

# COLUMBIA THREADNEEDLE INVESTMENTS - EMEA<sup>1</sup>

## SUMMARY ORDER EXECUTION POLICY (FOR PROFESSIONAL CLIENTS)

**July 2022**

---

<sup>1</sup>This Order Execution Policy applies to the following legal entities: Threadneedle Asset Management Limited, Threadneedle International Limited, Threadneedle Investment Services Limited, Threadneedle Management Luxembourg S.A., Threadneedle Investments Singapore (Pte.) Limited, Columbia Threadneedle Management Limited, Columbia Threadneedle Netherlands B.V., Columbia Threadneedle Multi-Manager LLP, Columbia Threadneedle Rep AM Plc, Columbia Threadneedle Fund Management Limited, Columbia Threadneedle Investment Business Limited, Columbia Threadneedle (EM) Investments Limited and Thames River Capital LLP.

---

## Contents

1.	RATIONALE .....	3
1.1.	BACKGROUND .....	3
1.2.	PURPOSE .....	3
1.3.	OBJECTIVE .....	3
1.4.	SCOPE .....	3
1.5.	KEY POINTS.....	3
1.6.	LEGAL AND REGULATORY REQUIREMENTS .....	3-4
2.	POLICY STATEMENT.....	5
2.1.	GENERAL .....	5
2.2.	ROLES AND RESPONSIBILITIES .....	5
2.3.	EXECUTION FACTORS .....	5
2.4.	EXECUTION VENUES .....	6
2.5.	BEST EXECUTION MONITORING .....	6
2.6.	REVIEW.....	6
2.7.	GENERAL TERMS OF ORDER HANDLING.....	6
2.8.	CROSS TRADING .....	7
2.9.	SPECIFIC CLIENT INSTRUCTIONS.....	7
3.	APPENDIX 1 .....	8
	APPENDIX 2 .....	9-13

# 1. RATIONALE

## 1.1. BACKGROUND

In accordance with the Markets in Financial Instruments (Amendment) (EU Exit) Regulations 2018 (SI 2018/1403) following the UK's withdrawal from the European Union ("EU") ("Brexit"), insofar as this applies to relevant legal entities authorised and regulated in the UK, or as otherwise still remaining applicable in accordance with the EU Markets in Financial Instrument Amending Directive (2014/65/EU) ("MiFID II"), which came into effect on 3 January 2018, Columbia Threadneedle Investments - EMEA<sup>1</sup> ("Columbia Threadneedle") is required to put in place an Order Execution Policy ("Policy") and to take all sufficient steps to obtain the best possible result (or "best execution") on behalf of its clients, either when executing client orders or receiving and transmitting orders for execution.

## 1.2. PURPOSE

The purpose of this Policy is to set out how and where Columbia Threadneedle will achieve best execution.

## 1.3. OBJECTIVE

The objective of this Policy is to set out Columbia Threadneedle's requirements with regards to best execution across various asset classes.

## 1.4. SCOPE

This Policy is applicable to Front Office staff.

This Policy only applies to Professional Clients when Columbia Threadneedle is dealing in Financial Instruments (as defined in the FCA rules and consistent with the provisions of MiFID II) and either:

- i. receives and transmits client orders and/or
- ii. executes orders on a client's behalf.

## 1.5. KEY POINTS

This Policy sets out:

- Duty of best execution owed to professional clients
- Best execution factors
- Execution venues
- Client instructions
- Details relating to each asset class are contained separately within annexes
- Details of the execution venues are included in the separate asset class annexes

## 1.6. LEGAL AND REGULATORY REQUIREMENTS

**EU Markets in Financial Instrument Amending Directive (2014/65/EU) (MiFID II) (15 May 2014):** Columbia Threadneedle is required to put in place an Order Execution Policy ("Policy") and take all sufficient steps to obtain, when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order.

**Markets in Financial Instruments (Amendment) (EU Exit) Regulations 2018 (SI 2018/1403),** which were made on 19 December 2018, the purpose of which is to ensure that the regulatory regime established by the MiFID II Directive (2014/65/EU) and the Markets in Financial Instruments Regulation (600/2014) ("MiFIR") (together MiFID II) functions effectively after Brexit.

---

**UK FCA Conduct of Business requirements: 11.2 Best Execution**

**COBS11.2A.4(R):**

(1) A firm must take all sufficient steps to obtain, when executing orders, the best possible results for its clients taking into account the execution factors.

(2) The execution factors to be taken into account are price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of an order.

[Note: article 27(1) of MiFID and article 25(2) of the UCITS implementing Directive].

**Luxembourg CSSF Grand-Ducal Regulation of 13 July 2007: Art 52; Best execution criteria.**

(1) This Article sets out the measures that credit institutions and investment firms are required to take to comply with the requirements of Article 37-3(1) and Article 37-5(1) of the amended law of 5 April 1993 on the financial sector.

(2) In order to determine the relative importance of the factors referred to in Article 37-5(1) of the amended law of 5 April 1993 on the financial sector, credit institutions and investment firms, when executing client orders, must take into account the following criteria:

- a) the characteristics of the client, including the categorisation of the client as retail or professional;
- b) the characteristics of the client order;
- c) the characteristics of financial instruments that are the subject of that order;
- d) the characteristics of the execution systems to which that order can be directed.

For the purposes of this article and of Article 54, "execution system" means a regulated market, a multilateral trading facility ("MTF"), an organised trading facility ("OTF") a systematic internaliser ("SI"), or a market maker or other liquidity provider or an entity that performs a function similar to any of the foregoing functions in a third country.

**Monetary Authority of Singapore (MAS) Notice SFA 04-N16 on Execution of Customer's Orders**

**3 Policies and Procedures in Relation to Customers' Orders**

3.1 A capital markets intermediary, which (either directly or through its agent) places or executes, or both, as the case may be, customers' orders for purchase or sale of any capital markets products, must establish and implement written policies and procedures that are commensurate with the nature, scale and complexity of its business:

- (a) to place or execute or both, as the case may be, customers' orders on the best available terms; and
- (b) to place or execute, or both, as the case may be, comparable customers' orders in accordance with the time of receipt of such orders.

## 2. POLICY STATEMENT

### 2.1. GENERAL

Columbia Threadneedle ultimately retains responsibility in terms of owing its Professional Clients a duty of best execution. However, in many circumstances Columbia Threadneedle (*and its underlying clients*) can gain additional comfort in the knowledge that it too will benefit from the duty of best execution which entities (i.e. *brokers*) will owe when Columbia Threadneedle passes orders to those entities for execution (i.e. transmitting orders for execution).

Where orders are placed with brokers and that entity therefore executes orders “on a client’s (Columbia Threadneedle’s) behalf”, that entity will be judged to be performing a service whereby they either:

- Execute an order by dealing as agent;
- Execute an order by dealing as risk-less principal on behalf of a client (or as matched principal as the case may be); and
- “Work” an order on a client’s behalf.

In such instances described above, Columbia Threadneedle will be owed a duty of best execution by the Broker entity. However, in other instances where Columbia Threadneedle “requests for quote”, as is usually the case in fixed income markets (i.e. broker acts as principal in the transaction), then entities will generally not owe a duty of best execution to Columbia Threadneedle over such quotes.

### 2.2. ROLES AND RESPONSIBILITIES

<b>Role (Position Title)</b>	<b>Responsibility</b>
Front Office Dealers	Must comply with requirements of this Policy
Front Office Dealers	Review of Best Execution arrangements
Compliance	Monitoring

### 2.3. EXECUTION FACTORS

Columbia Threadneedle endeavours to provide all of our clients “best execution” on an equal basis.

The main factors that Columbia Threadneedle may take into consideration with each transaction or group of transactions are typically price, costs, speed, likelihood of execution and settlement, counterparty credit risk, size, nature or any other consideration relevant to the execution of the order. There are also various sub-factors within each which will lead to each of the five criteria having a lesser or greater influence over the decisions to achieve the best execution. The extent to which the different factors are relevant to each asset class is provided in the annexes.

#### 2.4. EXECUTION VENUES

The decision to use which venue or entity is dependent upon the various factors described above.

Our Best Execution Policy includes, for each Financial Instrument in which we execute orders on your behalf, those venues that we consider enable us to obtain on a consistent basis Best Execution. Those possible execution venues include, as appropriate for each product; regulated markets, (MTFs), (OTFs), SIs, market makers, and other liquidity providers.

The details of venues used across asset classes are attached in Appendix 2. We reserve the right to use other execution venues that are not listed, where we deem appropriate in accordance with this Policy and may add or remove any execution venues from this list without notice.

#### 2.5. BEST EXECUTION MONITORING

Columbia Threadneedle will utilise a combination of internal and external analysis to facilitate the monitoring of transactions. Columbia Threadneedle seeks to monitor the execution quality obtained but also the quality and appropriateness of their execution arrangements and policies on an ex-ante and ex-post basis using a combination of internal and external analytics and review processes.

#### 2.6. REVIEW

Columbia Threadneedle will review its execution policy and procedures on at least an annual basis. Details of material changes to this Policy will be made available to clients and information updated, where applicable, in the relevant asset class annex. This policy and all relevant annexes are available on the Columbia Threadneedle website under the heading 'Legal Documents' within the Literature section.

We also regularly review whether the execution venues we use to execute orders provide the quality of service we require to consistently obtain the best possible result for our clients. We do this using Transaction Cost Analysis to quantify execution quality and identify trends and outliers..

We have a robust governance framework in place around order execution processes and outcomes. The relevant governance bodies are responsible for oversight of practices and review of this policy and include representation from the Front Office Assurance and Oversight, Trading and Compliance teams.

#### 2.7. GENERAL TERMS OF ORDER HANDLING

As we seek to enhance our investment capabilities and services to our clients, we may engage certain of our non-U.K. affiliated companies, of the Ameriprise Financial Inc., Group, around the world to provide dealing services on behalf of the clients of Columbia Threadneedle. We believe that harnessing the collective expertise of Columbia Threadneedle Investments and its affiliates will benefit our clients. By utilising the execution skills and resources of different dealing desks around the world (notably UK, US and Singapore), we are able to be active and engaged in each of the live local markets with a real-time presence in markets around the globe. This global execution model adds value to the portfolio management teams and ultimately our clients.

We are required under MiFID to execute client orders in a prompt and fair manner. We will execute aggregated orders sequentially in accordance with the time of their receipt unless otherwise instructed by the client, the interests of the client require otherwise, or the specifics of the order and the current market conditions make this impracticable. This may involve merging client orders together with those of other Columbia Threadneedle clients and may also include aggregated orders from its affiliates. Columbia Threadneedle believes that overall the effect of aggregation should generally be of benefit to clients, although it remains possible that on occasions, this may work to its disadvantage in relation to a particular order. For example, this may include circumstances whereby trades not aggregated with those of other clients (e.g. because of specific client instruction to execute otherwise) may be executed at different times via a different venue, receive a different price, which may or may not be a more favourable price to those that are aggregated with other clients.

With regard to secondary market trading, initial public offerings (IPOs) and New Issues, we comply with a strict order allocation process in accordance with our internal allocation policy.

---

**2.8. CROSS TRADING**

A cross trade is an arrangement whereby a sale order for one Client and a purchase order for another Client is placed with the same broker/venue, with the intention that the sale order is executed with the purchase order at the pre-arranged price. The overriding objective of initiating a cross trade is to achieve best execution. Cross trades can meet the objective of best execution because there is no market impact and they incur minimal administrative fees or commissions. All cross trades, executed by those relevant entities listed to which this policy applies, will be executed on venue where price validation takes place and adhere to any client mandate or regional restrictions.

**2.9. SPECIFIC CLIENT INSTRUCTIONS**

When a client gives Columbia Threadneedle a specific instruction as to the execution of an order, then that order will generally be executed in accordance with those specific instructions. Clients should therefore be aware that providing specific instructions will override Columbia Threadneedle's obligations to execute client orders in accordance with this Policy.

Similarly, if a client gives a specific instruction for an "Advisory Fund" or an "Advised Execution" fund, this instruction may prevent us from obtaining the best possible result in accordance with our Policy.

Where Columbia Threadneedle gives a specific instruction to an entity as to the execution of an order (for example, Direct Market Access (DMA) equity orders submitted via an electronic system), that order would be carried out by that entity (or broker) in accordance with the specific instructions and may not therefore follow the process indicated in the entity's own Policy. In such situations, Columbia Threadneedle will be solely responsible for providing best execution to its own clients, and as a client of the Broker entity providing DMA may not have the benefit of those regulatory protections owed to it by that entity.

### 3. APPENDIX 1

#### Definitions

**Advised Execution** – means a non-discretionary arrangement between the firm and its client to effect executions upon instruction from the client following the provision of reactive advice given to that client.

**Advisory Fund** – means a non-discretionary portfolio whereby advice is provided to the client by the firm and from which the client retains responsibility for choosing whether or not to accept the advice given.

**Execution Venue/Entity** - means a Regulated Market (RM), a Multilateral Trading Facility (MTF), an Organised Trading Facility (OTF), a Systematic Internaliser (SI) or a market maker, or another liquidity provider or an entity that performs a similar function.

**Financial Instruments** – includes:

- i. transferable securities;
- ii. money-market instruments;
- iii. units in collective investment schemes;
- iv. options, futures, forwards, swaps, forward rate agreements and any other derivative contracts relating to securities
- v. derivative instruments for the transfer of credit risk;
- vi. financial contracts for differences.

Note: Financial instruments do not include spot transactions, or loans and certain commodities.

**MiFID** - means the Directive 2004/39/EC of the European Parliament and the Council of 21 April 2004 on Markets in Financial Instruments Directive and any implementing directives and regulations.

**MiFID II** - means the Directive 2014/65/EU of the European Parliament and the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast).

**MiFIR** – means the Regulation (EU) No 600/2014 of the European Parliament and the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

**MTF (Multilateral Trading Facility)** – means a system operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in Financial Instruments, in the system and in accordance with non-discretionary rules, in a way that results in contract in accordance with the provisions of Title II of MiFID.

**OTF (Organised Trading Facility)** – means a multilateral system which is not a regulated market or an MTF and in which multiple third-party buying and selling interests in bonds, structured finance products, emission allowances or derivatives are able to interact in the system in a way that results in a contract in accordance with Title II of MiFID.

**Professional Client** – means a client meeting the criteria laid down in Annex II of MiFID.

**RM (Regulated Market)** - means a multilateral system operated and/or managed by a market operator which brings together multiple third party buying and selling interests in Financial Instruments in the system and in accordance with non-discretionary rules, in a way that results in contract, in respect of the Financial Instruments admitted to trading under its rules and/or systems and which is authorised and functions regularly in accordance with the provisions of Title II of MiFID.

**SI (Systematic Internaliser)** – means an investment firm which, on an organised, frequent, systematic and substantial basis, deals on own account when executing client orders outside a regulated market, an MTF or an OTF.

**Trading Venue** – means a regulated market, an MTF or an OTF



## APPENDIX 2

List of venues that firms may place significant reliance on in meeting their best execution obligations:

Abbey National Treasury Services plc  
ABG Sundal Collier ASA  
ABN Amro Bank NV  
Absa Bank Limited  
ADM Investor Services, Inc  
Alamo Capital  
AllianceBernstein Holding L.P.  
Amherst Pierpoint Securities LLC  
ANZ Securities, Inc  
Arbor Research & Trading UK Limited  
Arbor Research & Trading, LLC  
Arden Partners Plc  
Asian Development Bank  
Atlantic Equities LLP  
Auerbach Grayson and Company LLC  
Aurel BCG  
Australia & New Zealand Banking Group Limited  
Avior Capital Markets International Limited  
BBVA Securities Inc  
B. C. Ziegler and Company  
B. Riley Securities, Inc  
Baader Helvea Inc  
Banco Santander SA  
Bank Degroof Petercam SA  
Bank of America Corporation  
Bank of America Merrill Lynch International Designated Activity Company  
Bank of America NA  
Bank of America Na, Shanghai  
Bank of Montreal  
Bank of New York Mellon Corporation  
Bank of New York Mellon SA/NV  
Banque Lombard Odier & Cie SA  
Barclays Bank plc  
Barclay's Capital Inc  
Barclays Capital Securities Ltd  
BB&T Securities LLC  
BCP Securities LLC  
Benchmark Securities, LLC  
Bernstein Autonomous LLP  
BGC Brokers LP  
Bloomberg Tradebook Europe Ltd  
Bloomberg Trading Facility Limited (BMTF)  
BMO Capital Markets Corp.  
BMO Capital Markets Ltd

---

BNP Paribas Arbitrage  
BNP Paribas (China) Limited  
BNP Paribas Commodity Futures Limited  
BNP Paribas Equities France SA  
BNP Paribas SA  
BNP Securities Asia Ltd  
BNP Paribas Securities Corp  
BNP Paribas Securities Services  
BNY Mellon Capital Markets, LLC  
BOCI Securities Ltd  
Boenning & Scattergood, Inc  
BofA Securities, Inc.  
BOK Financial Securities, Inc.  
Bradesco Securities, Inc  
Brean Capital, LLC.  
Bred Banque Populaire SAC  
Bred Banque Populaire SAC  
Brownstone Investment Group, LLC  
BTG Pactual US Capital, LLC  
BTIG Limited  
BTIG, LLC  
C.L. King & Associates, Inc.  
Cabrera Capital Markets, LLC  
Caixabank SA  
Cambridge International Securities Inc  
Canaccord Genuity Limited  
Canaccord Genuity LLC  
Canadian Imperial Bank of Commerce (CIBC)  
Cantor Fitzgerald & Co  
Cantor Fitzgerald Europe  
Carnegie Investment Bank AB  
Cenkos Securities Plc  
China International Capital Corporation Ltd  
China International Capital Corporation Hong Kong Securities Limited  
CICC US Securities, Inc  
CIMB Bank Bhd  
Citadel Securities LLC  
Citibank NA  
Citibank (China) Co., Ltd  
Citigroup Inc  
Citigroup Global Markets Europe AG  
Citigroup Global Markets Inc  
Citigroup Global Markets Limited  
Citizens Bank, NA  
CLSA (UK)  
CLSA Americas, LLC  
CLSA Limited  
CLSA Singapore Pte Ltd

---

---

Columbia Management Investment Advisers LLC (an affiliated investment management entity)  
Commerzbank AG  
Commerz Markets LLC  
Commonwealth Australia Securities LLC  
Commonwealth Bank of Australia  
Tradition London Clearing Limited  
Cooperatieve Rabobank U.A.  
Cowen Execution Services Limited  
Cowan International Limited  
Cowen & Company, LLC  
Craig-Hallum Capital Group LLC  
Credit Agricole Corporate & Investment Bank  
Credit Agricole SA  
Credit Agricole Securities (USA) Inc  
Credit Suisse AG  
Credit Suisse AG, New York Branch  
Credit Suisse (Brasil) SA Corretora  
Credit Suisse International  
Credit Suisse Securities (Europe) Limited  
Credit Suisse Securities (USA) LLC  
CSI Global Markets Ltd  
D.A. Davidson & Co  
Daiwa Capital Markets America Inc  
Daiwa Capital Markets Europe Limited  
Danske Bank A/S  
Davenport & Company LLC  
Davy Securities Limited  
DBS Bank Ltd  
DBS Bank (China) Limited  
Deutsche Bank AG  
Deutsche Bank Securities Inc.  
DNB Bank ASA  
DNB Markets, Inc.  
Duncan-Williams, Inc  
DZ Bank AG Deutsche Zentral-Genossenschaftsbank AG  
Evercore Group LLC  
Exane Ltd  
Exane, Inc  
Exane SA  
Federal Reserve Bank of New York  
FHN Financial Securities Corp.  
Fidelity Capital Markets (a division of National Financial Services, LLC)  
Fidentiis Equities Sociedad de Valores S.A.  
Fifth Third Securities, Inc  
Financial Brokerage Group  
FinnCap Limited  
First Abu Dhabi Bank PJCS  
Flow Traders BV

---

Flow Traders US Institutional Trading LLC  
FX Alliance Limited (FXAll)  
GMS Group, L.L.C (The)  
Goldman Sachs Execution & Clearing, L.P.  
Goldman Sachs Group, Inc.  
Goldman Sachs International  
Goldman, Sachs & Co. LLC  
Goldman, Sachs Bank USA  
Goodbody Stockbrokers UC  
Guggenheim Securities, LLC  
HaiTong International Securities Company Ltd  
Hauck & Aufhaeuser Privatbankiers KGaA  
Headlands Tech Global Markets, LLC  
Herbert J. Sims & Co., Inc.  
Hilltop Securities Inc.  
HSBC Bank (China) Co., Ltd.  
HSBC Bank plc  
HSBC Bank USA, NA  
HSBC Continental Europe SA  
HSBC Holdings, Plc  
HSBC Securities (USA) Inc  
HSBC Trinkaus & Burkhardt AG  
Ho Chi Minh Securities Corporation  
Huntington Securities, Inc.  
ICAP Securities Ltd  
ICAP Plc  
ICBC Standard Bank plc  
ICICI Securities Primary Dealership Limited  
Ichiyoshi Securities Co., Ltd.  
IIFL Securities Ltd'  
Imperial Capital LLC  
ING Bank NV  
ING Financial Markets LLC  
Instinet Europe Limited  
Instinet, LLC  
Intesa Sanpaolo S.p.A.  
Investec Bank plc  
Investment Technology Group Limited  
Itau BBA International Plc  
Itau BBA USA Securities Inc  
J&E Davy  
Jane Street Execution Services, LLC  
Jane Street Financial Limited  
Jane Street Hong Kong Limited  
Janney Montgomery Scott LLC  
Jefferies International Limited  
Jefferies LLC  
JMP Securities LLC

---

Joh, Berenberg, Gossler & Co. KG (Berenberg Bank)  
JonesTrading Institutional Services LLC  
JonesTrading International  
JP Morgan Chase & Co.  
JP Morgan Chase Bank (China) Company Limited  
JP Morgan Chase Bank NA  
JP Morgan Securities Plc  
J.V.B. Financial Group, LLC  
KBC Securities NV  
Keefe, Bruyette and Woods, Inc  
Kepler Cheuvreux SA  
Keybanc Capital Markets Inc.  
'King & Shaxson Ltd  
Korea Investments & Securities Co., Ltd.  
Kotak Securities  
Lancaster Pollard & Co., LLC  
Landesbank Hessen-Thüringen Girozentrale  
Liberum Capital Ltd  
Liquidity Finance LLP  
Liquidnet Europe Limited  
Liquidnet, Inc.  
Lloyds Bank Corporate Markets Plc  
Lloyds Bank plc  
Lloyds Securities Inc.  
Loop Capital Markets LLC  
Luminex Trading & Analytics LLC  
Macquarie Bank Ltd  
Macquarie Capital (USA) Inc.  
Macquarie Capital (Europe) Limited  
Macquarie Securities (Australia) Limited  
MainFirst Bank AG  
Marex Financial Limited  
'Marex North America LLC - RCG Division  
MarketAxess Capital Limited  
MarketAxess Corporation  
Maybank Kim Eng Securities Pte. Ltd  
Mediobanca- Banca di Credito Finanziario S.p.A  
Merrill Lynch Capital Services Inc.  
Merrill Lynch International Limited  
Mesirow Financial, Inc.  
Middlegate Securities Ltd.  
Millennium Advisors, LLC  
Millennium Europe Limited  
Mirabaud Securities Limited  
Mirae Asset Daewoo Co Ltd  
Mirae Asset Securities (USA) Inc.  
Mitsubishi UFJ Trust International Limited  
Mizuho Bank (China), Ltd.

---

Mizuho International Plc  
Mizuho Securities Co Ltd  
Mizuho Securities USA LLC  
MKM Partners LLC  
Morgan Stanley & Co International plc  
Morgan Stanley & Co., LLC  
Morgan Stanley Capital Services LLC  
Morgan Stanley Europe SE  
Motilal Oswal Financial Services Ltd  
MUFG Securities Americas Inc.  
MUFG Securities EMEA Plc  
NatAlliance Securities, LLC  
National Australia Bank Ltd  
National Bank Financial Inc.  
National Bank of Canada Financial Inc.  
Natixis SA  
NatWest Markets Plc  
NatWest Markets Securities Inc.  
Needham & Company, LLC  
NH Investment & Securities Co., Ltd  
Nomura International plc  
Nomura Securities International, Inc.  
Nordea Bank AB  
Northland Securities, Inc.  
Northern Trust Company/The  
Northern Trust Corporation/The  
Northern Trust Global Services Plc/The  
Nplus 1 Singer Capital Markets Limited  
Numis Securities Ltd  
NW Capital Markets Inc.  
Oddo BHF New York Corporation  
Oddo BHF SCA  
Oppenheimer & Co Inc  
Oppenheimer Europe Ltd  
Panmure Gordon (UK) Ltd  
Peel Hunt LLP  
Performance Trust Capital Partners, LLC  
Pershing LLC  
Piper Sandler & Co  
PNC Capital Markets LLC  
Raymond James & Associates Inc  
Raymond James Financial International Limited  
RBC Capital Markets LLC  
RBC Dominion Securities Inc  
RBC Europe Ltd  
Redburn (Europe) Limited  
Robert W. Baird & Co. Incorporated  
Roosevelt & Cross, Incorporated

---

R. Seelaus & Co., LLC  
Royal Bank of Canada/The  
Royal Bank of Scotland PLC/The  
Wallich & Mathies BV  
Clarksons Platou Securities As (formerly RS Platou Markets AS)  
Samco Capital Markets, Inc.  
Samsung Securities (America) Ltd  
Samuel A. Ramirez & Company, Inc.  
Sanford C Bernstein & Co LLC  
Sanford C. Bernstein Limited  
Santander Investment Securities Inc.  
Scotia Capital (USA) Inc.  
Scotiabank (The Bank of Nova Scotia)  
Scotiabank Europe Ltd  
Seaport Global Securities LLC  
Seaport Group Europe LLP/The  
SG Americas Securities, LLC  
Shore Capital Stockbrokers Limited  
Siebert Williams Shank & Co., L.L.C.  
Skandinaviska Enskilda Banken AB  
SMBC Bank International Plc  
SMBC Nikko Capital Markets Ltd  
SMBC Nikko Securities America Inc  
Societe Generale  
Societe Generale International Limited  
Standard Chartered Bank Plc  
Standard Chartered Bank (China) Limited  
State Street Bank & Trust Company  
State Street Corp  
State Street Global Markets, LLC  
Stephens Inc.  
Stern Brothers & Co.  
Stifel Nicolaus Europe Ltd  
Stifel, Nicolaus & Company, Incorporated  
StoneX Financial, Inc.  
Sumitomo Mitsui Financial Group, In  
SumRidge Partners, LLC  
Susquehanna Financial Group, LLP  
SVB Leerink LLC  
Svenska Handelsbanken AB  
SWBC Investment Services, LLC  
TD Securities Inc  
TD Securities (USA), LLC  
Threadneedle Investments Singapore (Pte.) Limited (an affiliated investment management entity)  
Toronto-Dominion Bank/The  
TPCG Financial Services Agente De Valores SA  
Tradeweb Direct LLC  
Tradeweb Europe Limited

---

Tradition London Clearing Limited  
Truist Securities, Inc.  
U.S. Bancorp Investments, Inc.  
UBS AG  
UBS AG, London Branch  
UBS Group AG  
UBS Financial Services, Inc  
UBS Securities Limited  
UBS Securities LLC  
Uhlmann Price Securities, LLC  
UMB Bank, National Association  
UniCredit Bank AG  
UniCredit SpA  
United Capital Markets, Inc.  
UOB Kay Hian (U.S.) Inc.  
Van Lanschot Kempen N.V.  
Viet Capital Securities JSC  
Vining-Sparks IBG, Limited Partnership  
Virtu Americas LLC  
Virtu Financial Ireland Ltd  
Virtu ITG Europe Limited  
Virtu ITG HK Limited  
Wedbush Securities Inc.  
Wells Fargo Bank NA  
Wells Fargo Securities International Limited  
Wells Fargo, LLC  
Wells Fargo Securities, LLC  
Westpac Banking Corp  
William Blair & Company L.L.C.  
William Blair International Ltd  
Winterflood Securities Limited  
Yuanta Securities Co., Ltd.  
Zions Bancorporation, N.A.



Threadneedle Asset Management Limited. Registered in England and Wales No. 573204.  
Threadneedle International Limited. Registered in England and Wales No. 2283244.  
Threadneedle Investment Services Limited. Registered in England and Wales No. 3701768  
Registered Office: Cannon Place, 78 Cannon St, London EC4N 6AG.  
Threadneedle Management Luxembourg S.A. Registered with the Registre de Commerce et des Societes (Luxembourg) No. B 110242. Registered office 44 rue de la Vallée, L-2661 Luxembourg  
Threadneedle Investments Singapore (Pte.) Limited. Registered in Singapore. Company Number 201101559W. 3 Killiney Road, #07-07 Winsland House. 239519. Singapore.  
Columbia Threadneedle Management Limited. Registered in England and Wales No. 00517895  
Columbia Threadneedle Multi-Manager LLP. Registered in England and Wales No. OC328350  
Columbia Threadneedle Fund Management Limited. Registered in England and Wales No. 02170242  
Thames River Capital LLP. Registered in England and Wales No. OC310934  
Registered Office: Exchange House, Primrose Street, London, EC2A 2NY  
Columbia Threadneedle Rep AM Plc, Registered in England and Wales No. 01133893  
Registered Office: 7 Seymour Street, London, England, W1H 7JW  
Columbia Threadneedle (EM) Investments Limited. Registered in England and Wales No. 03029249  
Registered Office: 95 Wigmore Street, London, W1U 1FD  
Columbia Threadneedle Investment Business Limited. Registered in Scotland No. SC151198  
Registered Office: 6th Floor Quartermile 4, 7a Nightingale Way, Edinburgh, Scotland, EH3 9EG  
Columbia Threadneedle Netherlands B.V.  
Registered office Jachthavenweg 109 E, Amsterdam, 1081KM, Netherlands  
Threadneedle Asset Management Limited, Threadneedle International Limited, Threadneedle Investment Services Limited are authorised and regulated by the Financial Conduct Authority.  
Threadneedle Management Luxembourg S.A. is regulated by the Commission de Surveillance du Secteur Financier (CSSF)  
Threadneedle Investments Singapore (Pte.) Limited is regulated by the Monetary Authority of Singapore (MAS) under the Securities and Futures Act (Chapter 289).  
Columbia Threadneedle Management Limited, Columbia Threadneedle Multi-Manager LLP, Columbia Threadneedle Rep AM Plc, Columbia Threadneedle Fund Management Limited, Columbia Threadneedle Investment Business Limited, Columbia Threadneedle (EM) Investments Limited and Thames River Capital LLP are authorised and regulated by the Financial Conduct Authority.  
Columbia Threadneedle Netherlands B.V. is regulated by the Dutch Authority for the Financial Markets (AFM)