

This report has been prepared by Goldman Sachs Asset Management International ("GSAMI") for the calendar year ending 31 December 2018 (the "Reporting Period"), in accordance with Article 65(6) of Commission Delegated Regulation 2017/565 and Article 27(6) of Directive 2014/65/EU ("MiFID II"), which require GSAMI 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 GSAMI's 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. Where data for financial instruments was sourced from a third party, it may have been incomplete or inconsistent with the calculation methodology used for other financial instruments.

This report only covers the trading activities of GSAMI and not of any of its affiliates or the wider Goldman Sachs group. The information set out in this report also covers GSAMI's past trading activities and is not necessarily reflective of GSAMI's current or future trading activities and should not be relied on as such.

Please note that this document is not marketing or promotional material, and has been prepared and published on GSAMI's website solely to ensure compliance with MiFID II disclosure requirements. GSAMI is authorised and regulated by the Financial Conduct Authority."

**Equities Shares & Depositary Receipts**

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)				
Notification if <1 average trade per business day in the previous year	N/A				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of 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
7LTWFZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	32.78	17.83	N/A	N/A	N/A
549300XG5LFGN1IGYC71 - VIRTU FINANCIAL IRELAND LIMITED	27.25	46.51	N/A	N/A	N/A
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	17.59	13.10	N/A	N/A	N/A
8NAV47T0Y26Q87Y0QP81 - MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED	14.06	16.33	N/A	N/A	N/A
DL6FFRRL74S01HE2M14 - CREDIT SUISSE SECURITIES (EUROPE) LIMITED	5.27	3.16	N/A	N/A	N/A

**Equities Shares & Depositary Receipts**

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)				
Notification if <1 average trade per business day in the previous year	N/A				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of 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
7LTFZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	33.14	10.97	N/A	N/A	N/A
549300XG5LFGN1IGYC71 - VIRTU FINANCIAL IRELAND LIMITED	30.15	51.57	N/A	N/A	N/A
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	13.82	6.84	N/A	N/A	N/A
8NAV47T0Y26Q87Y0QP81 - MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED	12.37	9.26	N/A	N/A	N/A
DL6FFRRL74S01HE2M14 - CREDIT SUISSE SECURITIES (EUROPE) LIMITED	8.66	18.09	N/A	N/A	N/A

**Equities Shares & Depositary Receipts**

**Reporting Entity: GSAMI**

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)				
Notification if <1 average trade per business day in the previous year	N/A				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

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

Equities - Shares & Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
Class of Instrument	Equities - Shares & Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of 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
549300XG5LFGN1IGYC71 - VIRTU FINANCIAL IRELAND LIMITED	70.07	71.83	N/A	N/A	N/A
DL6FFRRL74S01HE2M14 - CREDIT SUISSE SECURITIES (EUROPE) LIMITED	14.22	19.64	N/A	N/A	N/A
E58DKGMJYYJLN8C3868 - CREDIT SUISSE INTERNATIONAL	10.52	6.88	N/A	N/A	N/A
7LTFWZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	4.26	0.50	N/A	N/A	N/A
8NAV47T0Y26Q87Y0QP81 - MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED	0.87	0.58	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

- The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead/after of a data event, company meeting or impacting news

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
    - o Mandate Funding Profile
      - Nature of the order
      - Likelihood of settlement
      - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organization, The Goldman Sachs Group, Inc. and its affiliates. GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy. When trading GSAMI utilised the following Affiliates:

- Goldman Sachs Asset Management, L.P.
- Goldman Sachs (Singapore) Pte.
- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received. • GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018. However, in a move to prepare the market for MiFID II, a number of new execution venues appeared within the equities market and these venues started seeing volumes increase towards the end of the year. Examples include rise of periodic auctions, MTFs, SIs and LIS venue types.

- GSAM has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAM maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;

- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

**Debt instruments: (i) Bonds**

**Reporting Entity: GSAMI**  
 Top Five Venue Report  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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
TREU - TRADEWEB EUROPE LIMITED	57.37	27.65	N/A	N/A	N/A
MAEL - MARKETAXESS EUROPE LIMITED	40.13	71.51	N/A	N/A	N/A
BMTF - BLOOMBERG TRADING FACILITY LIMITED	2.51	0.84	N/A	N/A	N/A

**Top Five Broker Report**  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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
XKZZ2JZF41MRHTR1V493 - CITIGROUP GLOBAL MARKETS LIMITED	11.67	9.33	N/A	N/A	N/A
RR3QWICWWIPCS8A4S074 - NATWEST MARKETS PLC	9.91	2.10	N/A	N/A	N/A
G5GSEF7VJPSI7OUK5573 - BARCLAYS BANK PLC	7.27	6.79	N/A	N/A	N/A
MP6ISZYBUEU3UXPYFY54 - HSBC BANK PLC	6.54	4.96	N/A	N/A	N/A
GGDZP1UYGU9STUHRDP48 - MERRILL LYNCH INTERNATIONAL	6.32	4.98	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

- The relative importance of execution factors of different trading desks:

**Fixed Income GovT/Agency Desk -**

- Size
- Price
  - o Liquidity
  - o Likelihood of execution
  - o Cost
  - o Speed
    - Nature of Order
    - Likelihood of settlement
- Speed may become the primary factor due to an interest to trade ahead of a data event.

**High Yield Desk -**

- Size
- Price
- Speed
- Liquidity
  - o Likelihood of execution
  - o Cost
  - o Likelihood of settlement

Credit events may lead to quick and significant price deterioration in the market which may require urgent action and therefore, speed may become the primary factor.

**Investment Grade Desk -**

- Size
- Price
- Speed
- Liquidity
  - o Likelihood of execution
  - o Cost
  - o Likelihood of settlement

Credit events may lead to quick and significant price deterioration in the market which may require urgent action and therefore, speed may become the primary factor.

**Alternative Investment Strategies / Customized Macro desk-**

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
  - o Mandate Funding Profile
    - Nature of the Order
    - Likelihood of settlement
    - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the desk will execute at the next feasible point.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

- Goldman Sachs Asset Management, L.P.
- Goldman Sachs (Singapore) Pte.
- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.

- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.

- GSAM has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAM maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;
  - reputation;
  - financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

Class of Instrument		Debt instruments: (ii) Money markets instruments			
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
TREU - TRADEWEB EUROPE LIMITED	84.17	55.83	N/A	N/A	N/A
BMTF - BLOOMBERG TRADING FACILITY LIMITED	15.83	44.17	N/A	N/A	N/A

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

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
1VUV7VQFKUOQSJ21A208 - CREDIT AGRICOLE CORPORATE AND INVESTMENT BANK	48.27	26.01	N/A	N/A	N/A
K6Q0W1PS1L1O4IQL9C32 - J.P. MORGAN SECURITIES PLC	21.1	16.21	N/A	N/A	N/A
NICH5Q04ADUV9SN3Q390 - BRED BANQUE POPULAIRE	4.28	5.7	N/A	N/A	N/A
6B2PBRV1FCJDMR45RZ53 - KBC BANK NV	3.58	1.33	N/A	N/A	N/A
DG3RU1DBUFHT4ZF9WN62 - COOPERATIEVE RABOBANK U.A.	2.92	5.95	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.
- In determining the relative importance of factors considered, GSAMI took into account:
  - the nature of client orders,
  - the characteristics of the financial instruments to which the order relates; and
  - the characteristics of the available execution venues which can be used or to which client orders can be directed.
- In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.
- The relative importance of execution factors of different trading desks:

Money Market Desk -

- Liquidity
- Price
- Balance Sheet
  - o Likelihood of settlement
  - o Speed
  - o Size
  - o Nature of Order
    - Likelihood of execution
    - Cost

Size and likelihood of execution may become the primary execution factors due to inventory being required.

Fixed Income GovT/Agency Desk -

- Size
- Price
  - o Liquidity
  - o Likelihood of execution
  - o Cost
  - o Speed
    - Nature of Order
    - Likelihood of settlement

Size and likelihood of execution may become the primary execution factors due to inventory being required.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

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- Goldman Sachs International
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- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

• GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.
- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;

- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

Class of Instrument		Interest rates derivatives: (i) Futures and options admitted to trading on a trading venue			
Notification if <1 average trade per business day in the previous year		N			
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

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

Class of Instrument		Interest rates derivatives: (i) Futures and options admitted to trading on a trading venue			
Notification if <1 average trade per business day in the previous year		N			
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
K6Q0W1P51L1O4IQL9C32 - J.P. MORGAN SECURITIES PLC	64.39	48.18	N/A	N/A	N/A
7LTWFZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	15.26	21.87	N/A	N/A	N/A
R0MUWSFPU8MPRO8K5P83 - BNP PARIBAS-LONDON BRANCH	5.46	0.36	N/A	N/A	N/A
REYPIEJN7XZHSUI0N355 - UBS LIMITED...	3.16	2.16	N/A	N/A	N/A
4PQUHN3JPFGNF3BB653 - MORGAN STANLEY & CO. INTERNATIONAL PLC	2.04	15.96	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

- The relative importance of execution factors of different trading desks:

Fixed Income GovT/Agency Desk -

- Size
- Price
  - o Liquidity
  - o Likelihood of execution
  - o Cost
  - o Speed
    - Nature of Order
    - Likelihood of settlement
- Speed may become the primary factor due to an interest to trade ahead of a data event.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates. GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

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- Goldman Sachs (Singapore) Pte.
- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.
- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
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- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;
  - reputation;
  - financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

**Reporting Entity: GSAMI**

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

Class of Instrument	Interest rates derivatives: (ii) Swaps, forwards, and other Interest rate derivatives*				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
TWSF - TW SEF LLC	100.00	100.00	N/A	N/A	N/A

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

Class of Instrument	Interest rates derivatives: (ii) Swaps, forwards, and other Interest rate derivatives				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
7H6GLXDRUGFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	19.10	12.45	N/A	N/A	N/A
G5GSEF7VJPSI7OUK5573 - BARCLAYS BANK PLC	16.54	11.91	N/A	N/A	N/A
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	11.49	4.67	N/A	N/A	N/A
4PQUHN3JPFQFN3BB653 - MORGAN STANLEY & CO. INTERNATIONAL PLC	8.67	11.07	N/A	N/A	N/A
E57ODZWZ7FF32TWEFA76 - CITIBANK, NATIONAL ASSOCIATION	8.44	9.65	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. • GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

- The relative importance of execution factors of different trading desks:

Emerging Market Desk -

- Liquidity
- Size
- Price
  - o Size
  - o Cost
    - Balance sheet
    - Nature of order
    - Likelihood of settlement

Speed may become the primary execution factor in a fast market when trading on NPV.

Fixed Income GovT/Agency Desk -

- Size
- Price
  - o Liquidity
  - o Likelihood of execution
  - o Cost
  - o Speed
    - Nature of Order
    - Likelihood of settlement

Liquidity may become the primary factor due to a broker having a particular flow resulting in a greater amount of risk being transferred.

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Likelihood of execution may become the primary factor due to a data event and a need for faster execution.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

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- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.

- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
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- competitiveness of commission rates or spreads;
- promptness of execution;
- clearance and settlement capabilities;
- quality of service;
- willingness to commit capital;
- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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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(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

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 Broker Report  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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

Goldman Sachs Asset Management International does not trade credit related futures or options that are admitted to trading on trading venues with clients.

**Credit derivatives: (ii) Other credit derivatives**

**Reporting Entity: GSAMI**

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

Class of Instrument		Credit derivatives: (ii) Other credit derivatives			
Notification if <1 average trade per business day in the previous year		N			
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
TWSF - TW SEF LLC	78.49	16.89	N/A	N/A	N/A
BBSF - BLOOMBERG SEF LLC	21.50	83.01	N/A	N/A	N/A
BMTF - BLOOMBERG TRADING FACILITY LIMITED	0.01	0.10	N/A	N/A	N/A

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

Class of Instrument		Credit derivatives: (ii) Other credit 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
E570DZWZ7FF32TWEFA76 - CITIBANK, NATIONAL ASSOCIATION	25.78	24.23	N/A	N/A	N/A
7H6GLXDRUGQFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	20.35	19.07	N/A	N/A	N/A
G5GSEF7VJPSI7OUK5573 - BARCLAYS BANK PLC	19.83	21.65	N/A	N/A	N/A
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	9.83	10.31	N/A	N/A	N/A
7LTFWZYICNSX8D621K86 - DEUTSCHE BANK AKTIENGESELLSCHAFT	9.62	11.86	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.
- In determining the relative importance of factors considered, GSAMI took into account:
  - the nature of client orders,
  - the characteristics of the financial instruments to which the order relates; and
  - the characteristics of the available execution venues which can be used or to which client orders can be directed.
- In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.
- The relative importance of execution factors of different trading desks:

**Emerging Market Desk-**

- Liquidity
- Size
- Price
  - o Size
  - o Cost
    - Balance sheet
    - Nature of order
    - Likelihood of settlement

Market access to certain otherwise inaccessible markets (e.g. EM Frontier markets).may change the order of certain execution factors.

**High Yield Desk -**

- Size
- Price
- Speed
- Liquidity
  - o Likelihood of execution
  - o Cost
  - o Likelihood of settlement

Liquidity may become the primary factor due to a broker having a particular flow resulting in a greater amount of risk being transferred.

**Investment Grade Desk -**

- Size
- Price
- Speed
- Liquidity
  - o Likelihood of execution
  - o Cost
  - o Likelihood of settlement

Liquidity may become the primary factor due to a broker having a particular flow resulting in a greater amount of risk being transferred.

**Alternative Investment Strategies / Customized Macro desk-**

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
    - o Mandate Funding Profile
      - Nature of the order
      - Likelihood of settlement
      - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) 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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- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)

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- promptness of execution;
- clearance and settlement capabilities;
- quality of service;
- willingness to commit capital;
- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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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- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

Reporting Entity: GSAMI

Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSAMI

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					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSAMI

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					
Y					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
7H6GLXDRUGUFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	23.17	14.50	N/A	N/A	N/A
G5GSEF7VJPSI7OUK5573 - BARCLAYS BANK PLC	17.03	15.50	N/A	N/A	N/A
RR3QWICWWIPCS8A4S074 - NATWEST MARKETS PLC	15.48	17.00	N/A	N/A	N/A
E570DZWZ7FF32TWEFA76 - CITIBANK, NATIONAL ASSOCIATION	12.07	10.00	N/A	N/A	N/A
BFM8T61CT2L1QCEMIK50 - UBS AG	10.34	8.00	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.
- In determining the relative importance of factors considered, GSAMI took into account:
  - the nature of client orders,
  - the characteristics of the financial instruments to which the order relates; and
  - the characteristics of the available execution venues which can be used or to which client orders can be directed.
- In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.
- The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Likelihood of execution may become the primary factor due to the nature of the order.

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
  - o Mandate Funding Profile
    - Nature of the order
    - Likelihood of settlement
    - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders.

GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

- Goldman Sachs Asset Management, L.P.
- Goldman Sachs (Singapore) Pte.
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- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018. However, in a move to prepare the market for MiFID II, a number of new execution venues appeared within the equities market and these venues started seeing volumes increase towards the end of the year. Examples include rise of periodic auctions, MTFs, SIs and LIS venue types.
- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;

- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

**Reporting Entity: GSAMI**

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

Currency derivatives: (ii) Swaps, forwards, and other currency derivatives					
Notification if <1 average trade per business day in the previous year					
N					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
TRAL - REFINITIV TRANSACTIONS SERVICES LIMITED	73.25	53.08	N/A	N/A	N/A
BMTF - BLOOMBERG TRADING FACILITY LIMITED	26.27	36.68	N/A	N/A	N/A
BBSF - BLOOMBERG SEF LLC	0.27	7.33	N/A	N/A	N/A
FXAL - FXALL	0.21	2.91	N/A	N/A	N/A

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

Currency derivatives: (ii) Swaps, forwards, and other currency derivatives					
Notification if <1 average trade per business day in the previous year					
N					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
4PQUHN3JPFQFN3BB653 - MORGAN STANLEY & CO. INTERNATIONAL PLC	16.03	14.16	N/A	N/A	N/A
7H6GLXDRUGQFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	10.10	6.91	N/A	N/A	N/A
BFM8T61CT2L1QCEMIK50 - UBS AG	9.54	5.98	N/A	N/A	N/A
7LTFWZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	8.64	9.69	N/A	N/A	N/A
E57ODZWZ7FF32TWEFA76 - CITIBANK, NATIONAL ASSOCIATION	8.06	9.69	N/A	N/A	N/A

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- costs;
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- The relative importance of execution factors of different trading desks:

Fixed Income Currency Desk –

- Liquidity Provision
  - o Impact
    - Slippage/Price
    - Speed
    - Likelihood of execution
    - Coverage
- Nature of order
  - o Likelihood of settlement
  - o Risk diversification/counterparty risk

Speed may become the primary factor to react to a data event or headline. Diversifying counterparty risk when trading hedges.

Alternative Investment Strategies / Customized Macro desk–

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
  - o Mandate Funding Profile
    - Nature of the order
    - Likelihood of settlement
    - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) 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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- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

• GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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.

• As pricing and functionality improved throughout 2018, GSAM saw an increase of FX trading volume through e-platforms.

• GSAM has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAM maintains a list of approved execution venues and brokers (the "Approved List").

• The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.

• The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:

- competitiveness of commission rates or spreads;
- promptness of execution;
- clearance and settlement capabilities;
- quality of service;
- willingness to commit capital;

- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

**Structured finance instruments**

**Reporting Entity: GSAMI**

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

Class of Instrument	Structured finance 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
MAEL - MARKETAXESS EUROPE LIMITED	94.88	96.87	N/A	N/A	N/A
TREU - TRADEWEB EUROPE LIMITED	5.12	3.13	N/A	N/A	N/A

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

Class of Instrument	Structured finance instruments				
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
K6Q0W1P51L1O4IQL9C32 - J.P. MORGAN SECURITIES PLC	55.00	39.20	N/A	N/A	N/A
GGDZP1UYGU9STUHRDP48 - MERRILL LYNCH INTERNATIONAL	11.74	8.00	N/A	N/A	N/A
R0MUWSFP8MPRO8K5P83 - BNP PARIBAS	9.58	4.80	N/A	N/A	N/A
KX1WK48MPD4Y2NCUIZ63 - NATIXIS	5.02	3.60	N/A	N/A	N/A
XKZZZJZF41MRHTR1V493 - CITIGROUP GLOBAL MARKETS LIMITED	4.98	10.00	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

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- the characteristics of the financial instruments to which the order relates; and
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In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

- The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead/after of a data event, company meeting or impacting news

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
    - o Mandate Funding Profile
      - Nature of the order
      - Likelihood of settlement
      - Operational Risk

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(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received. • GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018. However, in a move to prepare the market for MiFID II, a number of new execution venues appeared within the equities market and these venues started seeing volumes increase towards the end of the year. Examples include rise of periodic auctions, MTFs, SIs and LIS venue types.

- GSAM has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAM maintains a list of approved execution venues and brokers (the "Approved List").
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  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;

- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

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- N/A

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

Reporting Entity: GSAMI

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

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					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

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

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					
Class of Instrument	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
Top five execution venues ranked in terms of trading volumes (descending order)					
7LTFZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	51.55	47.52	N/A	N/A	N/A
E58DKGMJYYJLN8C3868 - CREDIT SUISSE INTERNATIONAL	24.97	39.74	N/A	N/A	N/A
0IKLU6X1B10WK7X42C15 - SOCIETE GENERALE INTERNATIONAL LIMITED	7.99	5.98	N/A	N/A	N/A
K6QOW1PS11O4IQL9C32 - J.P. MORGAN SECURITIES PLC	6.59	2.48	N/A	N/A	N/A
R0MUWSPU8MPRO8K5P83 - BNP PARIBAS-LONDON BRANCH	3.27	0.12	N/A	N/A	N/A

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Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Likelihood of execution may become the primary factor due to the nature of the order.

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
  - o Mandate Funding Profile
    - Nature of the order
    - Likelihood of settlement
    - Operational Risk

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- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;

- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

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

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

Class of Instrument		Equity Derivatives: (ii) Swaps and other equity derivatives			
Notification if <1 average trade per business day in the previous year		N			
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of 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
7H6GLXDRUGQFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	41.80	41.78	N/A	N/A	N/A
7LTWFZYICNSX8D621K86 - DEUTSCHE BANK AKTIENGESELLSCHAFT	41.78	46.04	N/A	N/A	N/A
E57ODZWZ7FF32TWEFA76 - CITIBANK, NATIONAL ASSOCIATION	12.69	11.11	N/A	N/A	N/A
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	1.91	0.24	N/A	N/A	N/A
GGDZP1UYGU9STUHRDP48 - MERRILL LYNCH INTERNATIONAL	1.80	0.69	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - Likelihood of execution
  - Speed
  - Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead or after a data event.

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - Liquidity
  - Speed
  - Likelihood of execution
  - Cost
  - Mandate Funding Profile
    - Nature of the order
    - Likelihood of settlement
    - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders. GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

(i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;

(ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

- Goldman Sachs Asset Management, L.P.
- Goldman Sachs (Singapore) Pte.
- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018. However, in a move to prepare the market for MiFID II, a number of new execution venues appeared within the equities market and these venues started seeing volumes increase towards the end of the year. Examples include rise of periodic auctions, MTFs, SIs and LIS venue types.
- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;

- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

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
MAEL - MARKETAXESS EUROPE LIMITED	100.00	100.00	N/A	N/A	N/A

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

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

(a) 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 making assessments of the quality of execution.  
 GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

The relative importance of execution factors of different trading desks:  
 Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead/after of a data event, company meeting or impacting news

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders.

- GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.
- GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:
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  - (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

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- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.
- GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").
- The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.
- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;
  - reputation;
  - financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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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(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

**Securitized Derivatives: (ii) Other securitized derivatives**

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

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 Broker Report  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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 Asset Management International does not execute client orders in Other Securitized Derivatives.

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

**Reporting Entity: GSAMI**  
 Top Five Venue Report  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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

**Top Five Broker Report**  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

Commodities derivatives and emission allowances Derivatives: (i) Options and Futures admitted to trading on a trading venue					
Notification if <1 average trade per business day in the previous year					
N					
Class of Instrument	Commodities derivatives and emission allowances Derivatives: (i) Options and Futures admitted to trading on a trading venue				
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
WOP23KWZWSJSMG3U094 - R.J. O'BRIEN & ASSOCIATES, LLC	34.47	28.60	N/A	N/A	N/A
7TK5RJIJZDFROZCA6XF66 - MIZUHO SECURITIES USA LLC	22.33	22.75	N/A	N/A	N/A
0IKLU6X1B10WK7X42C15 - SOCIETE GENERALE INTERNATIONAL LIMITED	19.75	19.48	N/A	N/A	N/A
K6QOW1PS11O4IQL9C32 - J.P. MORGAN SECURITIES PLC	14.63	19.09	N/A	N/A	N/A
VYVVKCR63DVZZN70PB21 - WELLS FARGO SECURITIES, LLC	7.91	9.07	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

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- The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead or after a data event.

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
    - o Mandate Funding Profile
      - Nature of the order
      - Likelihood of settlement
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This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

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- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;

- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

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

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

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

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

Commodities derivatives and emission allowances Derivatives: (ii) Other commodities derivatives and emission allowances derivatives					
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	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
7H6GLXRUGUFU57RNE97 - JPMORGAN CHASE BANK, NATIONAL ASSOCIATION	100.00	100.00	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.

In determining the relative importance of factors considered, GSAMI took into account:

- the nature of client orders,
- the characteristics of the financial instruments to which the order relates; and
- the characteristics of the available execution venues which can be used or to which client orders can be directed.

In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.

The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Speed may become the primary factor due to an interest to trade ahead or after a data event.

Alternative Investment Strategies / Customized Macro desk-

- Size
- Price
  - o Liquidity
  - o Speed
  - o Likelihood of execution
  - o Cost
  - o Mandate Funding Profile
    - Nature of the order
    - Likelihood of settlement
    - Operational Risk

This trading desk does not change the importance of execution factors. If a major data event is declared, the trading desk will execute at the next feasible point.

(b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders.

GSAMI is part of a worldwide, full service investment banking, broker-dealer, asset management organisation, The Goldman Sachs Group, Inc. and its affiliates.

GSAMI and its affiliates (the Firm) and (where applicable) the personnel of the Firm may:

- (i) have multiple advisory, transactional and financial and other interests in execution venues and brokers used by GSAMI;
- (ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

When trading GSAMI utilised the following investment management Affiliates:

- Goldman Sachs Asset Management, L.P.
- Goldman Sachs (Singapore) Pte.
- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018. However, in a move to prepare the market for MiFID II, a number of new execution venues appeared within the equities market and these venues started seeing volumes increase towards the end of the year. Examples include rise of periodic auctions, MTFs, SIs and LIS venue types.

GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAMI maintains a list of approved execution venues and brokers (the "Approved List").

The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.

The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:

- competitiveness of commission rates or spreads;
- promptness of execution;
- clearance and settlement capabilities;
- quality of service;
- willingness to commit capital;
- creditworthiness;

- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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.

- GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

**Contracts for difference**

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

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

Reporting Entity: GSAMI  
 Type of Client: Professional Client  
 Professional Client

Class of Instrument	Contracts for difference				
Notification if <1 average trade per business day in the previous year	N/A				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of 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 Asset Management International does not execute client orders in Contracts for Difference

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

Reporting Entity: GSAMI

Top Five Venue Report

Type of Client: Professional Client

Reporting Entity: GSAMI

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					
Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A

Top Five Broker Report

Type of Client: Professional Client

Reporting Entity: GSAMI

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					
Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)*				
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
B4TYDEB6GKMZO031MB27 - BANK OF AMERICA, NATIONAL ASSOCIATION	47.88	25.46	N/A	N/A	N/A
7LTWFZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	34.21	52.23	N/A	N/A	N/A
8NAV47TOY26Q87Y0QP81 - MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED	15	15.49	N/A	N/A	N/A
549300XG5LFGN1IGYC71 - VIRTU FINANCIAL IRELAND LIMITED	2.34	1.84	N/A	N/A	N/A
E58DKGMJYYJLN8C3868 - CREDIT SUISSE INTERNATIONAL	0.48	1.31	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution.

GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
- other appropriate factors, such as a broker's willingness to commit capital and the availability of external venues for the order or a particular product.
- In determining the relative importance of factors considered, GSAMI took into account:
  - the nature of client orders,
  - the characteristics of the financial instruments to which the order relates; and
  - the characteristics of the available execution venues which can be used or to which client orders can be directed.
- In addition, although different execution strategies were used on a trade-by-trade basis (dependent on factors such as market conditions, liquidity, investment strategy and client guidelines), the ranking of the execution factors was often determined by investment objectives for the strategy, the type of product to be traded, the rationale for the trade (e.g. cash flow or change in analyst view) and other appropriate considerations.
- The relative importance of execution factors of different trading desks:

Fundamental Equity / Quantitative Investment Strategy desks-

- Liquidity
- Price
  - o Likelihood of execution
  - o Speed
  - o Cost
    - Coverage
    - Nature of Order
    - Likelihood of settlement

Likelihood of execution may become the primary factor due to a data event or the size of the order.

(b) 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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(ii) operate execution venues and act as brokers in respect of orders executed for GSAMI's clients.

GSAMI may act in circumstances in which it or one of its affiliates has a material interest or a relationship of any description with another party which may involve an actual or potential conflict with GSAMI's duty to its clients. However, if GSAMI acts in circumstances where it has a material interest or conflict of interests, GSAMI will take all appropriate steps to ensure the clients are treated fairly. In this regard, GSAMI has established, implemented and maintains a written conflicts of interest policy.

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- Goldman Sachs Asset Management (Singapore) Pte. Ltd.
- Goldman Sachs International
- Goldman Sachs Services Private Limited
- Goldman Sachs (India) Securities Private Limited
- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

• GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

(d) 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 were no material changes to execution venues used by GSAMI over 2018.

• GSAMI has a process for the selection of (i) execution venues (including brokers) for executing client orders; and (ii) brokers, with whom it places or transmits client orders for execution. GSAM maintains a list of approved execution venues and brokers (the "Approved List").

• The specific qualitative criteria used to add an execution venue or broker to the Approved List in 2018, generally varied based on the asset class to be traded, but the overall approval process was applied in the same manner across all asset classes. GSAMI did not conduct any activity with a new execution venue or broker until the screening and approval process had been completed.

• The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:

- competitiveness of commission rates or spreads;
- promptness of execution;
- clearance and settlement capabilities;
- quality of service;
- willingness to commit capital;
- creditworthiness;
- reputation;
- financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

• GSAMI only has professional clients.

(f) An explanation of when 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.

• GSAMI only has professional clients.

(g) An explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10)(a) of Directive 2014/65/EU.

• GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A

**Emission Allowances**

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

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

Reporting Entity: GSAMI  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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

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

**Other instruments**

**Reporting Entity: GSAMI**  
 Top Five Venue Report  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

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 Broker Report**  
 Type of Client: Professional Client  
 Reporting Entity: GSAMI

Class of Instrument	Other instruments				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
VYVVKR63DVZLN70PB21 - WELLS FARGO SECURITIES, LLC	44.67	20.08	N/A	N/A	N/A
K6Q0W1PS1L1O4IQL9C32 - J.P. MORGAN SECURITIES PLC	17.26	14.78	N/A	N/A	N/A
WOP23KWZ5J5JMG3U094 - R.J. O'BRIEN & ASSOCIATES, LLC	15.06	16.60	N/A	N/A	N/A
MBNUM2BPBDO7JBLYG310 - CITIGROUP GLOBAL MARKETS INC.	8.69	1.01	N/A	N/A	N/A
7LTFWZYICNSX8D621K86 - DEUTSCHE BANK AG-LONDON BRANCH	5.71	11.58	N/A	N/A	N/A

(a) 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 making assessments of the quality of execution. GSAMI took into account a range of factors in deciding how and where to execute client orders, including, but not limited to:

- price;
- costs;
- timing and speed of execution;
- likelihood of execution, clearance and settlement;
- capabilities in execution, clearance and settlement;
- size;
- liquidity in or with a broker;
- nature of the order;
- nature of the instrument (e.g. bespoke or standardized); or
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- Liquidity
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  - o Likelihood of execution
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    - Coverage
    - Nature of Order
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Likelihood of execution may become the primary factor due to a data event or the size of the order.

(b) 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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- Goldman Sachs (Asia) L.L.C.
- GSAM Services Private Limited (formerly Goldman Sachs Asset Management (India) Private Limited)
- Goldman Sachs Asset Management Australia Pty Ltd

(c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.

- GSAMI did not receive any discounts, rebates or non-monetary benefits nor did GSAMI make any payments to execution venues in relation to its use of execution venues.

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- The criteria used to add an execution venue or broker to the Approved List were generally based on the evaluation of a number of quantitative and qualitative factors that may have included (as applicable), but were not limited to, GSAMI's analysis of the broker or execution venue's:
  - competitiveness of commission rates or spreads;
  - promptness of execution;
  - clearance and settlement capabilities;
  - quality of service;
  - willingness to commit capital;
  - creditworthiness;
  - reputation;
  - financial stability;

(e) An explanation of how order execution differs according to client categorisation, where the firm treats such category of client differently and where it may affect the order execution arrangements.

- GSAMI only has professional clients.

(f) An explanation of when 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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- GSAMI did not use any data or tools for any instrument classes

(h) An explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimise and assess execution performances.

- N/A