Goldman Sachs International: Best Execution Reports under RTS 28
This report has been prepared by Goldman Sachs International ("Goldman Sachs") for the period ending 31 December 2018 (the "Reporting Period") for the purposes of meeting Goldman Sachs'
regulatory obligations under Article 65(6) of Commission Delegated Regulation 2017/565 and Article 27(6) of Directive 2014/65/EU ("MiFID II") which requires Goldman Sachs to annually publish (i)
the top five venues where it executed clients orders; and (ii) the top five firms to whom it transmitted or placed client orders for execution, in respect of each class of financial instruments noted
below. This report also provides information on Goldman Sachs' assessment of the quality of execution it obtained from these execution venues and firms (based on its internal monitoring), for
each class of financial instruments. Goldman Sachs does not guarantee the correctness or completeness of the information in this report and shall not be responsible for or have any liability
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# **Equities Shares & Depositary Receipts**

Reporting Entity: GSI

Top Five Venue Report

Type of Client: Professional Client
Reporting Entity: GSI

Class of Instrument	Equities - Shares & Depositary Rece	ipts - Tick size liquidity bands 1 and 2	? (from 0 to 79 trades per day)		
Notification if <1 average trade per business day in the previous year	N				
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	58.81	10.65	0.47	9.19	0.72
XLON - LONDON STOCK EXCHANGE	10.94	9.05	54.28	35.64	0.13
XSWX - SIX SWISS EXCHANGE	6.74	7.16	50.89	35.34	0.74
XVTX - SIX SWISS EXCHANGE - BLUE CHIPS SEGMENT	3.97	0.81	76.38	14.97	0.14
CHIX - CBOE EUROPE - CXE ORDER BOOKS	2.19	3.81	41.66	58.34	1.12

Top Five Broker Report
Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Equities - Shares & Depositary Rece	ipts - Tick size liquidity bands 1 and 2	(from 0 to 79 trades per day)		
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)		Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
378900CEE329BEA35C22 - INVESTEC SECURITIES (PTY) LTD	49.08	21.11	N/A	N/A	0.06
789000ZSYXQD4Y7YRG72 - AK YATIRIM MENKUL DEGERLER ANONIM SIRKETI	29.14	52.05	N/A	N/A	0.64
549300WMD1RYUSGEUG82 - ISRAEL BROKERAGE AND INVESTMENTS - I.B.I. LTD	7.07	5.44	N/A	N/A	0.18
2549004R68ZXQ6YYFI14 - NAVIGARE SECURITIES (PTY) LTD	4.05	4.97	N/A	N/A	0.49
213800LVTF637I5COY97 - LEGAE SECURITIES (PTY) LTD	3.66	8.97	N/A	N/A	0.17

# **Equities Shares & Depositary Receipts**

Reporting Entity: GSI
Top Five Venue Report
Type of Client: Professional Client
Reporting Entity: GSI

Class of Instrument	Equities - Shares & Depositary Rece	ints. Tick size liquidity bands 2 and /	(from 90 to 1000 trades per day)		
Notification if <1 average trade per business day in the previous year	N	ipts - fick size liquidity ballus 5 aliu 4	(Holli 80 to 1999 trades per day)		
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	39.81	10.46	0.88	47.95	0.02
XLON - LONDON STOCK EXCHANGE	8.64	13.74	61.94	30.11	0.06
XETA - XETRA - REGULIERTER MARKT	8.27	9.04	70.26	21.42	0.57
CHIX - CBOE EUROPE - CXE ORDER BOOKS	5.82	8.88	56.31	43.69	1.13
XVTX - SIX SWISS EXCHANGE - BLUE CHIPS SEGMENT	3.85	0.89	73.76	15.66	0.18

Top Five Broker Report
Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Equities - Shares & Depositary Rece	ipts - Tick size liquidity bands 3 and 4	(from 80 to 1999 trades per day)		
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
5493006QMFDDMYWIAM13 - BANCO SANTANDER, S.A.	22.02	51.94	N/A	N/A	0.61
4BY1ZWG5DYMF1HP5KL86 - BANQUE LOMBARD ODIER & CIE SA	18.80	4.28	N/A	N/A	0.03
213800EEC95PRUCEUP63 - INVESTMENT TECHNOLOGY GROUP LIMITED	12.35	4.14	N/A	N/A	0.03
63540061DPCBNMCGRY22 - J & E DAVY	11.05	5.02	N/A	N/A	0.14
549300UYJKOXE3HB8L79 - WOOD & COMPANY FINANCIAL SERVICES, A.S.	9.08	4.66	N/A	N/A	0.71

#### **Equities Shares & Depositary Receipts**

Reporting Entity: GSI

Top Five Venue Report Type of Client: Professional Client

Reporting Entity: GSI

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Class of Instrument	Equities - Shares & Depositary Rece	ipts - Tick size liquidity bands 5 and 6	(from 2000 trades per day)		
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)		Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	39.66	11.63	1.48	68.12	0.01
CHIX - CBOE EUROPE - CXE ORDER BOOKS	14.33	19.82	79.23	20.77	0.74
XLON - LONDON STOCK EXCHANGE	8.89	10.16	60.14	29.06	0.53
XETA - XETRA - REGULIERTER MARKT	8.04	5.24	64.61	26.91	0.83
XPAR - EURONEXT - EURONEXT PARIS	3.90	2.37	46.75	34.24	0.86

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

	Equities - Shares & Depositary Rece	ipts - Tick size liquidity bands 5 and 6	6 (from 2000 trades per day)		
Notification if <1 average trade per business day in the previous year	N	Duranting of audous succeeded as	Developed of managers and managers	Develope of accounting and an	Develope of diverted and an
	· ·	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
5493006QMFDDMYWIAM13 - BANCO SANTANDER, S.A.	30.69	32.90	N/A	N/A	0.14
213800EEC95PRUCEUP63 - INVESTMENT TECHNOLOGY GROUP LIMITED	23.46	11.61	N/A	N/A	0.01
213800TFSEDK4Y98VZ05 - AURIGA GLOBAL INVESTORS, SOCIEDAD DE VALORES, S.A.	11.84	13.03	N/A	N/A	0.25
MAES062Z21O4RZ2U7M96 - DANSKE BANK A/S	9.64	15.48	N/A	N/A	0.07
213800MXAKR2LA1VBM44 - INSTINET EUROPE LIMITED	7.47	7.96	N/A	N/A	0.00

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to the Securities Division or Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

When assessing the relative importance given to execution factors where GS has determined it has a best execution obligation in respect of an order, GS will take into account the following criteria for determining the relative importance of the execution factors in the circumstances:

- the characteristics of the client including the regulatory categorisation of the client;
- the characteristics of the relevant order;
- the characteristics of financial instruments that are the subject of the relevant order; and
- the characteristics of the execution venue to which that relevant order can be directed.

Subject to any specific instructions, taking into account the criteria above, GS will generally give the highest priority to net price. The remaining execution factors are generally given equal ranking.

Notwithstanding the above, we may prioritise one or more of the other execution factors if: (i) there is insufficient immediately available liquidity on the relevant execution venues to execute the relevant order in full; or (ii) where a client instructs us to work a elevant order over a period of time or by reference to a benchmark calculated over a period of time (such as VWAP); or (iii) we determine that there are other circumstances such that obtaining the best immediately available price may not be the best possible result for the client. In these cases, we will determine the relative priority of each executed using an algorithm. We have a degree of discretion in how to apply the different execution factors and this may result in a range of different permissible approaches to executing client orders.

It should also be noted that where we provide direct market access arrangements to an execution venue, or where a client calibrates the parameters of an execution algorithm or otherwise provides specific instructions in relation to a trade or all trades via a particular execution channel, our relative prioritization of execution factors would be limited to those elements of the execution not covered by the client's specific instructions or, in the case of direct market access arrangements, not within the client's control

GS uses brokers, including affiliate brokers, to access equities markets for which it does not have a direct membership itself.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

GS is a member of the Goldman Sachs group of companies. The Securities Division of GS may execute transactions in certain asset classes with or through affiliated entities. Execution quality received from affiliated entities is subject to the same monitoring and assessment applied to third party entities and execution venues utilized by GS for execution of client orders.

GS has close links and/or common ownership with respect to the following entities:

SIGMA X MTF – Goldman Sachs International is under common ownership with Goldman Sachs International Bank which operates SIGMA X MTF, a multilateral trading facility for trading in European equity and equity-like instruments. SIGMA X MTF is operated on an independent and segregated basis to other Goldman Sachs businesses. Goldman Sachs International is itself one of several trading participants on SIGMA X MTF. For further information on SIGMA X MTF please visit the SIGMA X MTF website at http://gset.gs.com/sigmaxmtf/

In addition, Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients in certain financial instruments, including

- BIDS Holdings L.P.
- CHX Holdings, Inc.
- Chi-X Global Holdings LLC
- SBI Japannext Co., Ltd.
- National Stock Exchange of India Limited
- Turquoise Global Holdings Limited

Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

The Private Wealth Management Division executes these financial instruments primarily via the Securities Division, and where appropriate, other GS affiliates. The Private Wealth Management Division has determined that it can consistently achieve the best results for its clients using a single execution venue. For further details on the execution venues used by the Securities Division please refer to the Securities Division's best execution summary which is available via the link above.

For further details on the execution venues used by the Private Wealth Management Division and its conflicts of interest policy, please refer to Private Wealth Management Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

GS maintains internal procedures for the selection of Brokers, Trading Venues and other Execution Venues, both at the stage of on-boarding and throughout the relationship, in order to satisfy ourselves that those selections enable us to obtain best execution on a consistent basis. These procedures include undertaking due diligence and periodic assessments of execution quality.

In response to evolving market structure and client demand GS frequently evaluates existing and new execution venues. GS has added a variety of new execution venues during the reporting period, more specifically systematic internalisers and MTF's offering periodic auction and conditional order type functionality, including:

Systematic Internalisers: Jane St, Sun, Tower, Virtu, XTX, Hudson, Citadel Europe

MTFs (periodic and conditional order books (as applicable)): Aguis, First North Auction on Demand, Nordic Growth Market, ITG Posit, Liquidnet

Primary Markets: Tadawul (Saudi Stock Exchange)

As part of our periodic evaluation of execution venues GS reviews a variety of execution performance metrics, including addressable liquidity, fill rate, mark-outs and latency.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;
GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.
6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;
Not applicable.
7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27
GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.
8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.
N/A

## Debt instruments: (i) Bonds

Reporting Entity: GSI

Top Five Venue Report Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Dobt instruments: (i) Bonds						
	Debt instruments: (i) Bonds						
Notification if <1 average trade per business day in the previous year	N						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	54.35	25.20	N/A	N/A	N/A		
TREU - TRADEWEB EUROPE LIMITED	21.41	. 26.56	N/A	N/A	N/A		
BMTF - BLOOMBERG TRADING FACILITY LIMITED	16.36	37.80	N/A	N/A	N/A		
TRWB - TRADEWEB LLC	3.61	1.16	N/A	N/A	N/A		
MAEL - MARKETAXESS EUROPE LIMITED	2.01	7.26	N/A	N/A	N/A		

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Debt instruments: (i) Bonds					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
FOR8UP27PHTHYVLBNG30 - GOLDMAN SACHS & CO. LLC	23.00	22.00	N/A	N/A	N/A	
VYVVCKR63DVZZN70PB21 - WELLS FARGO SECURITIES, LLC	6.00	4.00	N/A	N/A	N/A	
549300LCO2FLSSVFFR64 - RBC CAPITAL MARKETS, LLC	6.00	1.00	N/A	N/A	N/A	
OXTKY6Q8X53C9ILVV871 - NOMURA SECURITIES INTERNATIONAL, INC.	5.00	2.00	N/A	N/A	N/A	
IVUV7VQFKUOQSJ21A208 - CREDIT AGRICOLE	5.00	2.00	N/A	N/A	N/A	

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

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These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices/indications of interest through electronic platforms where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

The Private Wealth Management Division operates an "open architecture" model for executing all fixed income trades where the GS Securities Division is one of the possible execution venues. Where the open architecture platform does not support a certain product or an order is subject to specific instructions the Private Wealth Management Division can trade through the Securities Division.

To the extent we determine we do owe a best execution obligation and subject to any specific instructions, GS will generally give the highest priority to:

• For Securities Division, net price. The remaining execution factors, to the extent relevant, are generally given equal ranking.

- For professional clients of the Private Wealth Management Division, total consideration.
- 2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg
- MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

The Private Wealth Management Division operates an "open architecture" order execution platform for executing all fixed income trades unless the open architecture platform does not support a certain product or an order is subject to specific instructions. Where this is the case, Private Wealth Management can trade through the GS Securities Division.

For further details on the execution venues used by the Private Wealth Management Division and its conflicts of interest policy, please refer to Private Wealth Management Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

This is not applicable to the Private Wealth Management Division's open architecture order execution platform.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

The Private Wealth Management Division generally gives the highest priority to total consideration for professional clients which is consistent with the Private Wealth Management Division's approach to execution with its retail clients.

GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

#### Debt instruments: (ii) Money markets instruments

Reporting Entity: GSI

Top Five Venue Report Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Debt instruments: (ii) Money marke	ets instruments				
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Percentage of directed orders				
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	47.20	13.00	N/A	N/A	N/A	
BMTF - BLOOMBERG TRADING FACILITY LIMITED	30.16	36.82	N/A	N/A	N/A	
TREU - TRADEWEB EUROPE LIMITED	13.71	43.87	N/A	N/A	N/A	
SSOB - BONDVISION EUROPE MTF	4.38	5.29	N/A	N/A	N/A	
BVUK - BONDVISION UK	2.98	0.38	N/A	N/A	N/A	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Debt instruments: (ii) Money marke	ts instruments					
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a proportion of orders executed as percentage of passive orders percentage of total in that class percentage of total in that class						
ZBUT11V806EZRVTWT807 - J.P. MORGAN SECURITIES LLC	28.00	33.00	N/A	N/A	N/A		
549300228WV14OKZYD84 - NOMURA INTERNATIONAL	16.00	15.00	N/A	N/A	N/A		
1VUV7VQFKUOQSJ21A208 - CREDIT AGRICOLE	14.00	7.00	N/A	N/A	N/A		
XKZZ2JZF41MRHTR1V493 - CITIGROUP GLOBAL MARKETS LIMITED	12.00	7.00	N/A	N/A	N/A		
K9WDOH4D2PYBSLSOB484 - BARCLAYS CAPITAL SECURITIES LIMITED	6.00	3.00	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

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These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices/indications of interest through electronic platforms where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

The Private Wealth Management Division operates an "open architecture" model for executing all fixed income trades where the GS Securities Division is one of the possible execution venues. Where the open architecture platform does not support a certain product or an order is subject to specific instructions the Private Wealth Management Division can trade through the Securities Division.

To the extent we determine we do owe a best execution obligation and subject to any specific instructions, GS will generally give the highest priority to:

- For Securities Division, net price. The remaining execution factors, to the extent relevant, are generally given equal ranking
- For professional clients of the Private Wealth Management Division, total consideration.
- 2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg
- MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

The Private Wealth Management Division utilizes different execution venues to execute client orders. The Private Wealth Management Division operates an "open architecture" model for executing all fixed income trades unless the open architecture platform does not support a certain product or an order is subject to specific instructions. Where this is the case, Private Wealth Management can trade through the GS Securities Division.

For further details on the execution venues used by the Private Wealth Management Division and its conflicts of interest policy, please refer to Private Wealth Management Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

This is not applicable to the Private Wealth Management Division's open architecture order execution platform.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

The Private Wealth Management Division generally gives the highest priority to total consideration for professional clients which is consistent with the Private Wealth Management Division's approach to execution with its retail clients.

GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

## Interest rates derivatives: (i) Futures and options admitted to trading on a trading venue

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Interest rates derivatives: (i) Futures and options admitted to trading on a trading venue*					
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
XEUR - EUREX	61.96	70.01	75.80	24.20	0.0	
IFLL - ICE FUTURES EUROPE - FINANCIAL PRODUCTS DIVISION	38.04	29.99	48.40	51.60	0.0	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Interest rates derivatives: (i) Future	Interest rates derivatives: (i) Futures and options admitted to trading on a trading venue						
Notification if <1 average trade per business day in the previous year	N/A							
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders			
GKS4XBH2YSEYMX83N473 - E D & F MAN CAPITAL MARKETS LIMITED	98.50	50.00	N/A	N/A	N/A			
549300ZXVZJL33KERP09 - E D & F MAN LIMITED	1.50	50.00	N/A	N/A	N/A			

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

These instruments are typically traded only on the execution venue of their listing and therefore client orders in the instrument will determine the execution venue. Application of best execution is therefore limited to liquidity available on the relevant execution venue for the instrument.

When assessing the relative importance given to execution factors where Goldman Sachs International ("GS") has determined it has a best execution obligation in respect of an order GS will take into account the following criteria for determining the relative importance of the execution factors in the circumstances:

• the characteristics of the client including the regulatory categorisation of the client;

• the characteristics of the relevant order;

- the characteristics of financial instruments that are the subject of the relevant order; and
- the characteristics of the execution venue to which that relevant order can be directed.

Subject to any specific instructions, taking into account the relevant criteria above, the ranking of execution factors would typically be as follows:

• price

speed of execution.

The remaining execution factors, to the extent applicable, are generally given equal ranking.

It should also be noted that where we provide direct market access arrangements to an execution venue, or where a client calibrates the parameters of an execution algorithm or otherwise provides specific instructions in relation to a trade, our relative prioritization of execution factors would be limited to those elements of the execution not covered by the client's specific instructions or, in the case of direct market access arrangements, not within the client's control.

For further information on GS' best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

For further details on the execution venues used by GS and its conflicts of interest policy, please refer to its best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have not changed any execution venues for this asset class during the reporting period.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

The Securities Division of GS only executes orders for professional clients and eligible counterparties. Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties. The Private Wealth Management Division does not have clients for which it executes orders in this asset class.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

# Interest rates derivatives: (ii) Swaps, forwards, and other interest rates derivatives

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Interest rates derivatives: (ii) Swaps, forwards, and other Interest rate derivatives*						
Notification if <1 average trade per business day in the previous year	N						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	98.61	93.00	N/A	N/A	N/A		
TWSF - TW SEF LLC	0.60	2.58	N/A	N/A	N/A		
BBSF - BLOOMBERG SEF LLC	0.48	1.61	N/A	N/A	N/A		
TREU - TRADEWEB EUROPE LIMITED	0.16	1.13	N/A	N/A	N/A		
BMTF - BLOOMBERG TRADING FACILITY LIMITED	0.09	1.23	N/A	N/A	N/A		

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Interest rates derivatives: (ii) Swaps	nterest rates derivatives: (ii) Swaps, forwards, and other Interest rate derivatives						
Notification if <1 average trade per business day in the previous year	I/A							
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg

MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

### Credit derivatives (i) Futures and options admitted to trading on a trading venue Reporting Entity: GSI Top Five Venue Report Type of Client: Professional Client Reporting Entity: GSI Credit derivatives (i) Futures and options admitted to trading on a trading venue Class of Instrument Notification if <1 average trade per business day in the previous year N/A Top five execution venues ranked in terms of trading volumes (descending order) Proportion of volume traded as a Percentage of aggressive orders Proportion of orders executed as Percentage of passive orders Percentage of directed orders percentage of total in that class percentage of total in that class N/A Top Five Broker Report Type of Client: Professional Client Reporting Entity: GSI Class of Instrument Credit derivatives (i) Futures and options admitted to trading on a trading venue Notification if <1 average trade per business day in the previous year Percentage of passive orders Top five execution venues ranked in terms of trading volumes (descending order) Proportion of orders executed as Percentage of aggressive orders Proportion of volume traded as a Percentage of directed orders percentage of total in that class percentage of total in that class N/A Goldman Sachs International does not trade credit related futures or options that are admitted to trading on trading venues with clients.

## Credit derivatives: (ii) Other credit derivatives

Reporting Entity: GSI

Top Five Venue Report
Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Credit derivatives: (ii) Other credit derivatives							
Notification if <1 average trade per business day in the previous year	N N							
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders			
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	39.30	52.15	N/A	N/A	N/A			
BBSF - BLOOMBERG SEF LLC	37.49	29.57	N/A	N/A	N/A			
BMTF - BLOOMBERG TRADING FACILITY LIMITED	13.14	10.51	N/A	N/A	N/A			
TREU - TRADEWEB EUROPE LIMITED	5.90	3.88	N/A	N/A	N/A			
TWSF - TW SEF LLC	4.16	3.88	N/A	N/A	N/A			

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Credit derivatives: (ii) Other credit derivatives						
Notification if <1 average trade per business day in the previous year	N/A						
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- BloombergMarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS only executes orders for professional clients and eligible counterparties in these financial instruments. Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

## Currency derivatives: (i) Futures and options admitted to trading on a trading venue Reporting Entity: GSI Top Five Venue Report Type of Client: Professional Client Reporting Entity: GSI Currency derivatives: (i) Futures and options admitted to trading on a trading venue Class of Instrument Notification if <1 average trade per business day in the previous year N/A Proportion of volume traded as a Percentage of passive orders Top five execution venues ranked in terms of trading volumes (descending order) Proportion of orders executed as Percentage of aggressive orders Percentage of directed orders percentage of total in that class percentage of total in that class N/A Top Five Broker Report Type of Client: Professional Client Reporting Entity: GSI Class of Instrument Currency derivatives: (i) Futures and options admitted to trading on a trading venue Notification if <1 average trade per business day in the previous year Percentage of passive orders Percentage of aggressive orders Top five execution venues ranked in terms of trading volumes (descending order) Proportion of volume traded as a Proportion of orders executed as Percentage of directed orders percentage of total in that class percentage of total in that class N/A Goldman Sachs International does not trade currency related futures or options that are admitted to trading on trading venues with clients

### Currency derivatives: (ii) Swaps, forwards, and other currency derivatives

Reporting Entity: GSI

Top Five Venue Report
Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Currency derivatives: (ii) Swaps, forwards, and other currency derivatives						
Notification if <1 average trade per business day in the previous year	N						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	64.73	67.52	N/A	N/A	N/A		
TRAL - REFINITIV TRANSACTIONS SERVICES LIMITED	16.41	20.12	N/A	N/A	N/A		
MFXR - FX CONNECT - MTF - RFQ	7.99	7.03	N/A	N/A	N/A		
MFXA - FX CONNECT - MTF - ALLOCATIONS	5.97	1.95	N/A	N/A	N/A		
BMTF - BLOOMBERG TRADING FACILITY LIMITED	2.72	2.37	N/A	N/A	N/A		

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Currency derivatives: (ii) Swaps, for	wards, and other currency derivative	es				
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg

MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS only executes orders for professional clients and eligible counterparties in these financial instruments. Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

#### Structured finance instruments

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Structured finance instruments						
Notification if <1 average trade per business day in the previous year  Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	65.05	43.29	N/A	N/A	N/A		
BMTF - BLOOMBERG TRADING FACILITY LIMITED	25.62	34.42	N/A	N/A	N/A		
TREU - TRADEWEB EUROPE LIMITED	4.91	. 10.33	N/A	N/A	N/A		
MAEL - MARKETAXESS EUROPE LIMITED	4.39	11.91	N/A	N/A	N/A		
TWJP - TRADEWEB JAPAN KK - PTS	0.01	0.03	N/A	N/A	N/A		

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Structured finance instruments						
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote and via a Bid Wanted in Competition basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg

MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS only executes orders for professional clients and eligible counterparties in these financial instruments. Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not Applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

## Equity Derivatives: (i) Options and Futures admitted to trading on a trading venue

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Equity Derivatives: (i) Options and I	Futures admitted to trading on a trad	ing venue				
Notification if <1 average trade per business day in the previous year	N .						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
XEUR - EUREX	65.17	49.44	70.02	29.98	0.00		
IFLL - ICE FUTURES EUROPE - FINANCIAL PRODUCTS DIVISION	18.19	24.64	57.95	42.05	0.00		
XMON - EURONEXT	6.88	9.73	58.06	41.94	0.00		
XEUE - ENXT EQF EQUITIES AND INDICES DERIV	2.82	2.95	51.79	48.21	0.00		
SEED - NASDAQ STOCKHOLM AB - SWEDISH EQ DERIVS	2.32	9.13	99.99	0.01	0.00		

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Equity Derivatives: (i) Options and F	utures admitted to trading on a trad	ing venue					
Notification if <1 average trade per business day in the previous year	N							
	·	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders			
ZWNFQ48RUL8VJZ2AIC12 - BGC BROKERS L.P.	28.95	1.87	N/A	N/A	0.00			
72450069UYG170FRIU73 - AFS GROUP B.V.	25.48	0.93	N/A	N/A	0.00			
21380097QNN7QGLDSR92 - ARIAN FINANCIAL LLP	24.30	0.47	N/A	N/A	0.00			
724500QCPKRLL1ZM6Y16 - AFS EQUITY & DERIVATIVES B.V.	16.67	0.93	N/A	N/A	0.00			
259400O67Y8R0XUKE191 - 'ERSTE SECURITIES POLSKA' SPOLKA AKCYJNA	2.74	54.21	N/A	N/A	0.00			

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded only on the execution venue of their listing and therefore client orders in the instrument will determine the execution venue. Application of best execution is therefore limited to liquidity available on the relevant execution venue for the instrument.

When assessing the relative importance given to those execution factors that are applicable where GS has determined that it owes a best execution obligation for a relevant order, GS will take into account the following criteria for determining the relative importance of the execution factors in the circumstances:

- the characteristics of the client including the regulatory categorisation of the client;
- the characteristics of the relevant order;
- the characteristics of financial instruments that are the subject of the relevant order; and
- the characteristics of the execution venue to which that relevant order can be directed.

Subject to any specific instructions, taking into account the relevant criteria above, the ranking of execution factors would typically be as follows:

- price
- speed of execution.

The remaining execution factors, to the extent applicable, are generally given equal ranking.

It should also be noted that where we provide direct market access arrangements to an execution venue, or where a client calibrates the parameters of an execution algorithm or otherwise provides specific instructions in relation to a trade or all trades via a particular execution channel, our relative prioritization of execution factors would be limited to those elements of the execution not covered by the client's specific instructions or, in the case of direct market access arrangements, not within the client's control.

For further information on GS' best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

Private Wealth Management Division executes these financial instruments via the Securities Division, and where appropriate, other GS affiliates. The Private Wealth Management Division has determined that it can consistently achieve the best results for its clients using a single execution venue. For further details on the execution venues used by the Securities Division please refer to the Securities Division's best execution summary which is available via the link above.

For further details on the execution venues used by the Private Wealth Management Division and its conflicts of interest policy, please refer to Private Wealth Management Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have not changed any execution venues for this asset class during the reporting period.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess client transactions against relevant market prices and benchmarks. For products with no observable external market data other criteria are used to benchmark client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU

#### Equity Derivatives: (ii) Swaps and other equity derivatives

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

heporting Entity. Goi						
Class of Instrument	Equity Derivatives: (ii) Swaps and other equity derivatives					
Notification if <1 average trade per business day in the previous year	,N					
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	99.97	100.00	N/A	N/A	N/A	
TREU - TRADEWEB EUROPE LIMITED	0.03	0.00	N/A	N/A	N/A	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Equity Derivatives: (ii) Swaps and ot	Equity Derivatives: (ii) Swaps and other equity derivatives					
Notification if <1 average trade per business day in the previous year	N						
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

• Tradeweb LLC

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some Execution Venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the Execution Venues rules. Information on such arrangements is publically available on the relevant Execution Venues website. Our decision to route orders to a particular venue for execution for this asset class is typically driven by the listing of the product the client wishes to trade, and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

N/A.

#### Securitized Derivatives: (i) Warrants and Certificate Derivatives

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Securitized Derivatives: (i) Warrants and Certificate Derivatives					
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	99.97	0.98	N/A	N/A	N/A	
FNFI - FIRST NORTH FINLAND	0.03	2.25	N/A	N/A	N/A	
MTAA - ELECTRONIC SHARE MARKET	0.00	0.04	N/A	N/A	N/A	
/IIVX - MARKET FOR INVESTMENT VEHICLES	0.00	0.08	N/A	N/A	N/A	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Securitized Derivatives: (i) Warrants	curitized Derivatives: (i) Warrants and Certificate Derivatives						
Notification if <1 average trade per business day in the previous year	N/A	'A						
	·	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders			
9695005EOZG9X8IRJD84 - KEPLER CHEUVREUX	100.00	100.00	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			
N/A	N/A	N/A	N/A	N/A	N/A			

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for each division save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote and via a Bid Wanted in Competition basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

For further details on the execution venues used by GS and its conflicts of interest policy, please refer to its best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

This is not applicable to the Private Wealth Management Division's open architecture order execution platform.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have removed execution venues that are not used for the execution of client orders. Please note GS uses selected brokers venues, OTFs, SEFs, and other hedging platforms as part of our execution hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess client transactions against relevant market prices and benchmarks. For products with no observable external market data other criteria are used to benchmark client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

#### Securitized Derivatives: (ii) Other securitized derivatives Reporting Entity: GSI Top Five Venue Report Type of Client: Professional Client Reporting Entity: GSI Class of Instrument Securitized Derivatives: (ii) Other securitized derivatives Notification if <1 average trade per business day in the previous year N/A Proportion of volume traded as a Percentage of aggressive orders Top five execution venues ranked in terms of trading volumes (descending order) Proportion of orders executed as Percentage of passive orders Percentage of directed orders percentage of total in that class percentage of total in that class N/A Top Five Broker Report Type of Client: Professional Client Reporting Entity: GSI Class of Instrument Securitized Derivatives: (ii) Other securitized derivatives Notification if <1 average trade per business day in the previous year Top five execution venues ranked in terms of trading volumes (descending order) Proportion of volume traded as a Proportion of orders executed as Percentage of passive orders Percentage of aggressive orders Percentage of directed orders percentage of total in that class percentage of total in that class N/A Goldman Sachs International does not execute client orders in Other Securitized Derivatives.

## Commodities derivatives and emission allowances Derivatives: (i) Options and Futures admitted to trading on a trading venue

Reporting Entity: GSI Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Commodities derivatives and emission allowances Derivatives: (i) Options and Futures admitted to trading on a trading venue					
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
XLME - LONDON METAL EXCHANGE	51.67	5.19	36.31	63.69	0.0	
IFEU - ICE FUTURES EUROPE	25.24	38.37	76.77	23.23	0.0	
NDEX - ICE Endex Futures	11.50	0.83	69.54	30.46	0.0	
IFLX - ICE FUTURES EUROPE - AGRI PROD DIV	8.89	42.90	72.63	27.37	0.0	
XMAT - EURONEXT PARIS MATIF	1.82	6.72	32.47	67.53	0.0	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Commodities derivatives and emission allowances Derivatives: (i) Options and Futures admitted to trading on a trading venue						
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
FOR8UP27PHTHYVLBNG30 - GOLDMAN SACHS & CO. LLC	100.00	100.00	N/A	N/A	0.00		
GKS4XBH2YSEYMX83N473 - E D & F MAN CAPITAL MARKETS LIMITED	0.00	0.00	N/A	N/A	0.00		

L. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

These instruments are typically traded only on the execution venue of their listing and therefore client orders in the instrument will determine the execution venue. Application of best execution is therefore limited to liquidity available on the relevant execution venue for the instrument.

When assessing the relative importance given to those execution factors that are applicable where Goldman Sachs International (GS) has determined that it has a best execution obligation for a relevant order, GS will take into account the following criteria for determining the relative importance of the execution factors in the circumstances:

• the characteristics of the client including the regulatory categorisation of the client;

the characteristics of the relevant order;

• the characteristics of financial instruments that are the subject of the relevant order; and

• the characteristics of the execution venue to which that relevant order can be directed.

Subject to any specific instructions, taking into account the relevant criteria above, the ranking of execution factors would typically be as follows:

price

speed of execution.

The remaining execution factors, to the extent applicable, are generally given equal ranking.

It should also be noted that where we provide direct market access arrangements to an execution venue, or where a client calibrates the parameters of an execution algorithm or otherwise provides specific instructions in relation to a trade or all trades via a particular execution channel, our relative prioritization of execution factors would be limited to those elements of the execution not covered by the client's specific instructions or, in the case of direct market access arrangements, not within the client's control.

For further information on GS' best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

GS is a member of the Goldman Sachs group of companies. The Securities Division of GS may execute transactions in certain asset classes with or through affiliated entities. Execution quality received from affiliated entities is subject to the same monitoring and assessment applied to third party entities and execution venues utilized by GS for execution of client orders.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients in certain financial instruments, including

LME Holdings Limited

Nasdaq NFX

National Commodities & Derivatives Exchange Ltd.

New York Shipping Exchange (NYSHEX)

Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have not changed any execution venues for this asset class during the reporting period.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

## Commodities derivatives and emission allowances Derivatives: (ii) Other commodities derivatives and emission allowances derivatives

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Commodities derivatives and emission allowances Derivatives: (ii) Other commodities derivatives and emission allowances derivatives					
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
W22LROWP2IHZNBB6K528 - (GS) GOLDMAN SACHS INTERNATIONAL	100.00	100.00	N/A	N/A	N/A	

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Commodities derivatives and emission allowances Derivatives: (ii) Other commodities derivatives and emission allowances derivatives						
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to the Securities Division or the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices/indications of interest through electronic platforms where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

The Private Wealth Management Division operates an "open architecture" model for executing all fixed income trades where the GS Securities Division is one of the possible execution venues. Where the open architecture platform does not support a certain product or an order is subject to specific instructions the Private Wealth Management Division can trade through the Securities Division.

To the extent we determine we do owe a best execution obligation and subject to any specific instructions, GS will generally give the highest priority to:

• For Securities Division, net price. The remaining execution factors, to the extent relevant, are generally given equal ranking.

• For professional clients of the Private Wealth Management Division, total consideration.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements, which GS may use to execute orders on behalf of clients or to respond to clients' requests for quotes in certain financial instruments, including

- Tradeweb LLC
- Bloomberg
- MarketAxess

Our decision to route orders to, or respond to clients' request for quotes on, a particular execution venue is determined, as applicable, by whether execution on such venues allows us to satisfy our best execution obligations or as necessary to interact with clients and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

The Private Wealth Management Division operates an "open architecture" order execution platform for executing all fixed income trades unless the open architecture platform does not support a certain product or an order is subject to specific instructions. Where this is the case, Private Wealth Management can trade through the GS Securities Division.

For further details on the execution venues used by the Private Wealth Management Division and its conflicts of interest policy, please refer to Private Wealth Management Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

This is not applicable to the Private Wealth Management Division's open architecture order execution platform.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

We have revised our execution venues list for this asset class to remove those execution venues that are not used for the execution of client orders. Please note GS may use selected brokers venues, OTFs, SEFs, and other platforms as part of its hedging and price discovery process.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

The Private Wealth Management Division generally gives the highest priority to total consideration for professional clients which is consistent with the Private Wealth Management Division's approach to execution with its retail clients.

GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

# Contracts for difference

Reporting Entity: GSI

Top Five Venue Report
Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Contracts for difference	Contracts for difference					
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

Reporting Entity: GSI

Type of Client: Professional Client

Professional Client

Class of Instrument	Contracts for difference						
Notification if <1 average trade per business day in the previous year	N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to Securities Division or to the Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

These instruments are typically traded on a request for quote basis, including where clients approach us for a quote or are responding to our streamed prices where we predominantly act in a principal capacity and the client ultimately decides whether to proceed with the transaction based upon the price provided by us and those of other liquidity providers from whom it has sourced quotes. Generally we would not expect clients to be legitimately relying on us to provide best execution and therefore our best execution obligations for these instruments are likely to apply in more limited circumstances than that for other asset classes.

To the extent we determine we do owe best execution and, subject to any specific instructions, GS will generally give the highest priority to net price. Other execution factors, to the extent relevant, are generally given equal ranking.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

Not applicable as GS is the only execution venue.

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Not applicable

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

Not applicable as GS is the only execution venue.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27

GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.

8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

## Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)

Reporting Entity: GSI Top Five Venue Report Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
Notification if <1 average trade per business day in the previous year  Top five execution venues ranked in terms of trading volumes (descending order)	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
TREU - TRADEWEB EUROPE LIMITED	29.37	3.66	0.00	0.00	0.00	
BMTF - BLOOMBERG TRADING FACILITY LIMITED	25.17	2.03	0.00	0.00	0.00	
W22LROWP2IHZNBB6K528 - GOLDMAN SACHS INTERNATIONAL	16.89	3.02	0.00	0.00	0.02	
XLON - LONDON STOCK EXCHANGE	16.71	36.38	34.63	61.05	0.08	
XETA - XETRA - REGULIERTER MARKT	4.49	11.96	37.25	61.85	0.13	

Top Five Broker Report Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)*						
Notification if <1 average trade per business day in the previous year	N						
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
4BY1ZWG5DYMF1HP5KL86 - BANQUE LOMBARD ODIER & CIE SA	76.20	92.43	N/A	N/A	0.00		
9695005EOZG9X8IRJD84 - KEPLER CHEUVREUX	10.34	5.34	N/A	N/A	0.00		
ZWNFQ48RUL8VJZ2AIC12 - BGC BROKERS L.P.	9.65	1.10	N/A	N/A	0.00		
5493006QMFDDMYWIAM13 - BANCO SANTANDER, S.A.	3.69	1.10	N/A	N/A	0.00		
213800MXAKR2LA1VBM44 - INSTINET EUROPE LIMITED	0.12	0.03	N/A	N/A	0.00		

1. Topic 1: an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution:

This qualitative commentary covers the activity of different divisions of Goldman Sachs International (GS), namely the Securities Division and the Private Wealth Management Division. Unless otherwise indicated, the responses provided below are relevant for both divisions save for when references are made to the Securities Division or Private Wealth Management Division specifically. For further information on each division's best execution arrangements please refer to the relevant summaries which are available at: http://www.goldmansachs.com/disclosures/mifid/

When assessing the relative importance given to execution factors, where GS has determined that it has a best execution obligation in respect of relevant orders, GS will take into account the following criteria for determining the relative importance of the execution factors in the circumstances:

- the characteristics of the client including the regulatory categorisation of the client;
- the characteristics of the relevant order;
- the characteristics of financial instruments that are the subject of the relevant order; and
- the characteristics of the execution venue to which that relevant order can be directed.

Subject to any specific instructions, taking into account the criteria above, GS will generally give the highest priority to net price. The remaining execution factors are generally given equal ranking.

Notwithstanding the above, we may prioritise one or more of the other execution factors if: (i) there is insufficient immediately available liquidity on the relevant execution venues to execute the relevant order in full; or (ii) where a client instructs us to work a elevant order over a period of time or by reference to a benchmark calculated over a period of time (such as VWAP); or (iii) we determine that there are other circumstances such that obtaining the best immediately available price may not be the best possible result for the client. In these cases, we will determine the relative priority of each executed using an algorithm.

We have a degree of discretion in how to apply the different execution factors and this may result in a range of different permissible approaches to executing client orders.

It should also be noted that where we provide direct market access arrangements to an execution venue, or where a client calibrates the parameters of an execution algorithm or otherwise provides specific instructions in relation to a trade or all trades via a particular execution channel, our relative prioritization of execution factors would be limited to those elements of the execution not covered by the client's specific instructions or, in the case of direct market access arrangements, not within the client's control.

2. Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

GS and persons connected with GS provide diversified financial services to a broad range of clients and counterparties and circumstances may arise in which GS may have a conflict of interest.

GS has close links and/or common ownership with respect to the following entities:

SIGMA X MTF – Goldman Sachs International is under common ownership with Goldman Sachs International Bank which operates SIGMA X MTF, a multilateral trading facility for trading in European equity and equity-like instruments. SIGMA X MTF is operated on an independent and segregated basis to other Goldman Sachs businesses. Goldman Sachs International is itself one of several trading participants on SIGMA X MTF. For further information on SIGMA X MTF please visit the SIGMA X MTF website at http://gset.gs.com/sigmaxmtf/

In addition, Goldman Sachs Group entities may have (i) minor, non-controlling ownership stakes in companies which operate or own execution venues and/or; (ii) be founding consortia members of execution venues for which it has revenue share arrangements. which GS may use to execute orders on behalf of clients in certain financial instruments, including

- BIDS Holdings L.P.
- CHX Holdings, Inc.
- Chi-X Global Holdings LLC
- Turquoise Global Holdings Limited
- Tradeweb LLC

Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such ownership or revenue share arrangements.

For further details on the execution venues used by the Securities Division and its conflicts of interest policy, please refer to the Securities Division's best execution summary which is available at: http://www.goldmansachs.com/disclosures/mifid/

3. Topic 3: a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Some execution venues may offer differing fee plans to trading members depending on the volume and nature/type of a trading activity on the venue as well as fee discounts depending on average volume of trading undertaken. Such arrangements apply equally to all trading members who satisfy the relevant criteria under the execution venues rules. Information on such arrangements is publically available on the relevant execution venues website. Our decision to route orders to a particular venue for execution is determined by whether execution on such venues allows us to satisfy our best execution obligations and is not influenced by any such fee structures or volume discounts.

4. Topic 4: an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;

GS maintains internal procedures for the selection of Brokers, Trading Venues and other Execution Venues, both at the stage of on-boarding and throughout the relationship, in order to satisfy ourselves that those selections enable us to obtain best execution on a consistent basis. These procedures include undertaking due diligence and periodic assessments of execution quality.

In response to evolving market structure and client demand GS frequently evaluates existing and new execution venues during the reporting period, more specifically systematic internalisers and MTF's offering periodic auction and conditional order type functionality, including:

Systematic Internalisers: Jane St, Tower, Virtu, Hudson, Citadel Europe MTFs (periodic and conditional order books (as applicable)): Aquis, ITG Posit

As part of our periodic evaluation of execution venues GS reviews a variety of execution performance metrics, including addressable liquidity, fill rate, mark-outs and latency.

5. Topic 5: an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

GS executes orders for professional clients of the Securities Divisions and the Private Wealth Management Division where the approach to order execution is consistent. GS also executes orders for eligible counterparties, however under applicable law and egulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

6. Topic 6: an explanation of whether other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;

Not applicable.

7. Topic 7: an explanation of how the investment firm has used any data or tools relating to the quality of execution, including any data published under RTS 27
GS has in place post execution supervisory monitoring procedures which use market data, where it is available, to assess relevant client transactions. Where appropriate market data is not available other criteria are used to review relevant client transactions for monitoring purposes. This monitoring is undertaken on a systematic basis via best execution monitoring systems or, where required, on a manual basis in accordance with internal monitoring policies and procedures. As part of its overall best execution monitoring framework and on-going assessment of execution venues utilised, GS may also take account of information published under RTS 27 by those execution venues (if applicable) alongside data sources used as part of its systematic best execution monitoring arrangements.
8. Topic 8: where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.
N/A

# **Emission Allowances**

Reporting Entity: GSI Top Five Venue Report

Type of Client: Professional Client Reporting Entity: GSI

Class of Instrument	Emission Allowances*  N/A						
Notification if <1 average trade per business day in the previous year							
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

Reporting Entity: GSI Type of Client: Professional Client

N/A – Emission Allowances will be addressed under the MiFID II Commodities Derivatives and Emission Allowances Derivatives report

Reporting Entity: GSI

Class of Instrument	Emission Allowances					
Notification if <1 average trade per business day in the previous year	N/A					
	•	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	
N/A	N/A	N/A	N/A	N/A	N/A	

# Other instruments

Reporting Entity: GSI
Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument Notification if <1 average trade per business day in the previous year	Other instruments N/A						
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		
N/A	N/A	N/A	N/A	N/A	N/A		

Top Five Broker Report Type of Client: Professional Client

Reporting Entity: GSI

Class of Instrument	Other instruments					
Notification if <1 average trade per business day in the previous year	N					
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders	
FOR8UP27PHTHYVLBNG30 - GOLDMAN SACHS & CO. LLC	87.88	68.10	N/A	N/A	0.00	
549300GGFLRSTQ15VF10 - GOLDMAN SACHS AUSTRALIA PTY LTD	7.12	2.07	N/A	N/A	0.00	
5493009FWOE6CQ1J5K28 - GOLDMAN SACHS (ASIA) SECURITIES LIMITED	1.91	11.23	N/A	N/A	0.00	
5NGPZ37H6T4XS5MO5N09 - GOLDMAN SACHS JAPAN CO., LTD.	1.32	3.96	N/A	N/A	0.00	
JAKOZABYQXDI5R26CX11 - GOLDMAN SACHS FUTURES PTE LTD	0.88	11.89	N/A	N/A	0.00	

5NGPZ37H6T4XS5MO5N09 - GOLDMAN SACHS JAPAN CO., LTD.	1.32	3.96	N/A	N/A	0.00
AKOZABYQXDI5R26CX11 - GOLDMAN SACHS FUTURES PTE LTD	0.88	11.89	N/A	N/A	0.00
The data within the report is inclusive of order execution in Equity, Interest Rate and	d Commodity Derivatives executed o	on non-EU trading venues by GS Affil	liates or Brokers. Please cross refer	to the relevant asset class specific s	ections of this report for
pplicable commentary.					