

Information on the top five execution venues and quality of execution obtained

Union Investment Institutional GmbH

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As a new regulation introduced with MiFID II, investment management companies are obliged to identify on their website, once a year and for each class of financial instruments, the top five execution venues in terms of trading volumes where they executed client orders in the preceding year, together with summary information regarding the quality of execution obtained (Delegated Regulation (EU) 2017/576 of the EU Commission / RTS 28).

However, this reporting requirement does not apply to all transactions, but only covers transactions within the scope of individual financial portfolio management. The top five execution venues and/or brokers are determined on the basis of these transactions only. Execution of transactions within the framework of managing investment fund assets are outside the scope of this report. Therefore, the information provided with this report is not representative of Union Investment Institutional GmbH overall trading activity.

An analysis of the top five execution venues in terms of trading volumes for all client orders executed (for professional investors) during the 2017 reporting period, broken down by class of financial instrument, is provided below – together with summary information regarding the quality of execution obtained.

Please refer to Delegated Regulation (EU) 2017/576 (RTS 28) for more details regarding this publication.

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1 Equities - Shares & Depository Receipts

Information on the top five brokers

Class of Instrument	Equities - Shares & Depository Receipts				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Morgan Stanley Bank AG (7CPI4ZQUQVBDH8SA1F44)	21,94%	11,40%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	12,63%	11,69%	N.A.	N.A.	0,00%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	9,86%	9,09%	N.A.	N.A.	0,00%
UBS Limited (REYPIEJN7XZHSUI0N355)	9,82%	19,05%	N.A.	N.A.	0,00%
Credit Suisse International (E58DKGMJYYYYJLN8C3868)	7,04%	2,65%	N.A.	N.A.	0,00%

Information on the top five brokers (securities financing transactions)

Class of Instrument	Equities - Shares & Depository Receipts	
Notification if <1 average trade per business day in the previous year	Y	
Top five Venues ranked in terms of volume (descending order)	Proportion of volume executed as a percentage of total in that class	Proportion of orders executed as percentage of total in that class
Société Générale S.A. (O2RNE8IBXP4R0TD8PU41)	42,10%	33,97%
Citigroup Global Markets Limited (XKZZ2JZF41MRHTR1V493)	16,86%	20,57%
Barclays Bank PLC (G5GSEF7VJP5I7OUK5573)	15,18%	21,53%
UBS AG (BFM8T61CT2L1QCEMIK50)	14,33%	6,70%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	4,21%	5,74%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and

- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Equities - Shares & Depositary Receipts" class, given the relatively high availability of liquidity across numerous trading venues and the availability of in depth price discovery, the highest priority is on the price and on the costs associated with order execution. For less liquid equities and equity certificates, whilst high priority is assigned to the speed and probability of execution, price and costs are the most important factors.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. A transaction cost analysis (TCA) prepared by independent providers supports this evaluation process; the TCA also serves as a tool to monitor the quality of order execution, and to determine trading costs. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

2 Debt instruments

2.1 Bonds

Information on the top five brokers

Class of Instrument	Debt instruments - 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
BNP Paribas S.A. (ROMUWSFPU8MPRO8K5P83)	8,93%	9,29%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTFWZYICNSX8D621K86)	8,25%	8,55%	N.A.	N.A.	0,00%
Barclays Bank PLC (G5GSEF7VJP517OUK5573)	5,74%	5,15%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L104IQL9C32)	5,27%	5,32%	N.A.	N.A.	0,00%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	5,19%	4,43%	N.A.	N.A.	0,00%

Information on the top five execution venues

Class of Instrument	Debt instruments - 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
Bloomberg Trading Facility Limited (BMTF)	74,12%	73,44%	N.A.	N.A.	0,00%
Tradeweb Europe Limited (TREU)	23,56%	22,49%	N.A.	N.A.	0,00%
Marketaxess Europe Limited (MAEL)	2,33%	4,07%	N.A.	N.A.	0,00%

Information on the top five brokers (securities financing transactions)

Class of Instrument	Debt instruments - Bonds	
Notification if <1 average trade per business day in the previous year	N	
Top five Venues ranked in terms of volume (descending order)	Proportion of volume executed as a percentage of total in that class	Proportion of orders executed as percentage of total in that class
Barclays Bank PLC (G5GSEF7VJP517OUK5573)	26,02%	11,07%

Société Générale S.A. (O2RNE8IBXP4R0TD8PU41)	21,61%	12,25%
UBS AG (BFM8T61CT2L1QCCEMIK50)	12,61%	10,28%
BNP Paribas S.A. (ROMUWSFPU8MPRO8K5P83)	8,02%	7,51%
SEB AG (POT131ELWMYGYC1G4O52)	7,59%	5,14%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Debt instruments - Bonds" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price, which generally has similarly high priority. Since execution costs for debt securities are largely standardised, these are not given high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. A transaction cost analysis (TCA) prepared by independent providers supports this evaluation process; the TCA also serves as a tool to monitor the quality of order execution, and to determine trading costs. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

2.2 Money Markets Instruments

Information on the top five brokers

Class of Instrument	Debt instruments - 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
DZ BANK AG (529900HNOAA1KXQJUQ27)	55,58%	52,78%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTFWZYICNSX8D621K86)	22,15%	16,67%	N.A.	N.A.	0,00%
Norddeutsche Landesbank Girozentrale (DSNHHQ2B9X5N6OUJ1236)	10,22%	13,89%	N.A.	N.A.	0,00%
Landesbank Baden-Württemberg B81CK4ESI35472RHJ606)	5,47%	5,56%	N.A.	N.A.	0,00%
Citigroup Global Markets Limited (XKZZZJZF41MRHTR1V493)	5,39%	5,56%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Debt instruments - Money markets instruments" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations –

whereby this must not be at the expense of the price, which generally has similarly high priority. Since execution costs for debt securities are largely standardised, these are not given high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

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No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

3 Interest rates derivatives

3.1 Futures and options admitted to trading on a trading venue

Information on the top five brokers

Class of Instrument	Interest rates derivatives - 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
DZ BANK AG (529900HNOAA1KXQJUQ27)	35,03%	46,78%	N.A.	N.A.	0,00%
DZ PRIVATBANK S.A. (SVY0KHTJZBP60K295346)	25,06%	25,44%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	21,03%	8,14%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	17,70%	18,95%	N.A.	N.A.	0,00%
Morgan Stanley Bank AG (7CPI4ZQUQVBDH8SA1F44)	0,54%	0,06%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Interest rates derivatives - Futures and options admitted to trading on a trading venue" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. A transaction cost analysis (TCA) supports this evaluation process; the TCA also serves as a tool to monitor the quality of order execution, and to determine trading costs. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

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No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

3.2 Swaps, forwards, and other interest rates derivatives

Information on the top five brokers

Class of Instrument	Interest rates derivatives - Swaps, forwards, and other interest rates 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
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	96,22%	41,84%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	1,55%	15,31%	N.A.	N.A.	0,00%
Citigroup Global Markets Limited (XKZZ2JZF41MRHTR1V493)	1,21%	12,24%	N.A.	N.A.	0,00%
Barclays Bank PLC (G5GSEF7VJP5I7OUK5573)	0,56%	22,45%	N.A.	N.A.	0,00%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	0,45%	7,14%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Interest rates derivatives - Swaps, forwards, and other interest rates derivatives" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

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No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

4 Credit derivatives

4.1 Futures and options admitted to trading on a trading venue

Information on the top five execution venues

Class of Instrument	Credit derivatives - 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
Tradeweb Europe Limited (TREU)	100,00%	100,00%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Credit derivatives - Futures and options admitted to trading on a trading venue" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing

orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

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4.2 Other credit derivatives

Information on the top five brokers

Class of Instrument	Credit derivatives - 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
Morgan Stanley & Co. International PLC (4PQUHN3JPFNF3BB653)	52,16%	10,81%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	22,37%	24,59%	N.A.	N.A.	0,00%
Barclays Bank PLC (G5GSEF7VJP517OUK5573)	13,68%	11,08%	N.A.	N.A.	0,00%
Société Générale S.A. (O2RNE8IBXP4R0TD8PU41)	5,02%	19,19%	N.A.	N.A.	0,00%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	2,94%	5,95%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;

- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Credit derivatives - Other credit derivatives" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

5 Currency derivatives

5.1 Futures and options admitted to trading on a trading venue

Information on the top five brokers

Class of Instrument	Currency derivatives - 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
DZ BANK AG (529900HNOAA1KXQJUQ27)	69,42%	52,99%	N.A.	N.A.	0,00%
DZ PRIVATBANK S.A. (SVY0KHTJZBP60K295346)	19,66%	33,27%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	4,75%	9,41%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	4,60%	2,43%	N.A.	N.A.	0,00%
HSBC Trinkaus & Burkhardt AG (JUNT405OW8OY5GN4DX16)	1,53%	0,81%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Currency derivatives - Futures and options admitted to trading on a trading venue" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

5.2 Swaps, forwards, and other currency derivatives

Information on the top five brokers

Class of Instrument	Currency derivatives - Swaps, forwards, and other currency derivatives				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
JPMorgan Chase Bank, N.A. (7H6GLXDRUGQFU57RNE97)	51,61%	19,25%	N.A.	N.A.	0,00%
B. Metzler seel. Sohn & Co. KGaA (529900IOG1ENLW4SUU53)	15,44%	35,47%	N.A.	N.A.	0,00%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	7,37%	3,40%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	6,42%	7,92%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	4,43%	7,17%	N.A.	N.A.	0,00%

Information on the top five execution venues

Class of Instrument	Currency derivatives - Swaps, forwards, and other currency derivatives
Notification if <1 average trade per business day in the previous year	N

Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Bloomberg Trading Facility Limited (BMTF)	87,42%	87,94%	N.A.	N.A.	0,00%
Reuters Transaction Services Limited - FX ALL RFQ (TRAL)	12,58%	12,06%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Currency derivatives - Swaps, forwards, and other currency derivatives" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive

any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

6 Structured finance instruments

Information on the top five brokers

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
Goldman Sachs International (W22LROWP2IHZNBB6K528)	15,54%	12,16%	N.A.	N.A.	0,00%
Citigroup Global Markets Limited (XKZZ2JZF41MRHTR1V493)	14,24%	13,96%	N.A.	N.A.	0,00%
Natixis S.A. (KX1WK48MPD4Y2NCUIZ63)	11,14%	9,46%	N.A.	N.A.	0,00%
Barclays Bank PLC (G5GSEF7VJP517OUK5573)	6,91%	6,31%	N.A.	N.A.	0,00%
Morgan Stanley & Co. International PLC (4PQUHN3JPFGFNF3BB653)	6,02%	5,86%	N.A.	N.A.	0,00%

Information on the top five execution venues

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
Bloomberg Trading Facility Limited (BMTF)	100,00%	100,00%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;

- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Structured finance instruments" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

7 Equity Derivatives

7.1 Options and Futures admitted to trading on a trading venue

Information on the top five brokers

Class of Instrument	Equity Derivatives - Options and Futures admitted to trading on a trading venue				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
DZ BANK AG (529900HNOAA1KXQJUQ27)	43,30%	46,62%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	22,14%	9,50%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LWTFZYICNSX8D621K86)	20,48%	23,08%	N.A.	N.A.	0,00%
DZ PRIVATBANK S.A. (SVY0KHTJZBP60K295346)	12,13%	18,96%	N.A.	N.A.	0,00%
UBS Limited (REYPIEJN7XZHSUI0N355)	0,75%	0,29%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Equity Derivatives - Options and Futures admitted to trading on a trading venue" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. A transaction cost analysis (TCA) supports this evaluation process; the TCA also serves as a tool to monitor the quality of order execution, and to determine trading costs. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

7.2 Swaps and other equity derivatives

Information on the top five brokers

Class of Instrument	Equity Derivatives - Swaps and other equity derivatives				
Notification if <1 average trade per business day in the previous year	Y				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
UBS AG (BFM8T61CT2L1QCCEMIK50)	58,44%	22,47%	N.A.	N.A.	0,00%
J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32)	37,91%	62,92%	N.A.	N.A.	0,00%
Morgan Stanley & Co. International PLC (4PQUHN3JPFGFNF3BB653)	3,47%	8,99%	N.A.	N.A.	0,00%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	0,13%	4,49%	N.A.	N.A.	0,00%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	0,04%	1,12%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at

the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Equity Derivatives - Swaps and other equity derivatives" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

8 Securitized Derivatives

8.1 Warrants and Certificate Derivatives

Information on the top five brokers

Class of Instrument	Securitized Derivatives - 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
DZ BANK AG (529900HNOAA1KXQJUQ27)	29,13%	23,26%	N.A.	N.A.	20,00%
Credit Suisse International (E58DKGMJYYYJLN8C3868)	24,23%	2,33%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	21,21%	13,95%	N.A.	N.A.	0,00%
HSBC Bank PLC (MP6I5ZYZBEU3UXPYFY54)	6,01%	2,33%	N.A.	N.A.	0,00%
Exane S.A. (969500UP76J52A9OXU27)	5,47%	4,65%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Securitized Derivatives - Warrants and Certificate Derivatives" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing

orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

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

Information on the top five brokers

Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Credit Suisse International (E58DKGMJYYYYJLN8C3868)	32,12%	1,42%	N.A.	N.A.	0,00%
BNP Paribas S.A. (ROMUWSFPU8MPRO8K5P83)	23,98%	8,87%	N.A.	N.A.	0,00%
Macquarie Bank Limited (4ZHCHI4KYZG2WVRT8631)	8,32%	0,35%	N.A.	N.A.	0,00%
Deutsche Bank AG (7LTWFZYICNSX8D621K86)	7,18%	6,38%	N.A.	N.A.	0,00%
DZ PRIVATBANK S.A. (SVYOKHTJZBP60K295346)	6,98%	41,84%	N.A.	N.A.	0,00%

Information on the top five execution venues

Class of Instrument	Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Tradeweb Europe Limited (TREU)	100,00%	100,00%	N.A.	N.A.	0,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;

- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

The summary information regarding the quality of execution is solely based on transactions for clients classified as "Professional Clients". Where a Professional Client issues instructions with regard to the terms of execution within the scope of individual portfolio management, such instructions are always given priority and are implemented when executing orders, subject to the requirements of German investment law.

Union Investment's shareholders are German cooperative banks, DZ BANK AG, as well as additional partner entities from the Volksbanken Raiffeisenbanken cooperative financial network. The Company does not perceive any conflict of interest in this connection; when placing orders, said shareholders are subject to the same strict rules for execution venues and/or brokers.

No specific arrangements are in place with any execution venues regarding payments made or received, or any discounts or rebates. Other non-monetary benefits may be obtained in the form of research and analysis services: these are designed for use in making investment decisions, in the interests of the investors. Some execution venues and/or brokers offered their research and analysis services as well as execution services in bundled form during the 2017 reporting period. The requirement to separately show prices for the execution of trades has only been in place since 3 January 2018. Hence, such execution-only prices can only be used as a basis for analysing the quality of execution in the reports for 2018.

10 Other Instruments

Information on the top five brokers

Class of Instrument	Other 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
Erste Group Bank AG (PQOH26KWDF7CG10L6792)	34,51%	10,64%	N.A.	N.A.	0,00%
HSBC Trinkaus & Burkhardt AG (JUNT405OW8OY5GN4DX16)	26,53%	8,51%	N.A.	N.A.	0,00%
Deutsche Apotheker- und Ärztebank eG (Düsseldorf)	9,84%	14,89%	N.A.	N.A.	0,00%
Hypo Vorarlberg Bank AG (NS54DT27LJMDYN1YFP35)	7,07%	18,62%	N.A.	N.A.	0,00%
DZ PRIVATBANK S.A. (SVY0KHTJZBP60K295346)	5,07%	4,79%	N.A.	N.A.	0,00%

Information on the top five brokers (securities finance transactions)

Class of Instrument	Other 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
Citigroup Global Markets Limited (XKZZZJZF41MRHTR1V493)	100,00%	100,00%

Information on the quality of execution obtained

Within the scope of individual portfolio management, orders are generally placed with execution venues and/or brokers subject to the proviso that such orders are placed at the best available terms and conditions prevailing at the time of placing the order, given all information available at that time. Quantitative and qualitative factors which may be relevant for achieving the best possible results include, in particular:

- the price of the financial instrument;
- the associated costs of order execution;
- the speed of order execution;
- the likelihood of execution and settlement; and
- the volume and type of order.

Further qualitative factors include the financial stability and credit rating of the execution venue and/or broker, the scope and consistency of their offer, as well as their access to sources of liquidity.

The priority of these factors is differentiated according to the respective class of financial instrument. For the "Other Instruments" class, due to (in some cases marked) variance in relation to the availability of liquidity, assigning high priority to the probability of execution is necessary in some situations – whereby this must not be at the expense of the price and the costs associated with execution, which generally have similarly high priority.

Execution venues and/or brokers are selected on the basis of factors relevant for achieving the best possible results, in an independent process, and in accordance with all regulatory requirements, their Best Execution Policy, and in compliance with applicable law and regulations as well as the BVI Rules of Conduct.

A list providing an evaluation of execution venues and/or brokers, incorporating the quantitative and qualitative factors set out above, is prepared in regular intervals. Sustainably achieving the best possible results when placing orders may require changes to be made within the scope of regular evaluation of execution venues and/or brokers – including the addition, removal or exchange of execution venues and/or brokers.

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