RTS 28 Quality of Execution Annual Report

Firm: PGGM Vermogensbeheer BV Calendar Year Disclosure Period: 1 January 2018 to 31 December 2018 Date: 30 April 2019

Summary of classes of instruments included in this report, and class of instruments not included in this report (because PGGM has not executed client orders in that class of instruments)¹:

Classes of instruments included in this report

- Debt Instruments
- Equities
- Credit derivatives
- Futures

RTS 28 reporting requires firms to classify executed orders as "passive", "aggressive" or "directed", where these are defined as the following:

- "passive" order means an order entered into the order book that provided liquidity;
- "aggressive" order means an order entered into the order book that took liquidity;
- "directed" order means an order where a specific execution venue was specified by the client prior to the execution of the order.

Only orders executed directly on exchange would be eligible for this "passive" or "aggressive" classification. This not the case with PGGM. Trading volume identified as "passive" or "aggressive" in the following reporting is therefore not applicable.

PGGM does not have any client relationships where the client directs PGGM to use a specific venue. There are therefore no directed orders.

¹ As defined in Annex 1 of <u>RTS 28</u>.

| Class of instrument | Debt Instruments |
|---|--|
| General observations | Debt instruments include both bonds and money market instruments. |
| | Summary of analysis |
| Execution factors | PGGM defines the best possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. PGGM takes into account the following factors: |
| | Sustainability factors Relationship factors Service consistency Footprint Price Cost of execution Nature and size of the order Speed and likelihood of execution Settlement factors All other relevant factors |
| | Cost is determined as total cost. This includes price, and all other costs of execution, such as venue rebates, clearing cost, settlement cost and/or third party execution cost. Best Execution is a process that cannot always be drilled down to a single execution. Elements such as sustainability factors, relationship factors and service consistency need to be monitored and valued over a longer period of time. |
| Close links, conflicts of interest and | Close links PGGM has no close links with execution venues/brokers that were used to execute orders |
| common ownership with respect | Conflicts of interest PGGM has no conflicts of interest to report. |
| to execution venues | Common ownerships PGGM has no common ownership to report. |
| Specific arrangements with execution venues regarding payments made or | PGGM has no specific arrangements to report. |

| received, discounts, rebates or non-monetary benefits received | |
|--|---|
| Factors leading to a change in the list of execution venues listed in the order execution policy | There were no changes to the list of execution venues/brokers in PGGM's Order Execution Policy. |
| Differentiatio n across client categories Use of data / tools relating to quality of execution | N/A - all of PGGM's clients are classified as professional clients PGGM has used the data and/or tools relating to quality of execution coming from: Order management System Trading venues In house TCA report In house Broker review |
| Use of consolidated tape provider output | PGGM has not used output from consolidated tape providers, as no useful consolidated tape data was available in 2018 for this instrument type. |
| Use of DEA | No direct electronic access to execution venues we used. The list of the top 5 venues: |

| | Class of Instrument Notification if <1 average trade per business day in the prvious year | Debt Instruments | | | | | |
|------------|--|---|---|---------------------------------------|--------------------------------------|------------------------------------|--|
| | Top 5 Venues in terms of volume (descending order) | • | Proportion of orders executed traded as a percentage of total in that class | Percentage of passive orders | Percentage of agressive orders | Percentage o directed orders | |
| | XAMS | | | | | | |
| | Euronext Amsterdam | 23,16% | 7,93% | na | na | na | |
| | XPAR Euronext Paris | 16,83% | 6,15% | na | na | na | |
| | FRAA | 10,0370 | 0,13/0 | | | 114 | |
| | BOERSE FRANKFURT - REGULIERTER MARKT | 16,13% | 5,36% | na | na | na | |
| | XFRA | | | | | | |
| | Deutsche Boerse AG | 11,33% | 5,70% | na | na | na | |
| | XBRU | | | | | | |
| | Euronext Brussels | 9,37% | 5,14% | na | na | na | |
| Conclusion | PGGM evaluates both the execution as well as its co To evaluate brokers and counterparties a broker rev policy. | | | used acted in l | ine with PGGM' | s best executio | |
| | Evaluation of transactions is done via a Transaction transactions. The 2018 TCA report indicates that PG | | | otprint on a trar | nsaction basis a | s well as over a | |
| | An exemption report is set up and is monitored by C | ompliance. In 2018 no incider | ts were reported. | | | | |
| | Electronic trading platforms are selected on basis o offerings available in the market to see if the proper with PGGM's best execution policy. | f functionality, counterparties platforms are installed and us | connected, liquidity offered and use ed. The 2018 evaluation indicates th | r-friendliness. F nat platforms us | Periodically PGG ed meet the req | M evaluates th uirements in lin | |
| | The output of the used tools indicates that PGGM ac | | | | | | |

| Class of instrument | Equities | | | | |
|--|--|--|--|--|--|
| General observations | In 2018 Bloomberg has been the preferred execution venue. This venue is used to route 100% of the orders to brokers execution desks or broker algorithms. It supports an electronic order workflow, it facilitates the products PGGM uses and provides access to all our counterparties. The use of this venue aids to our commitment to realise best execution. | | | | |
| | Summary of analysis | | | | |
| Execution factors | PGGM defines the best possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. PGGI takes into account the following factors: Sustainability factors Relationship factors Service consistency Footprint Price Cost of execution Nature and size of the order Speed and likelihood of execution Settlement factors All other relevant factors Best Execution is a process that cannot always be drilled down to a single execution. Elements such as sustainability factors, relationship factors and service consistency need to be monitored and valued over a longer period of time. Monitoring of transactions is done on a trade by trade base. | | | | |
| Close links, conflicts of interest and | Close links PGGM has no close links with execution venues/brokers that were used to execute orders | | | | |
| common ownership with respect to execution venues | Conflicts of interest PGGM has no conflicts of interest to report. Common ownerships PGGM has no common ownership to report. | | | | |
| Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary | PGGM has no specific arrangements to report. | | | | |

| benefits received | |
|--|---|
| Factors leading to a change in the list of execution venues listed in the order execution policy | There were no changes to the list of execution venues/brokers in the PGGM's Order Execution Policy. |
| Differentiation across client categories | N/A - all of the PGGM's clients are classified as professional clients |
| Use of data / tools relating to quality of execution | PGGM has used the data and/or tools relating to quality of execution coming from: Order management System Trading venues In house TCA report In house Broker review |
| Use of consolidated tape provider output | The Firm has not used output from consolidated tape providers. |
| Use of DEA | No direct electronic access to execution venues we used. The list of the top 5 venues: |

| | Class of Instrument | | Equi | ties | | | |
|------------|---|--|---|------------------------------|---------------------------------|----------------------------------|--|
| | Notification if< 1 average trade per business day in the previous year | N | | | | | |
| | Top 5 Venues ranked in terms of volume (descending order) | Proportion of volume traded as a percentage of total in that class | | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders | |
| | XLON London Stock Exchange | 26,28% | 4,42% | na | na | na | |
| | XNYS New York Stock Exchange | 13,90% | 8,17% | na | na | na | |
| | XETR Deutsche Kassenverein AG Deutsche Boerse | 12,99% | 4,16% | na | na | na | |
| | XHKG The Stock Exchange of Hong Kong | 12,39% | 69,51% | na | na | na | |
| | XNGS NASDAQ/NGS (GLOBAL SELECT MARKET) | 9,67% | 5,80% | na | na | na | |
| Conclusion | PGGM evaluates both the execution as well as its counterparties along the benchmark of its best execution definition. To evaluate brokers and counterparties a broker review is used. The 2018 broker review indicates that counterparties used acted in line with PGGM's best execution policy. Evaluation of transactions is done with Transaction Cost Analysis (TCA). This report evaluates the costs on a transaction basis. For 2018 PGGM acted in line with best execution policy. | | | | | | |
| | | of functionality, counterpartie | pliance. In 2018 no incidents were reported. nctionality, counterparties connected, liquidity offered and user-friendliness. Periodically PGGM evaluates th tforms are installed and used. The 2018 evaluation indicates that platforms used meet the requirements in lin | | | | |
| | The output of the used tools indicates that PGGM a | acted in line with its best exec | cution policy during 2018. | | | | |

| Class of instrument | Credit Derivatives | | | |
|---|--|--|--|--|
| General observations | In 2018 all CDS trades have been executed with Citibank. This counterparty best suited our requirements. Positions have been closed with the same counterparty to avoid novation costs. | | | |
| | Summary of analysis | | | |
| Execution factors | PGGM defines the best possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. PGGM takes into account the following factors: Sustainability factors Relationship factors Service consistency Footprint Price Cost of execution Nature and size of the order Speed and likelihood of execution Settlement factors All other relevant factors All other relevant factors | | | |
| Close links, conflicts of interest and common ownership with respect to execution venues Specific arrangements with execution venues regarding payments made or received, discounts, | Close links PGGM has no close links with execution venues/brokers that were used to execute orders Conflicts of interest PGGM has no conflicts of interest to report. Common ownerships PGGM has no specific arrangements to report. PGGM has no specific arrangements to report. | | | |

| non-monetary benefits received | | | | | | |
|--|--|--|--|------------------------------|---------------------------------|----------------------------------|
| Factors leading to a change in the list of execution venues listed in the order execution policy | There were no changes to the list of execution vent | | rder Execution Policy. | | | |
| Differentiation across client categories | N/A - all of the PGGM's clients are classified as pro | | | | | |
| Use of data / tools relating to quality of execution | PGGM has used the data and/or tools relating to ques Order management System Trading venues In house TCA report In house Broker review | uality of execution coming fro | m: | | | |
| Use of consolidated tape provider output | The Firm has not used output from consolidated ta | be providers. | | | | |
| Use of DEA | No direct electronic access to execution venues we | e used. The list of the top 5 ve | enues: | | | |
| | Class of Instrument | | Credit De | rivatives | | |
| | Notification if< 1 average trade per business day in the previous year | | Ν | I | | |
| | Top 5 Venues ranked in terms of volume (descending order) | Proportion of volume traded as a percentage of total in that class | Proportion of orders executed as a percentage of total in that class | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
| | CITI GR LONDEN | | | | | |
| | XKZZ2JZF41MRHTR1V493 | 100,00% | 100,00% | na | na | na |
| Conclusion | PGGM evaluates both the execution as well as its o | counterparties along the bene | chmark of its best execution | definition. | | |

| To evaluate brokers and counterparties a broker review is used. The 2018 broker review indicates that counterparties used acted in line with PGGM's best execution policy. |
|--|
| Evaluation of transactions is done with Transaction Cost Analysis (TCA). This report evaluates the costs on a transaction basis. For 2018 PGGM acted in line with its best execution policy. |
| An exemption report is set up and is monitored by Compliance. In 2018 no incidents were reported. |
| Electronic trading platforms are selected on basis of functionality, counterparties connected, liquidity offered and user-friendliness. Periodically PGGM evaluates the offerings available in the market to see if the proper platforms are installed and used. The 2018 evaluation indicates that platforms used meet the requirements in line with PGGM's best execution policy |
| The output of the used tools indicates that PGGM acted in line with its best execution policy during 2018. |

| Class of instrument | Futures |
|--|--|
| General observations | |
| | Summary of analysis |
| Execution factors | PGGM defines the best possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. PGGM takes into account the following factors: Sustainability factors Relationship factors Service consistency Footprint Price Cost of execution Nature and size of the order Speed and likelihood of execution Settlement factors All other relevant factors All other relevant factors |
| Close links, conflicts of interest and | Close links PGGM has no close links with execution venues/brokers that were used to execute orders |
| common ownership | Conflicts of interest PGGM has no conflicts of interest to report. |
| with respect to execution venues | Common ownerships PGGM has no common ownership to report. |
| Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary | PGGM has no specific arrangements to report. |

| benefits | | | | | | |
|---|---|----------------------------------|---------------------------------------|------------|--------------|---------------|
| received | | | | | | |
| - | | | | | | |
| Factors leading to a | There were no changes to the list of execution venue | es/brokers in the PGGM's Ord | er Execution Policy. | | | |
| change in the | | | | | | |
| list of | | | | | | |
| execution | | | | | | |
| venues listed in the order | | | | | | |
| execution | | | | | | |
| policy | | | | | | |
| Differentiatio | N/A - all of the PGGM's clients are classified as profe | essional clients | | | | |
| n across | | | | | | |
| client | | | | | | |
| categories Use of data / | PGGM has used the data and/or tools relating to qua | lity of execution coming from: | | | | |
| tools relating | Order management System | | | | | |
| to quality of | Trading venues | | | | | |
| execution | In house TCA report | | | | | |
| | In house Broker review | | | | | |
| Use of consolidated tape provider output | The Firm has not used output from consolidated tape | e providers. | | | | |
| Use of DEA | No direct electronic access to execution venues we u | used. The list of the top 5 venu | Jes: | | | |
| | Class of Instrument | | | | | |
| | Notification if <1 average trade per business | | | | | |
| | day in the prvious year | | Futures | | | |
| | Top 5 Venues in terms of volume (descending | Proportion of volume | Proportion of orders executed | Percentage | Percentage | Percentage of |
| | | | | - | - | directed |
| | order) | | traded as a percentage of total | of passive | of agressive | |
| | | total in that class | in that class | orders | orders | orders |
| | ХСВТ | | | | | |
| | Chicage Board of Trade | 81,13% | 97,76% | na | na | na |
| | XEUR | , , | , , , , , , , , , , , , , , , , , , , | | | |
| | EUREX Deutschland | 18,87% | 2,24% | na | na | na |

| Conclusion | PGGM evaluates both the execution as well as its counterparties along the benchmark of its best execution definition. |
|------------|---|
| | To evaluate brokers and counterparties a broker review is used. The 2018 broker review indicates that counterparties used acted in line with PGGM's best execution policy. |
| | Evaluation of transactions is done with Transaction Cost Analysis (TCA). This report evaluates the costs on a transaction basis. For 2018 PGGM acted in line with its best execution policy. |
| | An exemption report is set up and is monitored by Compliance. In 2018 no incidents were reported. |
| | Electronic trading platforms are selected on basis of functionality, counterparties connected, liquidity offered and user-friendliness. Periodically PGGM evaluates the offerings available in the market to see if the proper platforms are installed and used. The 2018 evaluation indicates that platforms used meet the requirements in line with PGGM's best execution policy. |
| | The output of the used tools indicates that PGGM acted in line with its best execution policy during 2018. |