trade executions resulting from intentional and unintentional crosses by volume, value and number of trades. For the most recent period examined (January to June 2018) these averages are:

| Unintentional Crosses by Number of Trades | 13.91% |
|---|---|
| Unintentional Crosses by Volume | 12.75% |
| Unintentional Crosses by Value | 13.40% |
| Intentional Crosses by Number of Trades | 0.11% |
| Intentional Crosses by Volume | 8.87% |
| Intentional Crosses by Value | 11.67% |

The net changes from the average of the first six months of 2016 to the average of the first six months of 2018 are:

| Unintentional Crosses by Number of Trades | 1.64% |
|---|---|
| Unintentional Crosses by Volume | 0.90% |
| Unintentional Crosses by Value | 1.96% |
| Intentional Crosses by Number of Trades | 0.06% |
| Intentional Crosses by Volume | -2.66% |
| Intentional Crosses by Value | -1.51% |

**3.2    Broker Preferencing**

Part 2 of Appendix A details the magnitude of trades that resulted from broker preferencing (i.e. where an order executed ahead of another order (other orders) from a different dealer(s) that was at the same price and that had time priority) for the period of January 2017 to July 2018. Not every Canadian marketplace is able to accurately identify trades that result from broker preferencing and as a result, the data only includes those marketplaces that were able to provide relevant information.

The information is provided in terms of total volume, value and number of trades and as a percentage of total volume, value and number of trades. It is further separated by trades that are client to client, client to inventory and other.

Over the period of January 2017 to July 2018, the following data represents the average volume, value and number of trades resulting from broker preferencing as a percentage of total volume, value and number of trades.

| Number of Broker Preferenced Trades | Average as Percent of Total Number of Trades |
|---|---|
| Client to Client | 3.91% |
| Client to Inventory | 1.06% |
| Other | 0.35% |

| Volume of Broker Preferenced Trades | Average as Percent of Total Volume of Trades |
|---|---|
| Client to Client | 4.44% |
| Client to Inventory | 2.03% |
| Other | 0.30% |

| Value of Broker Preferenced Trades | Average as Percent of Total Value of Trades |
|---|---|
| Client to Client | 2.54% |
| Client to Inventory | 1.81% |
| Other | 0.27% |

## Part 4 - Issues and Concerns

The following sections discuss some of the key issues or concerns that have been identified in relation to internalization. They include considerations related to:

- the common versus individual good
- the impact of broker preferencing in an evolving Canadian market
- how advanced dealer systems that leverage technology may intersect with the definition of a marketplace in the Canadian rule framework (and the corresponding marketplace requirements)
- the retail investor and segmentation of retail orders, which are inextricably linked to concerns about increasing levels of internalization

### 4.1    Common Good Versus Individual Good

The internalization of client orders may potentially benefit both the dealer internalizing the orders and its clients. Some client orders may be of sufficient size that they would trade through multiple price levels in an order book resulting in "market impact" and a less advantageous execution outcome. Other orders may be of sufficient size that they must be routed to multiple marketplaces to access all available liquidity. Depending on the technology utilized, network latencies experienced and the state of the order book at the time the order arrives at a marketplace, execution volumes may be different than expected if available liquidity has changed. Where a dealer internalizes a client order and executes the order at a single price, execution quality for clients may

improve. Dealers may also experience reduced trading and/or back office processing costs, which also may ultimately benefit their clients.

Given the above, it may seem reasonable to suggest that in certain instances, the internalization of client orders could be in the best interests of the client, and in furtherance of a dealer's best execution obligations. However, dealers collectively acting in a manner that maximizes their benefits and the benefits to their own clients raises questions about whether and how this impacts the market as a whole. Where a dealer internalizes a client order that would otherwise have traded with existing displayed orders, another market participant has, at least in the immediate term, experienced an inferior outcome. Further, concentrated "silos" of orders interacting exclusively within individual dealers may result in inferior outcomes for participants who are not clients of these individual dealers. This raises important considerations that relate to balancing the principles of fairness and market integrity (i.e. confidence in the market) with the recognition that technology has provided the tools to achieve trading outcomes that provide measurable benefits to individual dealers and their clients.

**Question 4:** **Please provide your thoughts on the question of the common versus the individual good in the context of internalization and best execution.**

**Question 5:** **Please provide any data regarding market quality measures that have been impacted by internalization. Please include if there are quantifiable differences between liquid and illiquid equities.**

**Question 6:** **Market participants: please provide any data that illustrates the impacts to you or your clients resulting from your own efforts (or those of dealers that execute your orders) to internalize client orders (e.g. cost savings, improved execution quality) or the impacts to you or your clients resulting from internalization by other market participants (e.g. inferior execution quality/reduced fill rates).**

## 4.2 Broker Preferencing and Key Attributes of a Market

Broker preferencing is a somewhat unique feature to Canadian marketplaces[30] and has been a divisive issue over the years. Some market participants have expressed concern with the perceived inherent conflict with the use of broker preferencing in trading systems that otherwise prioritize the allocation of trades based on best price followed by time of order entry. Some also believe that it conveys greater benefits to dealers with more client orders, limits access to these orders to only those dealers and that it is at odds with general principles of fairness.

Supporters have expressed the view an "on-marketplace" internalization mechanism such as broker preferencing is more favourable and potentially more beneficial to market quality than alternatives. As previously noted, in other jurisdictions such as the United States, significant amounts of orders are traded by dealers "off-marketplace", and these orders are therefore never made available to the broader market. If broker preferencing were to be prohibited or substantially curtailed, concerns

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[30] While preferencing allocations have historically been employed on certain marketplaces in the United States, to our knowledge there are only limited other examples of this type of matching priority currently being employed by other marketplaces globally.

have been raised that dealers will search for alternative means by which to achieve the same outcomes away from Canada's transparent order books.

Broker preferencing can also be viewed as an incentive for dealers (or their clients where direct market access has been provided) to display liquidity in a transparent order book. While critics may argue that it acts as a deterrent to the price discovery process, proponents suggest the opposite.

Over the many years that broker preferencing has been part of the Canadian market, we are not aware of any studies completed or evidence to show that market quality has been negatively impacted as a result. However, if systems are being used to leverage broker preferencing and facilitate automated internalization (further described below), and the breadth of orders that can thus be internalized is larger, the impact on the broader market is not clear. Over time, the expanded use of broker preferencing to internalize a significantly greater magnitude of orders may impact liquidity, price discovery, fairness and market integrity, all of which we continue to believe are key attributes of a well-functioning Canadian market. While the execution results may be positive for clients, we must consider the impact on the broader market.

**Question 7:**       **Please provide your views on the benefits and/or drawbacks of broker preferencing?**

**Question 8:**       **Market participants: where available, please provide any data that illustrates the impact of broker preferencing on order execution for you or your clients (either positive or negative).**

**Question 9:**       **Please provide your thoughts regarding the view that broker preferencing conveys greater benefits to larger dealers.**

**Question 10:**      **Does broker preferencing impact (either positively or negatively) illiquid or thinly-traded equities differently than liquid equities?**

### 4.3     Interpretation of the Definition of a Marketplace

As noted above, two main characteristics of a marketplace are that it:

(a)     brings orders for multiple buyers and sellers together
(b)     allows orders to interact using established, non-discretionary methods

The current definition of a marketplace remains largely unchanged from when the Marketplace Rules were first introduced in 2001. However, technology has changed in many ways since that time and has been a key contributor to the evolution of the Canadian equity market. It has both increased the efficiency of our market and contributed to the complexity of trading. Technology has also helped dealers more efficiently match orders between their own clients and to provide liquidity to clients on a principal basis. While these tasks were once largely manual, technology has enabled dealers to automate the processes.

*4.3.1   Automated Matching Against Client Orders on a Marketplace*

The term "match" is not defined in NI 21-101 but it is intended to capture the process of bringing a buyer and seller together, potentially resulting in a trade execution. 21-101CP provides additional guidance and clarifies that where a system merely routes unmatched orders to a marketplace for execution, that system would not be considered a marketplace.[31] However, 21-101CP also clarifies that if a dealer uses a system to match buy and sell orders or pair orders with contra-side orders outside of a marketplace and routes the matched or paired orders to a marketplace as a cross, the Canadian securities regulatory authorities may consider the dealer to be operating a marketplace under subparagraph (a)(iii) of the definition of "marketplace".[32]

Systems may be used by dealers that identify potential opportunities to route two "unmatched" orders to a marketplace, which may be executed and internalized through broker preferencing. Using a variety of techniques, a dealer may be able to internalize these orders with a high degree of certainty.

Although not contemplated at the time the Marketplace Rules were written, systems operating in a manner similar to that described above may appear to exhibit the characteristics of a marketplace as intended by the definition in NI 21-101 and guidance in 21-101CP. The systems may automatically identify potential internalization opportunities and employ various processes to essentially bring together client and principal orders which, using the established non-discretionary order matching methodology of a marketplace, may execute with a high degree of certainty. While the orders are executed as an "unintentional" cross through broker preferencing, the automated processes and resulting trades are intentional in nature.

The automation of this type of dealer activity may also greatly expand the scope of orders to which these processes can be applied. Subject to pre-determined and systematic parameters, technology can bring together or "match" buy and sell orders from large individual classes of a dealer's orders. The ability to automate wide-scale internalization of client orders may further call into question whether the activities exhibit enough characteristics of a marketplace that certain provisions of the Marketplace Rules should apply.

**Question 11:     Do you believe that a dealer that internalizes orders on an automated and systematic basis should be captured under the definition of a marketplace in the Marketplace Rules? Why, or why not?**

## 4.4     Segmentation of Retail Orders

In the context of trade execution, segmentation of orders means the separation of orders from one class or type of market participant from that of other classes of participants. This can occur through a variety of methods and in the Canadian context is typically focused on the orders of retail investors. Retail orders have a unique value proposition to a variety of market participants. They not only provide value to the dealer responsible for their execution, but also provide value to

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[31] Subsection 2.1(8) of 21-101CP.

[32] Subsection 2.1(8) of 21-101CP.

counterparties on the other side of retail trades (including other investors, market makers and proprietary trading firms) and the marketplaces on which the orders are executed.

For market makers or proprietary trading firms, retail orders are valuable because they are less risky to trade against. Retail orders are often smaller in size, tend to be on aggregate, non-directional, and may be perceived to be less informed. As a result, they may be profitable counterparties to trading strategies that seek to provide liquidity and/or capture the spread between the bid and offer.

For a dealer, part of the value of retail orders may also be linked to their desirability as a trade counterparty. In some jurisdictions, dealers often receive payment for their retail orders. Third-party firms will pay for the right to execute retail orders and then trade off-marketplace on a proprietary basis. These types of arrangements are not permitted within the Canadian rule framework.

Retail investors may also tend to demand immediacy of trade execution (i.e. employ market or marketable limit orders) more frequently than other types of clients. This may result in retail orders being more costly for a dealer to execute, particularly when executing trades on marketplaces that charge a fee for orders that remove liquidity from an order book (such as the standard "maker-taker" marketplace fee model[33]). As a result, dealers may seek ways to achieve best execution for retail orders while also minimizing associated costs.

Marketplaces also value retail orders in that attracting retail orders will also attract liquidity providing participants who are motivated to act as a counterparty to retail orders, which may result in increased trading volume, market share and revenue.

As a result of their value to a variety of market participants, a number of methods designed to segment retail orders, both explicitly and implicitly, have been proposed or introduced by Canadian marketplaces. The traditional maker-taker trading fee model has been modified in the form of an "inverted" maker-taker model, which pays a rebate to an order that removes liquidity from an order book and charges a fee for the execution of an order that provides liquidity. The inverted fee model is attractive to cost-sensitive retail dealers as well as to liquidity providers who are seeking to take the other side of retail orders, and who are willing to pay a fee to do so.

Dark marketplaces[34] in Canada have also been linked to considerations related to segmentation of orders and internalization for many years. As an example, in 2010, Alpha ATS LP proposed to introduce IntraSpread, a dark trading facility within Alpha ATS that sought approval to introduce a "Seek Dark Liquidity" (**SDL**) order that would trade only with undisplayed liquidity in IntraSpread, and only with orders from the same dealer.[35] This explicit internalization feature raised concerns on the part of staff of the Ontario Securities Commission (the principal regulator of Alpha ATS at the time) and certain respondents to the public comment process. While the

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[33] The "maker-taker" marketplace fee model charges a fee for the execution of an order that removes liquidity from an order book and pays a rebate to the provider of liquidity for the same transaction.

[34] A dark marketplace is a marketplace that does not publicly display orders on a pre-trade basis.

[35] Published at: http://www.osc.gov.on.ca/documents/en/Marketplaces/ats_20100716_proposed-changes.pdf

proposal was subsequently revised,[36] the underlying rationale was to offer a facility that would allow providers of liquidity the opportunity to interact exclusively with retail orders in a manner that offered the retail client price improvement and offered retail dealers a means by which to more efficiently manage trading costs.

In addition, certain marketplaces have introduced order processing delays, or "speedbumps" that are designed to slow down the execution of certain orders. In some cases, these order processing delays are implicitly operationalized in a way to make the marketplace potentially less attractive to certain orders and trading strategies (such as those of institutional investors) and potentially more attractive to retail dealers and counterparties seeking to trade with retail orders.

Recognized exchanges in Canada have also employed other methods to segment retail orders. Programs associated with exchange market makers have been revised in a manner that, in certain circumstances, allows market makers to interact more exclusively with retail orders. These programs essentially provide an opportunity for the market maker to interact with "eligible" orders at the best available bid or offer, after all displayed liquidity on that marketplace has been traded against. An "eligible" order is narrowly defined such that it is essentially restricted to retail orders. A market maker is thus given the opportunity to exclusively interact with the remaining balance of a retail order that has traded with all available liquidity at the best bid or offer.

Segmentation is not only being facilitated by marketplaces. When developing systems to internalize orders such as those previously described, dealers may be specifically segmenting their own clients; targeting orders from their retail clients and excluding orders from other types of clients. Much of the recent concern about increasing levels of dealer internalization is premised on the view that systems are being employed to segment and internalize predominantly retail orders, leaving significantly less opportunity for the broader market to trade with retail clients and potentially resulting in inferior execution results for market participants in aggregate.

The continued trend towards segmentation of retail orders raises important questions, similar to those discussed in relation to internalization and more broadly in the context of the key attributes of a market.

**Question 12:** **Do you believe segmentation of orders is a concern? Why, or why not? Do your views differ between order segmentation that is achieved by a dealer internalizing its own orders and order segmentation that is facilitated by marketplaces?**

### 4.5    Internalization and the Retail Investor

The retail investor is inextricably linked to any discussion about internalization. In sections 4.1 through 4.3 of this Consultation Paper, we have highlighted specific issues related to dealer systems that blur the lines between dealer and marketplace activities, as well as concerns about the fairness of broker preferencing. Further, we frame a "bigger picture" issue in the context of the "individual good" versus the "common good" of the entire market. While orders from a variety of market participants can be internalized using various means, the focus of recent concerns is predominantly in relation to the orders of retail investors.

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[36] Published at: http://www.osc.gov.on.ca/en/Marketplaces_ats_20101214_rfc-intraspread.htm

Discussions about the treatment of retail orders are not new. Many of the market structure issues that CSA staff, IIROC staff and the industry as a whole have considered in recent years are in some way related to retail orders. As has been described, the execution of retail orders was an important element in the development of the framework for dark liquidity, changes to the order protection rule, as well as various marketplace proposals related to fees, order processing delays and market making facilities. It was also the direct focus of a CSA publication in 2014 that articulated concerns related to the routing of retail orders to the United States for execution.[37] In that publication, the CSA stated "*retail orders are an important part of the Canadian market ecosystem, and the CSA continue to support the existing rule framework, which emphasizes the importance of these orders to the quality of the Canadian equity market, including the price discovery process*". We further articulated our public interest concerns in stating "*the CSA are concerned that widespread routing of retail order flow to U.S. dealers will negatively impact the quality of the Canadian market, and may affect the quality of execution achieved for investors.*" These same issues continue to be relevant in the context of this Consultation Paper on internalization.

It is clear that retail orders have value to a variety of market participants, and a great deal of resources have been expended by various industry stakeholders to create ways to extract this value to the benefit of some, but not necessarily all. In the context of the issues around internalization, we are considering whether and how our rule framework can directly address the questions and issues associated with the execution of retail orders in a manner that both protects the interests of retail investors, and ensures that the Canadian equity market continues to bring together all types of participants in a transparent and efficient manner.

**Question 13:** **Do you believe that Canadian market structure and the existing rule framework provides for optimal execution outcomes for retail orders? Why or why not?**

**Question 14:** **Should the CSA and IIROC consider changes to the rule framework to address considerations related to orders from retail investors? If yes, please provide your views on the specific considerations that could be addressed and proposed solutions.**

### Part 5 – Other Related Issues

There are also several elements of Canadian market structure that are related to internalization but that we have either not explored in detail in this Consultation Paper, and/or are not in scope when considering potential policy approaches to the issues.

### 5.1 Block Trades

As has been discussed, internalization can refer to different types of trading activities, and may occur through a variety of means. One method is through the execution of an intentional cross, where a dealer may work to find the counterparty to a client order or commit its capital and assume the risk of acting as the trade counterparty on a principal basis. Commonly referred to as the "upstairs market", withholding larger orders from immediate entry to a marketplace is a long-

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[37] Published at: http://www.osc.gov.on.ca/en/NewsEvents_nr_20141215_concerns-routing-retail-equity-orders.htm

standing practice in the Canadian market. Although these trades may ultimately be internalized, and potentially to the exclusion of orders from other marketplace participants, we do not intend to consider policy changes in this regard as we believe such activities to be potentially integral to both the execution of large investor orders and efficient functioning of the Canadian market.

## 5.2    Dark Liquidity

The Canadian rule framework for dark liquidity was implemented in 2012 as a joint initiative between the CSA and IIROC, with the goal of balancing the use of undisplayed orders and supporting the price discovery process. The key elements of the framework are the prioritization of displayed orders ahead of undisplayed orders at the same price on the same marketplace, and the provision of meaningful price improvement for small orders that execute with undisplayed orders. Section 4.4 of this Consultation Report briefly describes the historical link between the use of dark liquidity and segmentation of orders.

While we will consider potential approaches to address the execution of retail orders, we continue to believe that the dark liquidity framework strikes an appropriate balance that protects the price discovery process while recognizing that dark liquidity serves an important purpose in the execution of certain trading strategies and is a consideration in seeking best execution of client orders. We do not intend to consider revising the dark liquidity framework at this time.

## 5.3    Trading Fee Models

We have described the link between trading fee models and internalization, and that trading fee models are a tool used by marketplaces to attract and/or segment orders, including retail orders. While trading fee models are an important part of the internalization discussion, at this time we do not intend to consider changes that might impact the trading fee models currently employed by Canadian marketplaces. In addition, on December 18, 2018, the CSA published for comment a proposed pilot study that would examine the impact of limiting or prohibiting the payment of rebates by marketplaces.[38]

**Question 15:    Are there other relevant areas that should be considered in the scope of our review?**

## Part 6 – Next Steps

This Consultation Paper seeks feedback on a variety of matters related to internalization. As we recognize the importance of the issue, we must also ensure that all stakeholders are given an opportunity to provide input, and that all feedback is considered in our ongoing policy discussions. For this reason, this Consultation Paper does not reach conclusions or propose next steps. We will consider all feedback received and determine next steps at the end of this consultation phase.

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[38] Published at: http://www.osc.gov.on.ca/documents/en/Securities-Category2/csa_20181218_23-323_trading-fee-rebate-pilot-study.pdf

**Comments and submissions**

We invite participants to provide input on the issues outlined in this public Consultation Paper. You may provide written comments in hard copy or electronic form. The consultation period expires **Monday, May 13, 2019.**

Please submit your comments in writing on or before **May 13, 2019**. If you are not sending your comments by email, please send a CD containing the submissions (in Microsoft Word format).

Address your submission to all of the CSA as follows:

British Columbia Securities Commission
Alberta Securities Commission
Financial and Consumer Affairs Authority of Saskatchewan
Manitoba Securities Commission
Ontario Securities Commission
Autorité des marchés financiers
Financial and Consumer Services Commission, New Brunswick
Superintendent of Securities, Government of Prince Edward Island
Nova Scotia Securities Commission
Superintendent of Securities, Department of Service NL, Provincial Government of Newfoundland and Labrador
Superintendent of Securities, Northwest Territories
Superintendent of Securities, Yukon
Superintendent of Securities, Department of Justice, Government of Nunavut

Deliver your comments **only** to the addresses below. Your comments will be distributed to the other participating CSA regulators.

The Secretary
Ontario Securities Commission
20 Queen Street West
22$^{nd}$ Floor
Toronto, Ontario M5H 3S8
Fax: 416-593-2318
comments@osc.gov.on.ca

M$^e$ Anne-Marie Beaudoin
Corporate Secretary
Autorité des marchés financiers
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Consultation-en-cours@lautorite.qc.ca

IIROC
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kmccoy@iiroc.ca

We cannot keep submissions confidential because securities legislation in certain provinces requires publication of the written comments received during the comment period. All comments received will be posted on the websites of each of the Alberta Securities Commission at www.albertasecurities.com , the Autorité des marchés financiers at www.lautorite.qc.ca and the Ontario Securities Commission at www.osc.gov.on.ca. Therefore, you should not include personal information directly in comments to be published. It is important that you state on whose behalf you are making the submission.

## Part 7 - Questions

Please refer your questions to any of the following:

| | |
|---|---|
| Kent Bailey<br>Trading Specialist, Market Regulation<br>Ontario Securities Commission<br>kbailey@osc.gov.on.ca | Kortney Shapiro<br>Legal Counsel, Market Regulation<br>Ontario Securities Commission<br>kshapiro@osc.gov.on.ca |
| Tracey Stern<br>Manager, Market Regulation<br>Ontario Securities Commission<br>tstern@osc.gov.on.ca | Roland Geiling<br>Analyste en produits dérivés<br>Direction des bourses et des OAR<br>Autorité des marchés financiers<br>roland.geiling@lautorite.qc.ca |
| Serge Boisvert<br>Analyste en réglementation<br>Direction des bourses et des OAR<br>Autorité des marchés financiers<br>serge.boisvert@lautorite.qc.ca | Lucie Prince<br>Analyste<br>Direction des bourses et des OAR<br>Autorité des marchés financiers<br>lucie.prince@lautorite.qc.ca |
| Sasha Cekerevac<br>Regulatory Analyst, Market Regulation<br>Alberta Securities Commission<br>sasha.cekerevac@asc.ca | Bruce Sinclair<br>Securities Market Specialist<br>British Columbia Securities Commission<br>bsinclair@bcsc.bc.ca |
| Kevin McCoy<br>Vice-President, Market Policy & Trading<br>Conduct Compliance<br>IIROC<br>kmccoy@iiroc.ca | |

**Appendix A**

Quantitative Analysis of Internalization on Canadian Marketplaces

This appendix looks quantitatively at trading activity and features associated with the internalization of orders.

Part 1 of this appendix provides data with respect to the occurrences of intentional and unintentional crosses on all Canadian marketplaces for the period of January 2016 to June 2018 and relies on data received by IIROC through the Market Regulation Feed submitted by each marketplace.

Part 2 of this appendix looks at the magnitude of broker preferencing. The data used for this section only includes the data provided by those marketplaces that are able to accurately track trades resulting from orders that do not follow time priority as a result of broker preferencing, and covers the period of January 2017 to July 2018.

**Part 1**

Fig. 1 – Percentage of Total Trades Executed as Unintentional (UIC) or Intentional (IC) Crosses



This figure shows overall crosses as a percentage of total number of trades. The upper chart shows unintentional crosses and the lower chart shows intentional crosses. Table 1 provides a summary of the averages and the percentage change over the period.
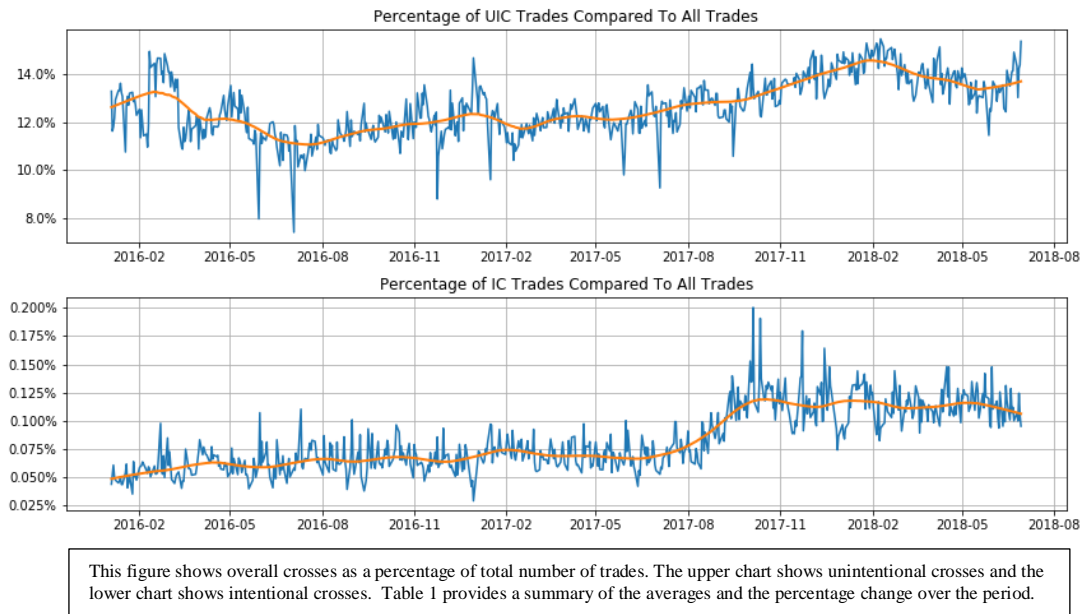
Fig. 2 - Percentage of Total Volume Executed as Unintentional or Intentional Crosses



This figure shows overall crosses as a percentage of total volume traded. The upper chart shows unintentional crosses and the lower chart shows intentional crosses. Table 1 provides a summary of the averages and the percentage change over the period.
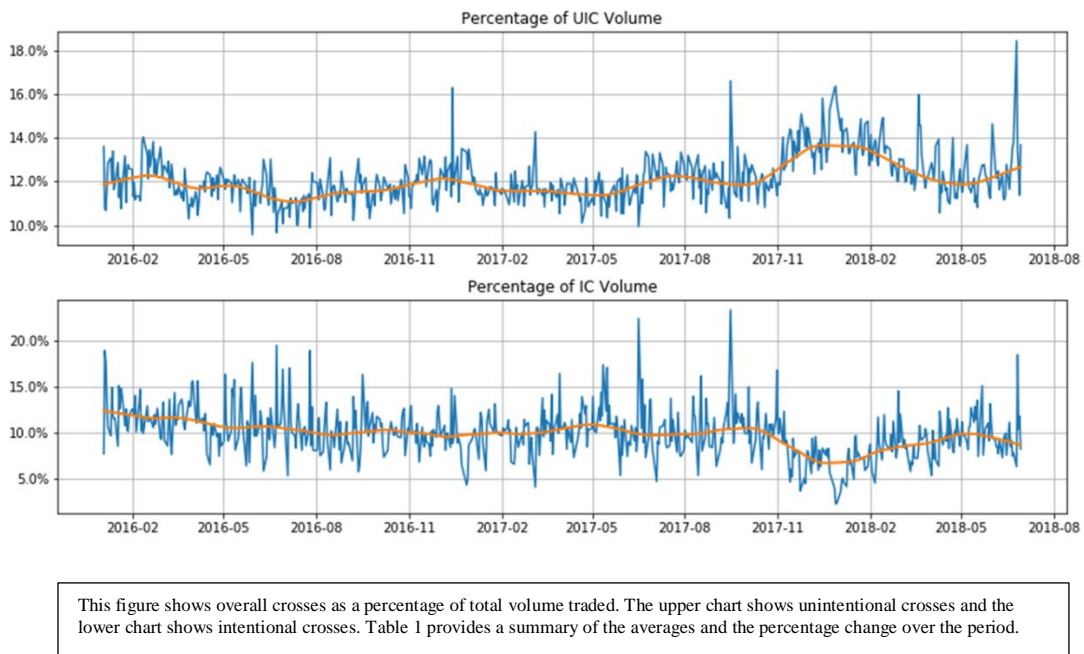
Fig. 3 - Percentage of Total Value Executed as Unintentional or Intentional Crosses
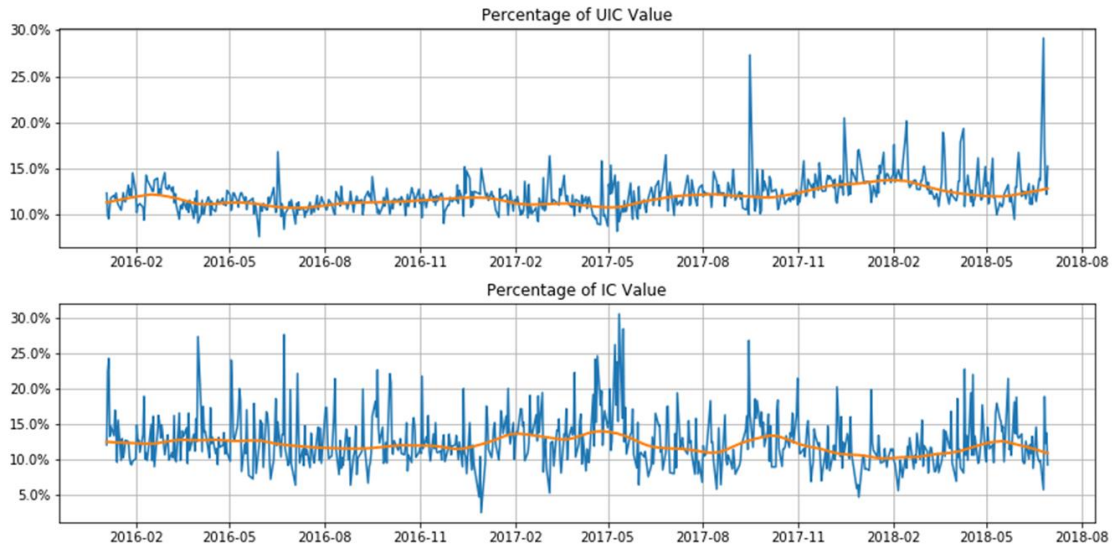


This figure shows overall crosses as a percentage of total value traded. The upper chart shows unintentional crosses and the lower chart shows intentional crosses. Table 1 provides a summary of the averages and the percentage change over the period.

Table 1 – Six-month Averages of Unintentional and Intentional Crosses

| | 2016 Period1 | 2016 Period2 | 2017 Period3 | 2017 Period4 | 2018 Period5 | | Change Over Periods 1-5 |
|---|---|---|---|---|---|---|---|
| | Jan-June | July-Dec | Jan-June | July-Dec | Jan-June | Net Change | % Change |
| Unintentional by Trade | 12.27% | 11.64% | 12.07% | 13.12% | 13.91% | 1.64% | 13.41% |
| Unintentional by Volume | 11.85% | 11.70% | 11.58% | 12.62% | 12.75% | 0.90% | 7.60% |
| Unintentional by Value | 11.44% | 11.39% | 11.48% | 12.65% | 13.40% | 1.96% | 17.13% |
| Intentional by Trade | 0.06% | 0.07% | 0.07% | 0.10% | 0.11% | 0.06% | 94.52% |
| Intentional by Volume | 11.53% | 10.03% | 10.46% | 9.41% | 8.87% | -2.66% | -23.09% |
| Intentional by Value | 13.18% | 12.13% | 13.82% | 12.09% | 11.67% | -1.51% | -11.46% |

Table 1 shows the average percentages of total trade executions executed as intentional and unintentional crosses by number of trade, total volume and value averaged over a six-month period. Net change is calculated by comparing period 1 (Jan-June 2016) to period 5 (Jan-June 2018). Change over periods 1-5 is the net change as a percentage of the period 1 percentage. Net change and percent change may not be exact due to rounding.

**Fig. 4 – Cross Trades by Account Type – Compared Against Non-cross (NC) Trades**
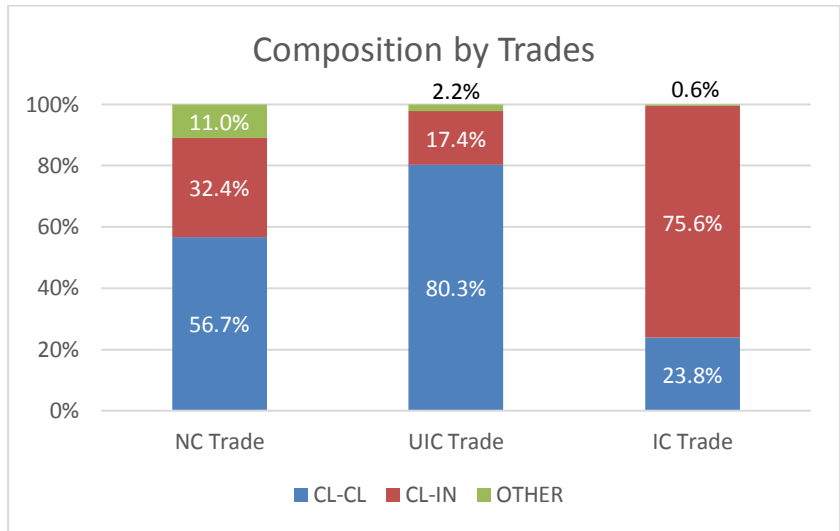


This figure shows the percentage of intentional and unintentional crosses by number of trades and client types. Client types of non-cross trades is provided for comparison purposes. "OTHER" refers to any trade involving an account type marker that is not CL-CL or CL-IN.

**Fig. 5 – Cross Volume by Account Type – Compared Against Non-cross Volume**
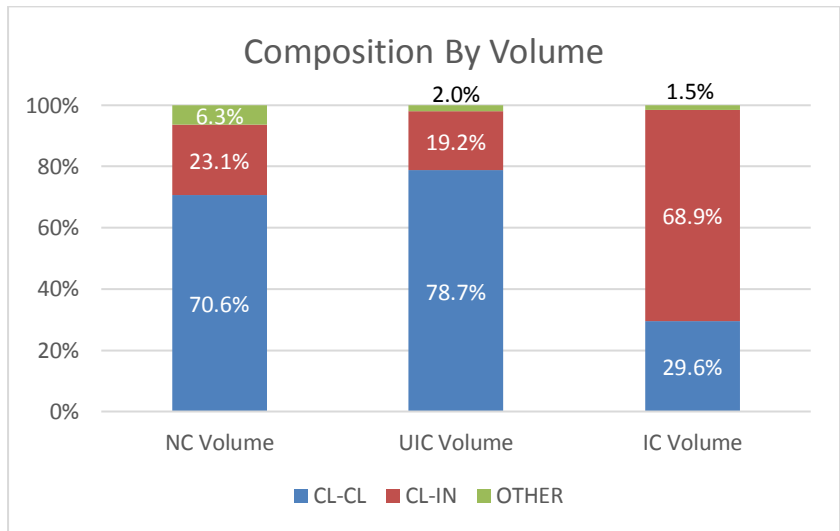


This figure shows the percentage of intentional and unintentional crosses by volume and client types. Client types of non-cross trades is provided for comparison purposes.

Fig. 6 - Cross Value by Account Type – Compared Against Non-cross Value
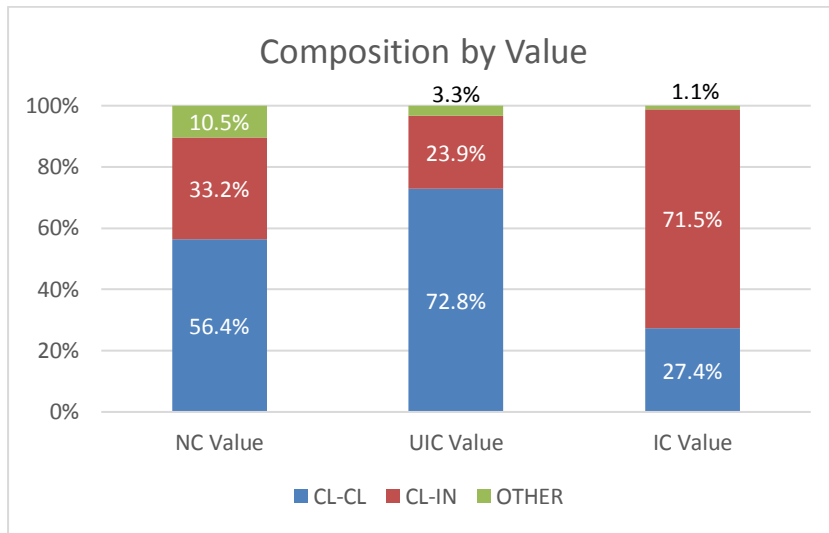


This figure shows the percentage of intentional and unintentional crosses by value traded and client types. Client types of non-cross trades is provided for comparison purposes.

Fig. 7 – Crosses by Account Type
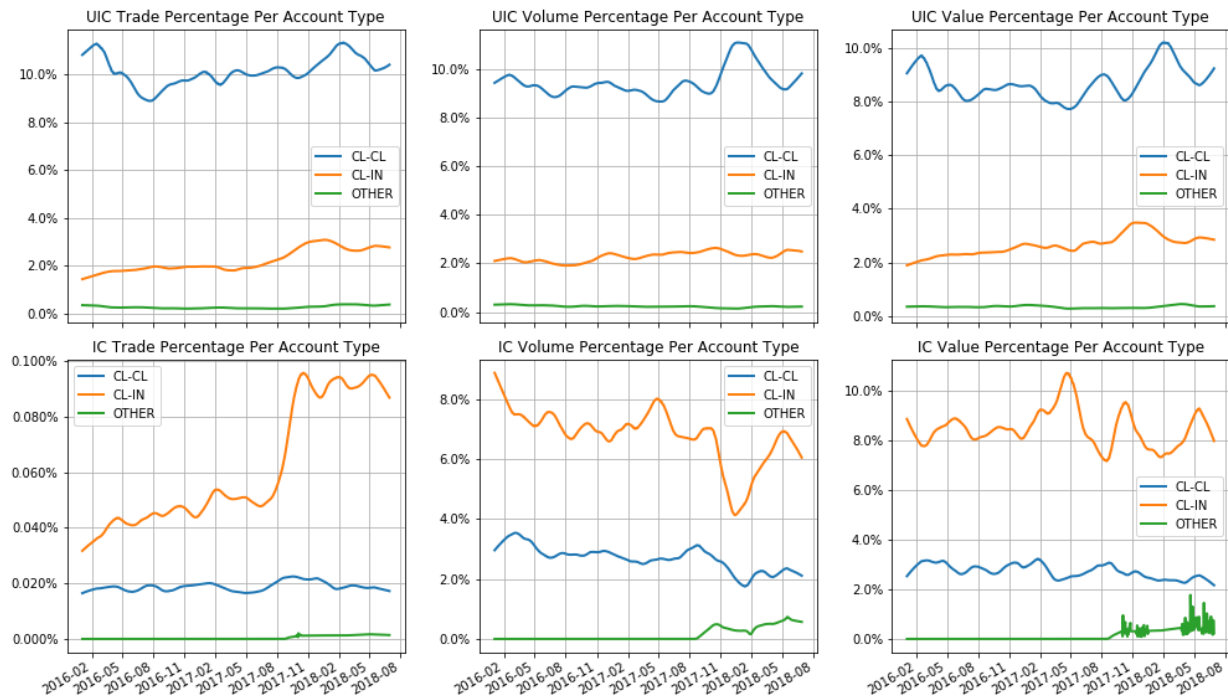


This figure shows the change over the period by number of trades, total volume traded and total value traded by client type. The percentages are measured against the total trading that occurred on all marketplaces.

Table 2 – Cross by Account Types – 6-month Averages

| | | 2016 Period1 | 2016 Period2 | 2017 Period3 | 2017 Period4 | 2018 Period5 | | Change Over Periods 1-5 |
|---|---|---|---|---|---|---|---|---|
| | | Jan-June | July-Dec | Jan-June | July-Dec | Jan-June | Net Change | % Change |
| Unintentional by Trade | CL-CL | 10.25% | 9.47% | 9.89% | 10.13% | 10.72% | 0.47% | 4.60% |
| Unintentional by Trade | CL-IN | 1.73% | 1.95% | 1.95% | 2.74% | 2.81% | 1.08% | 62.40% |
| Unintentional by Trade | OTHER | 0.29% | 0.23% | 0.24% | 0.25% | 0.39% | 0.10% | 33.90% |
| Unintentional by Value | CL-CL | 8.80% | 8.46% | 8.22% | 8.79% | 9.95% | 1.14% | 13.00% |
| Unintentional by Value | CL-IN | 2.25% | 2.53% | 2.91% | 3.51% | 3.00% | 0.75% | 33.50% |
| Unintentional by Value | OTHER | 0.39% | 0.40% | 0.36% | 0.35% | 0.45% | 0.06% | 16.20% |
| Unintentional by Volume | CL-CL | 9.37% | 9.31% | 8.97% | 9.83% | 10.12% | 0.75% | 8.00% |
| Unintentional by Volume | CL-IN | 2.18% | 2.14% | 2.38% | 2.58% | 2.40% | 0.22% | 10.10% |
| Unintentional by Volume | OTHER | 0.30% | 0.25% | 0.23% | 0.21% | 0.23% | -0.07% | -23.30% |
| Intentional by Trade | CL-CL | 0.02% | 0.02% | 0.02% | 0.02% | 0.02% | 0.00% | 2.60% |
| Intentional by Trade | CL-IN | 0.04% | 0.05% | 0.05% | 0.08% | 0.09% | 0.05% | 132.90% |
| Intentional by Trade | OTHER | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | NA |
| Intentional by Value | CL-CL | 4.13% | 3.75% | 3.56% | 3.23% | 2.56% | -1.58% | -38.10% |

| Intentional by Value | CL-IN | 9.04% | 8.38% | 10.26% | 8.65% | 8.64% | -0.40% | -4.50% |
|---|---|---|---|---|---|---|---|---|
| Intentional by Value | OTHER | 0.00% | 0.00% | 0.00% | 0.20% | 0.47% | 0.47% | NA |
| Intentional by Volume | CL-CL | 3.54% | 3.16% | 2.96% | 2.94% | 2.24% | -1.30% | -36.80% |
| Intentional by Volume | CL-IN | 7.99% | 6.86% | 7.50% | 6.24% | 6.16% | -1.83% | -22.90% |
| Intentional by Volume | OTHER | 0.00% | 0.00% | 0.00% | 0.23% | 0.48% | 0.47% | NA |

Table 2 shows the average percentages of intentional and unintentional crosses by client type and number of trades, total volume and value averaged over a six-month period. Net change is calculated by comparing periods 1 (Jan-June 2016) to period 5 (Jan-June 2018). Change over periods 1-5 is the net change as a percentage of the period 1 percentage. Net change and percent change may not be exact due to rounding.

Fig. 8 – Cross Percentage by Marketplace[39] – Relative to Own Trading
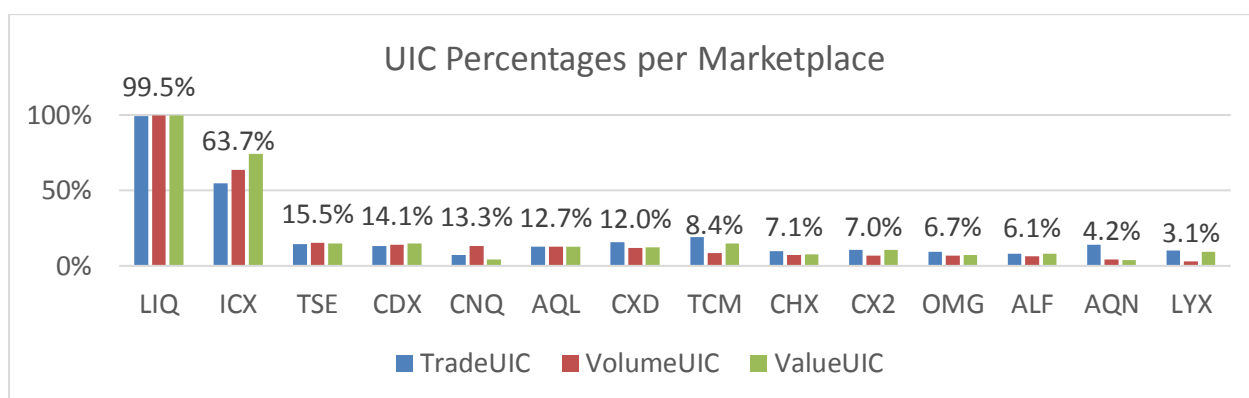


[39] Marketplaces are represented by the following abbreviations: AQN – Aequitas Neo, CHX - Nasdaq CXC, TSE - TSX, CNQ – Canadian Securities Exchange, OMG – Omega, CDX - TSX Venture, CX2 – Nasdaq CX2, ALF – Alpha, LYX – Lynx, LIQ – Liquidnet Canada, ICX – Instinet Canada Cross, AQL – Aequitas Lit, CXD – Nasdaq CXD, TCM – MATCHNow.
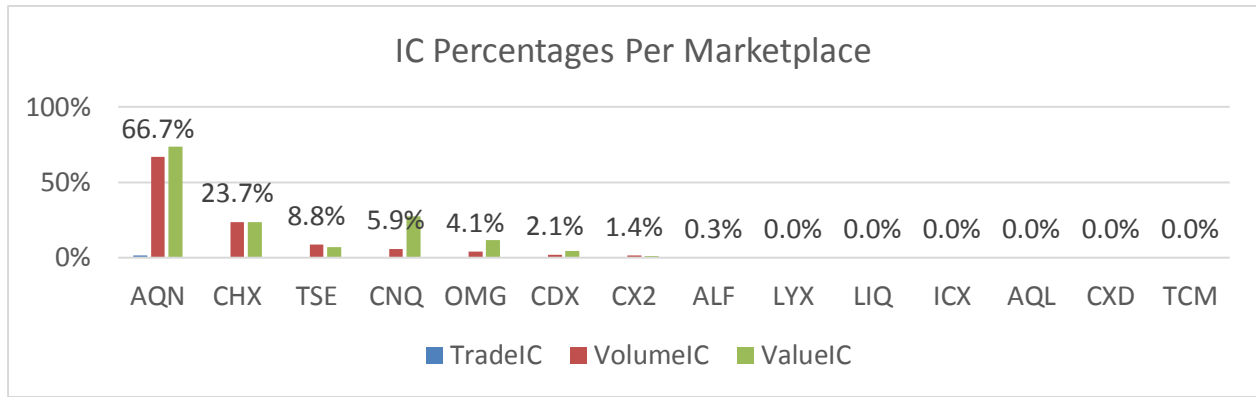
This figure shows the percentage of intentional and unintentional crosses by total trades, total volume and total value measured against each marketplace's own trading. Percentages displayed above the bars correspond to volume.

Fig. 9 – Contribution by Marketplace
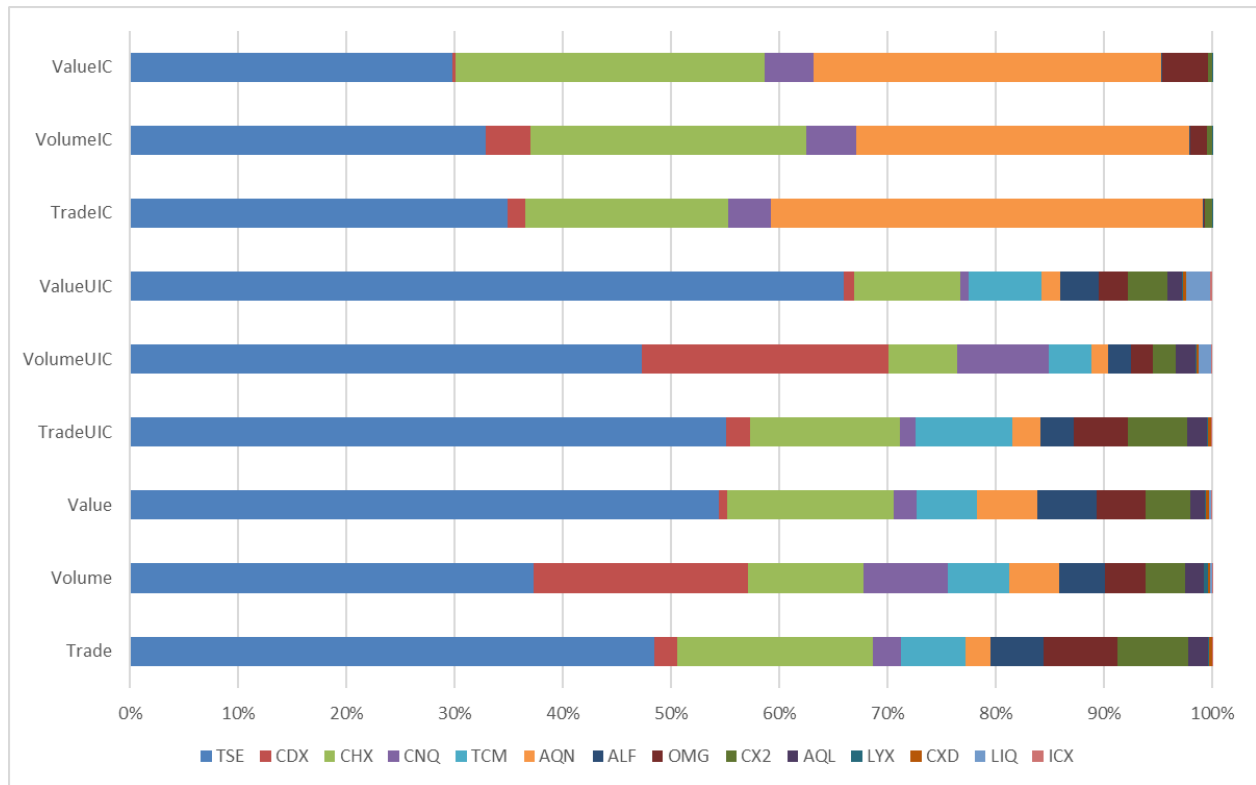


This figure shows the percentage contribution by each marketplace against the total traded by all marketplaces. For comparison purposes, total (including cross and non-cross activity) number of trades, volume and value has been included.
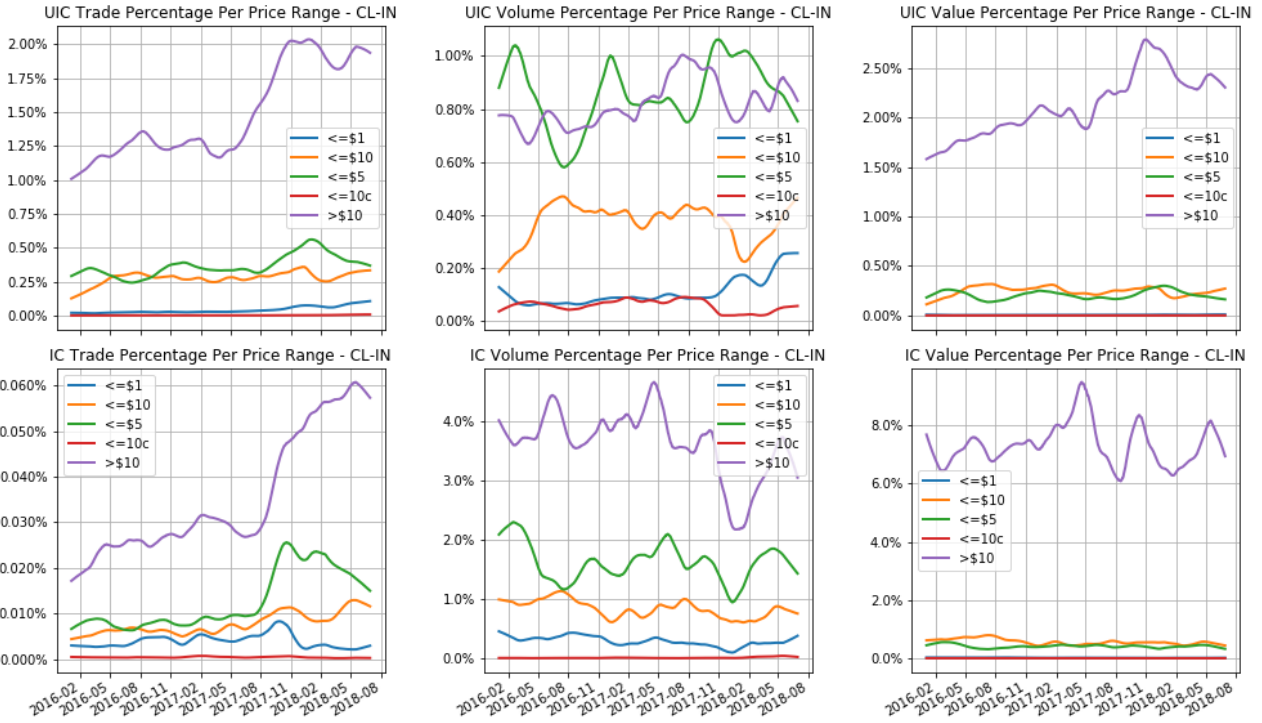
Fig. 10 – CL-CL Crosses by Security Price[40]
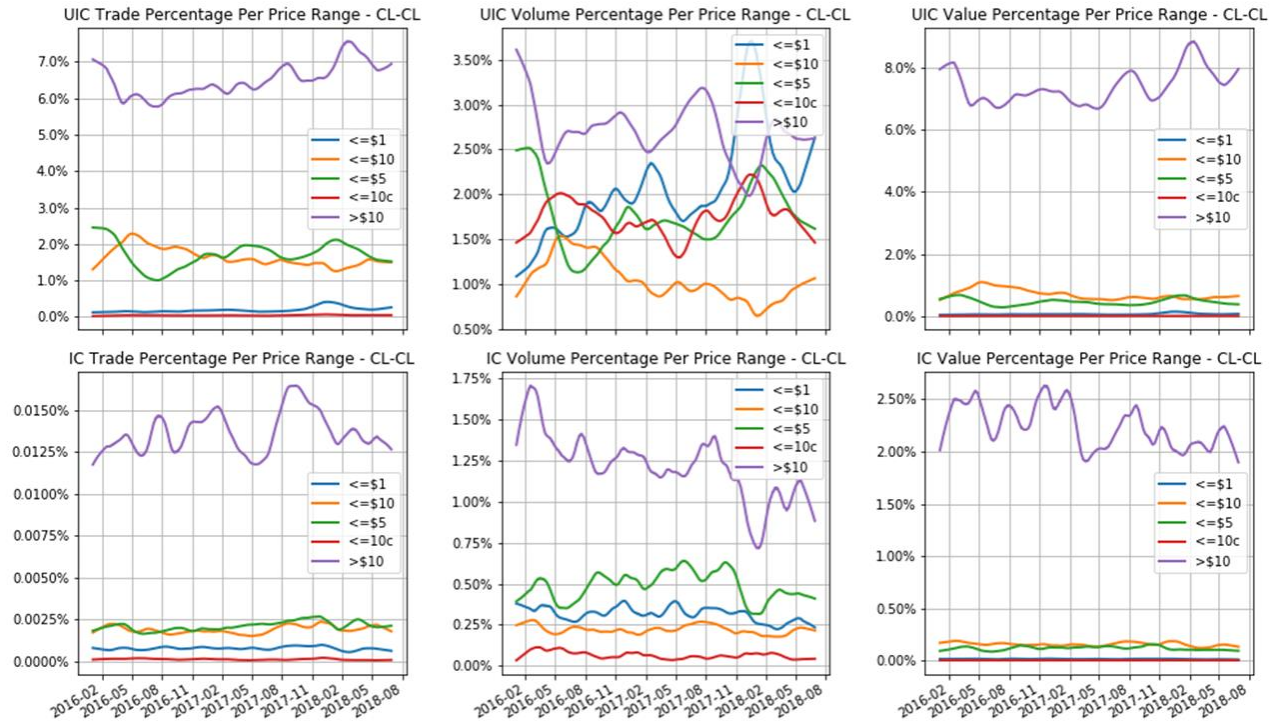


This figure shows a breakdown of intentional and unintentional client-client crosses as a percentage of total trading activity over the period by security price. 5 buckets are used: <=.10, <=$1, <=$5, <=$10, >$10.

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[40] For Fig. 10 and Fig. 11, <=$1 means >.10 and <$1, <=$5 means >$1 and <=$5, <=$10 means >$5 and <=$10

## Fig. 11 – CL-IN Crosses by Security Price



This figure shows a breakdown of intentional and unintentional client-inventory crosses as a percentage of total trading activity over the period by security price. 5 buckets are used: <=.10, <=$1, <=$5, <=$10, >$10.

## Fig. 12 –Crosses by Liquidity
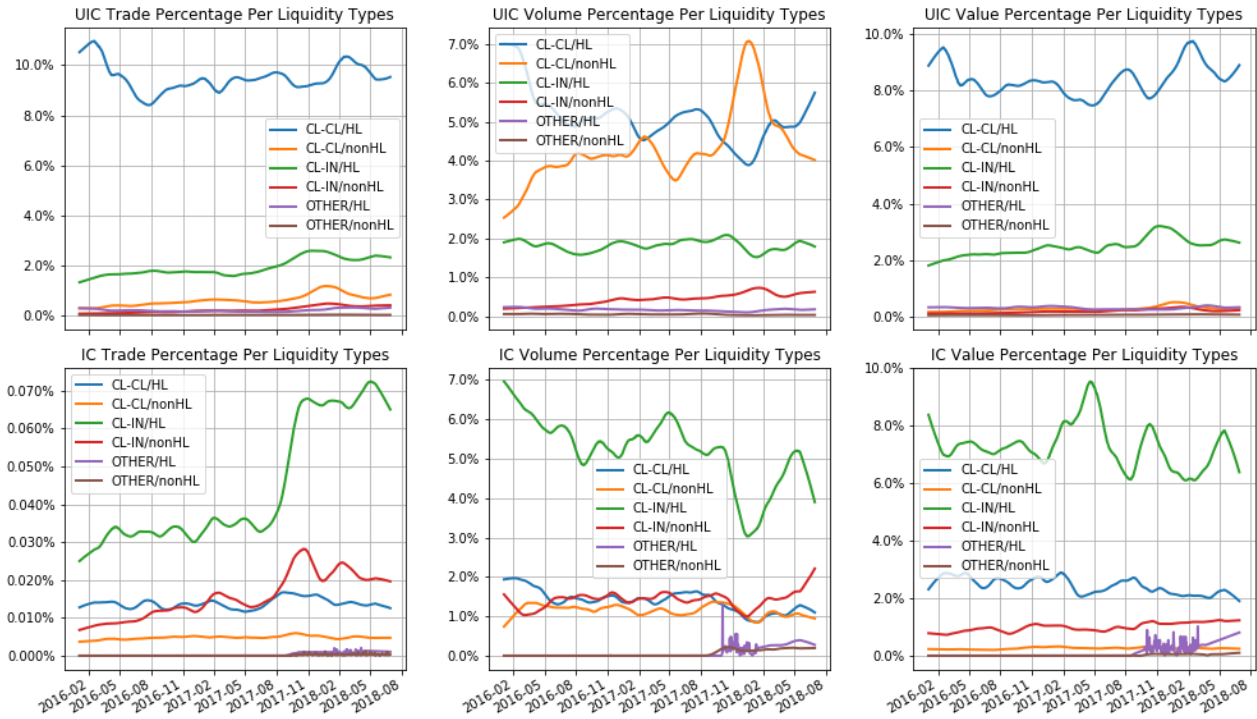


This figure shows a breakdown of intentional and unintentional crosses as a percentage of total trading activity by client type over the period by liquidity. For the calculation of liquidity, the IIROC highly-liquid security list was used. A highly-liquid security is defined as a listed or quoted security that:

- has traded, in total, on one or more marketplaces as reported on a consolidated market display during a 60-day period ending not earlier than 10 days prior to the commencement of the restricted period:
    - an average of at least 100 times per trading day, and
    - with an average trading value of at least $1,000,000 per trading day;
    or
- is subject to Reg. M and is considered to be an "actively-traded security" under that regulation.

Table 3 – Contribution by Top 15 Dealers

| Total Value | 87.70% |
|---|---|
| Total Volume | 84.20% |
| Total Trades | 87.90% |
| Intentional Crosses - Value | 83.30% |
| Intentional Crosses - Volume | 74.60% |
| Intentional Crosses - Trades | 75.00% |
| Unintentional Crosses - Value | 94.40% |
| Unintentional Crosses - Volume | 94.40% |
| Unintentional Crosses - Trades | 98.60% |

Table 3 aggregates the activity of the top 15 dealers as measured by trading activity. Percentages reflect the aggregate contribution over the period. For comparison purposes, total (including cross and non-cross trades) number of trades, volume and value have been included.

Fig. 13 – Top 15 Dealers - Crosses - Percentage of Own Trading
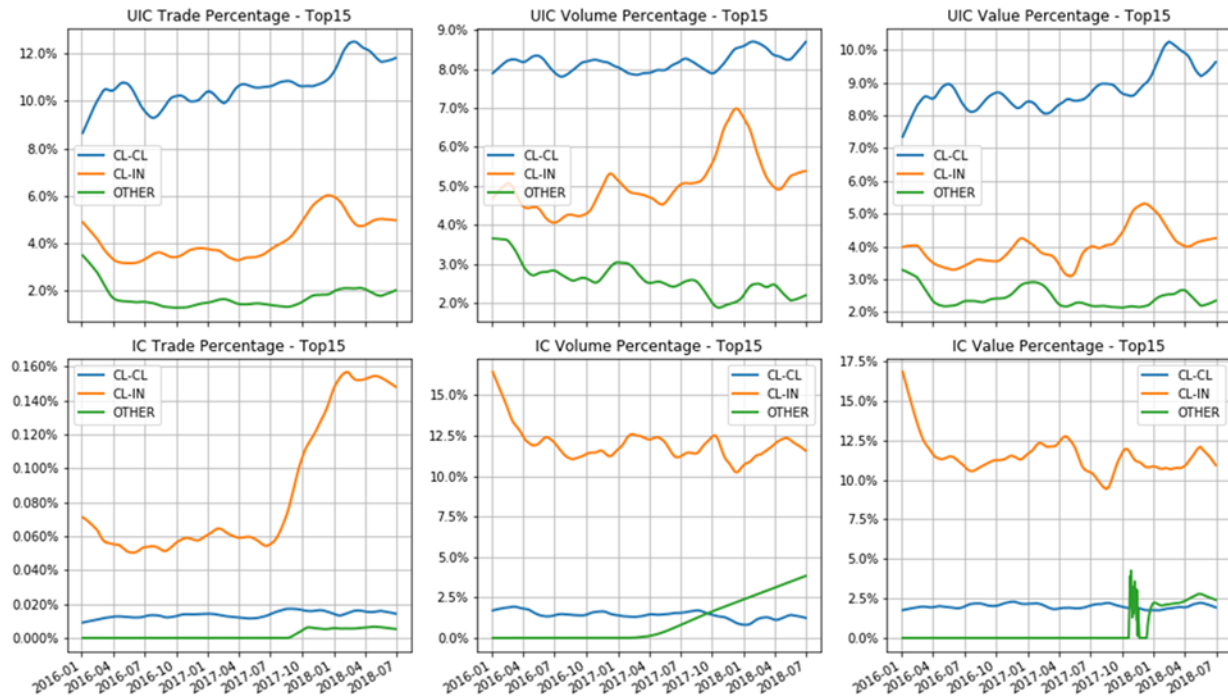


This figure shows the percentage of intentional and unintentional crosses by client type of the top 15 dealers as compared against the total trading activity of the same top 15 dealers on all marketplaces.

Fig. 14 – Top 15 Dealers - Crosses - Percentage of Total Trading
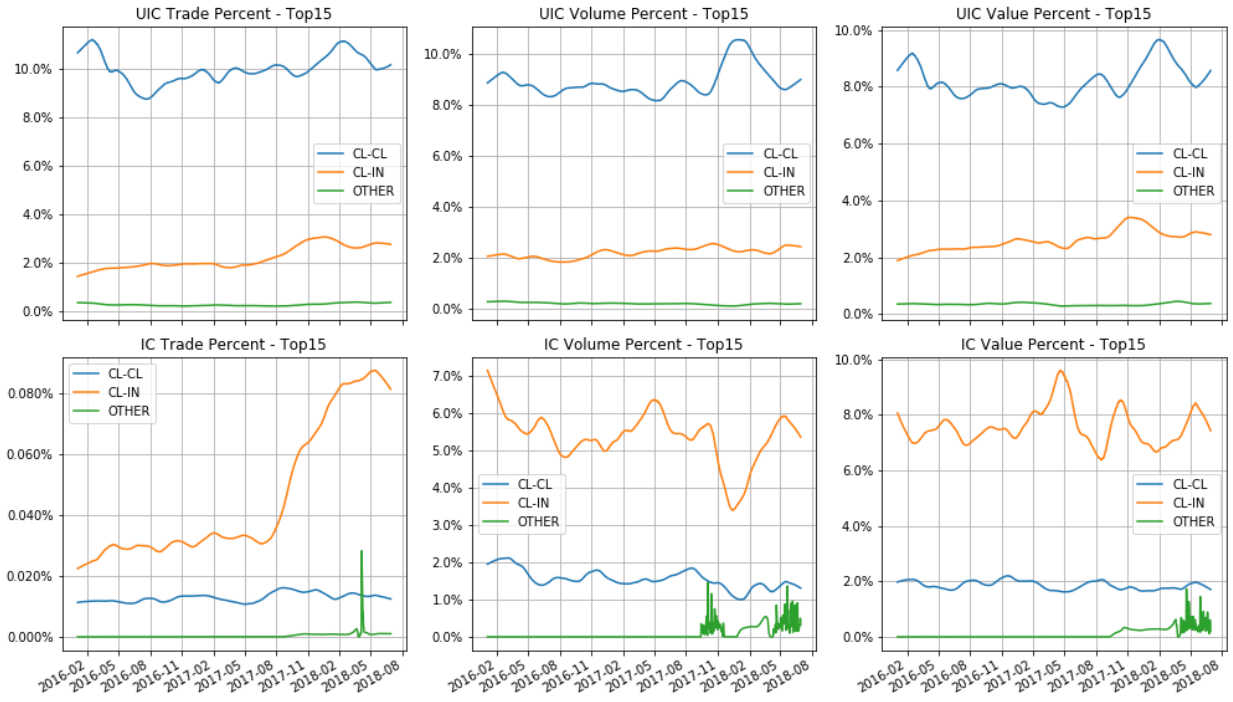


This figure shows the percentage of intentional and unintentional crosses by client type of the top 15 dealers as compared against the total trading activity of all dealers on all marketplaces.

**Part 2**

Certain marketplaces can capture executions that result from broker preferencing (i.e. when an order does not follow time priority and executes with another order from the same dealer). Data from these marketplaces is set out below for the period of January 2017 to July 2018. Figures 1 through 3 represent the number of trade executions resulting from broker preferencing (by volume, value and number of trades) aggregated across all marketplaces that are able to provide relevant data. Figures 4 through 6 represent the same information, but shown as a percentage of aggregate volume, value and number of trades (across all marketplaces that are able to provide relevant data).

Fig. 1 –Broker Preferenced Trade Executions by Number of Trades
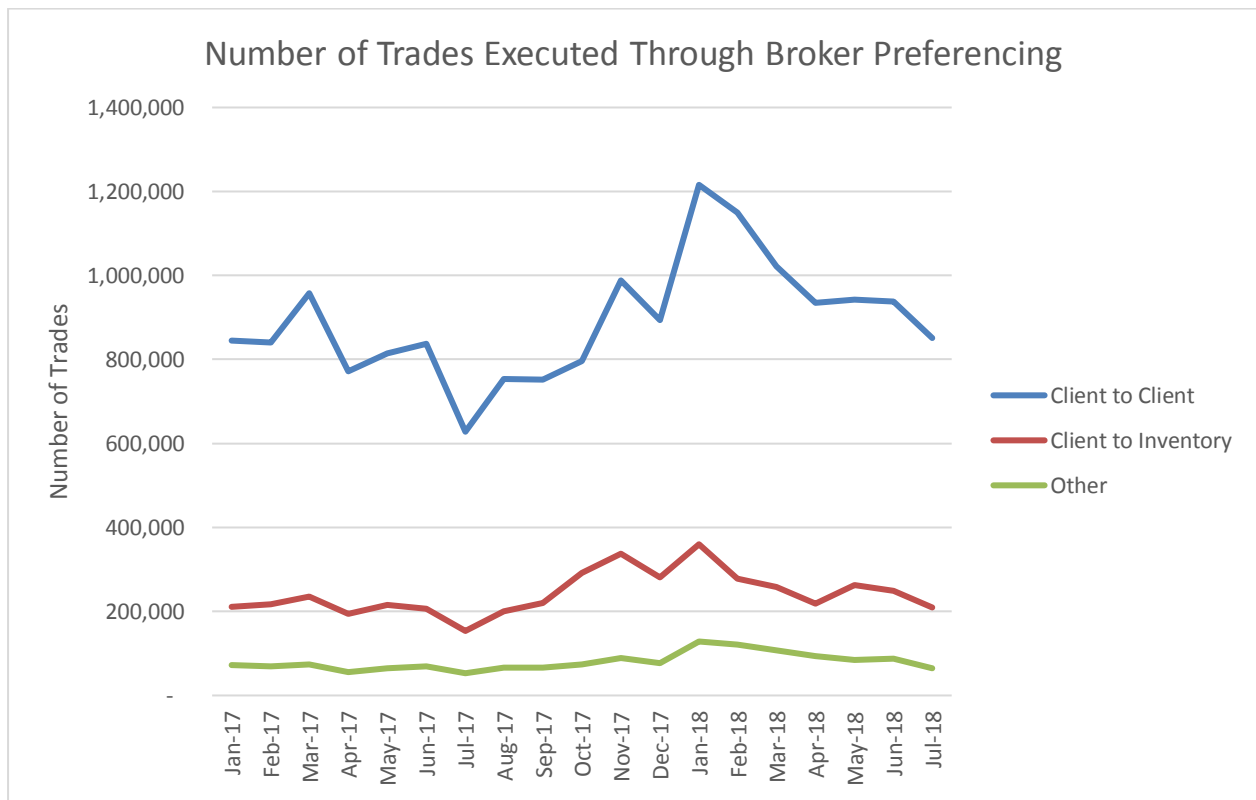
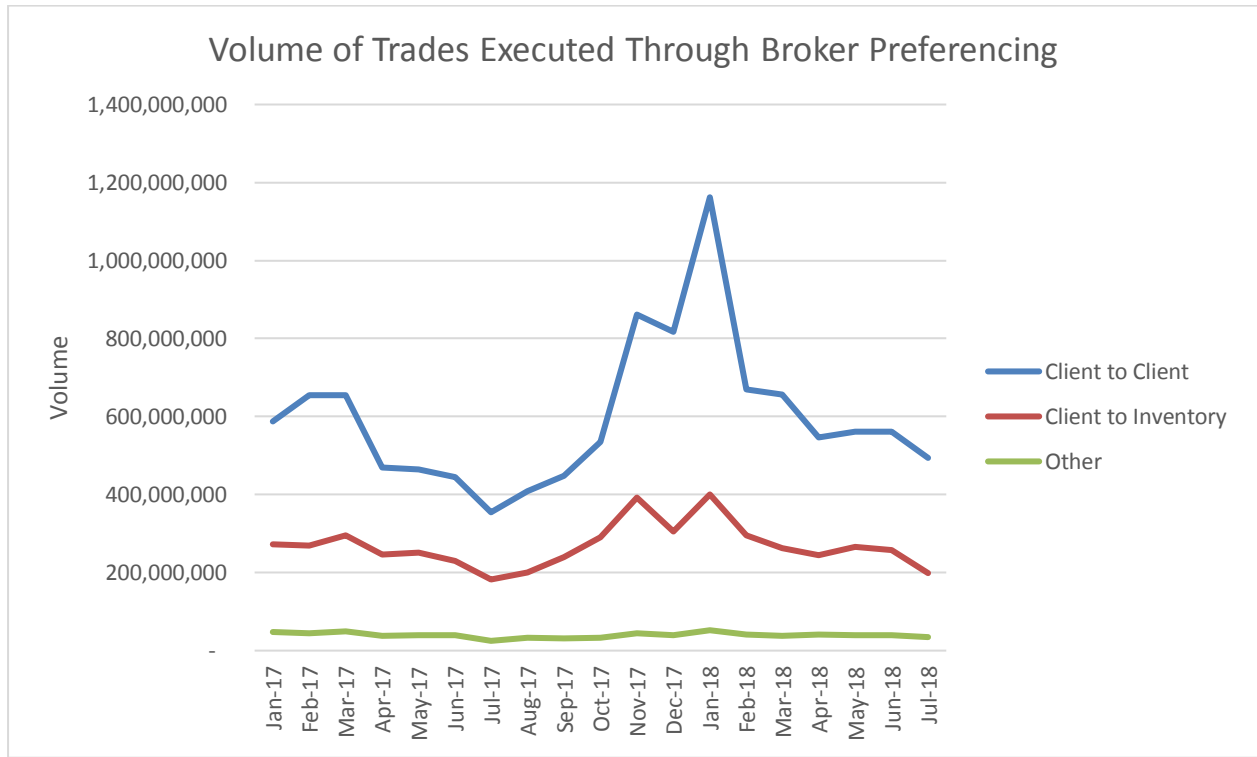Fig. 2 – Broker Preferred Trade Executions by Volume



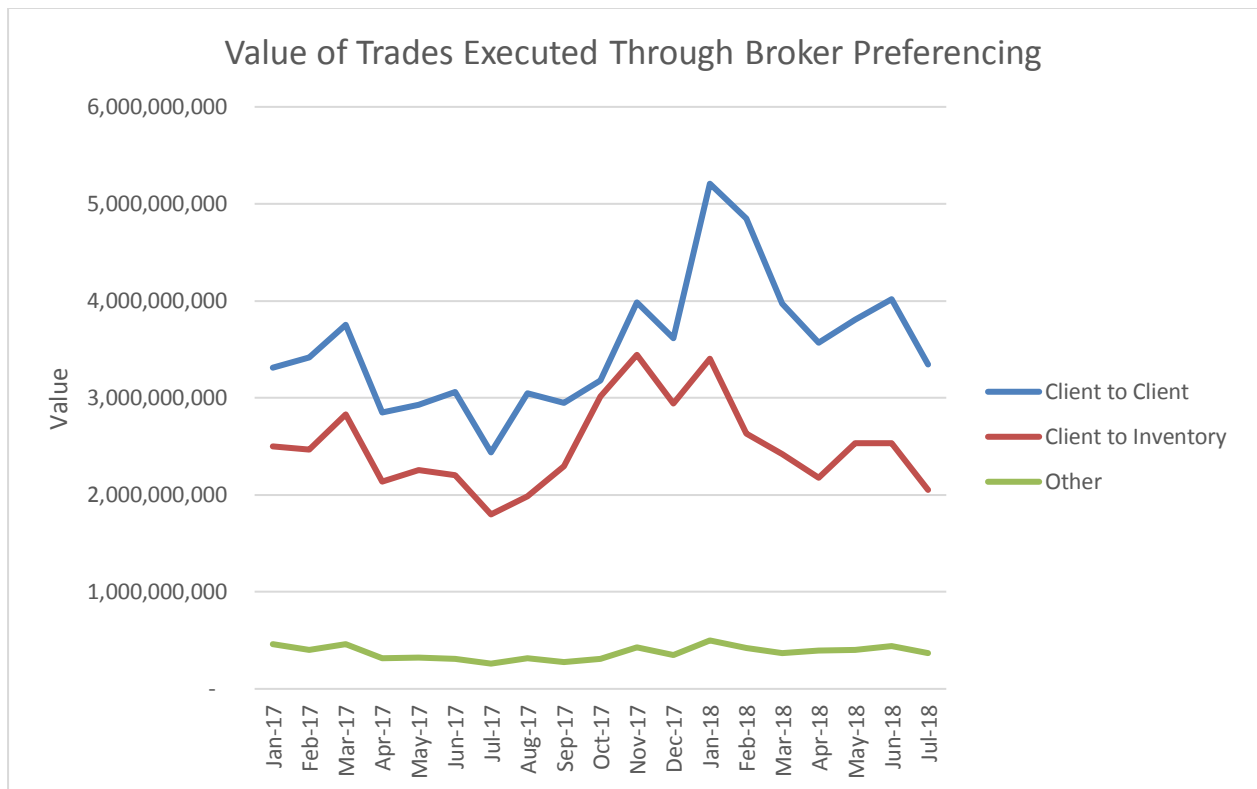Fig. 3 - Broker Preferenced Trade Executions by Value

Fig. 4 –Broker Preferenced Trades as a Percentage of Aggregate Number of Trades
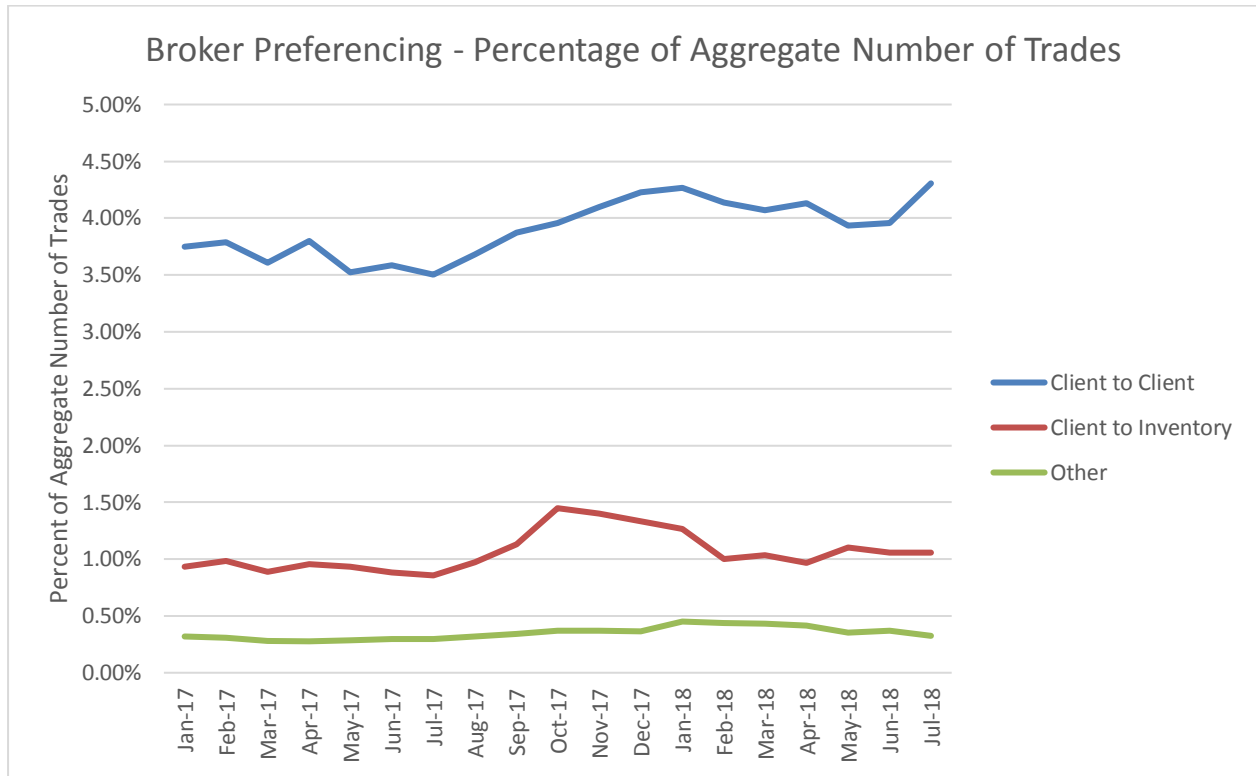


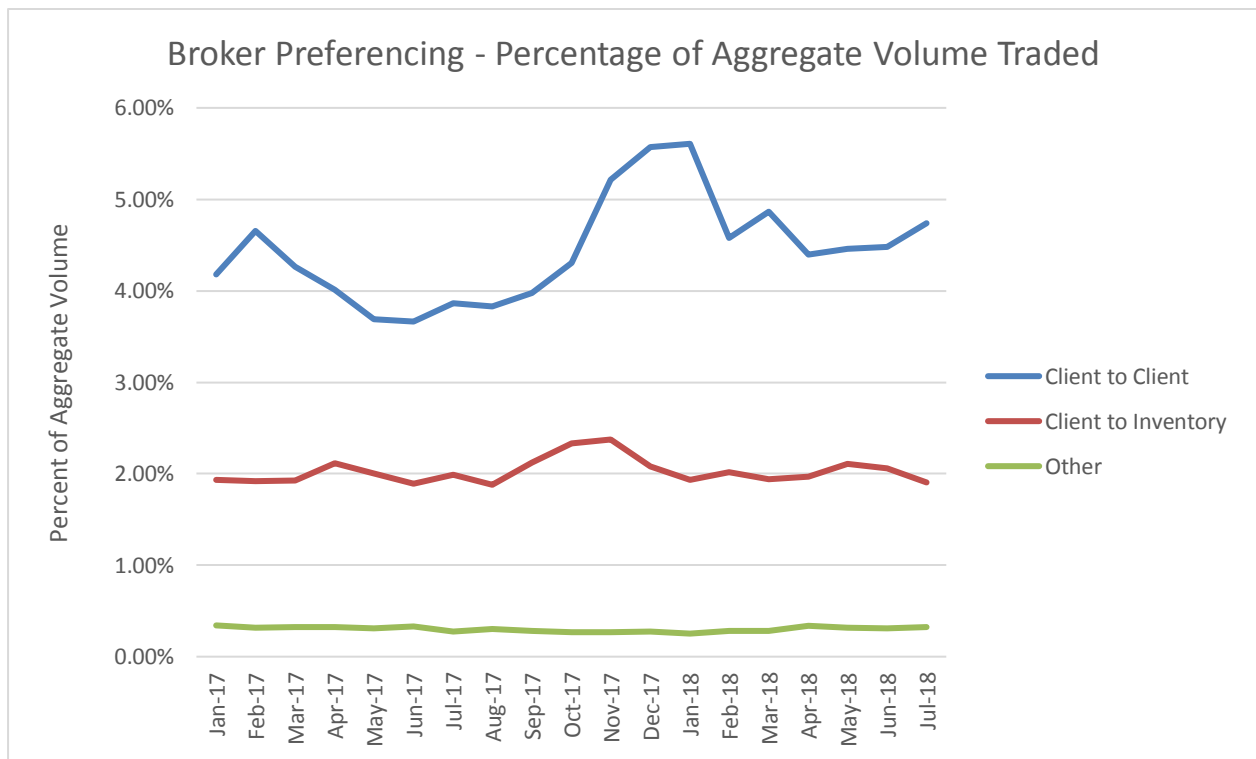Fig. 5 – Broker Preferenced Trades as a Percentage of Aggregate Volume Traded

Fig. 6 – Broker Preferenced Trades as a Percentage of Aggregate Value Traded