RTS 28 Quality of Execution Annual Report

Firm: PGGM Vermogensbeheer BV

Calendar Year Disclosure Period: 1 January 2023 to 31 December 2023

Date: 20 March 2023

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
- Interest rates derivatives
- Equities
- Currency 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 is 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.

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¹ As defined in Annex 1 of RTS 28.

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
	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.
Differentiation across client categories	N/A - all of 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	PGGM has not used output from consolidated tape providers, as no useful consolidated tape data was available in 2023 for this instrument type.
	No direct electronic access to execution venues we used. The list of the top 5 venues:

	Class of Instrument		Debt Instrumen	ts			
	Notification if <1 average trade per business		N				
	day in the prvious year		N				
	Top 5 Venues in terms of volume (descending	Proportion of volume	Proportion of orders executed	Percentage	Percentage	Percentage of	
	order)	traded as a percentage of	traded as a percentage of total	of passive	of agressive	directed	
		total in that class	in that class	orders	orders	orders	
	XFRA						
	Deutsche Boerse AG	28,56%	12,07%	na	na	na	
	XPAR						
	Euronext Paris S.A	16,57%	10,26%	na	na	na	
	XAMS						
	Euronext Amsterdam	7,55%	3,07%	na	na	na	
	XBRU						
	Euronext Brussels	6,09%	1,85%	na	na	na	
	XWBO						
	Wiener Boerse AG	5,36%	1,76%	na	na	na	
Conclusion	To evaluate brokers and counterparties a broker	s its counterparties along the benchmark of its best execution definition. ker review is used. The 2023 broker review indicates that counterparties used acted in line with PGGM's best execution					
	policy.						
	Evaluation of transactions is done via a Transaction Cost Analysis (TCA) report. This report evaluates the cost and footprint on a transaction basis as well as over all transactions. The 2023 TCA report indicates that PGGM acted in line with its best execution policy.						
	An exemption report is set up and is monitored b	y Compliance. In 2023 no i	ncidents were reported.				
		lectronic trading platforms are selected on basis of functionality, counterparties connected, liquidity offered and user-friendliness. Periodically PGGM evaluates the fferings available in the market to see if the proper platforms are installed and used. The 2023 evaluation indicates that platforms used meet the requirements in line rith PGGM's best execution policy.					
	The output of the used tools indicates that PGGM	M acted in line with its best	execution policy during 2023.				
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Class of instrument	Interest rate derivatives
General observations	Interest rate derivatives include interest rate swaps only. In 2023 Tradeweb has been the dominant venue for Interest rate derivatives trading. This venue is one of the leading venues that supports the electronic order routing
	and execution of the liquidity provided by our approved counterparties. The use of this venue aids to our commitment to realise best execution. The top 5 consists of 5 Counterparties, currently Systemic Internalisers.
	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	PGGM has no specific arrangements to report.

made or 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.
Differentiation across client categories	N/A - all of 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	PGGM has not used output from consolidated tape providers, as no useful consolidated tape data was available in 2023 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	Interest Rates Derivatives N					
Notification if <1 average trade per business day in the prvious year						
Top 5 Venues in terms of volume (descending order)	<u> </u>	Proportion of orders executed traded as a percentage of total in that class	Percentage of passive orders	Percentage of agressive orders	Percentage of directed orders	
F0HUI1NY1AZMJMD8LP67						
HSBC Continental Europe	30,76%	32,76%	na	na	na	
549300ZK53CNGEEI6A29						
JP Morgan SE	27,88%	21,77%	na	na	na	
ROMUWSFPU8MPRO8K5P83						
BNP Paribas	19,68%	18,53%	na	na	na	
O2RNE8IBXP4R0TD8PU41						
Societe Generale	12,11%	12,72%	na	na	na	
549300FH0WJAPEHTIQ77						
BOFA Securities Europe SA	3,91%	3,02%	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 2023 broker review indicates that counterparties used acted in line with PGGM's best execution policy.

Evaluation of transaction is done via a Transaction Cost Analysis (TCA) report. This report evaluates the cost and footprint on a transaction basis as well as over all transactions. The 2023 TCA report indicates that PGGM acted in line with its best execution policy.

An exemption report is set up and is monitored by Compliance. In 2023 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 2023 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 2023.

Class of instrument	Equities
General observations	In 2023 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. 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 - All other relevant and size 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	Conflicts of interest
ownership	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 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: • Tick size liquidity band 1 and 2 (from 0 to 79 trades per day) - Less liquid shares • Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day) - Medium liquid shares • Tick size liquidity bands 5 and 6 (from 2000 trades per day) - Highly liquid shares

Class of Instrument	Equities - Shares & Depositary Receipts tick size liquidity bands 1 and 2					
Notification if <1 average trade per business day in the prvious year	N					
Top 5 Venues in terms of volume (descending	Proportion of volume	Proportion of orders executed	Percentage	Percentage	Percentage of	
order)	traded as a percentage of	traded as a percentage of total	of passive	of agressive	directed	
	total in that class	in that class	orders	orders	orders	
XHKG						
The Stock Exchange of Hong Kong	29,30%	0,98%	na	na	na	
XSES						
Singapore Stock Exchange	12,92%	0,26%	na	na	na	
XTKS						
Tokyo Stock Exchange	7,77%	1,16%	na	na	na	
XOFF						
World wide OTC	4,83%	1,57%	na	na	na	
LIQU						
Liquidnet Systems	3,74%	0,28%	na	na	na	

Class of Instrument	Equities - 9	Shares & Depositary Receipts tic	k size liquidity	bands 3 and 4		
Notification if <1 average trade per business						
day in the prvious year	N					
Top 5 Venues in terms of volume (descending	Proportion of volume	Proportion of orders executed	Percentage	Percentage	Percentage of	
order)	traded as a percentage of	traded as a percentage of total	of passive	of agressive	directed	
	total in that class	in that class	orders	orders	orders	
XLON						
London Stock Exchange	10,33%	0,50%	na	na	na	
LIQU						
Liquidnet Systems	7,01%	0,25%	na	na	na	
TRQM						
Turquoise	5,95%	0,40%	na	na	na	
CEUX						
CBOE Europe - CXE Order Books	4,09%	2,95%	na	na	na	
CHID						
CBOE Europe - CXE Dark Order Book	4,04%	0,50%	na	na	na	

Class of Instrument	Equities - Shares & Depositary Receipts tick size liquidity bands 5 and 6					
Notification if <1 average trade per business day in the prvious year	N					
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 of directed orders	
XSES						
Singapore Stock Exchange	36,03%	0,26%	na	na	na	
XASX						
Australian Stock Exchange	34,09%	0,56%	na	na	na	
ASXC						
ASX Centerpoint	3,44%	0,30%	na	na	na	
ASXT						
ASX Tradematch	2,00%	0,12%	na	na	na	
CXAC						
Chi-X	1,61%	0,62%	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 2023 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 2023 PGGM acted in line with its best execution policy.

An exemption report is set up and is monitored by Compliance. In 2023 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 2023 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 2023.

Class of instrument	Currency derivatives
General observations	In 2023 Bloomberg has been the preferred execution venue. This venue is one of the leading execution venues for FX. 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. 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 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	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 change in the list of execution venues listed in the order execution policy	There were no changes to the list of execution	on venues/brokers in the	PGGM's Order Execution Poli	icy.				
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 as follows: WM Reuters benchmark data NewChange FX benchmark data General market data Broker provided market structure data							
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		Currency Derivati	ves				
	Notification if <1 average trade per business day in the prvious year							
	Top 5 Venues in terms of volume (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed traded as a percentage of total in that class	Percentage of passive orders	Percentage of agressive orders	Percentage of directed orders		
	BMTF Bloomberg	100%	100%	na	na	na	-	
Conclusion	PGGM evaluates both the execution as well	·						
	To evaluate brokers and counterparties a br policy.	oker review is used. The	2023 broker review indicates	that counterp	parties used a	icted in line with	1 PGGM's best execution	

Evaluation of transaction is done via a Transaction Cost Analysis (TCA) report. This report evaluates the cost and footprint on a transaction basis as well as over all transactions. The 2023 TCA report indicates that PGGM acted in line with its best execution policy.

An exemption report is set up and is monitored by Compliance. In 2023 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 2023 evaluation indicates that platforms used meet the requirements in line with PGGM's best execution policy

Data from several sources has been used to evaluate the execution quality. The results indicate that PGGM acted in line with its best execution policy during 2023.

Class of instrument	Futures						
General observations	In 2023 all futures have been traded on the Chicago Board of Trade and Eurex.						
	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. Possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. Possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. Possible result as a proper balance between cost, service and client added value within the existing risk and regulatory frameworks. Possible result account the following 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 consistence 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	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 change in the list of execution venues listed in the order execution policy	There were no changes to the list of execution v	renues/brokers in the PGGI	M'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 Order management System Trading venues In house TCA report In house Broker review		ng from:							
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	No direct electronic access to execution venues we used. The list of the top 5 venues:								
	Class of Instrument Futures									
	Notification if <1 average trade per business day in the prvious year	N								
	Top 5 Venues in terms of volume (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed traded as a percentage of total in that class	Percentage of passive orders	Percentage of agressive orders	Percentage of directed orders				
	ХСВТ									
	Chicage Board of Trade	61,76%	18,07%	na	na	na				
	XEUR EUREX Deutschland	38,24%	81,93%	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 broke policy.	r review is used. The 2023	broker review indicates that cou	nterparties use	ed acted in line	with PGGM's b	est execution			

Evaluation of transactions is done with Transaction Cost Analysis (TCA). This report evaluates the costs on a transaction basis. For 2023 PGGM acted in line with its best execution policy.

An exemption report is set up and is monitored by Compliance. In 2023 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 2023 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 2023.