

This report has been prepared by Goldman Sachs AG ("GSAG") for the period ending 31 December 2017 (the "Reporting Period") for the purposes of meeting Goldman Sachs' regulatory obligations under Commission Delegated Regulation (EU) 2017/576 ("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.

Please note that information for the Reporting Period has been collated based on the regulatory obligations that applied to Goldman Sachs, its affiliates, brokers and execution venues during that time. In respect of Goldman Sachs and other financial institutions to whom MiFID II applies, those regulatory obligations were different to those that apply to them now and pursuant to which this report has been prepared. Consequently, there are certain sections in this report for which information required under MiFID II for the Reporting Period (i) was not available; (ii) was only available partly; or (iii) was available in a different format. As a result this report has been prepared on a best efforts basis only. The assumptions and available information used to prepare this report may result in inconsistencies in information across asset classes presented herein or, in the case of SFTs, no data being presented and therefore may not accurately reflect the trading activities undertaken by Goldman Sachs during 2017. Please also note that the assumptions and methodologies used to produce this report may not be used for the preparation of future reports.

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 whatsoever for any loss or damage caused by errors, inaccuracies or omissions in connection with use or reliance on this information.

Equities – Shares & Depositary Receipts

Reporting Entity: GSAG

Top Five Broker Report
Type of Client: Professional Client
Reporting Entity: GSAG

Class of Instrument	Equities – Shares & Depositary Receipts				
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	61.80	42.95	N/A	N/A	N/A
W22LROWP2IHZNBB6K528 - (GS) GOLDMAN SACHS INTERNATIONAL	22.93	39.84	N/A	N/A	N/A
S81F8KH474EY7PUW1149 - (GS) GOLDMAN SACHS BANK AG ZURICH	15.27	17.21	N/A	N/A	N/A

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

Class of Instrument	Equities – Shares & Depositary Receipts				
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

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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 for professional clients; or
- total consideration for retail clients. Notwithstanding any asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

GSAG is a member of the Goldman Sachs group of companies. The Private Wealth Management 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 which would be applied to third party entities and execution venues utilized for execution of client orders.

Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution.

The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

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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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Debt instruments: (i) Bonds

Reporting Entity: GSAG

Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		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	
S81F8KH474EY7PUW1149 - (GS) GOLDMAN SACHS BANK AG ZURICH	50.82	23.55	N/A	N/A	N/A	
W22LROWP2IH2NBB6K528 - (GS) GOLDMAN SACHS INTERNATIONAL	30.78	23.14	N/A	N/A	N/A	
FOR8UP27PHHYVLBNG30 - GOLDMAN SACHS & CO. LLC	18.40	53.31	N/A	N/A	N/A	

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

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 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	

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Not applicable.

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Legitimate Reliance:

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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;

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Debt instruments: (ii) Money markets instruments

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Debt instruments: (ii) Money markets 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
W22LROWP2IHZNBB6K528 - (GS) GOLDMAN SACHS INTERNATIONAL	100.00	100.00	N/A	N/A	N/A

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

Class of Instrument	Debt instruments: (ii) Money markets 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 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

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Legitimate Reliance:

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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/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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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/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	

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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 for professional clients; or
- total consideration for retail clients. Notwithstanding any asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

GSAG is a member of the Goldman Sachs group of companies. The Private Wealth Management 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 which would be applied to third party entities and execution venues utilized for execution of client orders.

Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution. The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

Data published under Delegated Regulation (EU) 2017/575 was not available for the reporting period covered by this report. However, 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.

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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Interest rates derivatives: (ii) Swaps, forwards, and other interest rates 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

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

Class of Instrument	Interest rates derivatives: (ii) Swaps, forwards, and other interest rates derivatives				
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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
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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

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The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Credit derivatives: (i) Futures and options admitted to trading on a trading venue

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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	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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Credit derivatives: (i) Futures and options admitted to trading on a trading venue				
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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
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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

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Legitimate Reliance:

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Credit derivatives: (ii) Other credit derivatives

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Credit derivatives: (ii) Other credit 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	

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

Class of Instrument		Credit derivatives: (ii) Other credit 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	
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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	

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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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

GSAG is a member of the Goldman Sachs group of companies. The Private Wealth Management 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 which would be applied to third party entities and execution venues utilized for execution of client orders.

Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution. The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

Data published under Delegated Regulation (EU) 2017/575 was not available for the reporting period covered by this report. However, 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.

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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Currency derivatives: (i) Futures and options admitted to trading on a trading venue

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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	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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Currency derivatives: (i) Futures and options admitted to trading on a trading venue				
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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

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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:

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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.

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;

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Legitimate Reliance:

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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;

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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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Currency derivatives: (ii) Swaps, forwards, and other currency derivatives				
Notification if <1 average trade per business day in the previous year	Y				
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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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/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

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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
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Topic 2: a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

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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.

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;

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Legitimate Reliance:

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Structured finance instruments

Reporting Entity: GSAG

Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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

Class of Instrument	Structured finance instruments				
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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
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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
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The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

Data published under Delegated Regulation (EU) 2017/575 was not available for the reporting period covered by this report. However, 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.

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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Equity 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	
W22LROWP2IHZNBB6K528 - (GS) GOLDMAN SACHS INTERNATIONAL	95.77	78.47	N/A	N/A	N/A	
S81F8KH474EY7PUWI149 - (GS) GOLDMAN SACHS BANK AG ZURICH	4.21	10.16	N/A	N/A	N/A	
FOR8UP27PHHYVLBN30 - GOLDMAN SACHS & CO. LLC	0.02	11.37	N/A	N/A	N/A	

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

Class of Instrument		Equity 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 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	

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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 for professional clients; or
- total consideration for retail clients. Notwithstanding any asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

GSAG is a member of the Goldman Sachs group of companies. The Private Wealth Management 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 which would be applied to third party entities and execution venues utilized for execution of client orders.

Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution.

The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

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- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

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Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

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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;

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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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Equity Derivatives: (ii) Swaps and other equity derivatives

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Equity Derivatives: (ii) Swaps and other equity derivatives			
Notification if <1 average trade per business day in the previous year		Y			
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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Equity Derivatives: (ii) Swaps and other equity 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

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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 for professional clients; or
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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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

GSAG is a member of the Goldman Sachs group of companies. The Private Wealth Management 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 which would be applied to third party entities and execution venues utilized for execution of client orders.

Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution. The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
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Execution Factors

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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;

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The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Securitized Derivatives: (i) Warrants and Certificate Derivatives

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Securitized Derivatives: (i) Warrants and Certificate Derivatives				
Notification if <1 average trade per business day in the previous year		Y				
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	87.10	78.95	N/A	N/A	N/A	
S81F8KH474EY7PUWI149 - (GS) GOLDMAN SACHS BANK AG ZURICH	12.90	21.05	N/A	N/A	N/A	

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

Class of Instrument		Securitized Derivatives: (i) Warrants and Certificate 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	

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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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

Data published under Delegated Regulation (EU) 2017/575 was not available for the reporting period covered by this report. However, 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.

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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Securitized Derivatives: (ii) Other securitized derivatives

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument		Securitized Derivatives: (ii) Other securitized 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	

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

Class of Instrument		Securitized Derivatives: (ii) Other securitized 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	

Goldman Sachs AG does not undertake client executions in this Asset Class.

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Commodities derivatives and emission allowances 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				
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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Commodities derivatives and emission allowances 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				
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

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 the Private Wealth Management Division of Goldman Sachs AG (GS). For further information on the best execution arrangements please refer to the EMEA Private Wealth Management summary which is available at: <http://www.goldmansachs.com/disclosures/mifid>

When assessing the relative importance given to execution factors, 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 for professional clients; or
- total consideration for retail clients. Notwithstanding any asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

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 relevant 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 execution factor on an order-by-order basis, where the order is executed manually, and by order type (e.g. iceberg, VWAP), where the order is 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.

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

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

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Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

- rely on the Securities Division of the relevant GS affiliate for the selection and ongoing review of execution venues (this ongoing review is in addition to the monitoring and oversight of order execution arrangements conducted by the Private Wealth Management Division);
- have determined that it can consistently achieve the best results for its clients using a single execution venue and that this single execution venue may be the Securities Division at other GS affiliates.

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.

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;

There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution. The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

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The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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

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

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

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

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Furthermore, the Private Wealth Management Division may, depending on the asset class or financial instrument:

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

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To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
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- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

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- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

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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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Contract For Difference

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Contract 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

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

Class of Instrument	Contract 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

N/A – Contracts for Difference will be addressed under the MiFID II Swaps Asset Class for the First Report

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

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

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				
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	41.17	39.75	N/A	N/A	N/A
S81F8KH474EY7PUWI149 - (GS) GOLDMAN SACHS BANK AG ZURICH	38.56	26.09	N/A	N/A	N/A
FOR8UP27PHHYVLBNG30 - GOLDMAN SACHS & CO. LLC	20.27	34.16	N/A	N/A	N/A

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

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/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

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There has been no change to the execution venues listed in GS' execution policy.

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;

A client's regulatory categorisation is an important factor both in the assessment of whether the client is relying on GS to deliver best execution and in providing best execution. The starting presumption is that retail clients do legitimately rely on GS to protect their interests in relation to pricing and other elements of the transaction that may be affected by the choice made by GS in executing the relevant order (i.e. GS owes a duty of best execution to retail clients) and professional clients do not legitimately rely on GS to protect their interests; however, these presumptions may be revised depending on the application of the four-fold test for determining legitimate reliance (set out below) to the particular circumstances of GS' interaction with the client and how the market operates for the relevant product.

Legitimate Reliance:

To determine whether a client is legitimately relying on GS to protect its interests, the following factors are considered:

- which party initiates the transaction - where GS approaches the client and suggests that the client should enter into a transaction, it is more likely that the client will be placing reliance on GS. Where the client initiates the transaction it is less likely that the client will be placing reliance on GS;
- market practice and the existence of a convention to 'shop around' - where the practice in the market in which a business area operates suggests that the client takes responsibility for the pricing and other elements of the transaction (e.g. there is a market convention to "shop around" for a quote), it is less likely that the client will be placing reliance on GS;
- the relative levels of price transparency within a market - if GS has ready access to prices in the market in which we operate and the client does not, it is more likely that the client will be placing reliance on GS. If GS's access to pricing transparency is equal or similar to the client's, it is less likely that the client will be placing reliance on GS; and
- the information provided by GS and any agreement reached - where GS's arrangements and agreements with the client do not indicate or suggest a relationship of reliance, it is less likely that the client will be placing reliance on GS.

Execution Factors

Subject to any specific instructions, GS will generally give the highest priority to:

- net price for professional clients; or
- total consideration for retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

Under applicable law and regulation GS is not obliged to provide best execution when it executes orders on behalf of eligible counterparties.

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;

Subject to any specific instructions, GS will generally give the highest priority to total consideration for its retail clients. Notwithstanding any of the asset-class specific requirements, speed, likelihood of execution and settlement, the size and nature of the relevant order, market impact and any other implicit transaction costs may be given precedence over the immediate price and cost consideration only insofar as they are instrumental in delivering the best possible result in terms of the total consideration to the retail client.

If GS receives an order from a retail client that includes a specific instruction or specific instructions in relation to the handling and execution of the entire order or a particular aspect or aspects of an order (including selecting a particular execution venue, executing at a particular price or time or through the use of a particular strategy) then, subject to GS's legal and regulatory obligations, GS will execute the retail client's order in accordance with that specific instruction. Where the specific instruction covers only a portion of an order (for example, as to the choice of execution venue), and GS has discretion over the execution of other elements of the order, then GS will continue to be subject to the best execution obligation in respect of the elements of the order that are not covered by the client's specific instruction.

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;

Data published under Delegated Regulation (EU) 2017/575 was not available for the reporting period covered by this report. However, 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.

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;

The relevant laws and regulations transposing Article 65 of Directive 2014/65/EU into national legislation did not apply for the reporting period covered by this report.

Emission allowances

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Emission allowances				
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

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

Class of Instrument	Emission allowances				
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

Goldman Sachs AG does not undertake client executions in this Asset Class.

Other instruments

Reporting Entity: GSAG
 Top Five Broker Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Other 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 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 Venue Report
 Type of Client: Professional Client
 Reporting Entity: GSAG

Class of Instrument	Other 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 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

N/A - There are no instruments that fall into this category in 2017