

VIKING GLOBAL INVESTORS EUROPE LLP

Annual Order Execution Report

30 April 2019

THIS REPORT AND THE INFORMATION CONTAINED HEREIN RELATES TO THE ORDER EXECUTION ACTIVITIES OF VIKING GLOBAL INVESTORS EUROPE LLP, AN AFFILIATE OF VIKING GLOBAL INVESTORS LP ("VGI" AND, TOGETHER WITH ITS AFFILIATES "VIKING"). THIS INFORMATION SHOULD NOT BE CONSIDERED REPRESENTATIVE OF VIKING AS A WHOLE.

VGI is a global investment firm founded in 1999. VGI manages approximately \$27 billion of capital for its investors. Viking has offices in the United States, the United Kingdom and Hong Kong and is registered as an investment adviser with the U.S. Securities and Exchange Commission.

VGI has engaged Viking Global Investors Europe LLP ("VGIE"), an investment firm regulated by the U.K. Financial Conduct Authority ("FCA"), to provide investment research, analysis, recommendations and advice, and trade execution services. VGIE has published this report in order to comply with its obligations under Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU ("MiFID II") and related secondary and implementing legislation, including Chapter 11 of the FCA's Conduct of Business Sourcebook ("COBS").

VGIE's clients consist of VGI and Viking Global Hong Kong Limited, an investment adviser registered with the Securities and Futures Commission of Hong Kong ("VGHK" and together with VGIE and VGI, the "Viking Group"). VGIE provides portfolio management and trade execution services to VGI and provides trade execution services to VGHK, in each case for the accounts of investment funds for which VGI acts as management company (the "Funds"). VGI and VGHK have each agreed to be classified as a "professional client" under FCA rules.

Part 1 of this report summarizes VGIE's analysis and conclusions of the quality of execution obtained with respect to the investment firms to which it transmitted client orders and the execution venues on which it executed client orders in the year ended 31 December 2018. Part 2 of this report contains VGIE's top five investment firms and execution venues in terms of trading volumes for the year ended 31 December 2018 in the form specified by Commission Delegated Regulation (EU) 2017/576 ("RTS 28").

Unless otherwise indicated, the term execution venue as used in this report shall include any investment firm, systematic internaliser, market maker, liquidity provider, trading venue or direct counterparty (e.g., an OTC derivative counterparty) with which VGIE executes client orders or to which VGIE transmits client orders.

1. Summary of Analysis and Conclusions

a. Introduction

For the year ended 31 December 2018, VGIE executed client orders in the following classes of financial instruments listed in Annex 1 to RTS 28:

- Equities - Shares and Depositary Receipts:
  - Tick size liquidity bands 5 and 6 (from 2000 trades per day)

- Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)
- Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)
- Equity Derivatives:
  - Swaps and other equity derivatives

VGIE has not included in this report any disclosure relating to instrument classes in which it carried on no relevant trading activity during the year ended 31 December 2018. Unless otherwise indicated, this analysis and conclusions contained in this report apply to both equities and equity derivatives.

#### b. Direct and Indirect Execution

In the case of equities, VGIE transmits orders for execution to other investment firms, including other members of the Viking Group. These investment firms may act as agent (in which case the investment firms may transmit the order to an execution venue), as principal (in which case the order may be filled directly by the investment firm), or in other trading capacities (e.g., matched principal). VGIE generally regards its execution activities in equities to be indirect, including in cases where the relevant investment firm executes the order using its systematic internaliser.

In the case of equity derivatives, VGIE generally requests pricing information from the same group of investment firms to which it may transmit orders in equities, but enters into equity derivative transactions only with those counterparties that have executed ISDA Master Agreements with the Funds. VGIE generally regards its execution activities in equity derivatives to be direct, except in cases where VGIE transmits orders for execution to other members of the Viking Group for further execution with such derivative counterparties.

#### c. Conflicts of Interest

VGIE has established policies and procedures to monitor and resolve conflicts with respect to execution venues used to execute client orders. Other than with respect to other members of the Viking Group, VGIE is not under common ownership with any execution venues used to execute client orders and does not have any specific arrangements with such execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received in relation to transmitting client orders. VGIE may otherwise obtain research, company meeting services and other non-monetary benefits from third parties (including execution venues) in a manner consistent with its policies and procedures and COBS 2.3A.

#### d. Execution Quality Analysis

VGIE actively assesses the quality of its execution using data and other tools. For example, VGIE conducts post-trade transaction cost analysis to assess the quality of trader decision-making and the performance of its execution venues and trading strategies. Among other things, this analysis considers whether an executed price was higher or lower than the price of the financial instrument at the time the order was received from the portfolio manager (i.e., arrival costs) and whether actual arrival costs were consistent with anticipated arrival costs (using internal and/or third party estimates). In addition, the Viking Group's Trading department employs quantitative strategists who use technological tools to assist the trading staff in improving the overall efficacy of their trading strategies. As part of its execution quality analysis, VGIE may consider data published by execution venues under Commission

Delegated Regulation (EU) 2017/575. VGIE has not used output from a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

#### e. Execution Factors

Under MiFID II and COBS rules, VGIE must take all sufficient steps to obtain the best possible result for its clients, taking into account the execution factors of price, costs, speed, likelihood of execution and other relevant considerations. VGIE believes that its processes generally resulted in best execution for its clients for the year ended 31 December 2018.

VGIE utilizes both full-service and low-cost trading strategies to execute client orders. Subject to receiving any specific instructions from its clients, VGIE has discretion in how to apply the different execution factors and other relevant considerations, including:

- Reputation, financial viability and regulatory compliance;
- Confidentiality of trading activity;
- Accuracy and timeliness of execution, clearance and settlement;
- Block trading capabilities;
- Market insight and sector expertise;
- Ability to execute difficult transactions;
- Low-cost trading algorithms;
- Access to underwritten offerings, private investment opportunities and secondary market liquidity;
- Reliability and strength of salespeople;
- Commissions, mark-ups, mark-downs or spreads;
- Ability to manage market impact and trading costs;
- Willingness to correct mistakes;
- Size and volume of the investment firm's order flow;
- Responsiveness of the investment firm;
- Accommodation of special needs; and
- Frequency and amount of price improvement.

The exercise by VGIE of its discretion in applying the execution factors and other relevant considerations may result in a range of approaches to executing client orders. Among the most important of these factors, however, is net price, which VGIE defines as the execution price of the financial instrument (before costs) plus all costs associated with acquiring or disposing of the relevant financial instrument, including both explicit costs (such as commissions charged by third party brokers) and implicit costs (such as movements in the price of the financial instrument as a result of the execution). However, there may be circumstances where the primary execution factors vary and net price is no longer the dominant execution factor. For example, in particular with respect to less liquid financial instruments, likelihood of execution could become the dominant factor.

During the trading process, when considering each execution factor, VGIE uses its experience and expertise to balance the full range of factors, including instances where they may conflict with each other. Overall, this may mean that VGIE does not always achieve the best price for every client transaction.

In the case of equity derivatives, VGIE generally measures and monitors best execution by reference to the prices requested from investment firms at the time of trade, which investment firms may or may not be the Funds' counterparties to the transactions. The selection of derivative counterparties is generally made by the Viking Group's Treasury department, taking into account various factors such as reputation, financial viability and regulatory compliance, willingness to commit balance sheet, financing rates, and the ability to locate borrowed shares.

## 2. Top Five Execution Venues

Information regarding VGIE's top five execution venues for the year ended 31 December 2018 is available for downloading by the public in a machine-readable format by clicking on the link below.