

THE OTCQX  
ADVANTAGE;  
BENEFITS FOR  
INTERNATIONAL  
COMPANIES

#### **ABOUT OXFORD METRICA**

Oxford Metrica is a strategic advisory firm, offering informed counsel to boards.

Our advisory services are anchored on evidence-based research in risk and financial performance.

Our work includes statistical analysis and index construction for banks and insurers, risk and performance analytics for asset managers, due diligence support in mergers and highly customised services for corporate boards.



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# FOREWORD

OTC Markets Group has commissioned an independent study to identify the benefits of trading on the OTCQX Market for international companies with a primary listing outside the US. The aim is to better inform the decisions of the management of such companies that may be considering trading their securities in the US. OTCQX is the top tier of the US over-the-counter market. One of the primary objectives in seeking to be traded in the US is to increase and secure US investor holdings. This paper reports the results of a study on the increase in US ownership, the improvement in liquidity and the enhancement of shareholder value that accompanies the admission of international companies to OTCQX.

Established in 2007 by OTC Markets Group, the OTCQX Best Market is designed to distinguish established and investor-focussed US and international companies traded in the US over-the-counter equity market. Companies traded on OTCQX receive a suite of corporate services designed to increase their visibility and outreach to investors, including wide distribution of company news, financial disclosure and presentations; sponsored real time Level 2 quotes for investors and eligibility for inclusion in the OTCQX Composite Index and other OTCQX indexes.

The companies found on OTCQX are distinguished by the excellence of their operations and diligence with which they convey their qualifications. They range from securities of large, global issuers like Adidas, Heineken and Roche to well-capitalised US community banks, small and growing US and international companies. Currently, there are over 400 securities from 27 countries traded on OTCQX.

OTC Markets Group is delighted to be working with Oxford Metrica to present this study. We hope you will find the report to be a valuable resource when deciding to cross-trade in the US on the OTCQX Market. Moreover, we look forward to answering your questions about trading on OTCQX and working with you to assist in maximising your company's value, trading volume and visibility in the US public markets.



Jason Paltrowitz  
Executive Vice President - Corporate Services  
OTC Markets Group Inc. (OTCQX: OTCM)

# EXECUTIVE SUMMARY

The aim of this briefing is to provide an independent, evidence-based view of the benefits to international firms from trading on the OTCQX Market. The view is based on an empirical study of the benefits generated within the home market of the respective issuers as well as an analysis of US ownership, and is supplemented with interviews from selected international issuers and other market participants.

The primary focus of the empirical study is to evaluate the value and liquidity impact within the home market of the respective international firms once they have joined OTCQX. Value creation is measured as the performance of the share price, after controlling for market returns and idiosyncratic factors. The liquidity impact is measured by the change in the average daily Trading Volume Multiplier<sup>TM</sup>; both measures are analysed for 180 trading days after joining the OTCQX Market. The US investor holdings are measured by the increase in the percentage of the total shares in issue held by US investors.

The portfolio studied includes the full universe of international issuers that have traded on the OTCQX Market since 2007. The portfolio consists of over 500 international issuers that were admitted to OTCQX during that 11-year interval. Some of these have subsequently ceased to trade due to a variety of reasons, including through merger activity. Presented below are the key results, all of which show strong statistical significance.

## KEY RESULTS

1. US ownership increased 7-fold after joining OTCQX.
2. Trading volume by number of shares increased 28% within the home market.
3. Trading volume by number of shares increased 37% within the OTC market.
4. Trading volume of firms falling into the lower half of the distribution by size increased 43%.
5. Trading volume of firms falling into the upper half of the distribution by size increased 12%.
6. There were positive liquidity reactions for companies from Canada, Asia Pacific & Europe.
7. 1.5% of value was created within the home market.

The evidence reveals a clear and consistent picture that value and liquidity are enhanced in the issuing firm's home market on joining OTCQX. In addition, there is a significant increase in US ownership once a company is traded on OTCQX.

# INTRODUCTION

OTCQX is the premier tier of OTC Markets Group and is available to both US domestic and international issuers. To be eligible for trading on the OTCQX Market issuers are required to meet high financial standards, adhere to regulatory and compliance laws within the United States and have an independent third-party sponsor introduction. As a result, OTCQX firms tend to have greater transparency in their disclosures, high corporate governance practices and provide shareholders with timely investor information.

In the paper *OTCQX: The Clear Advantage* Oxford Metrica reports a study which evaluated the impact on liquidity of firms that have joined OTCQX. It was found that after firms joined OTCQX, there were significant increases in liquidity: trading volume by number of shares and dollar volumes increased; bid-ask spreads fell and there was an increase in the number of broker dealers per security. Thus, OTCQX provides considerable benefits without the need to incur the significant additional cost associated with listing on an established US exchange.

There are additional considerations that management of international issuers, based outside the United States, may want to evaluate before deciding to move to the OTCQX Market. One consideration, that is unique to international issuers, is the interaction between their home market and OTCQX. In addition, there is the aim to diversify their shareholder base through increased US ownership. The paper evaluates these three dimensions of the impact of joining OTCQX: home market value, liquidity and US ownership.

All international companies that have been admitted to OTCQX since 2007 were analysed. The resultant portfolio consists of more than 500 firms. Price and volume data one year prior to joining OTCQX and three years after were obtained, as well as ownership data one year prior and 5-years post-joining.

In addition to the empirical study, a series of interviews with OTCQX international companies and other market participants were conducted to gauge the issuers' perspective on the benefits of OTCQX within their home market. The interviews are reported in the relevant sections of the paper.

“We see first-hand the value created for companies that choose to cross-trade on OTCQX. These companies experience greater liquidity in the Canadian Market while also increasing their percentage of US ownership.”

- Richard Carleton, Chief Executive Officer,  
Canadian Securities Exchange

# INCREASING US OWNERSHIP

## US OWNERSHIP INCREASES 7-FOLD

The first section of this paper investigates the impact on the US ownership of international securities traded on OTCQX. A key objective for international companies seeking a trading platform in the US is to diversify their shareholder base outside their domestic market and to increase investment from US investors. This is an important prerequisite to increasing liquidity and visibility in order to reduce their cost of capital which manifests as an improvement of share value.

Figure 1 provides clear evidence that once an international firm is traded on the OTCQX Market, there is a significant increase in US ownership as a percentage of total shares in issue.

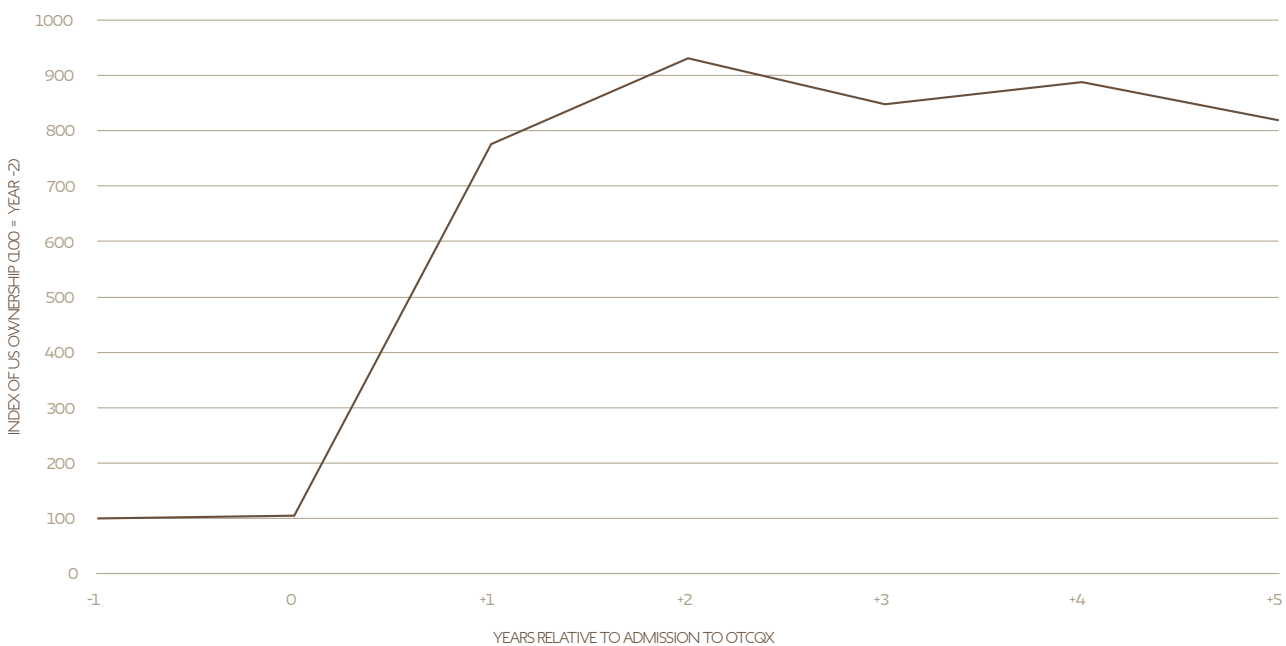


FIGURE 1. Index level of standardised average US ownership

Figure 1 depicts the index level change of US ownership from two years prior to joining OTCQX to five years post joining. The index base is set to 100 two years prior to being launched. It is clearly evident that one year after joining OTCQX, international firms have experienced on average a more than 7-fold increase in US ownership. In absolute terms the US ownership percentage increased from 1.05% one year prior to joining to 7.76% one year post. In addition, the increase in US holdings is sustained over the subsequent four years, therefore providing a stable base of US investment in the international issuers securities. This is a strong statistical result and demonstrates that being traded on OTCQX has enabled international companies to substantially increase and retain the proportion of shareholders based in the United States. The US shareholding is a key driver of the liquidity and value benefits also reported in this study.

“The OTCQX Market has been a great asset for Roche and has enabled us to broaden our investor base here in the US.”

- Roche Holdings (OTCQX: RHHBF; RHHBY)



# THE LIQUIDITY BENEFITS

This section provides evidence of the liquidity benefit that international firms have experienced from moving to the OTCQX Market, measured through trading volume. Trading volume activity reflects how rapidly and effectively information about the firm is disseminated, absorbed and reacted to by investors. Increases in trading volume of a security reflect a higher quality of disclosure, improved information flow, operational efficiency in the market and greater shareholder engagement.

The trading volume metric used is the Trading Volume Multiplier™ (TVM), defined as the daily trading volume, after joining OTCQX, expressed as a multiple of the one year average daily trading volume prior to joining. A TVM of 1 indicates normal trading volumes and no impact of liquidity; any result greater than 1 indicates evidence of higher liquidity.

LIQUIDITY  
INCREASES 28%  
IN HOME MARKET

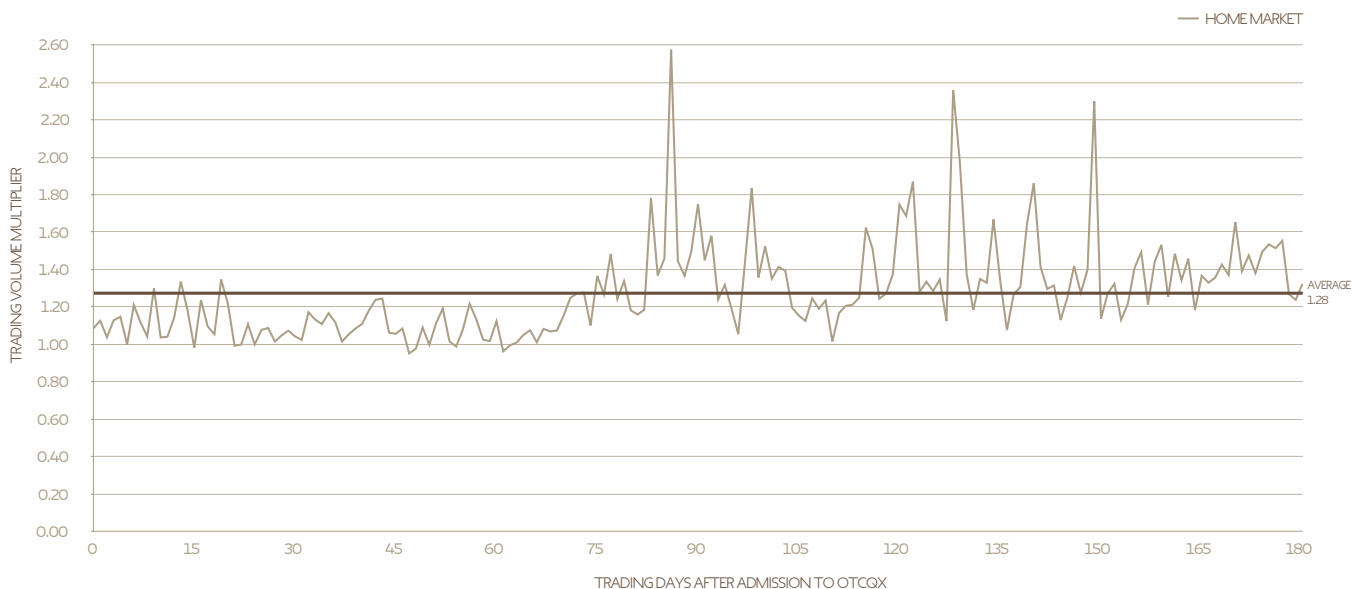


Figure 2 indicates that after joining OTCQX there is a positive increase in the volume of trading in the shares listed on the firm's home exchange. Over the first 180 trading days the daily trading volumes are shown to increase by 28% on average. This indicates the positive impact that is created by joining OTCQX and provides evidence that allowing shares to trade on a market in the US, has additional home market benefits. Domestic market exchanges often express concern over the potential loss of trading in the home market when corporations trade their shares on foreign exchanges. The evidence presented here shows the concern to be ill-founded - quite the opposite, the home market enjoys an improvement in trading volume due to the increased interest among investors.

FIGURE 2. The Trading Volume Multiplier™ in the home market after joining OTCQX

The Trading Volume Multiplier™ is the daily trading volume after joining OTCQX expressed as a multiple of the one year average daily trading volume prior to joining.

Figure 3 indicates that there is an additional positive trading volume observed on the OTC Market when an international firm joins. On average the TVM is 1.37, indicating a 37% increase in daily trading volumes. There are benefits seen in both the home market and OTC Market from joining OTCQX.

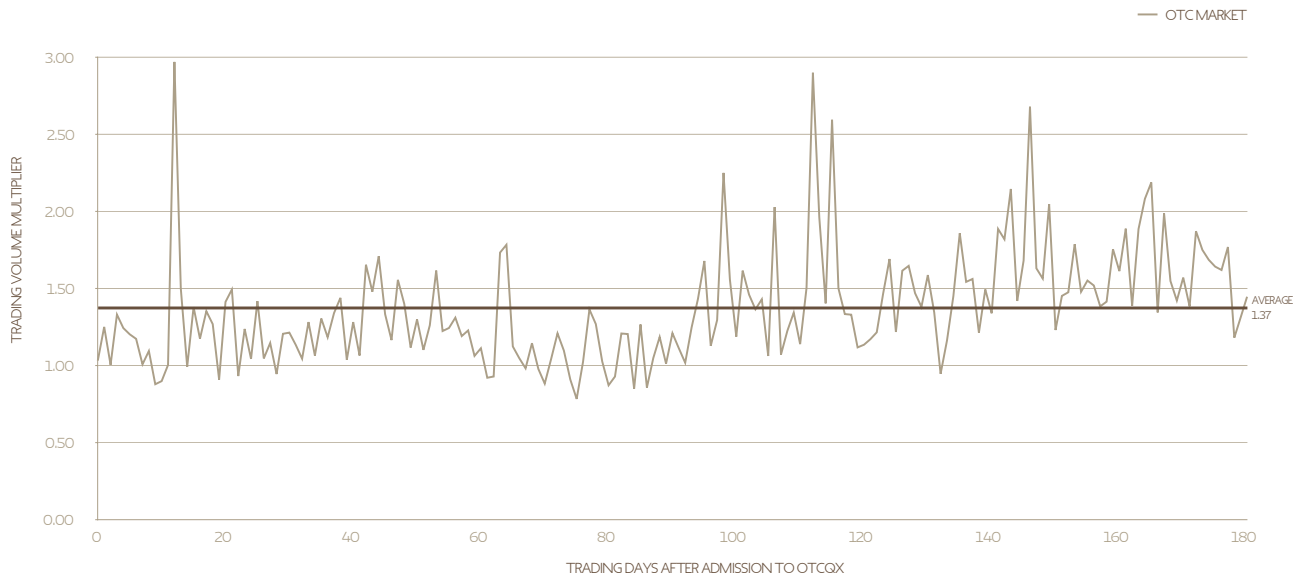


FIGURE 3. The Trading Volume Multiplier™ in the OTC Market after joining OTCQX

“OTCQX is a fantastic facility. Our US investors are able to buy Repsol shares at home in dollars.”

- Repsol S.A. (OTCQX: REPYF; REPY)

The impact of size on this result was evaluated to analyse whether size was a determinant of the positive liquidity effect in the firm's domestic market. Figures 4 and 5 present the Trading Volume Multiplier™ for both large and small firms respectively. Both figures indicate that there is a positive impact on average daily trading volumes in the issuers respective home market.

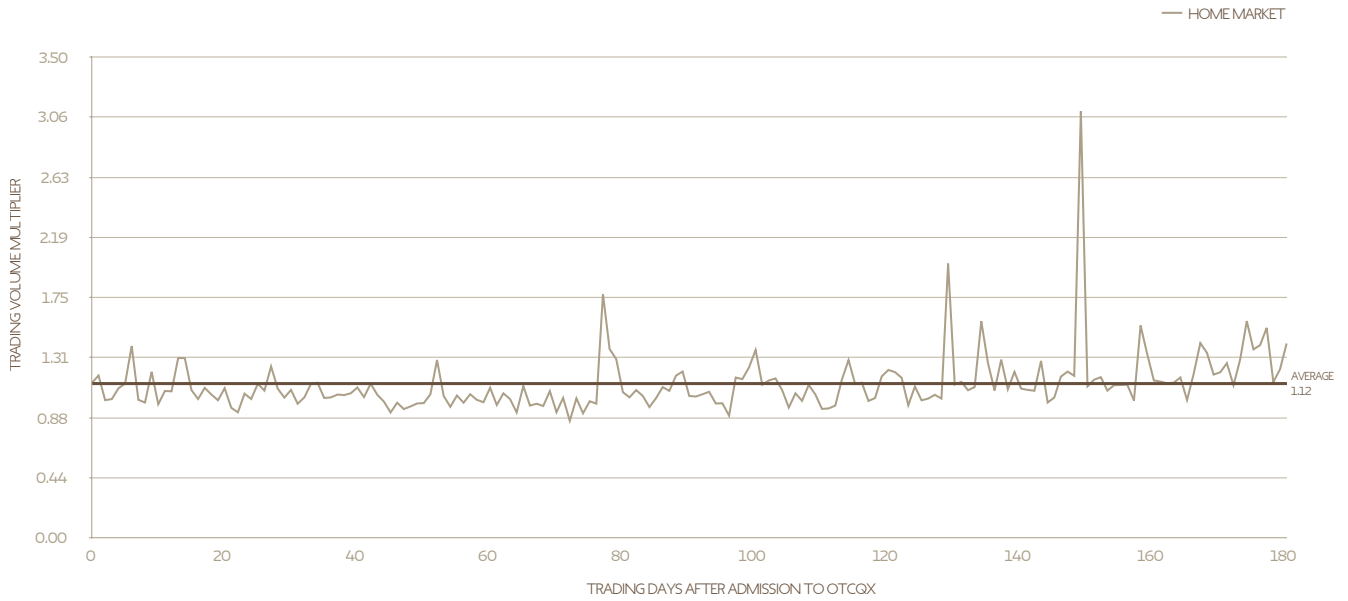


FIGURE 4. The Trading Volume Multiplier™ for large international firms in their home market

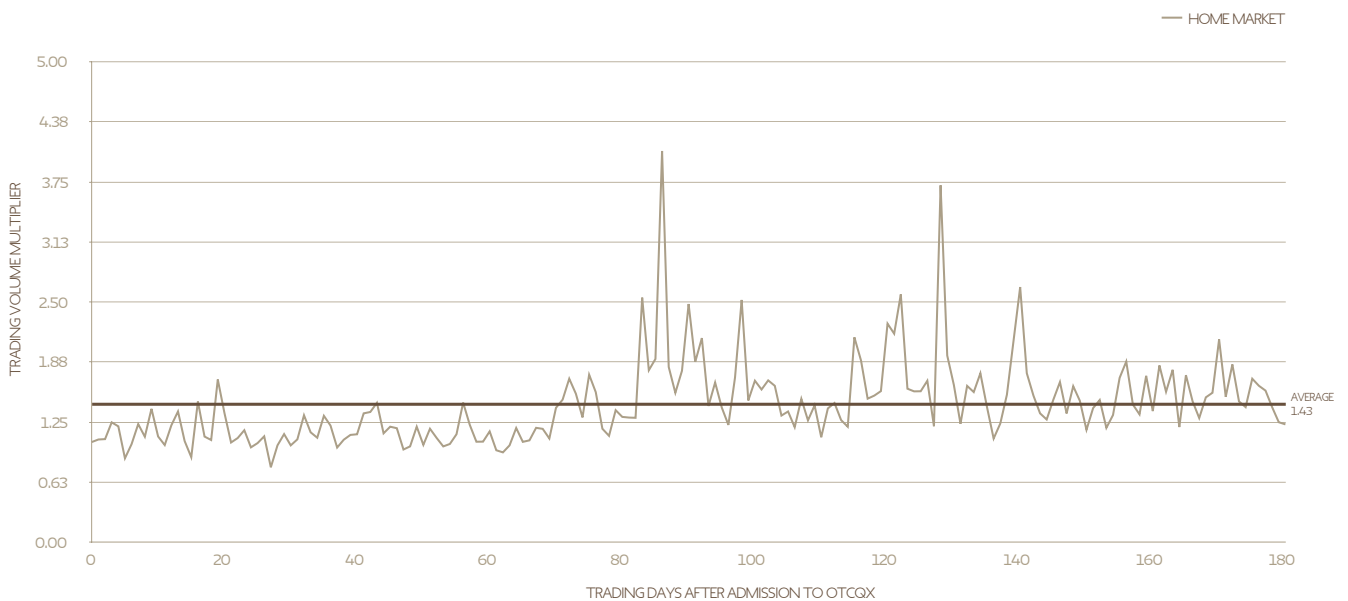


FIGURE 5. The Trading Volume Multiplier™ for small international firms in their home market

Finally, the results were analysed based on the region of the issuer’s home market exchange. Figures 6 to 8 highlight the increase in the Trading Volume Multiplier™ across a diverse set of global regions, pointing to the fact that the positive impact of joining OTCQX is applicable to listed securities regardless of provenance.

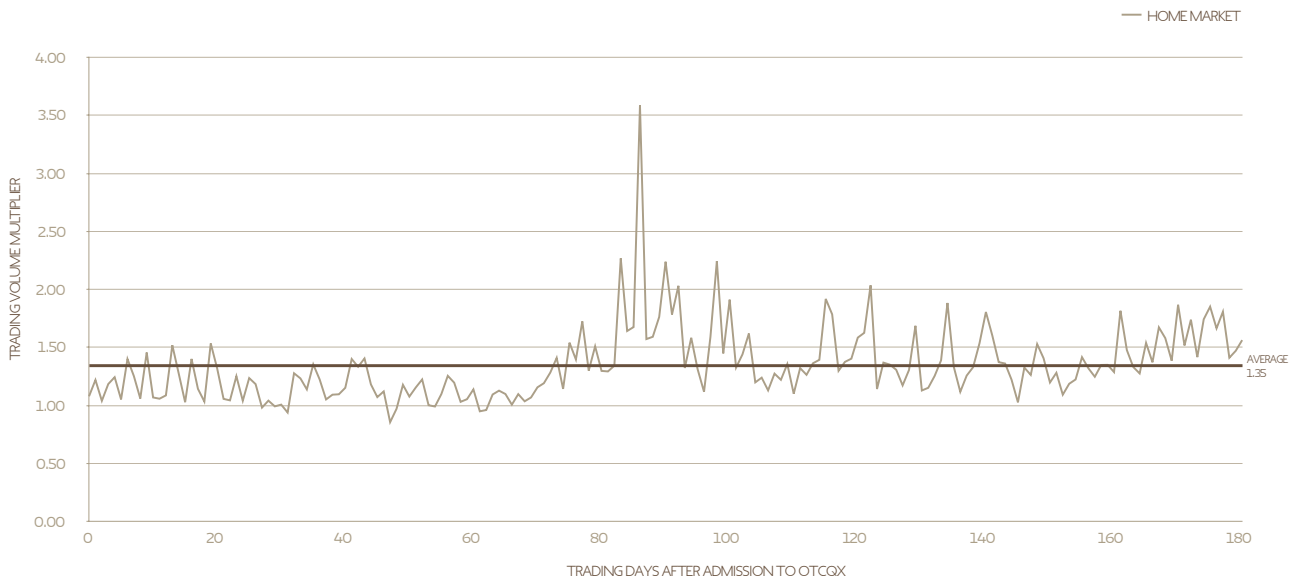


FIGURE 6. The Trading Volume Multiplier™ for Canadian listed securities

Figure 6 indicates that firms listed on the Canadian exchanges exhibit a 35% increase in average daily trading volume within their home market after joining OTCQX.

“The upgrade to OTCQX was seamless and we have seen a substantial increase in trading volumes since upgrading.”

- Experian plc (OTCQX: EXPGE; EXPGY)

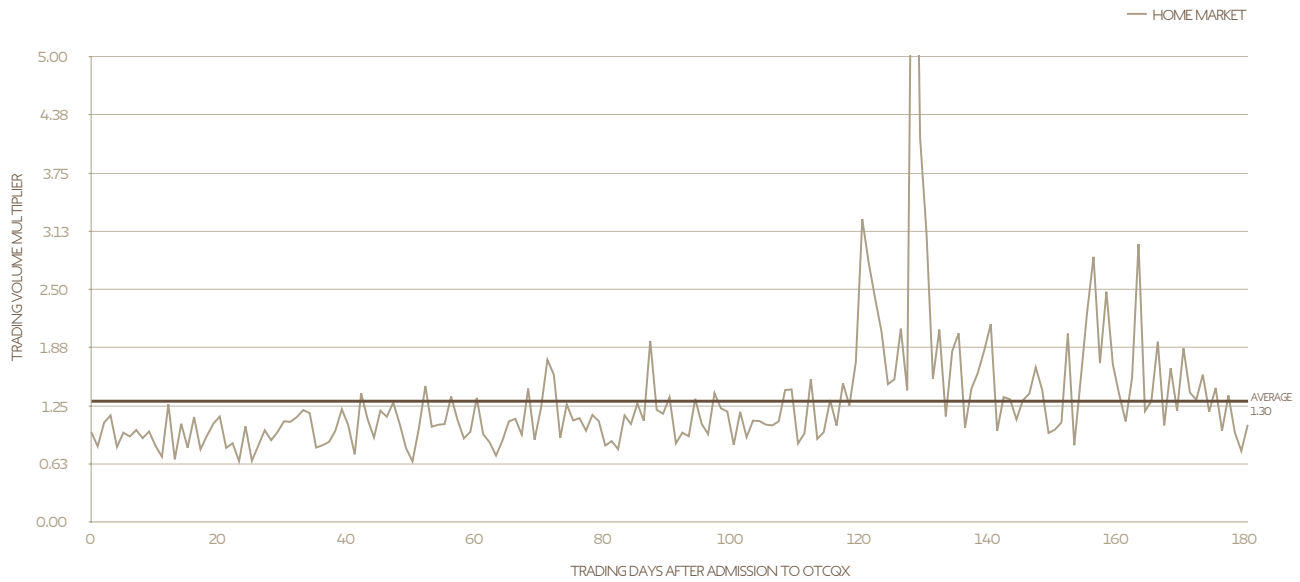


FIGURE 7. The Trading Volume Multiplier™ for Asia Pacific listed securities

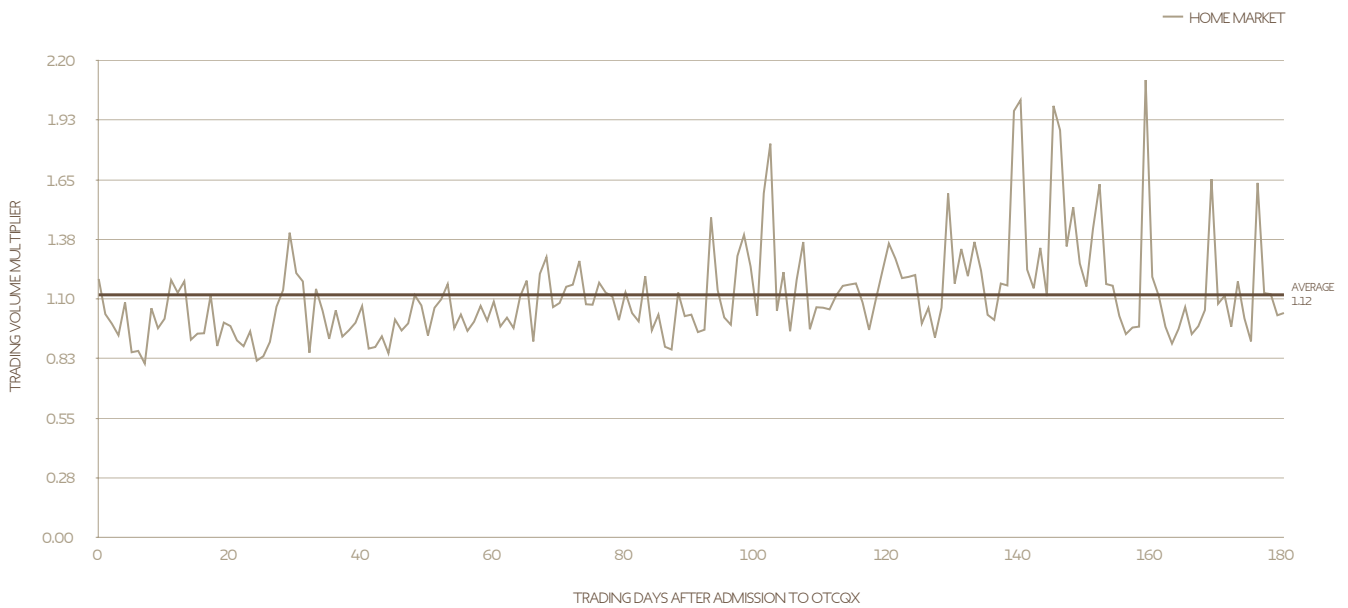


FIGURE 8. The Trading Volume Multiplier™ for European listed securities

Figures 7 and 8 present the evidence of an increase in average daily trading volumes in Asia Pacific and Europe respectively. Asia Pacific exhibits a 30% rise in average daily volumes and European firms a 12% increase in their respective home markets.

# THE VALUE ADVANTAGE

150 BASIS POINTS  
OF VALUE CREATED

This section focuses on the value reaction to the common event of joining OTCQX. The Value Reaction™ metric captures the firm-specific impact on shareholder value, while controlling for market wide effects, risk and currency. The dates at which the individual firms joined OTCQX have been aligned, again helping control for idiosyncratic factors, so that day 0 in the figures is the common event of joining OTCQX.

The graphs presented below reveal the value that is created 180 trading days after admission to OTCQX. The large sample size and diverse set of international securities over multiple observation windows have endowed the results with increased statistical significance.



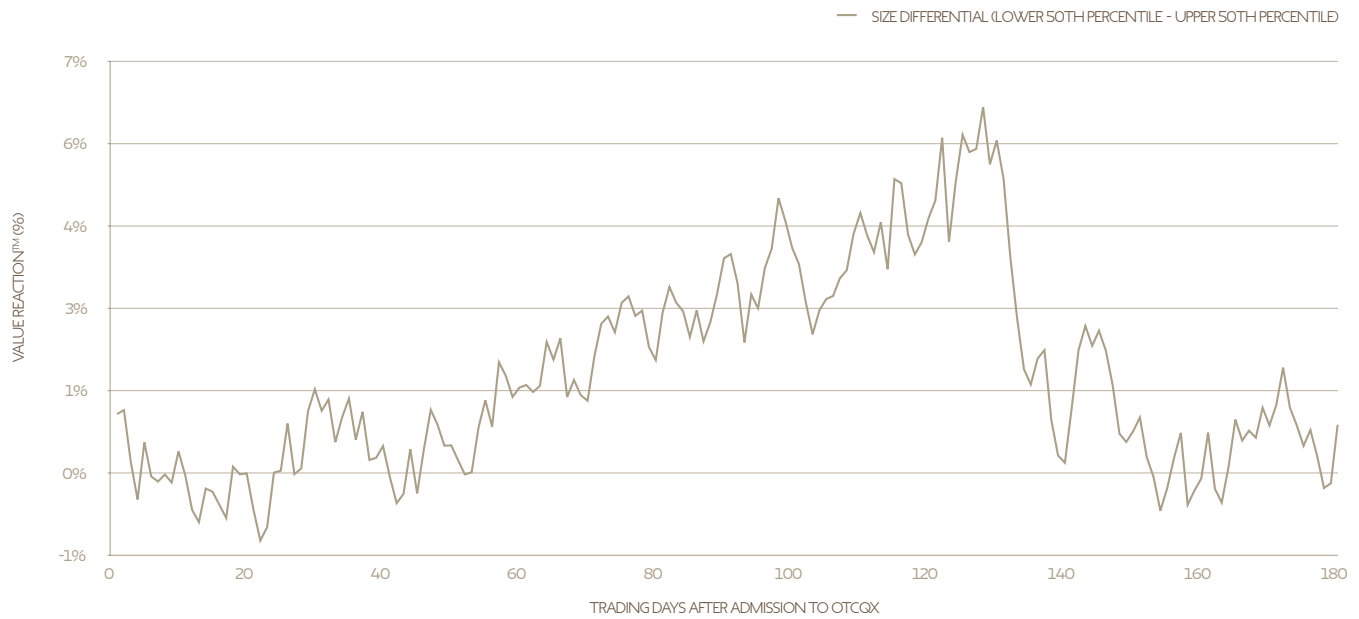
FIGURE 9. The value impact in the home market on joining OTCQX

Figure 9 presents the average value reaction within the respective firm's home market. The home market is defined as the location of the international firm's primary listing outside the United States. On average, it is evident that there is a positive value reaction in the home market after a corporation has begun trading its shares on OTCQX, with 150 basis points of incremental value being created 180 trading days after joining. The value added measured is alpha, which represents the risk-adjusted return over and above general market movements. We suggest that due to the increased transparency, disclosure requirements and corporate governance practises required by OTCQX, a positive signalling effect is generated in the issuer's home market, which translates to a reduced cost of capital and increased value to their shareholders.

In addition, the study analysed whether firm size, as measured by market capitalisation, was a factor in determining the observed positive value reaction in the issuer's home market on joining OTCQX.

Figure 10 presents the value reaction differential between small firms, firms falling into the lower 50th percentile of the population, and large firms that were in the upper 50th percentile of the distribution. It is evident from the graph that although smaller firms initially experienced a greater value reaction in their home market, by 180-trading days after joining, the differential is only 0.8%.

The Value Reaction™ metric captures the firm specific impact on shareholder value while controlling for market wide effects and risk.



This implies that the size of the firm is not a major determinant of the observed positive value reaction. International firms of all sizes are in a position to create value for its shareholders in their home market by joining OTCQX.

FIGURE 10. The value impact differential by size in the home market

“OTCQX has been a great move for us. It allows our US shareholders more efficient trading. We’re very pleased.”

- Village Farms International (OTCQX: VFFIF)

## CONCLUSION

As prior research has shown, there are a number of clear liquidity advantages to trading on the OTCQX Market. The high standards of qualification, compliance requirements and timely reporting lead to increased trading activity within the OTC Market.

For international firms, whose main listing is outside the United States, there are additional advantages that trading on OTCQX can provide within their domestic market. This paper has highlighted three areas of benefit: increased US ownership, liquidity enhancement and value creation. There is evidence that trading on OTCQX translates into increases in shareholder value in the firm's domestic market. Liquidity as measured by average daily trading volumes increases on average by 28% within the domestic market after joining OTCQX. In addition, this study showed that size of the international firm is not a prerequisite for either value or liquidity improvements. Finally, there is clear evidence of a significant increase in US ownership associated with joining OTCQX. International firms' US ownership was shown to increase more than 7-fold.

This paper provides an independent assessment of the evidence for the advantages international issuers have gained from being traded on the OTCQX Market. There is clear evidence that being traded on OTCQX gives international issuers the advantage of increased US investor holding and an increase in liquidity and share value in both the home and OTC markets. It is hoped that the research results will be helpful to international companies seeking to diversify their shareholder base by seeking to be traded on the OTCQX Market.

“The OTCQX Market has been a critical component in our IR program as it has allowed us to offer our shares to domestic US investors in an efficient way, opening up a much larger potential shareholder base to the Company.”

- Ferguson plc (OTCQX: FERGY; WOSCF)







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