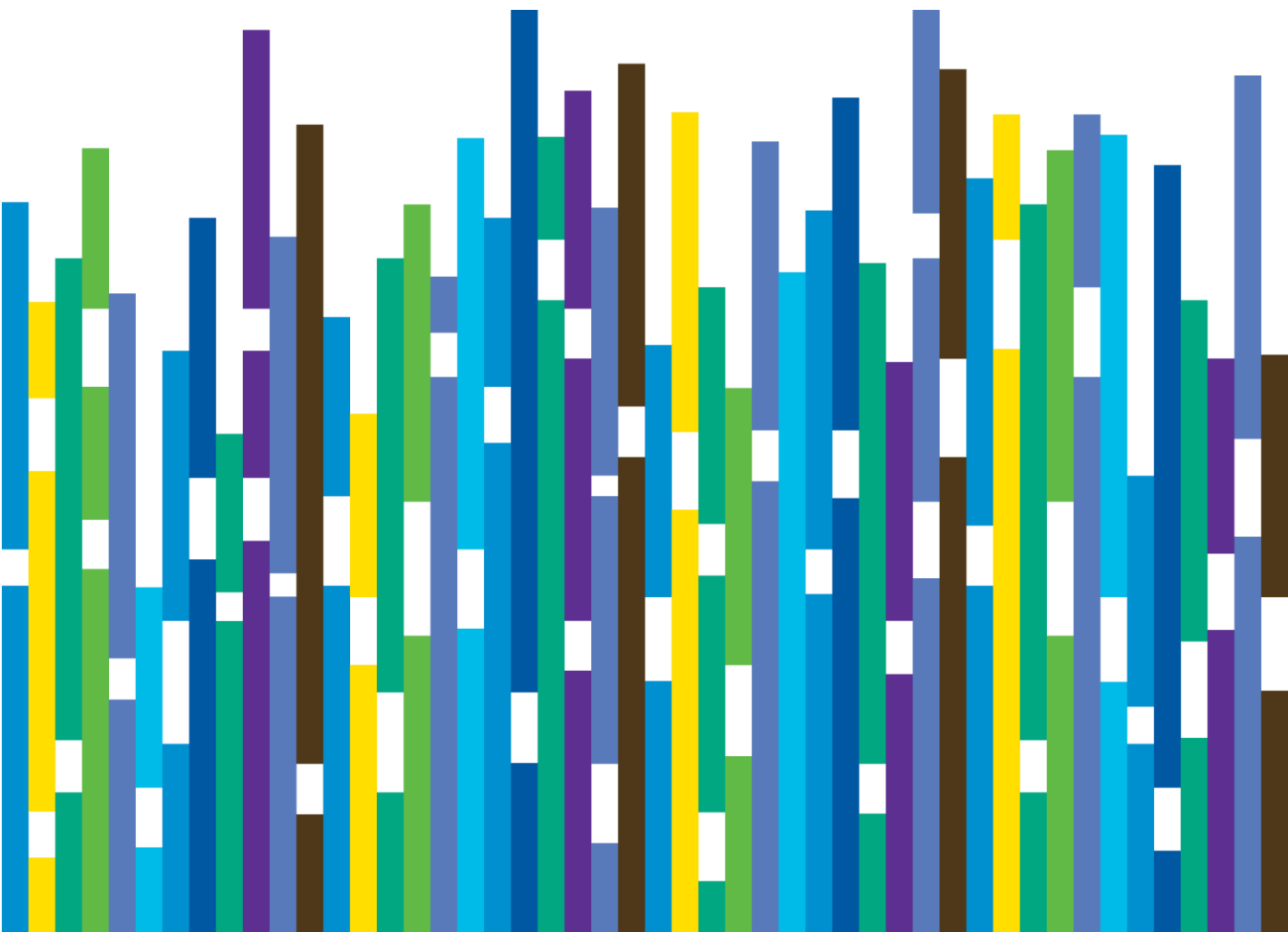


POLICY BRIEF

TRADE-AT RULES IN AUSTRALIA AND CANADA

A Mixed Bag for Investors



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Overview

For decades, brokers have dealt with below-block-size investor orders in a system known as “internalization.” Under this system, brokers execute customer orders either by buying into, or selling from, the brokers’ own inventories, or by directing the trade to an internalized pool of customer orders wherein the orders trade against other customer orders within the pool. By keeping these orders in-house in this manner, brokers avoid paying the fees charged by exchanges, thus reducing the cost of trading for their customers, as well as by earning the spread between the bid and offer, or some point in between. They also benefit from seeing the order flow and selecting which orders to internalize and which to send to a lit exchange.

While the internalized pools are similar in function to traditional multilateral exchanges — the orders of many buyers and sellers meet and trade in one place — the broker system has one very important conflict of interest. They can use the information gleaned from this order flow to selectively internalize, or preference, only those orders that are profitable to do so. As a consequence, internalizers have first rights on trading against orders within their systems, thus undermining investors submitting limit orders on lit venues.

The effects of this system came to notice in the United States when the Securities and Exchange Commission (SEC) noted the practice in its *Concept Release on Equity Market Structure*, published in early 2010. The report estimated broker internalization at approximately 17.5% of the market¹, compared with 7.5% for institutional dark pools. It also suggested that most, if not all, individual investor order flow was handled this way through such mechanisms as payment for order flow — where big brokers purchase and aggregate orders from smaller brokers. The SEC asked whether it should consider adoption of a “trade-at” rule to “prohibit any trading center from executing a trade at the price of the [national best bid or offer, or NBBO] unless the trading center was displaying that price at the time it received the incoming contra-side order.”

On 15 October 2012, Canada introduced the first broad-based trade-at rule, requiring all dark markets to provide meaningful price improvement when executing dark orders. Australia followed suit less than a year later, introducing a version applicable to all dark markets in that country on 26 May 2013. The SEC has since incorporated a trade-at rule into its proposed tick-size pilot program for small-cap equities, with a planned introduction in 2015.

To study the real-world effects of trade-at rules and to gauge their usefulness as a means of dealing with broker internalization elsewhere in the world, CFA Institute commissioned Sean Foley of the University of Sydney and Tālis J. Putniņš of the University of Technology Sydney and Stockholm School of Economics in Riga. Their study, *Regulatory efforts to reduce dark trading in Canada and Australia: How have they worked?* looked at the 250² and 200 most actively traded stocks on the Toronto Stock Exchange (TSX) Composite Index and the Australian Securities Exchange (ASX) 200 Index, respectively. They note that

¹ According to Tabb Group, that percentage was as high as 24% two years later; see: <http://news.investors.com/business/040912-607087-stocks-trading-exchanges-dark-pools-growth.htm>.

² The authors restricted their review only to those companies that were included in the index at both the beginning and the end of the review period.



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the rules in both countries required that “dark trades below block size” had to have at least one full tick of price improvement — half a tick if the spread was one tick or less.

Below we summarize their findings, and conclude with CFA Institute policy perspectives based on their research.

Canada: Reduction in Trading No Panacea for Investors

Securities regulation in Canada is administered and enforced provincially for the most part, though it is largely coordinated through the work of the Canadian Securities Administrators. Oversight of the national Universal Market Integrity Rules (UMIR) is handled on a national basis; however, by the self-regulatory organization IIROC (Investment Industry Regulatory Organization of Canada.) It was [IIROC notice 12-0130](#) that introduced the trade-at rule as a change to the UMIR in 2012.

One of the peculiarities of the Canadian equity market is that the order execution priority rules permit full broker-preferencing in which a broker can jump to the front of the order book to execute a trade against a standing order if the incoming order trades against a standing order from the same broker. This system has the same characteristics as broker internalization, wherein a broker’s customers’ trades interact solely with orders of other customers of the same broker rather than with the rest of the market. The primary difference, though, is that the trades are executed through an exchange’s system rather than through the proprietary system of the broker-dealer.

Canadian equity markets already were operating under a price improvement rule, imposed on the market by TSX, in 1998. The rule disallowed internalization without price improvement. The IIROC trade-at rule was broader in scope, applying to all dark pools and dark trading, with the intention of reducing off-exchange trading.

On this basis, Foley and Putniņš report, the rule was successful. They found that dark trading volume declined to a mean (median) of 8% (5%) of total dollar volume after the regulation, from 10% (8%) before, a reduction of about 20%. Likewise, dark internalization in Canada declined to 6% of total dark dollar volume, from 13% pre-rule.

However, they also found that a reduction in dark trading was no panacea for investors. The rule did not lead to an increase in average dark trade size, as one would expect if the economics of execution for smaller orders worsened, thus diverting such orders to exchanges and leaving only large block orders in dark markets. That was not the case, however. Instead, the average dark trade remained at around C\$7,100, suggesting that larger, institutional trades were not the reason behind the rise in dark trading in Canada prior to the rule being implemented. Nor did the researchers find an increased likelihood for investors to post liquidity in the lit markets.

To the contrary, Foley and Putniņš found that quoted and effective spreads³ were wider after introduction of the new trade-at rule. Quoted spreads rose 5% after the rule’s introduction, while effective spreads — those that involve actual trades — rose 8%. The authors also found that the new rule pushed nearly all

³ Effective spreads are defined as twice the difference between the actual execution price and the market quote at the time of order entry. The realized spread is based on twice the difference between the execution price and quote mid-point five minutes after the execution of the order.



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dark trades to execute at the midpoint of the NBBO, from just 24% before. In other words, dark trades that used to execute at some point above or below the bid-offer midpoint now execute almost exclusively at the midpoint, which is expected to increase quoted spreads by 2.22 basis points.

By comparison, the 1998 TSX rule that targeted internalization seemed to bring a host of positive results. A [2009 study by Larrymore and Murphy](#) found it led to an increase in average price improvement, reductions in spreads, lower return volatility, and greater market depth. By reducing the benefits of internalization, the authors of that study concluded, market makers were more aggressive in their pricing to obtain order flow and were able to cut spreads because of a fall in adverse selection risks. The same study also found that on-market internalization (broker preferencing) rates increased for trade sizes between 1,200 shares and 5,000 shares. As broker preferencing rates increased, spreads and volatilities declined and market depth increased.

Australia: Dark Trading Declines

Australia's trade-at rule took effect on 26 May 2013, thus amending the Market Integrity Rules of the Australian Securities and Investments Commission (ASIC). The amended rule required trades below block size and exempt from pre-trade transparency requirements to provide one full tick of price improvement. The rule change included a revision to block size rules, as well. Whereas before, blocks were set at AUS\$1 million and trades could execute without any price improvement, the revision created a tiered structure with thresholds set at AUS\$1 million, AUS\$0.5 million, and AUS\$0.2 million.

Certain types of trades remain exempt from pre-trade transparency. Single crossing trades that meet the block trade thresholds are one type. Likewise, portfolio "special crossings" that include at least 10 stocks with a minimum value of at least \$200,000 for each stock, and a combined portfolio value of at least AUS\$5 million are exempt from the pre-trade transparency rules.

Foley and Putniņš found that, as in Canada, Australian dark volume declined, to a mean (median) of 11% (8%) of total dollar volume, from 18% (13%) before the rule, also a decline of around one-third of dollar volume. Dark internalization fell to 22% of dark dollar volume after introduction of the new rules, from around 63% before.

The new rules, which required at least one tick improvement compared with trades previously occurring at the NBBO, mean that brokers are no longer able to earn as much from the spread off client orders as they had before the new rule. Centre Pointe, a dark pool which had a policy of executing at the midpoint of the NBBO prior to the new rules, saw an increase in its share of dark volume to 51%, from 26% before the rule.

By contrast with Canada, however, the average size of dark trades declined in Australia, to a mean of AUS\$2,300, from AUS\$5,600 before the rule. The decline in dark volume and average dark trade size occurred simultaneously with a 40% increase in block trades on institutional crossing networks, to 14% of dollar trading volume, from 10% pre-rule. Foley and Putniņš conclude that this "migration" from dark to block trading explains some of the decrease in the dark trading share and the increase in share of volume executed as block trades.



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As was the case in Canada, spreads in Australia widened following introduction of the trade-at rule there. The authors estimated the increase in quoted spreads at 19%. Moreover, the median share of dark trades occurring at the midpoint of the NBBO increased to 89% of the market, from 46% before the new rule. As noted for Canada, dark trades that used to execute at some point above or below the bid-offer midpoint now execute almost exclusively at the midpoint, producing an estimated increase in quoted spreads.

Key Study Conclusions

On the basis of their research, Foley and Putniņš conclude the following about the trade-at rules in Canada and Australia:

- There is no evidence that dark trading with nonmeaningful price improvement discourages lit liquidity.
- Metrics in both Canada and Australia indicate that minimum price improvement regulation is associated with an increase in spreads.
- There is no evidence of increased propensity for market participants to post lit liquidity after imposition of price improvement rules.
- Average trade sizes in dark markets were unchanged in Canada, and decreased significantly in Australia by migrating to revised block sizes.
- The regulations did reduce the amount of dark trading, ensured that dark trades provide meaningful price improvement, and reduced the amount of internalization in the dark.
- The trade-at rules do not appear to have succeeded in encouraging the posting of lit liquidity and increasing overall liquidity.

Europe: MiFID II Reforms

Under the revised Markets in Financial Instruments Directive (MiFID II), which was passed into law in June 2014, dark pool “reference price” systems will be required to match orders at the mid-point of the quoted spread on a reference market (such as the primary exchange). Accordingly, these systems will be subject to a price-improvement requirement. Additionally, MiFID II introduces a double-volume cap mechanism to restrict dark trading. Trading volume in a given stock on any venue operating under a pre-trade transparency “waiver” (e.g., a dark pool) cannot exceed 4% of total volume on organized venues and total trading under these waivers (across all venues) for a given stock cannot exceed 8%. The legislation is due to be implemented by January 2017.

The MiFID II reforms also introduce a new tick-size framework for European stocks, which will be calibrated to reflect the liquidity profile of the financial instrument in different markets and the average bid-ask spread. As such, the European tick-size framework will be flexible and introduce a range of ticks according to the price level and liquidity characteristics of stocks.

United States: Tick-Size Pilot Program

In June 2014, the SEC announced that it would write rules to implement a pilot program with regard to the size of price increments, or “ticks,” for small-capitalization stocks. The proposed pilot would study and



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segregate the market into three groups, whereby one group would be the base case with no change in price increments. The second would introduce a five-cent tick, while the third would also have five-cent ticks, but also would require price improvement for dark orders to interact with the NBBO for each stock. This trade-at proposal would require price improvement of \$0.005.

In their conclusions, Foley and Putniņš contend that part of the problem with the trade-at rules adopted and implemented in Australia and Canada was that both markets included minimum tick sizes. Rather than increasing tick sizes, the authors suggest that the US pilot would benefit from a *decrease* in tick size. Other opinions we've heard with regard to this pilot are that the \$0.005 price improvement would be insufficient to discourage broker internalizers from operating their dark trading venues. One final matter related to the pilot is that there is concern that interest in the temporary market would not provide sufficient data to provide a clear indication of the trade-at rule's usefulness with small-cap companies. The pilot has yet to begin, and is set to last one year.

CFA Institute Policy Perspectives

In 2012, CFA Institute published a report looking at the effects of dark pools on market quality. That report, *Dark Pools, Internalization, and Equity Market Quality*, showed how the benefits of market competition over the past 15 years could be and were being unwound by the trend toward more and more dark trading, principally among retail and institutional investors as opposed to high-frequency traders. One of the principal policy conclusions from that report was that regulators should require meaningful price improvement for the internalization of retail orders.

In this report, Foley and Putniņš conclude that requiring meaningful price improvement for the broader market will not necessarily lead to better outcomes for investors. At the same time, they point to an [earlier study by Larrimore and Murphy](#) that suggest that a 1998 TSX rule disallowing broker internalization, only, without price improvement, led to improved investor outcomes.

Based on these findings, we suggest the following policies:

1. All functionally equivalent trading venues should be subject to functionally equivalent regulation, including requirements regarding access to markets, pre- and post-trade transparency, and the fair treatment of orders. Exceptions to this principle should be allowed in cases where a venue differentiates itself according to the type or size of orders it handles and the existence or otherwise of discretion in order execution.
2. Regulators should specifically disallow retail internalization without meaningful price improvement of at least one tick, or half of a tick for securities priced below one primary currency unit (i.e., Euro, dollar, franc, etc.).
3. Regulators should continue to monitor the growth in dark trading volume and internationalization, in particular, and consider restrictions on dark orders and dark trading facilities should the magnitude of dark trading volume reach a significant level. A possible measure would be to lower the threshold at which alternative trading systems must display orders and meet general access requirements for particular stocks.



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4. Regulators and trading venues should improve reporting and disclosure around the operations of dark trading facilities and internalization pools, including the types of orders that are accepted within those systems and the processes by which orders are matched. Dark trading facilities should voluntarily reveal greater information about their operating mechanics and report more information on the volumes they execute as a means of improving transparency and enabling all stakeholders to better understand their relative benefits and drawbacks. The goal of these changes should be to enhance investor trust by protecting displayed orders while offering meaningful savings to retail investors executing away from public markets, maintaining competition, and furthering transparency.