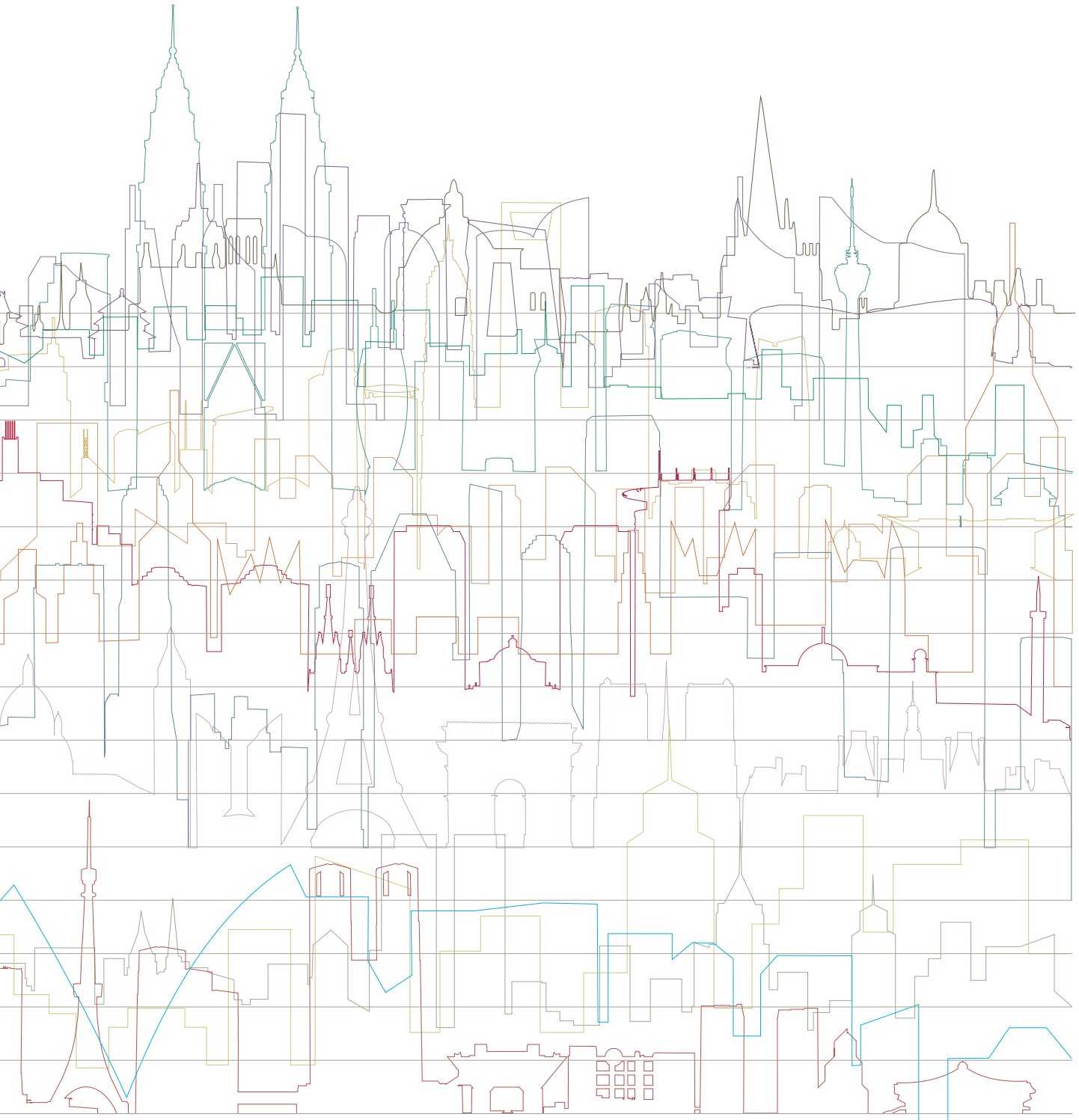




OTC MARKETS STRENGTHENED BY REGULATION CHANGE



The impact of the amendment to SEC Rule 15c2-11

On 28th September 2021 (enactment date) an amendment to SEC Rule 15c2-11 (the rule) came into force with significant implications for the 12,000+ securities trading on the OTC Markets. The amendment increased the minimum disclosure requirements for issuers trading on the OTC Markets and prohibits broker-dealers from publicly quoting securities that are non-compliant. The strengthened regulation requires firms to continuously maintain a new higher standard of reporting to investors.

The improvement in transparency with a higher threshold for quotability on the OTC Markets is already having a positive effect in terms of value added, increased liquidity and reduced spread ratios. The extensive data analysis reported in this paper suggests that investors and brokers have internalised the rule change and have modified their behaviour.

The premium tiers of the OTC Markets, OTCQX and OTCQB, are experiencing an expansion of value in comparison to the lower Pink tiers of the market. The gap in performance between the premium tiers (OTCQX & OTCQB) and the Pink tiers is widening as a result of the superior reporting by the former, now amplified by the new rule. OTC Markets Group plays a significant role as the market operator which is entrusted to distribute information disclosures to the US investment community. The early evidence here reported indicates that the OTC Markets are strengthened under the new disclosure regime. There is now a further considerable incentive for Pink traded securities to migrate to the higher tiers.

Although the rule applies to all securities trading on the OTC Markets many of these are already compliant with the new rule. Specifically, all securities trading on the OTCQX and OTCQB tiers were already compliant. However, many securities that traded on the lower Pink tiers were not compliant and therefore they faced a decision to either improve their disclosure to maintain their quotability or cease to be publicly quoted by broker-dealers operating in the market.

The extent of the impact on issuers, investors and market makers will largely depend on which tier an issuer's security trades, its domicile and the level of corporate information and transparency associated with the tier.

The implementation of the amendment should impact to a greater extent those issuers trading on the Pink tiers of the OTC Markets, where disclosure requirements are less rigorous. The significant advantage is to those issuers that already trade or upgraded to the OTCQX or OTCQB tiers. OTCQX is designed for established, investor-focused international companies. Companies joining OTCQX have found their trading volumes and US ownership increase in part because issuers trading on the OTCQX Market are required to meet high financial standards, follow best practice corporate governance, adhere to regulatory and compliance laws and appoint an independent third-party sponsor. As a consequence,

the gap between the premium and Pink tiers is expected to widen as mentioned above.

The core focus of this paper is to identify how OTCQX and OTCQB issuers fared in the face of the amendment to the rule. As these issuers already meet a high standard disclosure and international companies publish in English, the paper reveals that OTCQX and OTCQB securities created value for shareholders during the period following the change in the rule. Furthermore, there were identifiable liquidity benefits for this cohort of issuers relative to companies that remained on the Pink tiers.

450 BPS OF VALUE
CREATED FOR
OTCQX ISSUERS

The key results

The results reported in the following sections of the paper confirm the benefits for the OTCQX and OTCQB cohorts in the period after the enactment date.

- 450 basis points (bps) gain in value for OTCQX issuers and 290 bps gain for OTCQB issuers (Figure 1).
- 110 bps loss of value for Pink Current and 360 bps loss for Pink Limited (Figure 2).
- A massive 600 bps approximate average value gap between the premium tiers (OTCQX and OTCQB) and the Pink tiers.
- 470 bps value enhancement for international issuers on the premium tiers and 330 bps for US issuers (Figure 3).
- Fivefold average increase in trading volumes of the premium tiers relative to the Pink tiers (Figure 4).
- Tightening in the spread ratio for international OTCQX issuers (Figure 5).

The value benefits

There are a number of qualitative advantages for international issuers that choose to trade on the OTCQX and OTCQB platform. Firstly, OTCQX and OTCQB offer less burdensome market standards relative to a listing on a national exchange. Companies may leverage their local market disclosure (SEC Exchange Act Rule 12g3-2(b)), they are exempt the Sarbanes-Oxley laws and, as already highlighted, all disclosure requirements for OTCQX and OTCQB meet all changes to the rule. In addition, OTCQX and OTCQB offers a cost-effective way for issuers to communicate with shareholders. The high transparency and disclosure requirements of OTCQX and OTCQB allow US investors and market makers to easily access market and financial information on the international company. Furthermore, the host of corporate services offerings, including virtual investor conferences, allow companies to easily address a large number of US investors.

600 BPS VALUE
GAP BETWEEN
PINK & OTCQX/QB

Therefore, OTCQX and OTCQB issuers are in an advantageous position following the implementation of the change

and as a result actually created value for shareholders in the period subsequent to the enactment date. The impact on shareholder value was analysed and the value reaction to the event was measured during the subsequent 40 trading days, for firms trading on OTCQX and OTCQB. Figure 1 presents the positive impact that the change in the SEC rules had on OTCQX and OTCQB issuers.

The Value Reaction™ metric captures the impact on shareholder value, while controlling for market movements and idiosyncratic risk, thus it is a measure of alpha associated with the regulatory event. The figure shows that on average over 2.9% and 4.5% of value was generated for OTCQX and OTCQB issuers respectively.

This finding is in stark contrast to the detrimental impact of the change in rules on those issuers trading on the Pink Current and Pink Limited tiers, which lost over 1.1% and 3.6% of value respectively, as reported in figure 2. Furthermore, the significant benefit offered by OTCQX and OTCQB tiers was robust when controlling for the domicile of issuers. Figure 3 shows that international companies enjoyed 4.7% of value creation, while US issuers generated 3.3% of alpha for shareholders.

Liquidity enhancements - Trading Volume

In addition to the valuation benefits that accrued to OTCQX and OTCQB issuers there were found to be a number of liquidity benefits including trading volume, bid-ask spread and number of market makers. Oxford Metrica's research provides evidence that OTCQX and OTCQB firms enjoyed increased trading volumes in both dollar and share volume terms relative to firms that remained on the Pink tiers. The OTCQX and OTCQB tiers provide a platform for an international company to increase its visibility and enhance liquidity that will benefit company management, domestic investors and US investors during times of regulatory change.

The trading volume metric used is the Trading Volume Multiplier™ (TVM), defined as the daily trading volume, after the enactment, expressed as a multiple of the 3-month average daily trading volume prior. Therefore, a TVM of greater than 1 indicates evidence of higher liquidity. Figure 4 presents the difference in the TVM between OTCQX and OTCQB issuers against those that traded on Pink. The figure shows

OTCQX & OTCQB ENJOYED A 5X INCREASE IN VOLUME VS PINK

that on average there was close to 5x more trading volumes in OTCQX and OTCQB issuers relative to Pink. Furthermore, this was supported by further analysis in trading volumes in dollar terms which showed a similar relative difference. Increases in trading volumes in both dollar and share volume terms of a security reflect quality of disclosure, improved information flow, operational efficiency in the market and greater shareholder engagement.

Liquidity enhancements - Bid-Ask Spreads

Bid-ask spreads provide an alternative measure of liquidity with tighter spreads reflective of enhanced liquidity and increased demand to buy or sell. Figure 5 presents the impact on spreads for international OTCQX companies following

the change in disclosure requirements. The spread ratio is defined as the bid-ask spread, after changes to the rule were enforced, expressed as a multiple of the 3-month average bid-ask spread prior. Therefore, a spread ratio of less than 1 indicates evidence of higher liquidity. The figure shows that on average spreads fell by 5% in the following 65 trading days after the enactment date.

Finally, analysing the ratio in the number of market makers for OTCQX securities following the change in regulation further supports the liquidity finding. On average, the number of market makers rose by a substantial 17% for those issuers that moved from Pink to OTCQX prior to the enactment date. A greater number of market makers will boost trading volumes, enhance dollar volumes and tighten spreads.

TIGHTER SPREADS FOR INTERNATIONAL OTCQX AND OTCQB ISSUERS

The likely detrimental impact on Pink Issuers

The real brunt of the amendments to the SEC disclosure rules will be felt by Pink issuers and specifically those issuers on Pink Limited which meet the minimum SEC disclosure requirements but provide limited further financial information. For example non-U.S. companies listed on a qualified foreign exchange that does not mandate English language disclosure. We would expect that analysing the valuation impact on the cohort of issuers that as a consequence of the amendments fell from Pink Current to Pink Limited, will highlight a detrimental impact the changes to the rules caused.

VALUE LIKELY DESTROYED FOR PINK LIMITED ISSUERS

This will be the subject of a future study.

Conclusion

The enactment of the amendment to SEC Rule 15c2-11 allows the OTC Markets to better fulfil their role as a market operator entrusted with the delivery of the best quality information disclosures to the US investment community.

The paper reports preliminary evidence that investors and brokers have adapted very positively and the process of price formation in these markets has improved as reflected in value increases and enhanced liquidity manifesting in both increased trading volumes and reduced bid-ask spreads.

INTERNATIONAL ISSUERS ON PINK HAVE INCENTIVES TO UPGRADE

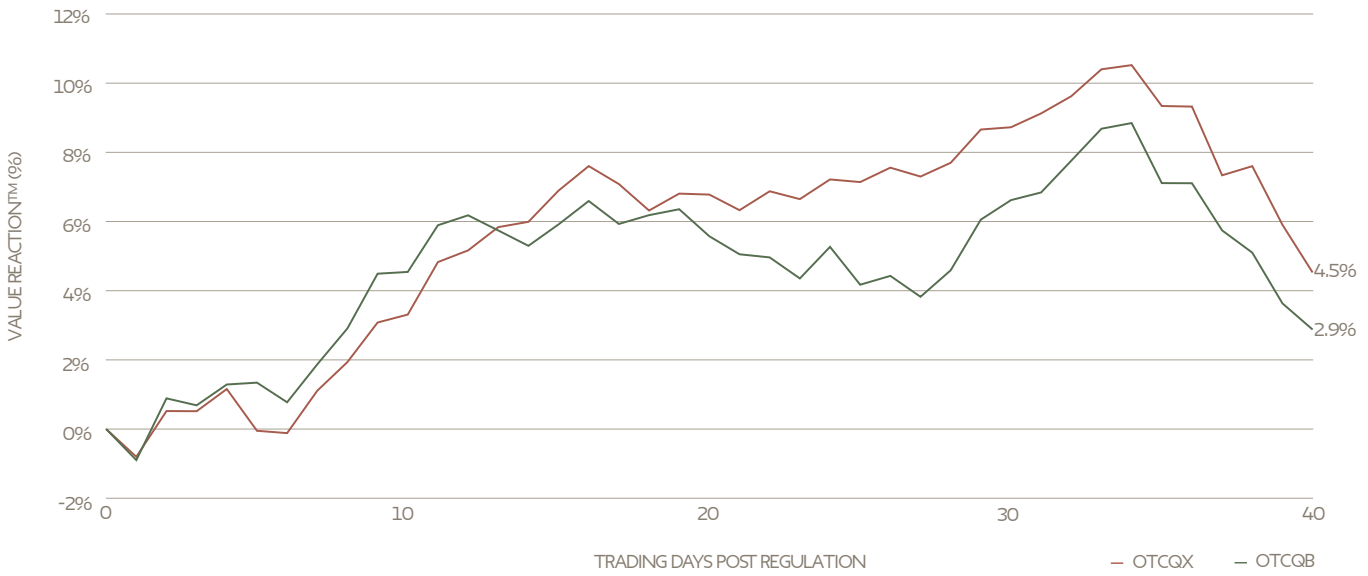
The value and liquidity gap between the premium tiers (OTCQX and OTCQB) and the Pink tiers has increased.

There is considerable incentive for Pink tier issuers to upgrade to a premium tier.

Alternatively put, the opportunity cost for international firms traded in the Pink tier is now considerably higher.

FIGURE 1: The increase in shareholder value for OTCQX and OTCQB

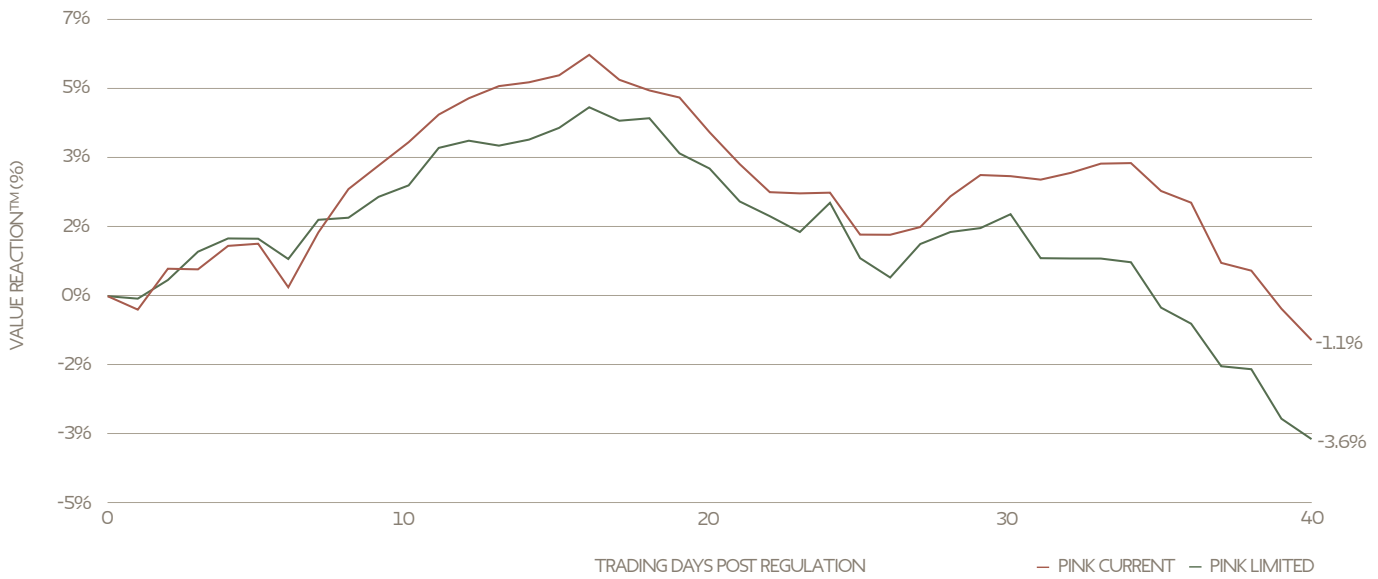
SOURCE: Oxford Metrica



450 BPS OF VALUE CREATED FOR OTCQX ISSUERS
 290 BPS OF VALUE CREATED FOR OTCQB ISSUERS

FIGURE 2: The loss in shareholder value for Pink tiers

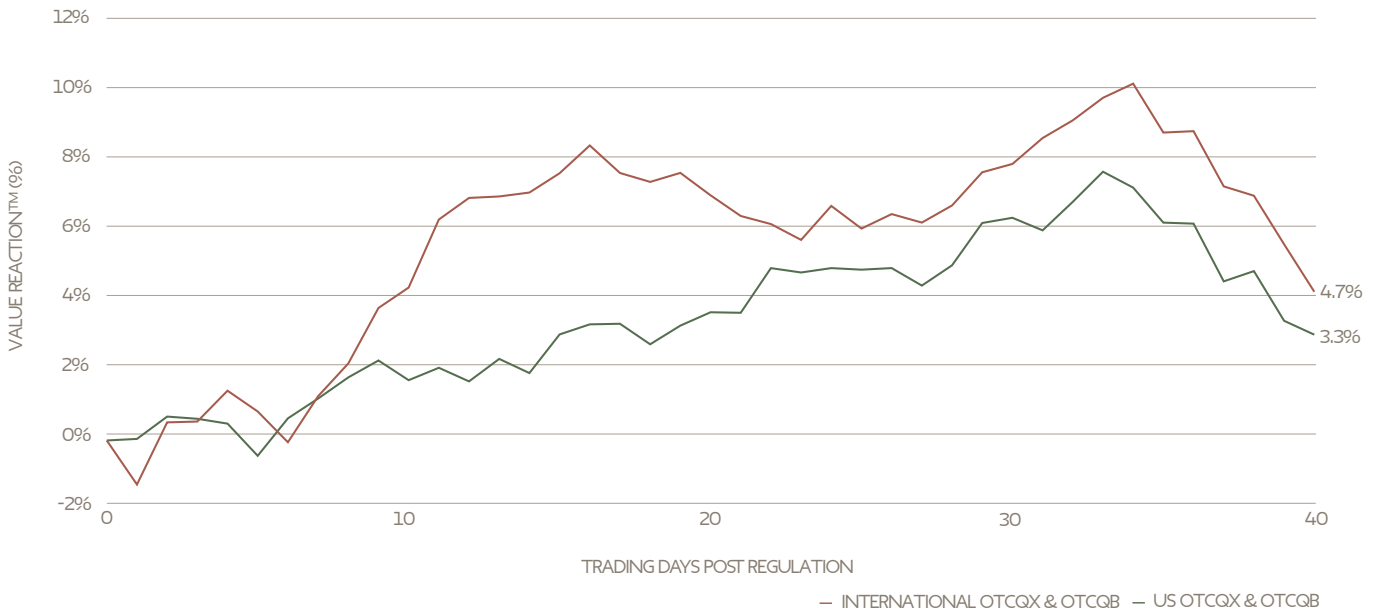
SOURCE: Oxford Metrica



600 BPS VALUE GAP BETWEEN PINK ISSUERS AND
 OTCQX & OTCQB ISSUERS

FIGURE 3: The increase in shareholder value for international and US OTCQX and OTCQB issuers

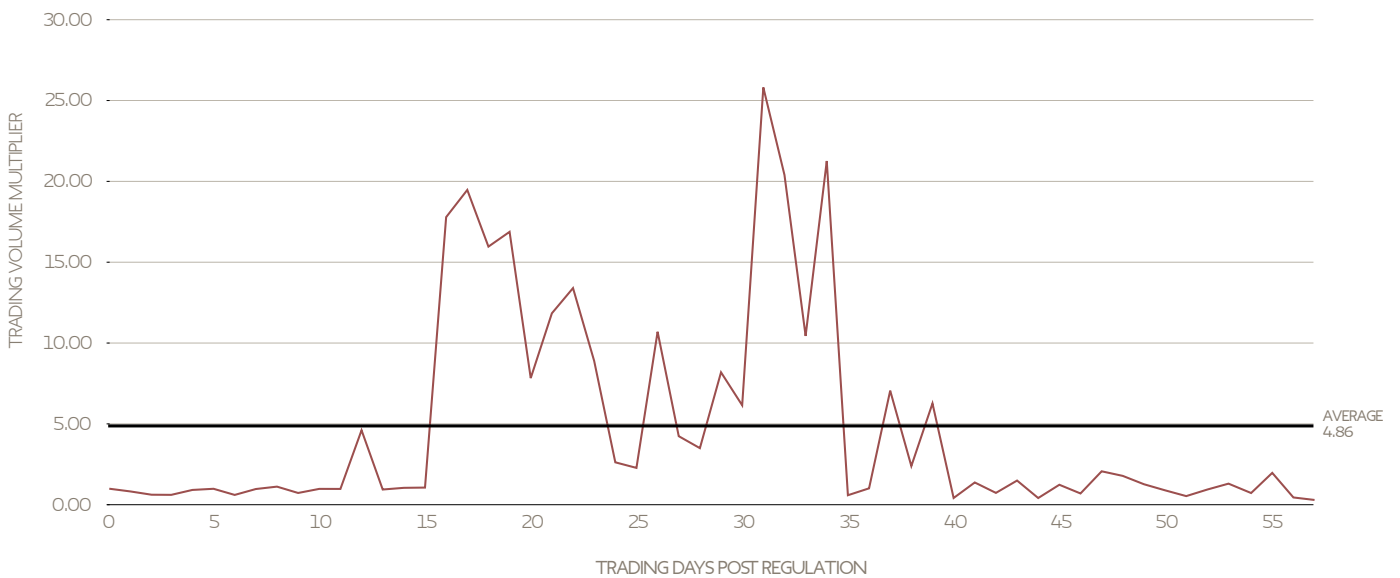
SOURCE: Oxford Metrica



470 BPS OF VALUE CREATED FOR INTERNATIONAL OTCQX & OTCQB ISSUERS
 330 BPS CREATED FOR US OTCQX AND OTCQB ISSUERS

FIGURE 4: The difference in Trading Volume Multiplier™ between OTCQX/OTCQB and Pink Tiers

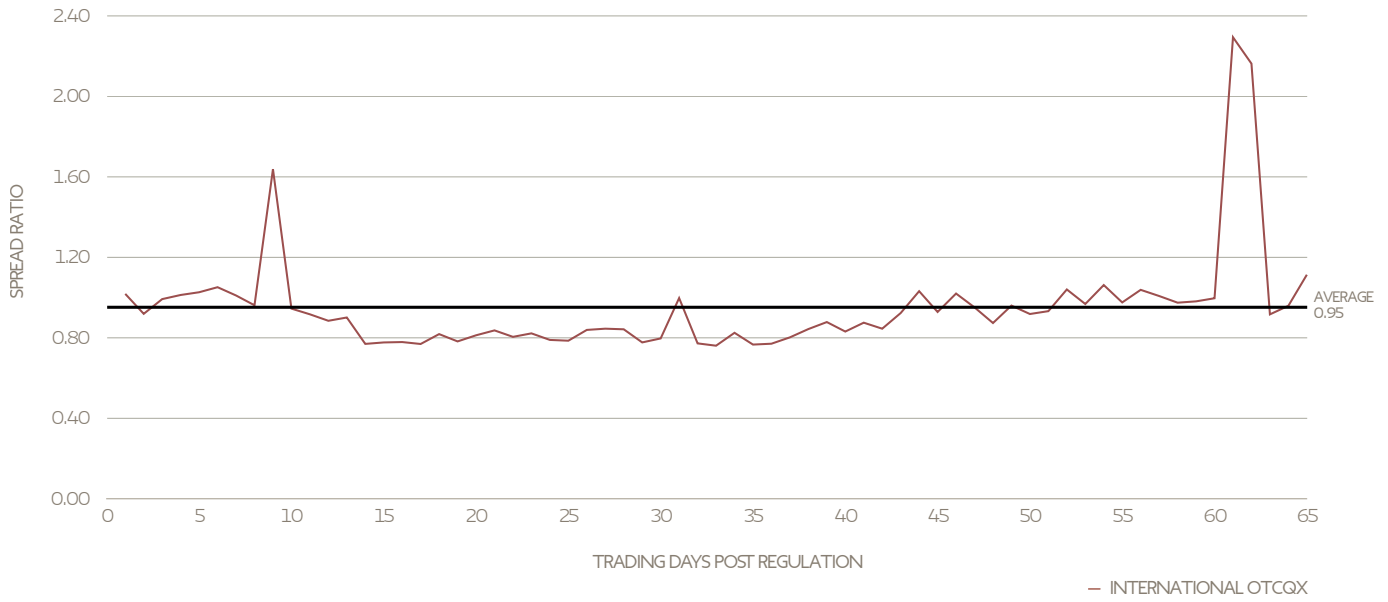
SOURCE: Oxford Metrica



OTCQX AND OTCQB ENJOYED A FIVE FOLD INCREASE IN VOLUME
 VERSUS PINK

FIGURE 5: **The tightening in Spread Ratio for international OTCQX issuers**

SOURCE: Oxford Metrica



AVERAGE SPREADS FOR INTERNATIONAL OTCQX ISSUERS FELL BY 5%

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