Consultation paper regarding the change of the methodology for provision of the WIRON benchmark

GPW BENCHMARK

Warsaw, March 2024

1. JUSTIFICATION

The GPW Benchmark, as the Administrator of interest rate benchmarks, submits for public consultation a consultation paper concerning the proposed changes to the method for providing the WIRON interest rate index.

The proposed changes to the methodology involve: (1) The Minimum Volume Threshold of a Single Transaction (hereinafter: the "Minimum Volume Threshold") and (2) the cut-off level in the Main Adjustment.

The Administrator points out that the Minimum Volume Threshold and the cut-off level in the Main Adjustment, which may undergo changes, constitute Key Elements of Method (hereinafter referred to as "KEM") of the WIRON index.

In the event that changes to the method concern KEM, the Administrator is obliged to conduct a materiality test of the method change. The test of the materiality of the methodology change, as provided for in The Rules of WIRON Interest Rate Index (hereinafter: the "Rules"), and concerning three statistical measures (arithmetic mean of WIRON values, absolute mean of the first difference of the WIRON series, standard deviation of the first difference of the WIRON series) indicates that the conditions for a material change in the methodology for providing WIRON have not been met. Parametric tests in the aforementioned scopes confirmed that the proposed change is not material.

Nevertheless, since the changes concern KEM, the Oversight Committee of Interest Rate Benchmarks supported conducting public consultations in this regard. The purpose of public consultations is to ensure transparency of the Administrator's actions and to provide clarity on the rationale behind the proposed methodology change. Public consultations regarding the change in the Minimum Volume Threshold and the cut-off level in the Main Adjustment also aim to verify with financial market participants and benchmarks users their preferences regarding selection of variants of the proposed methodology change.

The Administrator presents two variants of the proposed change to the methodology of the WIRON benchmark:

> (1) Change in the methodology involving adjusting the Minimum Volume Threshold to 25 million PLN and modifying the cut-off level in the Main Adjustment to 12.5%.
>
> or
>
> (2) Change in the methodology involving adjusting the Minimum Volume Threshold to 25 million PLN and modifying the cut-off level in the Main Adjustment to 20%.

The proposal of two variants of the methodology change primarily stems from the results of analyses regarding the impact of changing the method parameters on the course and performance of the index.

The introduction of the proposed methodology change does not affect the use of the WIRON benchmark or the compound indices for which WIRON serves as the basis, especially since it is not a material methodology change and does not require any actions on the part of entities using it.

However, it is pointed out that the proposed methodology changes aimed to verify, based on an updated set of input data, whether there exists a parameter set that reduces the volatility of the index while maintaining its characteristics and methodology features. The Administrator emphasizes that the method change leading to a reduction in WIRON volatility is a desired outcome, in line with the information provided by financial market participants, including in public consultation, regarding the optimal selection of an alternative benchmark[1]. Nevertheless, during the analysis period and the extended analysis period, parameter changes reveal particular behaviour of the index resulting from its structure and systemic or structural factors. One such example is the unique conditions in 2021, when amid ultra-low interest rates and lower overall volatility of the WIRON benchmark due to the specificity of the domestic financial market, a change in the cut-off level leads to a slight increase in volatility. At the same time, it is noted that a change in the Minimum Volume Threshold usually results in an increase in the average level of the interest rate over the analysed period, while a change in the cut-off level in the Main Adjustment generally leads to its decrease. The extent of

[1] Public consultation results 08.2022.pdf (gpwbenchmark.pl)

changes in course of the index in response to index parameter changes depends on the economic conditions and the structure of the money market during the analyzed period. Therefore, the Administrator presents a comprehensive range of analyses for WIRON so that responses from participants in public consultations can be based on a complete understanding of the impact of the methodology change on the index.

The Administrator conducted sensitivity analyses of WIRON for a 36-month analysis period, taking into account (1) the availability of high-quality updated transaction database for the period 2021-2023 and (2) key changes in economic conditions, including changes in monetary conditions during the analyzed period, which justified the inclusion of the year 2021[2] in the analysis. However, the consultation document incorporates an extended range of analyses for the period 2019-2023 to expand the verification period of parameters and their impact on the benchmark under various economic conditions.

The first reference point in the decision concerning the recommended acceptable Minimum Volume Threshold assumes that changing this threshold should not lead to a significant decrease in the average daily volume of transactions included in the provision of the benchmark by more than 10% of the value of this volume in the given period or the standard deviation of the daily volume in the analyzed period, depending on which measure is more restrictive. During the analytical work, it is indicated that for the WIRON index analyzed in the years 2021-2023 and in the years 2019-2023, which is the extended period for which analysis results are also presented in this document, more restrictive results were obtained by applying a 10% deviation from the average volume during the analysis period[3].

In the Administrator's assessment, it is crucial to ensure that the decrease in transactionality measured by the selected statistics, in this case, a decrease in the average daily volume, is rigorously verified, especially in the case of analysis results for years with significantly lower transactionality. Next, such a "constrained" Minimum Volume Threshold undergoes evaluation in terms of sensitivity analysis of selected descriptive statistics to ensure optimal selection of elements of the WIRON method.

During the analytical work based on the above assumptions, it was considered that the Minimum Volume Threshold should not exceed 28 million PLN, which can be considered as the maximum acceptable level of the Minimum Volume Threshold resulting from the analysis of a 3-year analysis period. The principles for defining the framework for the adopted recommendations regarding changes in the method of providing the WIRON benchmark were presented to and accepted by the Oversight Committee. Selected information regarding the method of determining the acceptable maximum level of the Minimum Volume Threshold can be found in the later sections of this document.

In the Administrator's assessment, and taking into account the results of the conducted analyses, a proposal for changing the WIRON method is presented that leads to a possible reduction in index volatility statistics. This should ensure cost and risk reduction associated with the implementation of this index for use. The proposal presented for consultation is prepared in two variants, considering the fact that:

(1) Both variants lead to a decrease in WIRON volatility statistics throughout the analysis period.

(2) Variant 2 reduces index volatility to the less extend throughout the analysis period than Variant 1 but at the same time to the lesser than Variant 1 extends volatility in periods of ultra-low interest rates (year 2021), whereby volatility increases as impact of reduction in cut-off level in the Main Adjustment is due to the "end-of-month effect".

[2] Where the Administrator refers to the Justification in the report, it means the first section of this document.

[3] The maximum acceptable value of the Minimum Volume Threshold shall be determined on the basis of the period of analysis adopted; however, in order to ensure that the results of the analysis adequately take into account the conditions observed within individual years, it is assumed that where a lower maximum acceptable value of the Minimum Volume Threshold than for the entire period of analysis is recorded for an individual year falling within the period of analysis, which is a year with a relatively low level of transactionality as measured by the average daily transaction volume, it should be considered binding in terms of challenging the findings arising from the entire period of analysis. The Administrator thus takes into account the conditions and constraints arising from years with lower transactional volume as periods of greater sensitivity.

Both variants affect the average level of the WIRON benchmark during the analysis period, with varying impacts and benchmark level does not constitute the reason to recommend the change in the method.

In the Administrator's assessment, active entities in the financial market, as well as users of interest rate benchmarks, may indicate which of the proposed method change variants is preferred in light of (1) the need for the development of financial products and instruments ensuring effective continuation of interest rate benchmark reform, and (2) the ability to develop derivatives ensuring optimal interest rate risk management, which is a significant condition for the optimal transition path of benchmarks.

The Administrator also points out that the decision regarding the proposed method change for WIRON allows for appropriate actions regarding the schedule for returning to the provision of the WIRON Compound Index. The Administrator recommends resuming the provision of the WIRON Compound Index with start date of January 2, 2024. It is also stressed that the Administrator may and likely will, in the case of subsequent mandatory validations of the index, make adjustments to the method of providing the WIRON index, and the decision in this area should not limit the possibility of providing indices such as the WIRON Compound Index. The decision to discontinue the WIRON Compound Index, announced to the public on January 5, 2024, was an exceptional decision made by the Administrator, taking into account the initial stage of the WIBID and WIBOR interest rate benchmark reform.

It is also noted that providing the Compound Index back should take place after the conclusion of public consultations and the decision regarding the method change along with its implementation according to the timelines resulting from the benchmark documentation.

Public consultations will last from March 20, 2024, to April 10, 2024. Alongside the consultation paper, the Administrator provides WIRON time series in the proposed variants. A summary of the paper will be made publicly available after the Administrator's decision is made based on the stance of the entities participating in the consultations.

2. PRESENTATION OF THE SENSITIVITY ANALYSIS RESULTS OF SELECTED STATISTICAL FEATURES FOR WIRON

The Administrator presents the results of the sensitivity analysis, showing the levels of various descriptive statistics concerning WIRON at different periods under influence of changes in selected parameters of the WIRON provision method. To ensure effective comparative analysis, the charts display the level of each statistics for historical WIRON and WIRON determined based on the existing method using the updated transaction database[4].

As part of the sensitivity analysis, the following results are presented:

(1) mean daily volume of Eligible Transactions Pool depending on the adopted Minimum Volume Threshold, taking into account up to a 10% level of acceptable deviation from the average volume in a given period, to determine acceptable boundaries for the method parameters' impact on eligible transactions pool for the given benchmark[5]
(2) standard deviation of the first difference of the WIRON– DIFF.SD (pp)
(3) mean of the centered 5-day moving range of WIRON– RANGE.5D.MEAN (pp)
(4) modified standard deviation of the first difference of WIRON (excluding end-of-month values of WIRON)– DIFF.SD.MOD (pp)
(5) modified mean of the centered 5-day moving range of WIRON (excluding end-of-month values of WIRON) – RANGE.5D.MEAN.MOD (pp)
(6) maximum of the centered 5-day moving range of WIRON - RANGE.5D.MAX
(7) average level of the WIRON (%)
(8) share of the days with the use of the Fallback Procedure – FALLBACK.SHARE (%)

The summary of the sensitivity analysis is a compilation of results for measures of volatility within the base 3-year analysis period and in the extended period. The Administrator's conclusions indicate that the optimal Minimum Volume Threshold is a threshold at 25 million PLN. However, in light of the overall positive impact of changing the Main Adjustment cut-off level, the Administrator asks for feedback on this element of providing the WIRON method, as this element generates the differences that the Administrator is paying attention to.

[4] The Administrator has taken into account in the attached analyses the impact of verification of the Maximum Volume Threshold of a Single Transaction for 2023 due to the recorded operational error; the conducted simulations encompass all historically occurring and method-compliant limitations (if any) on the use of data on transactions in accordance with the benchmark documentation.

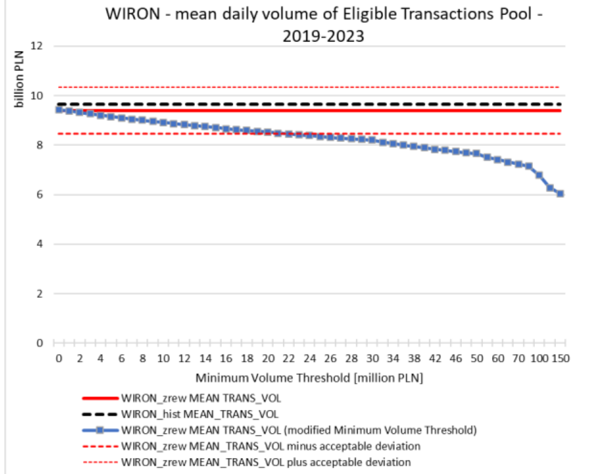
[5] The Administrator conducted similar analyses for the standard deviation as acceptable deviation of the average volume; nonetheless, the results are presented for a 10% deviation due to the more restrictive nature of this measure in this aspect. The use of standard deviation results in a significant loosening of the conditions of the potential acceptable level of Eligible Transactions Pool volume change throughout the analysis period and its sub-periods. This means that the average daily Eligible Transactions Pool volume during the analysis period was highly volatile and the reference to 10% is a restrictive approach, which is something to consider when inferring the optimal calibration of the method.

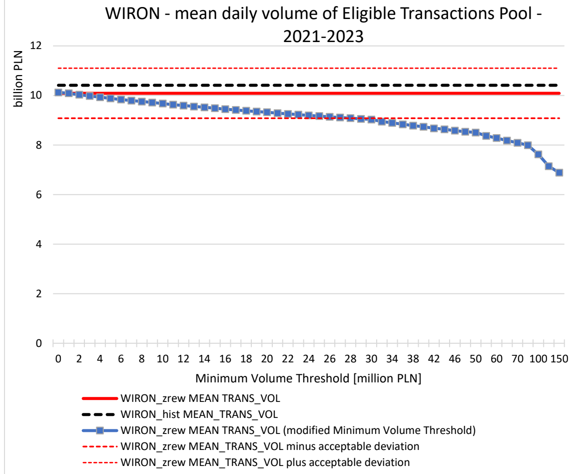
Sensitivity Analysis

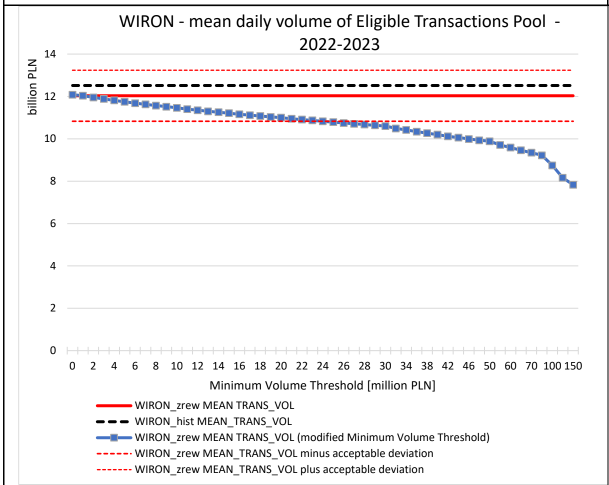
WIRON_zrew – simulated trajectory of the WIRON index in the current parametric configuration based on revised Input Data

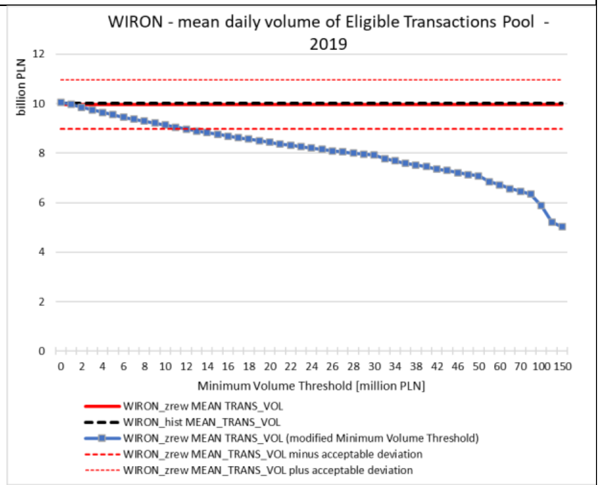
WIRON_hist – historical trajectory of the WIRON index

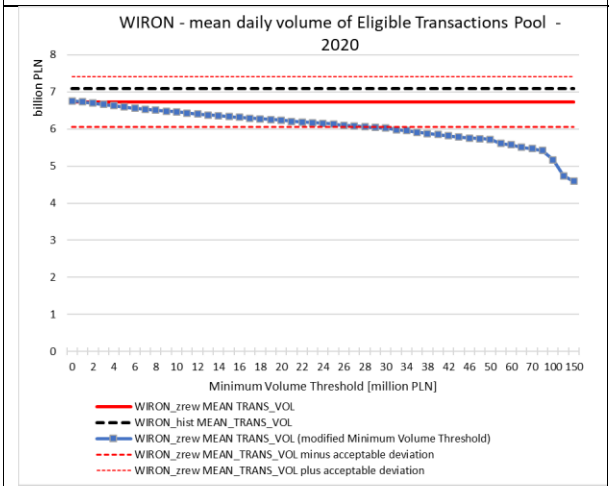
Mean daily volume of WIRON Eligible Transactions Pool (billion PLN) with an acceptable deviation equal to 10% of the mean daily volume of the WIRON_zrew Eligible Transactions Pool

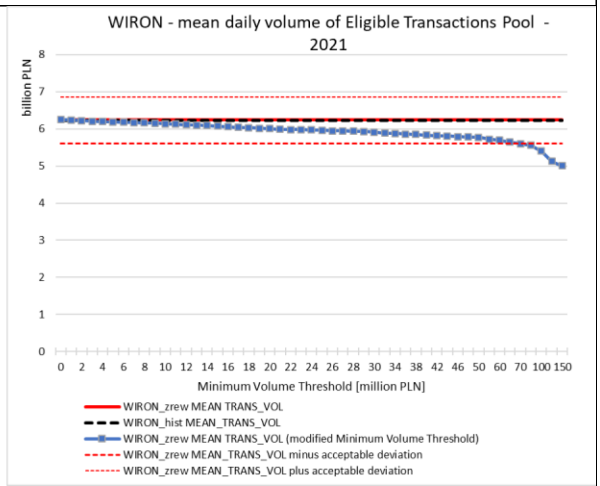


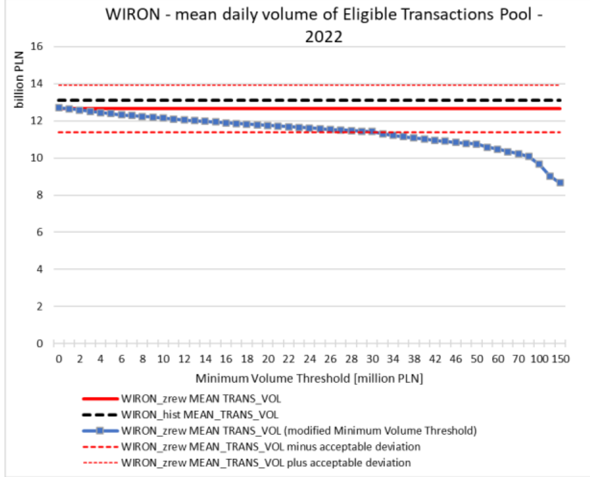


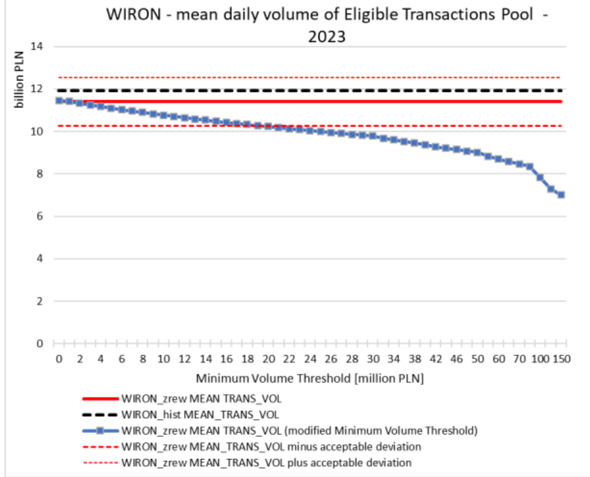












Comment:
Maximum acceptable values of the Minimum Volume Threshold for individual analysis periods and years included in them, as well as recommendations regarding the maximum acceptable value of the Minimum Volume Threshold derived from them (in accordance with the Justification from section 1):
- 2022-2023: 23 million PLN (2022: 30 million PLN, 2023: 19 million PLN) -> recommendation[6]: 23 million PLN;
- 2021-2023: **28 million PLN** (2021[7]: 65 million PLN, 2022: 30 million PLN, 2023: 19 million PLN) -> recommendation: 28 million PLN;
- 2019-2023: 22 million PLN (2019: 12 million PLN, 2020: 28 million PLN, 2021: 65 million PLN, 2022: 30 million PLN, 2023: 19 million PLN) -> recommendation: 22 million PLN).

In light of the above results and considering partial analyses, it is deemed appropriate to subject the range of potential values of the Minimum Volume Threshold to further detailed analysis, ranging from 0 to 28 million PLN.

[6] For the analysis period of 2022-2023 as well as the analysis period of 2019-2023, none of the individual years included in them recorded a daily average Eligible Transactions Pool volume below the daily average volume determined for the entire period minus the standard deviation of the daily volume for that period. Therefore, the maximum acceptable value of the Minimum Volume Threshold determined for any of these individual years is not considered binding.

[7] For the analysis period of 2022-2023, the year 2021 recorded a daily average Eligible Transactions Pool volume below the daily average volume determined for the entire period minus the standard deviation of the daily volume for that period, which makes the maximum acceptable value of the Minimum Volume Threshold determined for this year considered binding, but since it is not lower than the maximum acceptable value of the Minimum Volume Threshold determined for the entire analysis period, the recommended maximum acceptable level of the Minimum Volume Threshold is considered the value determined for the entire period (i.e., PLN 28 million).

Below, the Administrator provides information on the sensitivity analysis of selected descriptive statistics depending on the cut-off level used in the Main Adjustment and the Minimum Volume Threshold.

In order to avoid confusion, it is reiterated that:

The X-axis indicates the values of the Minimum Volume Threshold, and the dotted lines reflect the relationship between the standard deviation of the first differences of the WIRON index and the applied Minimum Volume Threshold at various cut-off levels in the Main Adjustment.

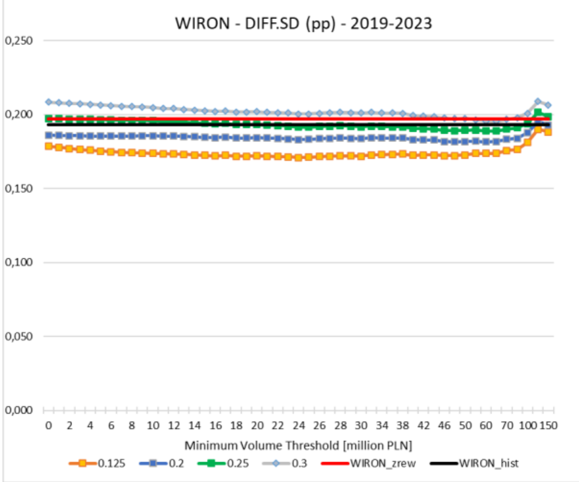
Green color – Main Adjustment cut-off level set at 25%

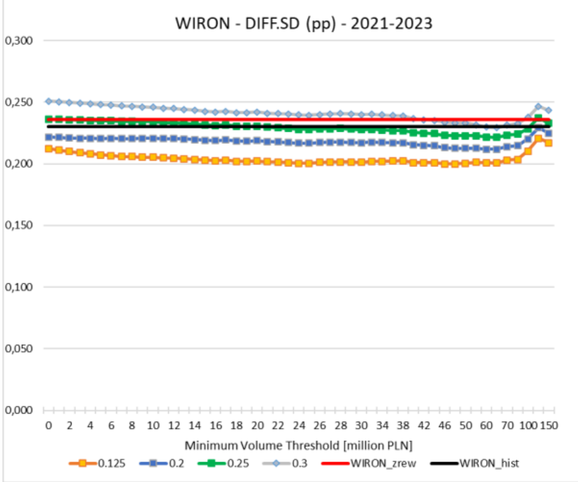
Gray color – Main Adjustment cut-off level set at 30%

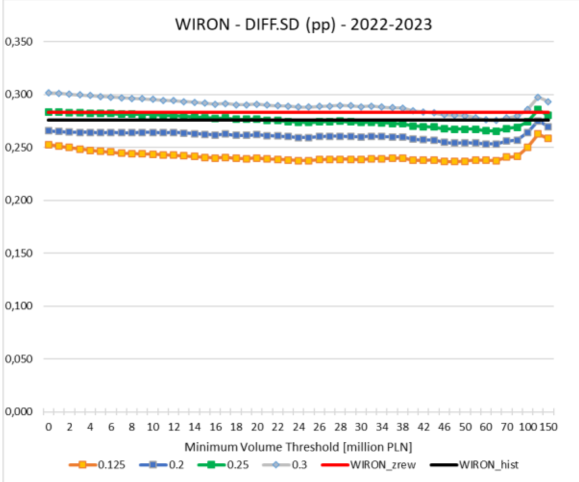
Blue color – Main Adjustment cut-off level set at 20%

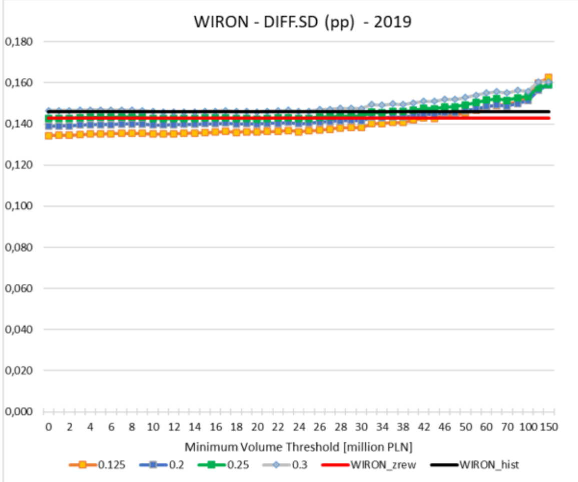
Yellow color – Main Adjustment cut-off level set at 12.5%

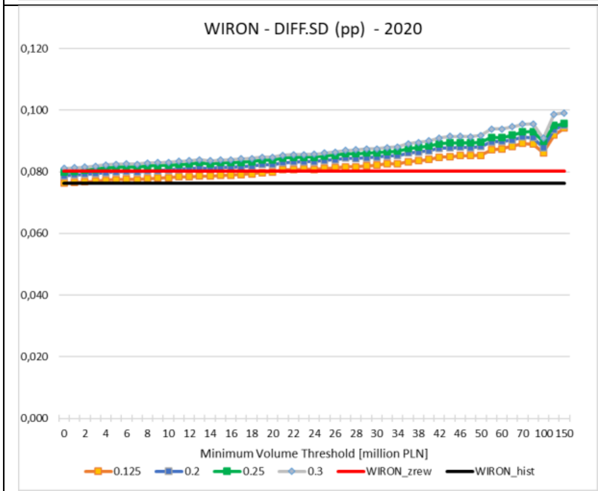
Standard deviation of the first difference of the WIRON index – DIFF.SD (pp.)

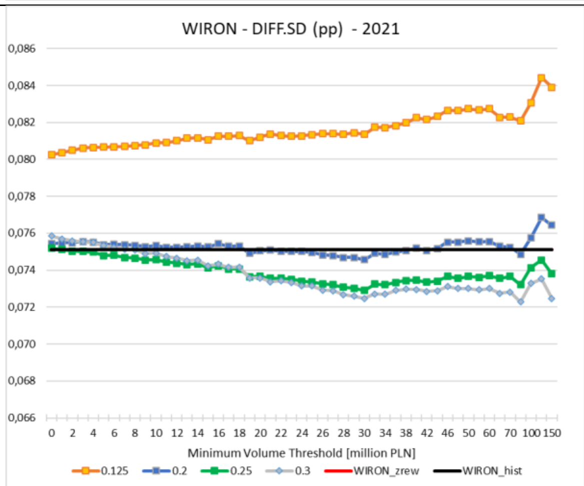


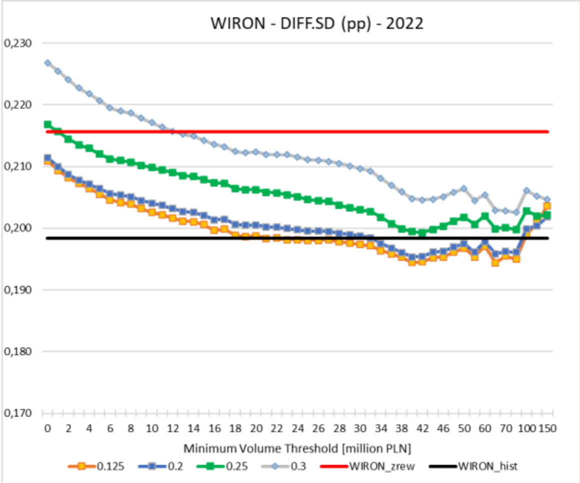


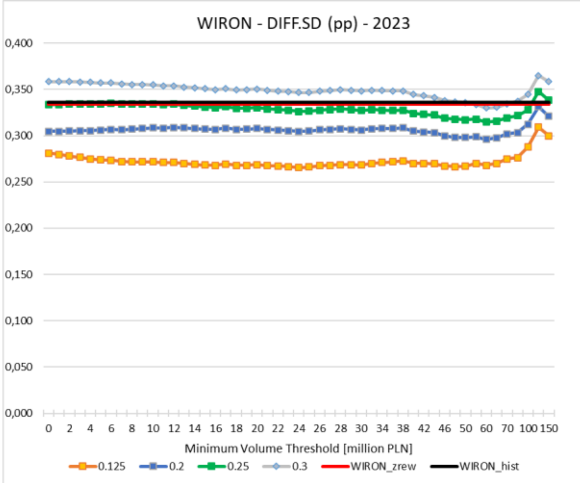












Comment:

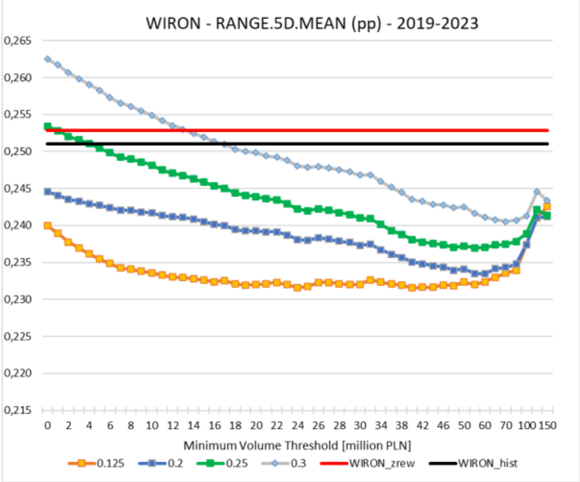
DIFF.SD (pp)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	0,212	0,222	0,236	0,251	0,179	0,186	0,197	0,208
1	0,211	0,221	0,236	0,250	0,178	0,186	0,197	0,208
2	0,210	0,221	0,236	0,250	0,177	0,186	0,197	0,208
3	0,209	0,221	0,236	0,249	0,176	0,186	0,197	0,207
4	0,208	0,221	0,235	0,249	0,176	0,186	0,197	0,207
5	0,207	0,221	0,235	0,248	0,175	0,186	0,196	0,206
6	0,207	0,221	0,235	0,248	0,175	0,186	0,196	0,206
7	0,206	0,220	0,235	0,247	0,174	0,185	0,196	0,206
8	0,206	0,221	0,234	0,247	0,174	0,186	0,196	0,205
9	0,206	0,221	0,234	0,246	0,174	0,186	0,196	0,205
10	0,205	0,221	0,234	0,246	0,174	0,186	0,196	0,205
11	0,205	0,220	0,234	0,245	0,174	0,185	0,195	0,204
12	0,205	0,221	0,234	0,245	0,173	0,186	0,195	0,204
13	0,204	0,220	0,233	0,244	0,173	0,185	0,195	0,203
14	0,204	0,220	0,232	0,244	0,173	0,185	0,195	0,203
15	0,203	0,219	0,232	0,243	0,172	0,185	0,194	0,203
16	0,203	0,219	0,231	0,242	0,172	0,184	0,194	0,202
17	0,203	0,219	0,232	0,242	0,173	0,185	0,194	0,202
18	0,202	0,219	0,231	0,242	0,172	0,184	0,193	0,202
19	0,202	0,218	0,230	0,242	0,172	0,184	0,193	0,202
20	0,202	0,219	0,231	0,242	0,172	0,184	0,193	0,202
21	0,202	0,218	0,230	0,241	0,172	0,184	0,193	0,201
22	0,201	0,218	0,229	0,241	0,172	0,184	0,193	0,201
23	0,201	0,217	0,229	0,240	0,171	0,184	0,192	0,201
24	0,200	0,217	0,228	0,240	0,171	0,183	0,192	0,200
25	0,201	0,217	0,228	0,240	0,171	0,183	0,192	0,200
26	0,201	0,217	0,228	0,240	0,172	0,184	0,192	0,201
27	0,201	0,218	0,229	0,240	0,172	0,184	0,192	0,201
28	0,202	0,218	0,229	0,241	0,172	0,184	0,192	0,202

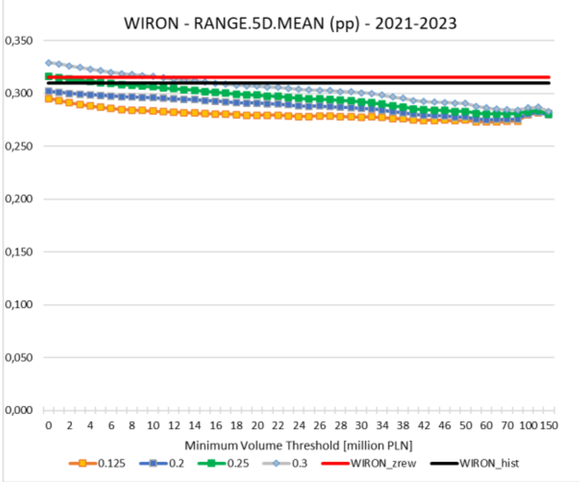
It should be noted that the reference point in the conducted analysis is the current configuration of WIRON, assuming the Minimum Volume Threshold of 1 million PLN and the Main Adjustment cut-off level of 25% (i.e., the red horizontal line on the graph illustrating the value of the analyzed statistic for WIRON_zrew).

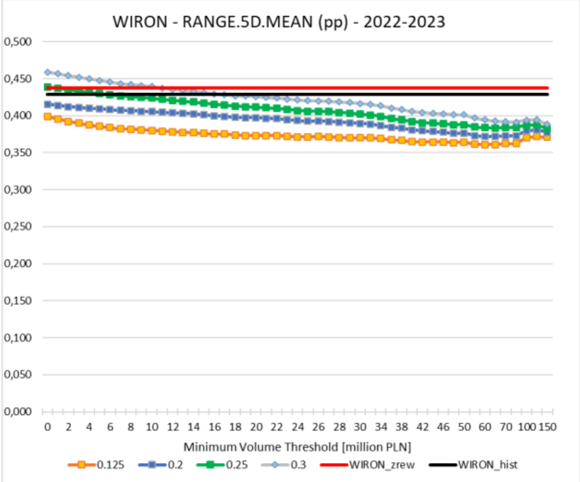
The data presented above (graphs and table) indicate that the key influence on the volatility of the WIRON index (measured using the DIFF.SD metric) is the scale of symmetric cut-off in the Main Adjustment. Lowering it from the current level of 25% to 12.5% results in a significant decrease in volatility at each of the acceptable levels of the Minimum Volume Threshold (i.e., from 0 to 28 million PLN).
An exception is the year 2021, where lowering the cut-off level from 25% to 12.5% clearly increases volatility. If the Administrator were to prioritize outlier observations, the data for 2021 would undermine the rationale for lowering the cut-off to 12.5%. In the case of the year 2021, the recommended choice would then be a cut-off level of 20%. On one hand, this level would bring about a decrease in volatility in the remaining years (although clearly less than in the case of a cut-off level of 12.5%), and on the other hand, it would not lead to such a significant increase in volatility in 2021.
It is worth emphasizing that the increase in volatility in 2021 due to lowering the cut-off level from 25% to 12.5% oscillates around 0.5-0.6 basis points within the range of considered values of the Minimum Volume Threshold (i.e., up to 28 million PLN) compared to the baseline index configuration.
Furthermore, when using an analogous measure of volatility modified by excluding the last working days of the month characterized by increased volatility[8] (i.e., DIFF.SD.MOD), the year 2021 no longer stands out from the other years considered, and lowering the cut-off level to 12.5% results in a decrease in index volatility. This suggests that the unusual relationship between the cut-off level and volatility measured by the DIFF.SD metric in 2021 is due to the increased volatility recorded in the last working days of the month.
The impact of the Minimum Volume Threshold on the volatility of the index is much smaller than the cut-off level in the Main Adjustment, but it is still noticeable. Especially in the range up to approximately 16 million PLN, there is a clear decrease in volatility with an increase in the value of the Minimum Volume Threshold, while at higher threshold values, the decreasing tendency of volatility gradually diminishes. The selection of the optimal value of the Minimum Volume Threshold will be conducted using the table presented later in the document, which compares the values of various measures of volatility at different threshold values and in two cut-off level variants in the Main Adjustment (12.5% and 20%).

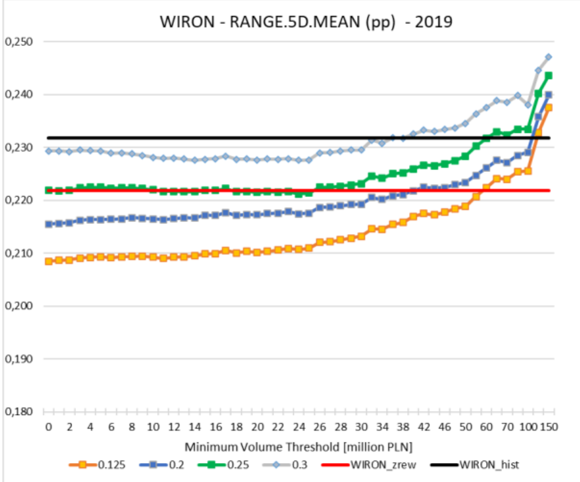
[8] The Administrator notes that during the three-year analysis period from 2021 to 2023, in 10 out of 36 cases, the last working day of the month, which is the moment of determining the tax base for some financial institutions, also coincided with the last day of the mandatory reserve maintenance period. This, due to factors such as structural liquidity surplus in the banking sector and the activity of the NBP in the form of main and fine-tuning open market operations, may lead to increased volatility in overnight interest rates.

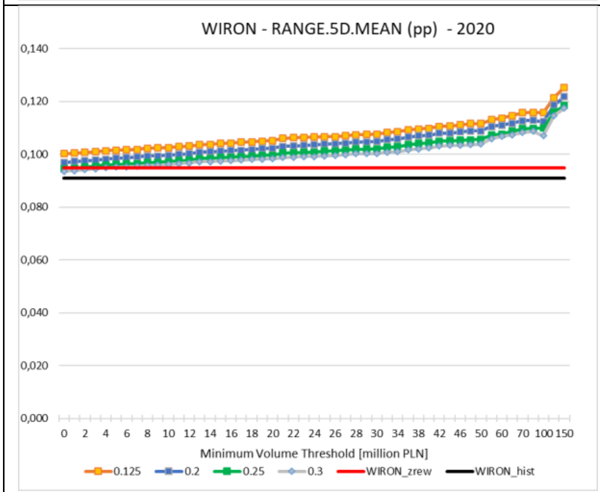
Mean of the centered 5-day moving range of the WIRON index – RANGE.5D.MEAN (pp.)

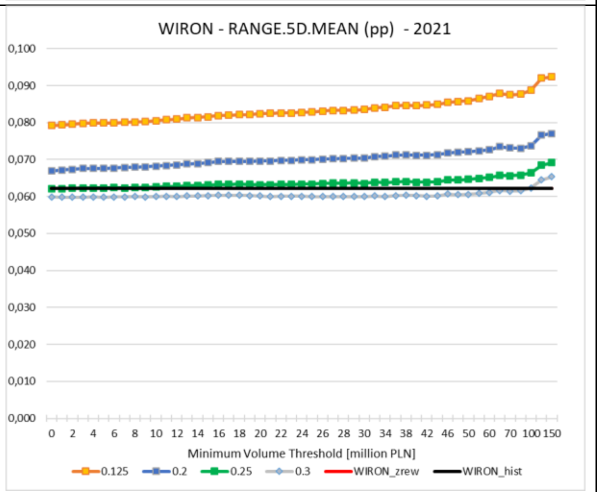


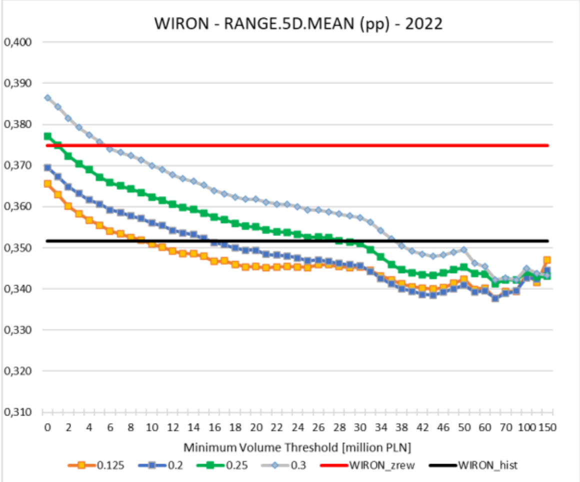


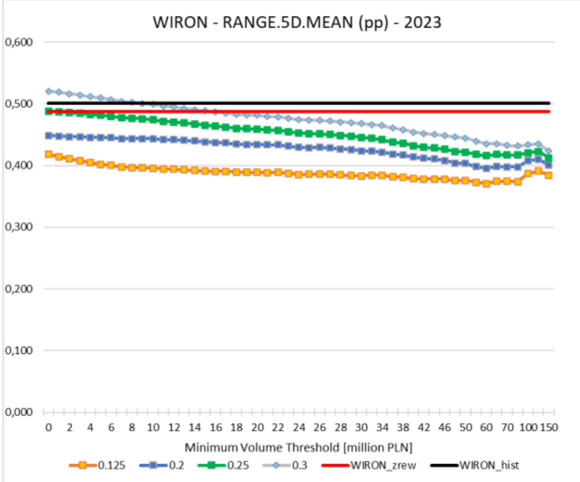












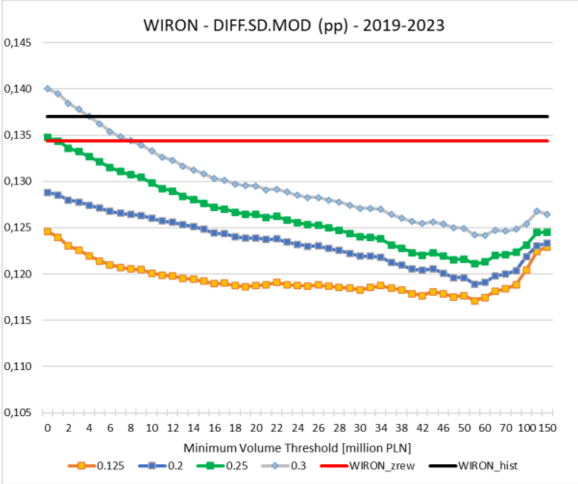
Comment:

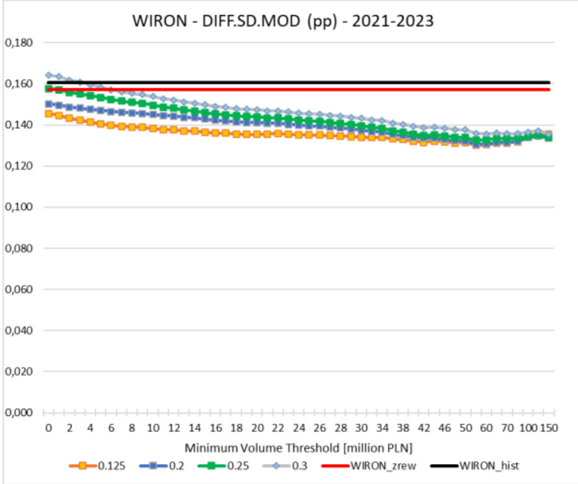
RANGE.5D.MEAN (pp)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	0,295	0,302	0,316	0,329	0,240	0,245	0,253	0,262
1	0,293	0,301	0,315	0,328	0,239	0,244	0,253	0,262
2	0,291	0,300	0,314	0,326	0,238	0,244	0,252	0,261
3	0,290	0,299	0,313	0,324	0,237	0,243	0,252	0,260
4	0,288	0,299	0,312	0,323	0,236	0,243	0,251	0,259
5	0,287	0,298	0,310	0,322	0,235	0,243	0,250	0,258
6	0,286	0,298	0,309	0,320	0,235	0,242	0,250	0,257
7	0,285	0,297	0,308	0,319	0,234	0,242	0,249	0,257
8	0,284	0,297	0,308	0,318	0,234	0,242	0,249	0,256
9	0,284	0,296	0,307	0,317	0,234	0,242	0,249	0,255
10	0,283	0,296	0,306	0,316	0,234	0,242	0,248	0,255
11	0,283	0,295	0,305	0,315	0,233	0,241	0,248	0,254
12	0,282	0,295	0,304	0,314	0,233	0,241	0,247	0,254
13	0,282	0,295	0,304	0,313	0,233	0,241	0,247	0,253
14	0,282	0,294	0,303	0,312	0,233	0,241	0,246	0,252
15	0,281	0,293	0,302	0,311	0,233	0,241	0,246	0,252
16	0,281	0,293	0,301	0,310	0,232	0,240	0,245	0,251
17	0,281	0,292	0,300	0,309	0,233	0,240	0,245	0,251
18	0,280	0,291	0,299	0,308	0,232	0,239	0,244	0,250
19	0,279	0,291	0,299	0,307	0,232	0,239	0,244	0,250
20	0,279	0,291	0,298	0,307	0,232	0,239	0,244	0,250
21	0,279	0,290	0,298	0,306	0,232	0,239	0,244	0,249
22	0,279	0,290	0,297	0,306	0,232	0,239	0,243	0,249
23	0,279	0,289	0,296	0,305	0,232	0,239	0,243	0,249
24	0,278	0,288	0,295	0,304	0,232	0,238	0,242	0,248
25	0,278	0,288	0,295	0,303	0,232	0,238	0,242	0,248
26	0,279	0,288	0,295	0,303	0,232	0,238	0,242	0,248
27	0,279	0,288	0,294	0,303	0,232	0,238	0,242	0,248
28	0,278	0,287	0,294	0,302	0,232	0,238	0,242	0,248

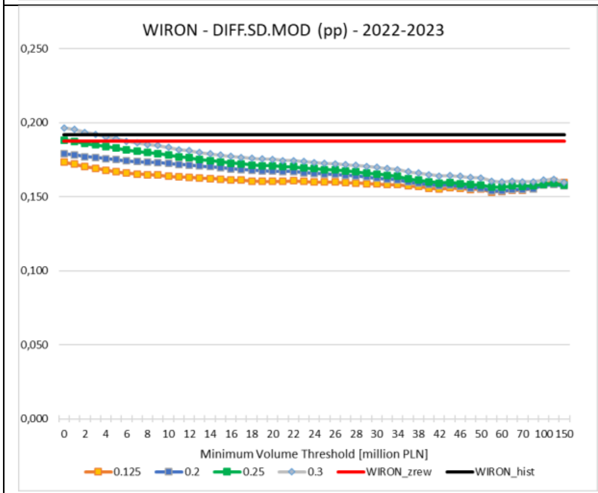
The data presented above (graphs and table) indicate that the cut-off level in the Main Adjustment has a key impact on the volatility of the WIRON index (measured using the RANGE.5D.MEAN metric). Lowering it from the current level of 25% to 12.5% results in a significant decrease in

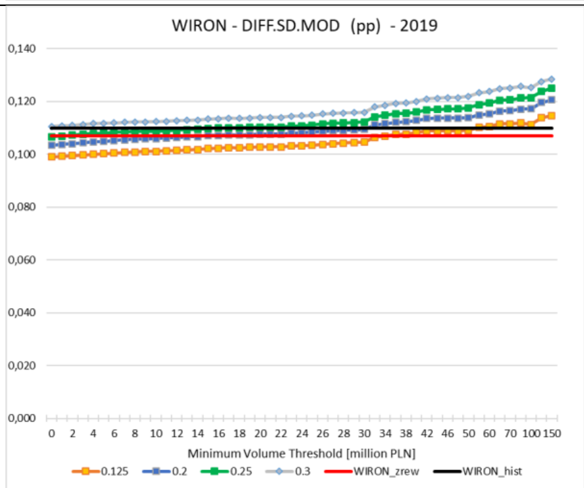
volatility at each of the acceptable levels of the Minimum Volume Threshold (i.e., from 0 to 28 million PLN).
The conclusions regarding the year 2021 in the analysis using the RANGE.5D.MEAN metric are consistent with the conclusions drawn using the DIFF.SD metric. Similarly, lowering the cut-off level to 12.5% from 25% results in an increase in the volatility of the index.
It is worth emphasizing that the increase in volatility in 2021 due to lowering the cut-off level from 25% to 12.5% ranges from approximately 1.8 to 2.0 basis points within the range of considered values of the Minimum Volume Threshold (i.e., up to 28 million PLN) compared to the baseline index configuration.
Using a similar measure of volatility modified by excluding days characterized by increased volatility in the last working days of the month (i.e., RANGE.5D.MEAN.MOD) in 2021 does not completely reverse the relationship as it did with the DIFF.SD metric, but it significantly reduces the scale of the increase in volatility resulting from lowering the cut-off level from 25% to 12.5% (the scale of increase in volatility decreases to 0.5-0.7 basis points, according to the above assumptions). Similar to the DIFF.SD metric, the RANGE.5D.MEAN metric confirms the significant impact of the end-of-month effect.
Depending on the analysis period and the cut-off level, the scale of the impact of the Minimum Volume Threshold value on the volatility of the index measured by the RANGE.5D.MEAN metric may be greater or smaller, but it is still limited.
For multi-year analysis periods, an increase in the value of the Minimum Volume Threshold results in a decrease in the volatility of the index, although for individual years such as 2019, 2020, and 2021, the direction of this relationship is reversed (i.e., volatility increases with an increase in the Minimum Volume Threshold). The selection of the optimal value of the Minimum Volume Threshold will be conducted using the table presented later in the document, which compares the values of various measures of volatility at different threshold values and in two cut-off level variants in the Main Adjustment (12.5% and 20%).

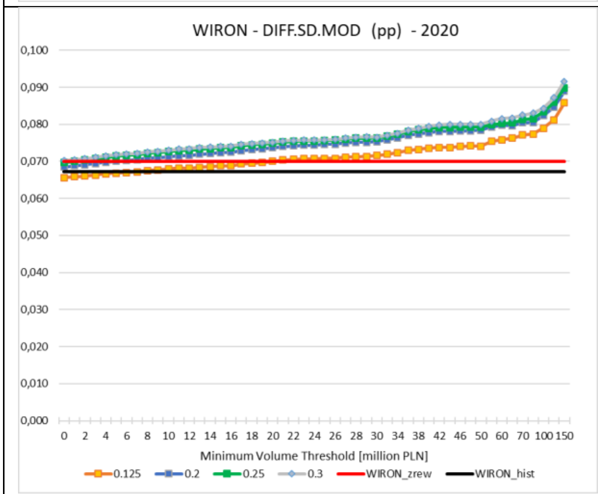
Standard deviation of the first difference of the WIRON index excluding month ends – DIFF.SD.MOD (pp)

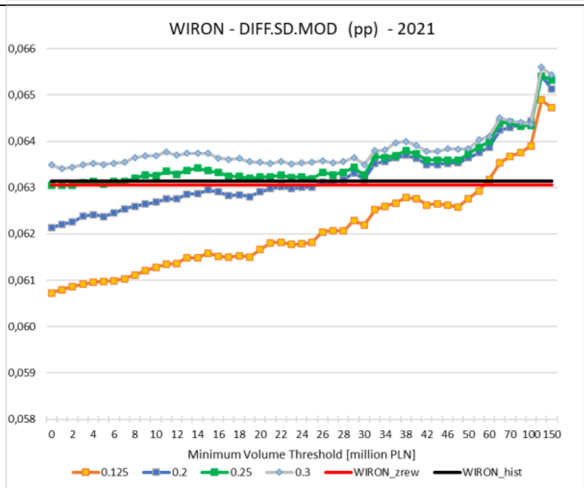


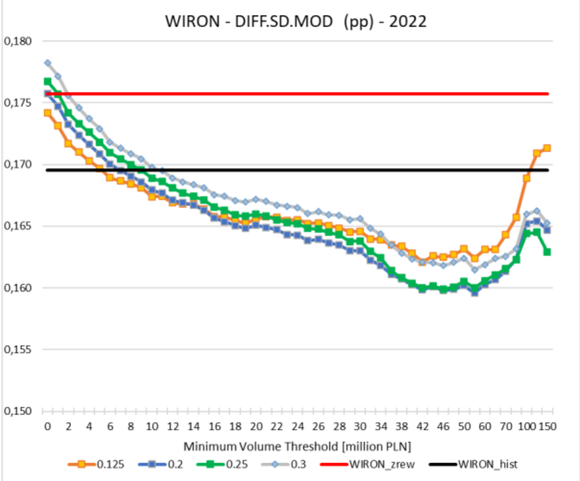


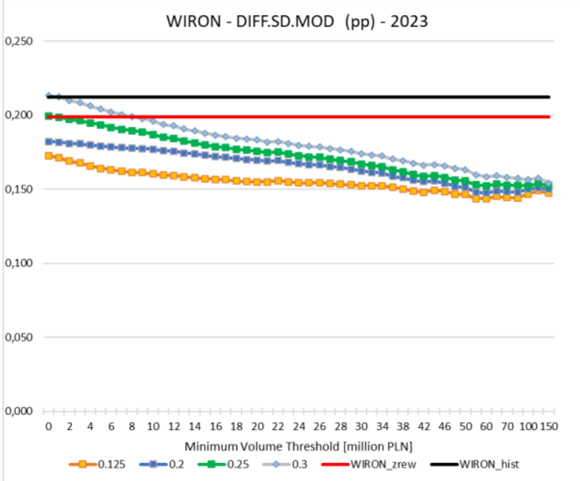










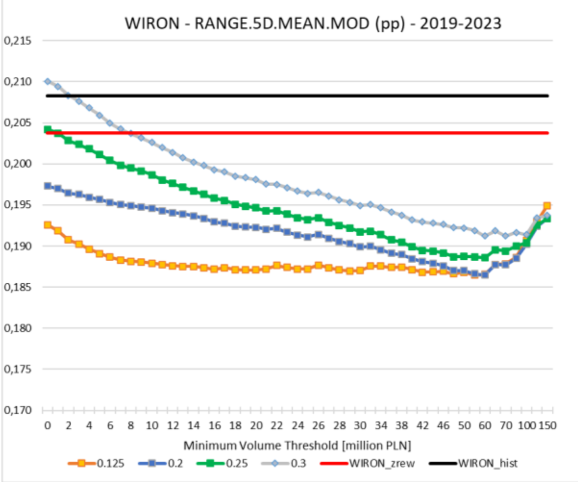


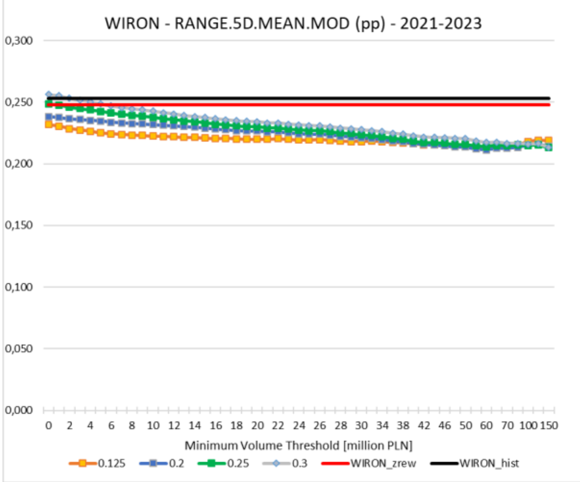
Comment:

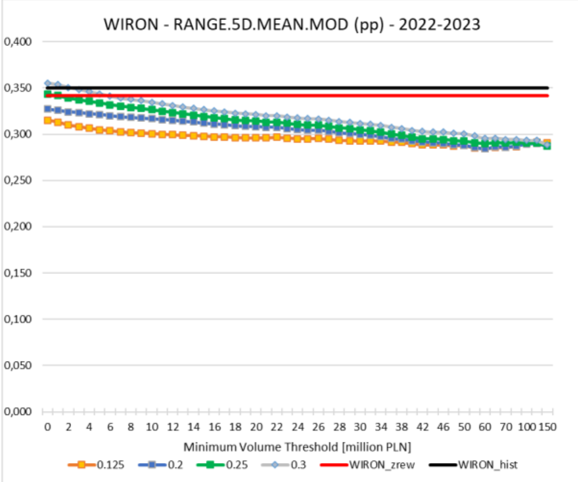
DIFF.SD.MOD (pp)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	0,146	0,150	0,158	0,164	0,125	0,129	0,135	0,140
1	0,145	0,150	0,157	0,163	0,124	0,129	0,134	0,139
2	0,143	0,149	0,156	0,162	0,123	0,128	0,134	0,138
3	0,142	0,148	0,155	0,161	0,123	0,128	0,133	0,138
4	0,141	0,148	0,154	0,160	0,122	0,127	0,133	0,137
5	0,140	0,147	0,153	0,158	0,121	0,127	0,132	0,136
6	0,140	0,147	0,152	0,157	0,121	0,127	0,132	0,135
7	0,139	0,146	0,152	0,156	0,121	0,127	0,131	0,135
8	0,139	0,146	0,151	0,155	0,121	0,126	0,131	0,134
9	0,139	0,146	0,151	0,155	0,120	0,126	0,130	0,134
10	0,138	0,145	0,150	0,154	0,120	0,126	0,130	0,133
11	0,138	0,145	0,149	0,153	0,120	0,126	0,129	0,133
12	0,138	0,144	0,148	0,152	0,120	0,126	0,129	0,132
13	0,137	0,144	0,147	0,151	0,120	0,125	0,128	0,132
14	0,137	0,143	0,147	0,150	0,119	0,125	0,128	0,131
15	0,137	0,143	0,146	0,150	0,119	0,125	0,128	0,131
16	0,136	0,142	0,145	0,149	0,119	0,124	0,127	0,130
17	0,136	0,142	0,145	0,149	0,119	0,124	0,127	0,130
18	0,136	0,141	0,144	0,148	0,119	0,124	0,127	0,130
19	0,135	0,141	0,144	0,148	0,119	0,124	0,126	0,130
20	0,135	0,141	0,144	0,147	0,119	0,124	0,126	0,130
21	0,136	0,141	0,143	0,147	0,119	0,124	0,126	0,129
22	0,136	0,141	0,144	0,147	0,119	0,124	0,126	0,129
23	0,135	0,140	0,143	0,146	0,119	0,123	0,126	0,129
24	0,135	0,140	0,142	0,146	0,119	0,123	0,126	0,129
25	0,135	0,139	0,142	0,145	0,119	0,123	0,125	0,128
26	0,135	0,139	0,142	0,145	0,119	0,123	0,125	0,128
27	0,135	0,139	0,141	0,145	0,119	0,123	0,125	0,128
28	0,135	0,139	0,141	0,144	0,119	0,123	0,125	0,128

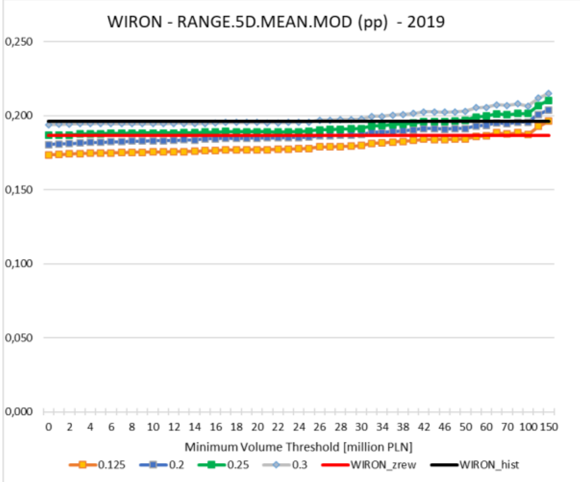
See: conclusions from the analysis for the DIFF.SD metric.

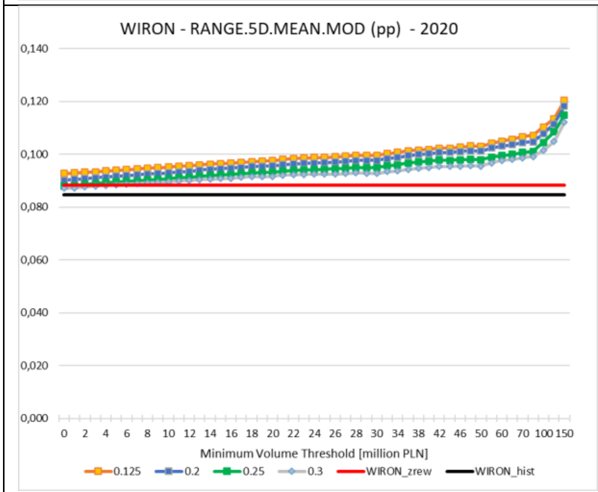
Mean of the centered 5-day moving range of the WIRON index excluding month ends – RANGE.5D.MEAN.MOD (pp.)

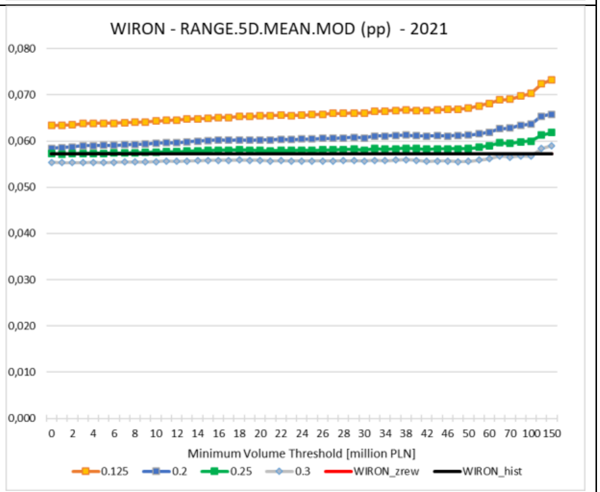


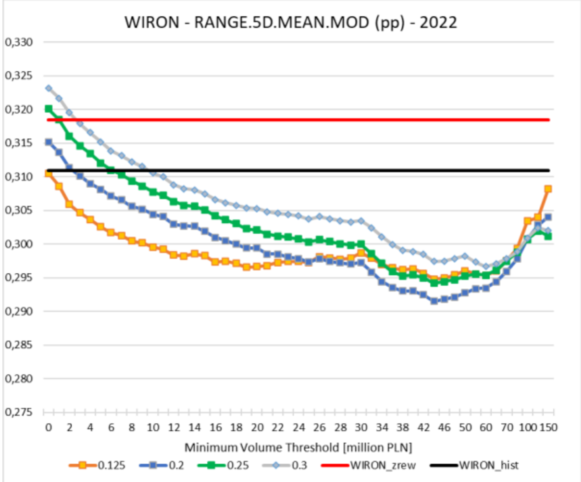


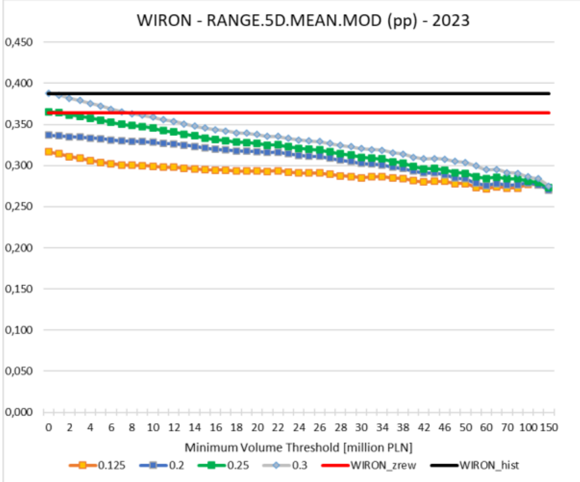










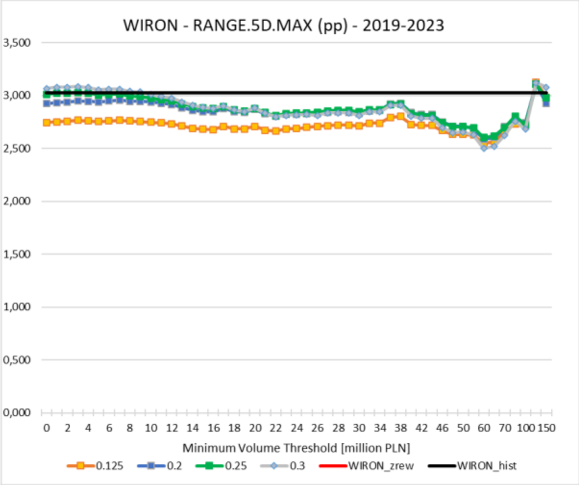


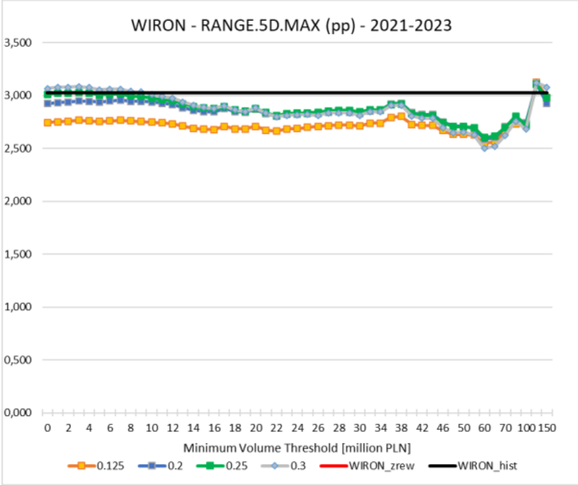
Comment:

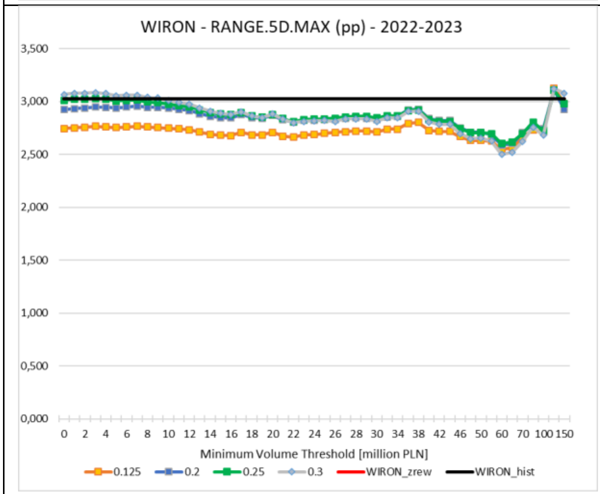
RANGE.5D.MEAN.MOD (pp)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	0,232	0,238	0,249	0,256	0,193	0,197	0,204	0,210
1	0,231	0,238	0,248	0,255	0,192	0,197	0,204	0,209
2	0,229	0,237	0,246	0,253	0,191	0,196	0,203	0,208
3	0,228	0,236	0,245	0,252	0,190	0,196	0,202	0,208
4	0,226	0,235	0,244	0,250	0,190	0,196	0,202	0,207
5	0,225	0,235	0,243	0,249	0,189	0,196	0,201	0,206
6	0,224	0,234	0,241	0,247	0,189	0,195	0,200	0,205
7	0,224	0,233	0,240	0,246	0,188	0,195	0,200	0,204
8	0,223	0,233	0,239	0,245	0,188	0,195	0,199	0,204
9	0,223	0,232	0,239	0,244	0,188	0,195	0,199	0,203
10	0,223	0,232	0,238	0,243	0,188	0,195	0,199	0,203
11	0,222	0,231	0,237	0,242	0,188	0,194	0,198	0,202
12	0,222	0,231	0,236	0,241	0,188	0,194	0,198	0,201
13	0,222	0,230	0,235	0,239	0,188	0,194	0,197	0,201
14	0,221	0,230	0,234	0,238	0,188	0,194	0,197	0,200
15	0,221	0,229	0,233	0,238	0,187	0,193	0,196	0,200
16	0,221	0,228	0,232	0,237	0,187	0,193	0,196	0,199
17	0,221	0,228	0,232	0,236	0,187	0,193	0,196	0,199
18	0,220	0,227	0,231	0,235	0,187	0,192	0,195	0,199
19	0,220	0,227	0,230	0,235	0,187	0,192	0,195	0,198
20	0,220	0,227	0,230	0,234	0,187	0,192	0,195	0,198
21	0,220	0,226	0,229	0,233	0,187	0,192	0,194	0,198
22	0,220	0,226	0,229	0,233	0,188	0,192	0,194	0,198
23	0,220	0,225	0,228	0,232	0,187	0,192	0,194	0,197
24	0,220	0,225	0,228	0,232	0,187	0,191	0,193	0,197
25	0,219	0,224	0,227	0,231	0,187	0,191	0,193	0,196
26	0,220	0,224	0,227	0,231	0,188	0,191	0,193	0,197
27	0,219	0,223	0,226	0,230	0,187	0,191	0,193	0,196
28	0,219	0,222	0,225	0,229	0,187	0,191	0,192	0,196

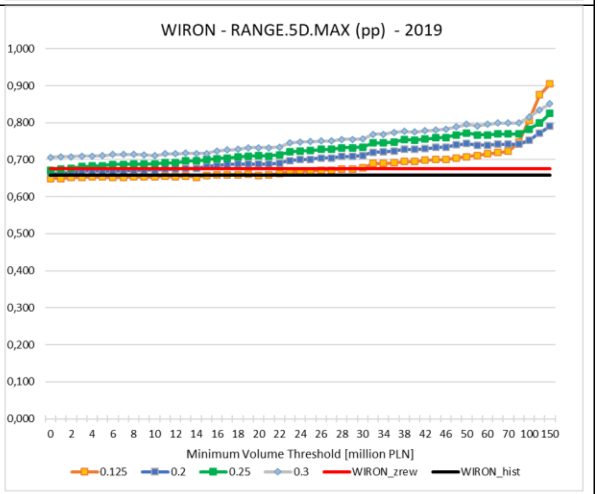
See: conclusions from the analysis for the RANGE.5D.MEAN metric.

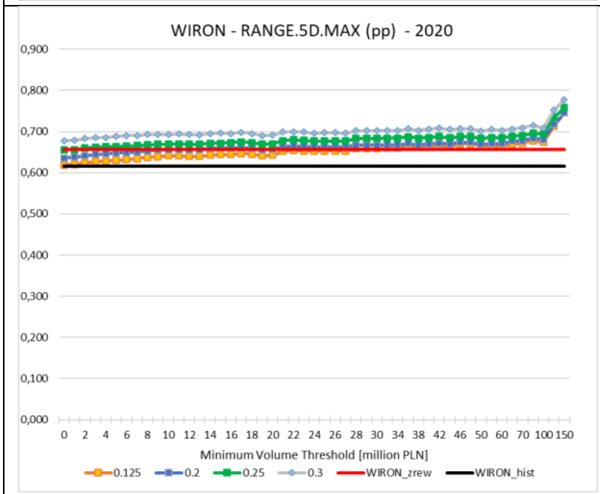
Maximum of the centered 5-day moving range of the WIRON index – RANGE.5D.MAX (pp.)

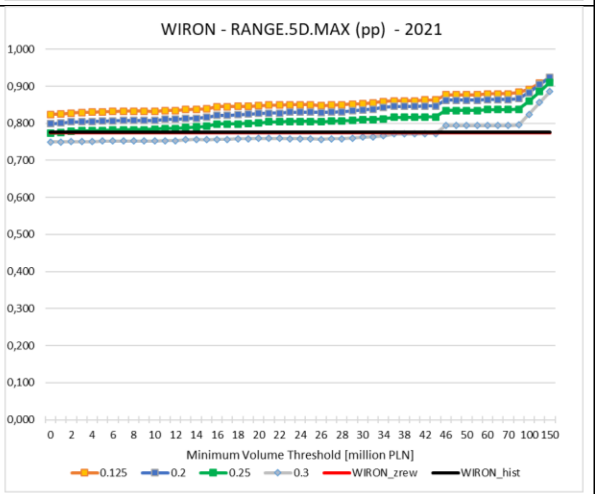


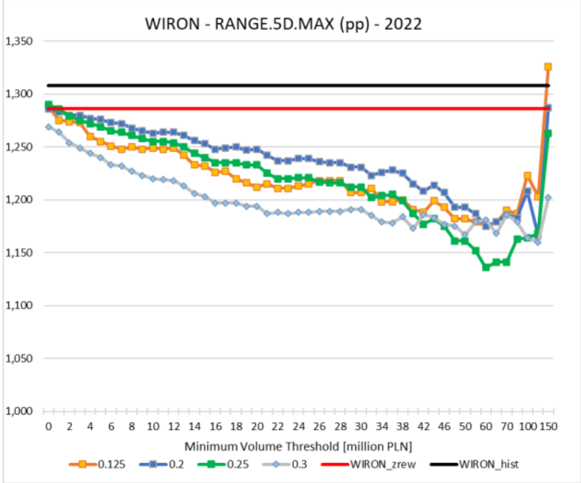


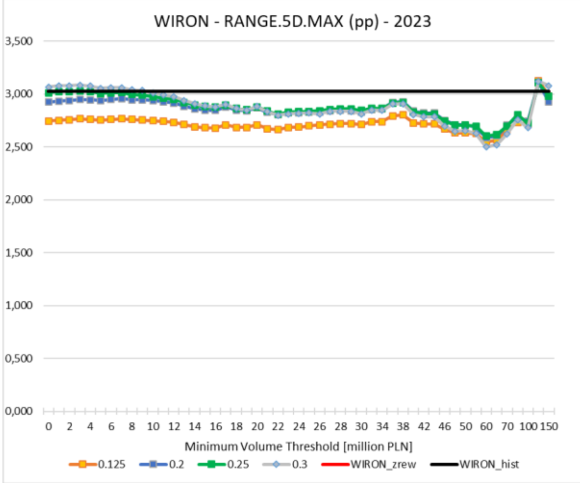












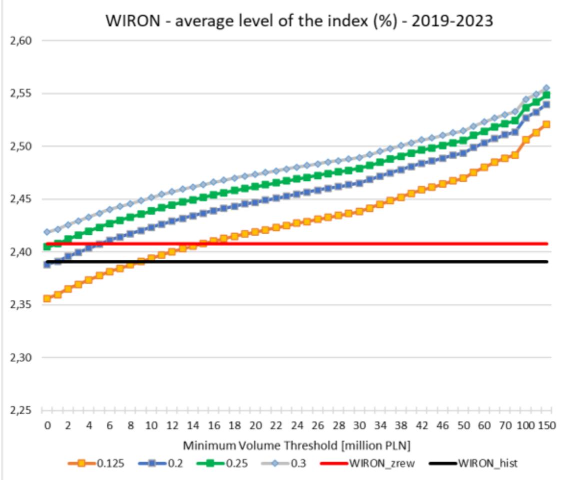
Comment:

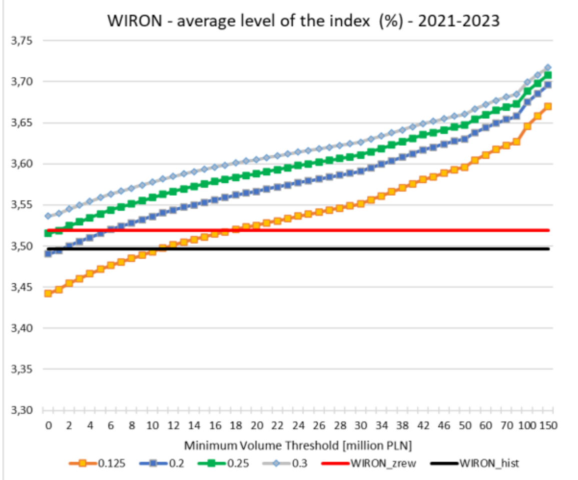
RANGE.5D.MAX (pp)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	2,744	2,923	3,013	3,067	2,744	2,923	3,013	3,067
1	2,752	2,932	3,023	3,079	2,752	2,932	3,023	3,079
2	2,758	2,939	3,025	3,080	2,758	2,939	3,025	3,080
3	2,765	2,948	3,029	3,084	2,765	2,948	3,029	3,084
4	2,761	2,945	3,023	3,076	2,761	2,945	3,023	3,076
5	2,753	2,939	3,007	3,055	2,753	2,939	3,007	3,055
6	2,759	2,947	3,012	3,060	2,759	2,947	3,012	3,060
7	2,768	2,957	3,015	3,061	2,768	2,957	3,015	3,061
8	2,759	2,946	2,996	3,038	2,759	2,946	2,996	3,038
9	2,754	2,945	2,991	3,032	2,754	2,945	2,991	3,032
10	2,749	2,940	2,977	3,012	2,749	2,940	2,977	3,012
11	2,742	2,926	2,961	2,990	2,742	2,926	2,961	2,990
12	2,733	2,914	2,950	2,976	2,733	2,914	2,950	2,976
13	2,711	2,886	2,921	2,939	2,711	2,886	2,921	2,939
14	2,691	2,862	2,898	2,910	2,691	2,862	2,898	2,910
15	2,681	2,848	2,883	2,889	2,681	2,848	2,883	2,889
16	2,679	2,845	2,875	2,878	2,679	2,845	2,875	2,878
17	2,709	2,878	2,897	2,904	2,709	2,878	2,897	2,904
18	2,684	2,847	2,865	2,864	2,684	2,847	2,865	2,864
19	2,686	2,842	2,851	2,849	2,686	2,842	2,851	2,849
20	2,709	2,869	2,880	2,882	2,709	2,869	2,880	2,882
21	2,674	2,826	2,838	2,833	2,674	2,826	2,838	2,833
22	2,664	2,806	2,809	2,799	2,664	2,806	2,809	2,799
23	2,684	2,820	2,829	2,812	2,684	2,820	2,829	2,812
24	2,689	2,823	2,832	2,818	2,689	2,823	2,832	2,818
25	2,700	2,830	2,837	2,820	2,700	2,830	2,837	2,820
26	2,709	2,831	2,841	2,813	2,709	2,831	2,841	2,813
27	2,714	2,840	2,855	2,837	2,714	2,840	2,855	2,837
28	2,720	2,844	2,859	2,837	2,720	2,844	2,859	2,837

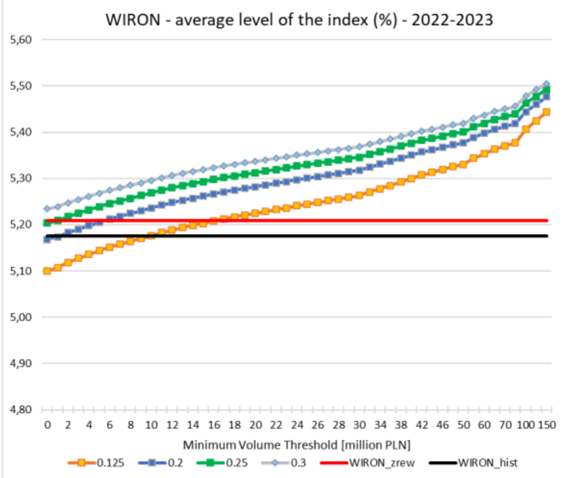
The RANGE.5D.MAX metric shows an exceptionally high value of the 5-day range in the analyzed period, which significantly distinguishes it from the previously presented measures of volatility. This measure is not cleared of changes in the parameters of the NBP's monetary policy, meaning it globally describes the full range of volatility in the analysed period. Due to its high sensitivity to

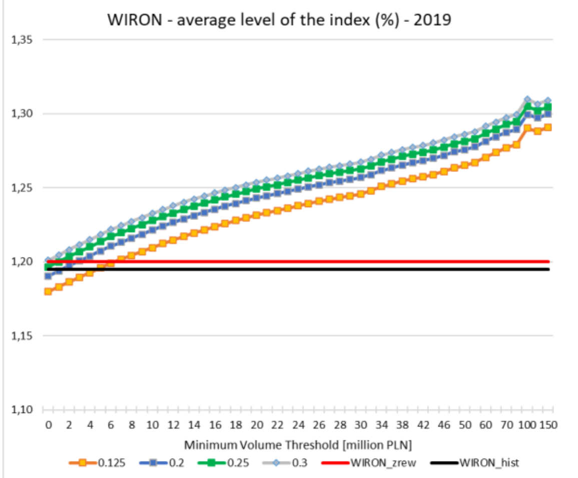
changes in the parameters of monetary policy and specific market situations (including distinct end-of-month/-year effects), its values differ significantly for different periods. Therefore, this measure is supplementary compared to the previously presented measures of volatility.
Nevertheless, for multi-year analysis periods, similar trends are observed as with other measures of volatility, i.e., a decrease in volatility with a decrease in the cut-off level in the Main Adjustment and with an increase in the Minimum Volume Threshold.
Admittedly, within the individual years of 2019, 2020 and 2021, the relationship between the Minimum Volume Threshold and the volatility of the index is reversed, meaning that volatility increases with an increase in the Minimum Volume Threshold. However, the scale of these increases in volatility is limited.
Similarly to other measures of volatility, in the year 2021, there is a reversal of the relationship between the cut-off level and volatility, meaning that volatility increases with a decrease in the cut-off level from 25% to 12.5%.
The selection of the optimal value of the Minimum Volume Threshold will be conducted using the table presented later in the document, which compares the values of various measures of volatility at different threshold values and in two cut-off level variants in the Main Adjustment (12.5% and 20%).

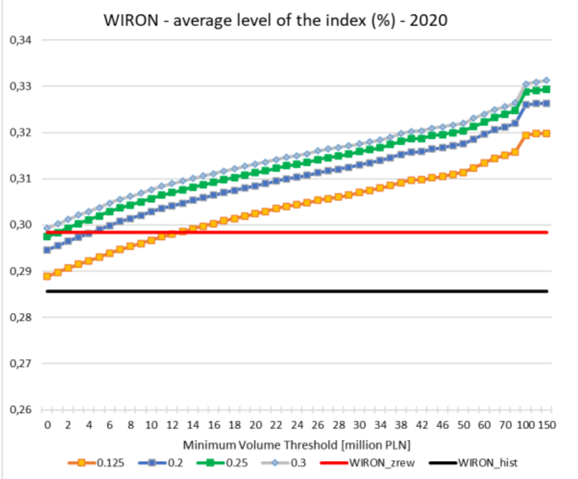
Average level of the WIRON index (%)

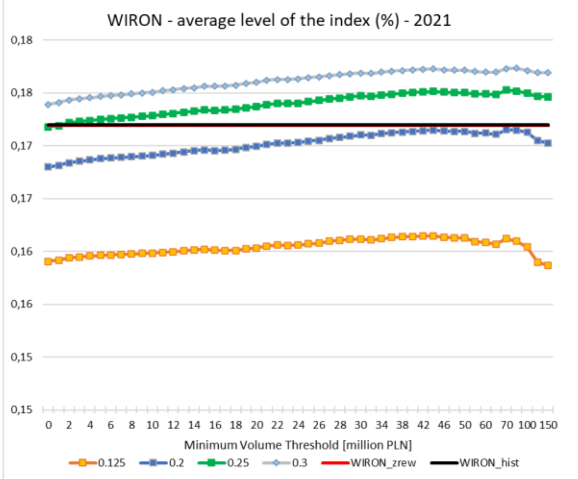


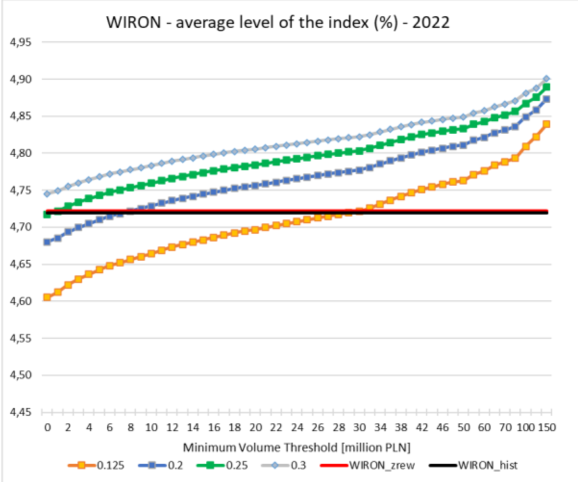


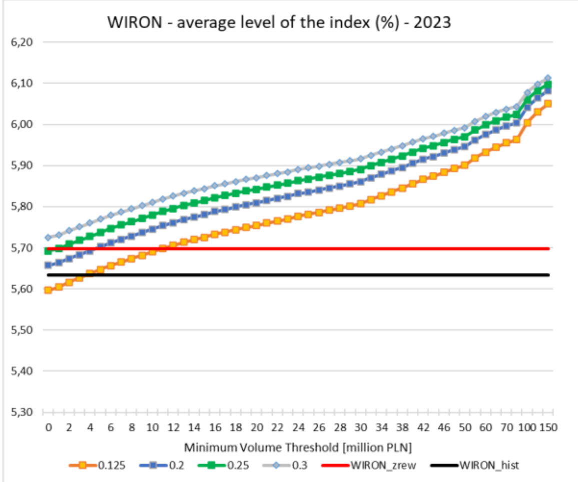












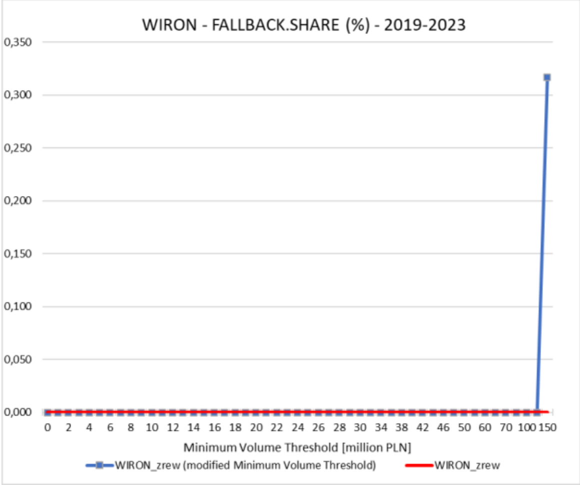
Comment:

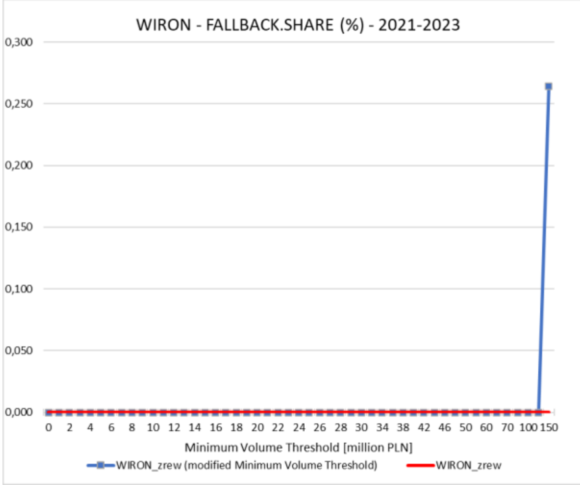
Average level of the index (%)	Symmetric cut-off level in the Main Adjustment							
	2021-2023				2019-2023			
Minimum Volume Threshold (million PLN)	0,125	0,2	0,25	0,3	0,125	0,2	0,25	0,3
0	3,442	3,490	3,515	3,536	2,356	2,388	2,405	2,419
1	3,447	3,494	3,519	3,540	2,360	2,391	2,408	2,421
2	3,454	3,500	3,525	3,545	2,365	2,396	2,412	2,426
3	3,461	3,505	3,530	3,550	2,369	2,400	2,416	2,429
4	3,466	3,510	3,534	3,554	2,373	2,403	2,420	2,433
5	3,472	3,515	3,539	3,559	2,378	2,407	2,423	2,437
6	3,477	3,520	3,544	3,563	2,381	2,411	2,427	2,440
7	3,481	3,524	3,548	3,567	2,385	2,414	2,430	2,443
8	3,485	3,528	3,551	3,571	2,388	2,417	2,433	2,446
9	3,489	3,532	3,555	3,574	2,391	2,420	2,436	2,449
10	3,493	3,536	3,559	3,578	2,394	2,423	2,439	2,451
11	3,497	3,540	3,563	3,581	2,397	2,426	2,442	2,454
12	3,501	3,544	3,566	3,585	2,400	2,429	2,445	2,457
13	3,505	3,547	3,570	3,588	2,403	2,432	2,447	2,459
14	3,508	3,550	3,572	3,591	2,405	2,434	2,449	2,462
15	3,511	3,553	3,575	3,593	2,408	2,436	2,452	2,464
16	3,515	3,556	3,578	3,596	2,410	2,439	2,454	2,466
17	3,517	3,559	3,581	3,599	2,413	2,441	2,456	2,468
18	3,520	3,562	3,584	3,601	2,415	2,443	2,458	2,470
19	3,523	3,564	3,586	3,603	2,417	2,445	2,460	2,472
20	3,525	3,567	3,588	3,605	2,419	2,447	2,462	2,473
21	3,528	3,569	3,591	3,608	2,421	2,449	2,464	2,475
22	3,531	3,572	3,593	3,610	2,423	2,451	2,465	2,477
23	3,533	3,574	3,595	3,612	2,425	2,453	2,467	2,478
24	3,536	3,577	3,598	3,615	2,427	2,455	2,469	2,480
25	3,539	3,579	3,600	3,616	2,429	2,457	2,471	2,482
26	3,541	3,582	3,602	3,618	2,431	2,458	2,472	2,483
27	3,544	3,584	3,604	3,620	2,433	2,460	2,474	2,485
28	3,546	3,586	3,606	3,622	2,434	2,462	2,476	2,486

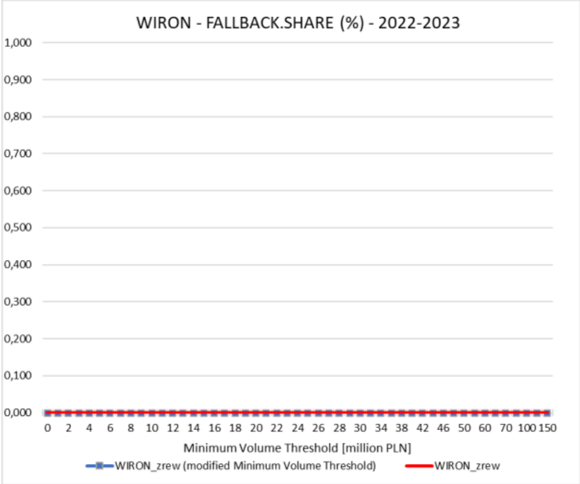
The extended analysis covering the years 2019-2020 confirms the conclusions drawn for the period 2021-2023 regarding the relationship between the analyzed parameters of the index and its average level, i.e., the increase in the average level of the index with an increase in the Minimum

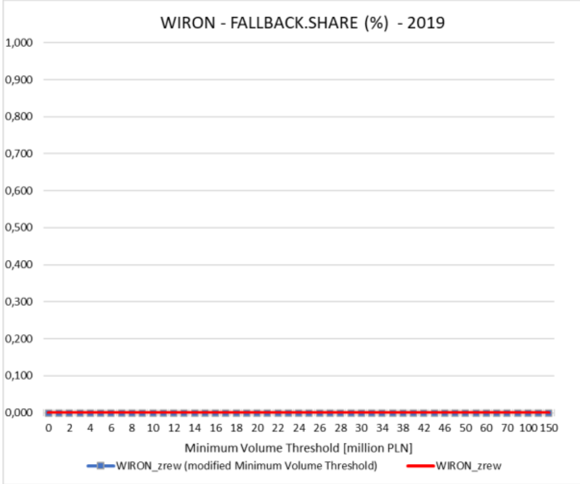
Volume Threshold and a decrease in the average level of the index with a decrease in the cut-off level in the Main Adjustment.

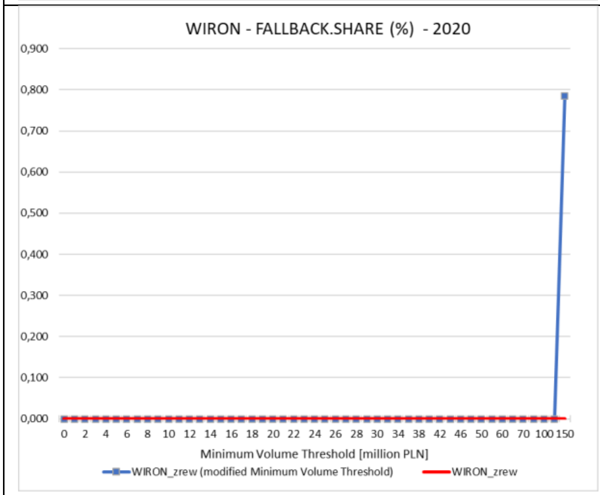
Percentage of days with the use of the Fallback Procedure for WIRON determination – FALLBACK.SHARE (%)

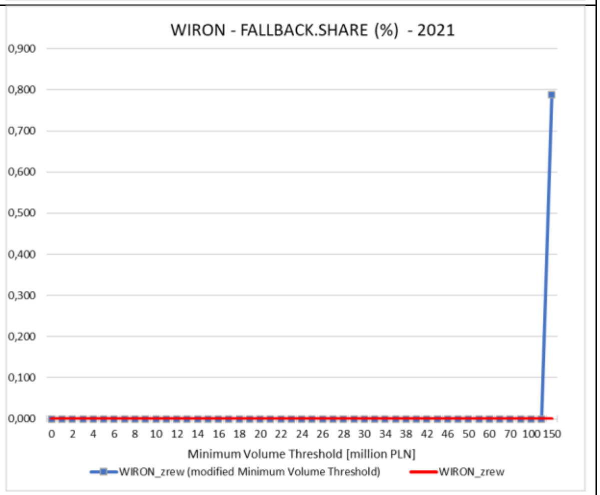


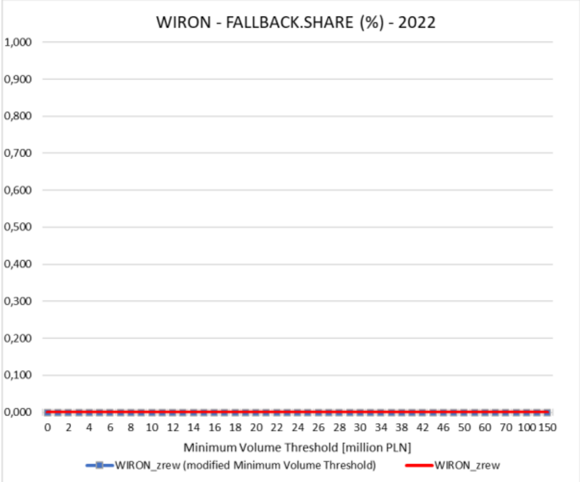


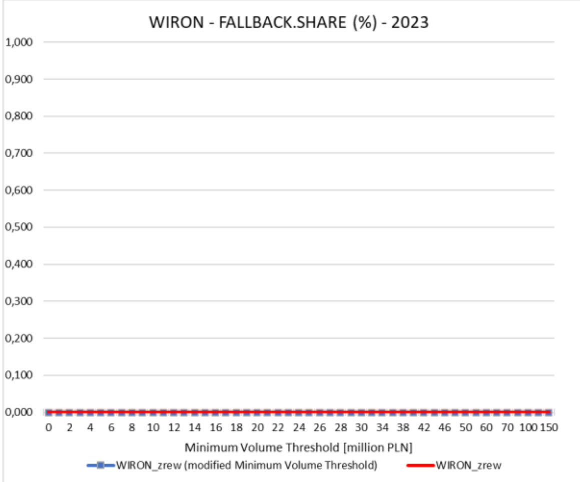












Comment:
Taking into account the adopted elements of the method, the above measure aims to measure the frequency of days when the Fallback Procedure for determining the WIRON index is applied. As shown in the presented graphs, within the acceptable values of the Minimum Volume Threshold (up to 28 million PLN), there is no risk of needing to use the Fallback Procedure.

3. SUMMARY OF SENSITIVITY ANALYSIS IN THE SCOPE OF VOLATILITY STATISTICS

Minimum Volume Threshold (million PLN)	Symmetric cut-off level in the Main Adjustment = 0,125									
	2021-2023					2019-2023				
	DIFF.SD	DIFF.SD.MOD	RANGE.5D.MEAN	RANGE.5D.MEAN.MOD	RANGE.5D.MAX	DIFF.SD	DIFF.SD.MOD	RANGE.5D.MEAN	RANGE.5D.MEAN.MOD	RANGE.5D.MAX
0	0,212	0,146	0,295	0,232	2,744	0,179	0,125	0,240	0,193	2,744
1	0,211	0,145	0,293	0,231	2,752	0,178	0,124	0,239	0,192	2,752
2	0,210	0,143	0,291	0,229	2,758	0,177	0,123	0,238	0,191	2,758
3	0,209	0,142	0,290	0,228	2,765	0,176	0,123	0,237	0,190	2,765
4	0,208	0,141	0,288	0,226	2,761	0,176	0,122	0,236	0,190	2,761
5	0,207	0,140	0,287	0,225	2,753	0,175	0,121	0,235	0,189	2,753
6	0,207	0,140	0,286	0,224	2,759	0,175	0,121	0,235	0,189	2,759
7	0,206	0,139	0,285	0,224	2,768	0,174	0,121	0,234	0,188	2,768
8	0,206	0,139	0,284	0,223	2,759	0,174	0,121	0,234	0,188	2,759
9	0,206	0,139	0,284	0,223	2,754	0,174	0,120	0,234	0,188	2,754
10	0,205	0,138	0,283	0,223	2,749	0,174	0,120	0,234	0,188	2,749
11	0,205	0,138	0,283	0,222	2,742	0,174	0,120	0,233	0,188	2,742
12	0,205	0,138	0,282	0,222	2,733	0,173	0,120	0,233	0,188	2,733
13	0,204	0,137	0,282	0,222	2,711	0,173	0,120	0,233	0,188	2,711
14	0,204	0,137	0,282	0,221	2,691	0,173	0,119	0,233	0,188	2,691
15	0,203	0,137	0,281	0,221	2,681	0,172	0,119	0,233	0,187	2,681
16	0,203	0,136	0,281	0,221	2,679	0,172	0,119	0,232	0,187	2,679
17	0,203	0,136	0,281	0,221	2,709	0,173	0,119	0,233	0,187	2,709
18	0,202	0,136	0,280	0,220	2,684	0,172	0,119	0,232	0,187	2,684
19	0,202	0,135	0,279	0,220	2,686	0,172	0,119	0,232	0,187	2,686
20	0,202	0,135	0,279	0,220	2,709	0,172	0,119	0,232	0,187	2,709
21	0,202	0,136	0,279	0,220	2,674	0,172	0,119	0,232	0,187	2,674
22	0,201	0,136	0,279	0,220	2,664	0,172	0,119	0,232	0,188	2,664
23	0,201	0,135	0,279	0,220	2,684	0,171	0,119	0,232	0,187	2,684
24	0,200	0,135	0,278	0,220	2,689	0,171	0,119	0,232	0,187	2,689
25	0,201	0,135	0,278	0,219	2,700	0,171	0,119	0,232	0,187	2,700
26	0,201	0,135	0,279	0,220	2,709	0,172	0,119	0,232	0,188	2,709
27	0,201	0,135	0,279	0,219	2,714	0,172	0,119	0,232	0,187	2,714
28	0,202	0,135	0,278	0,219	2,720	0,172	0,119	0,232	0,187	2,720

Comment:

The above summary of values of all analyzed volatility measures at a cut-off level of 12.5% and acceptable levels of the Minimum Volume Threshold (up to 28 million PLN) indicate that the minimum values of key volatility measures (i.e., DIFF.SD, DIFF.SD.MOD, RANGE.5D.MEAN, RANGE.5D.MEAN.MOD) correspond to Minimum Volume Threshold values at around 24-25 million PLN. These values, in the case of the supplementary volatility measure RANGE.5D.MAX, translate to values not exceeding the middle of the range of volatility for this measure (i.e., below 2.716 pp.). It is worth noting that exceeding the Minimum Volume Threshold value of 12 million PLN results in a consistent course of the RANGE.5D.MAX measure below the middle of the range of volatility for this measure (with a slight exceeding of this level in the case of a Minimum Volume Threshold equal to 28 million PLN).

Minimum Volume Threshold (million PLN)	Symmetric cut-off level in the Main Adjustment = 0,2									
	2021-2023					2019-2023				
	DIFF.SD	DIFF.SD.MOD	RANGE.5D.MEAN	RANGE.5D.MEAN.MOD	RANGE.5D.MAX	DIFF.SD	DIFF.SD.MOD	RANGE.5D.MEAN	RANGE.5D.MEAN.MOD	RANGE.5D.MAX
0	0,222	0,150	0,302	0,238	2,923	0,186	0,129	0,245	0,197	2,923
1	0,221	0,150	0,301	0,238	2,932	0,186	0,129	0,244	0,197	2,932
2	0,221	0,149	0,300	0,237	2,939	0,186	0,128	0,244	0,196	2,939
3	0,221	0,148	0,299	0,236	2,948	0,186	0,128	0,243	0,196	2,948
4	0,221	0,148	0,299	0,235	2,945	0,186	0,127	0,243	0,196	2,945
5	0,221	0,147	0,298	0,235	2,939	0,186	0,127	0,243	0,196	2,939
6	0,221	0,147	0,298	0,234	2,947	0,186	0,127	0,242	0,195	2,947
7	0,220	0,146	0,297	0,233	2,957	0,185	0,127	0,242	0,195	2,957
8	0,221	0,146	0,297	0,233	2,946	0,186	0,126	0,242	0,195	2,946
9	0,221	0,146	0,296	0,232	2,945	0,186	0,126	0,242	0,195	2,945
10	0,221	0,145	0,296	0,232	2,940	0,186	0,126	0,242	0,195	2,940
11	0,220	0,145	0,295	0,231	2,926	0,185	0,126	0,241	0,194	2,926
12	0,221	0,144	0,295	0,231	2,914	0,186	0,126	0,241	0,194	2,914
13	0,220	0,144	0,295	0,230	2,886	0,185	0,125	0,241	0,194	2,886
14	0,220	0,143	0,294	0,230	2,862	0,185	0,125	0,241	0,194	2,862
15	0,219	0,143	0,293	0,229	2,848	0,185	0,125	0,241	0,193	2,848
16	0,219	0,142	0,293	0,228	2,845	0,184	0,124	0,240	0,193	2,845
17	0,219	0,142	0,292	0,228	2,878	0,185	0,124	0,240	0,193	2,878
18	0,219	0,141	0,291	0,227	2,847	0,184	0,124	0,239	0,192	2,847
19	0,218	0,141	0,291	0,227	2,842	0,184	0,124	0,239	0,192	2,842
20	0,219	0,141	0,291	0,227	2,869	0,184	0,124	0,239	0,192	2,869
21	0,218	0,141	0,290	0,226	2,826	0,184	0,124	0,239	0,192	2,826
22	0,218	0,141	0,290	0,226	2,806	0,184	0,124	0,239	0,192	2,806
23	0,217	0,140	0,289	0,225	2,820	0,184	0,123	0,239	0,192	2,820
24	0,217	0,140	0,288	0,225	2,823	0,183	0,123	0,238	0,191	2,823
25	0,217	0,139	0,288	0,224	2,830	0,183	0,123	0,238	0,191	2,830
26	0,217	0,139	0,288	0,224	2,831	0,184	0,123	0,238	0,191	2,831
27	0,218	0,139	0,288	0,223	2,840	0,184	0,123	0,238	0,191	2,840
28	0,218	0,139	0,287	0,222	2,844	0,184	0,123	0,238	0,191	2,844

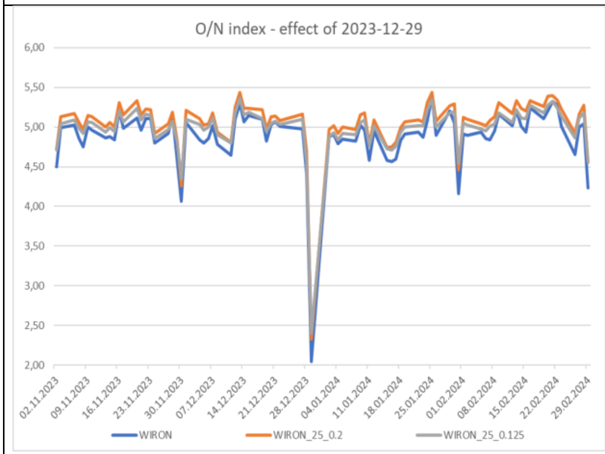
Comment:

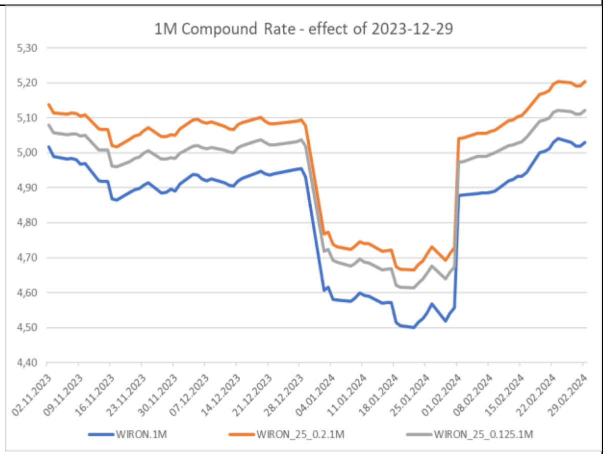
According to the analyses presented earlier, due to the particular nature of the relationship between the cut-off level and the volatility of the index in the year 2021 (i.e., increased volatility with a decrease in the cut-off level compared to decreased volatility with a decrease in the cut-off level for other years and multi-year periods), an alternative cut-off level of 20% is considered. In the Administrator's assessment, considering a smaller scale reduction in the cut-off level as an alternative proposal for a change in the method in terms of the cut-off level is justified due to the impact of this change on the behaviour of the index in situations of ultra-low interest rates. While it has been demonstrated that the increase in volatility measured by selected statistics was related to specific days and was primarily the result of deepening of those individual deviations, from the market participants' perspective, it should be noted that such effects influence the activities of entities (it is indicated that in the case of large deviations, for example, at the end of the month/year, the day of recording such deviations may significantly affect the course of the compound index, especially if it concerns Friday or the working day preceding non-working days).

The table above compares the values of all analyzed measures of volatility at this alternative cut-off level and at acceptable levels of the Minimum Volume Threshold (up to 28 million PLN). This summary indicates that the values of the Minimum Volume Threshold in the range of 24-25 million PLN recommended based on the analysis for a 12.5% cut-off level, as indicated in previous analyses, correspond to values close to the minima of key volatility measures (i.e., for measures DIFF.SD and DIFF.SD.MOD, these are exact minima, while for measures RANGE.5D.MEAN and RANGE.5D.MEAN.MOD, these are values exceeding the minima only by 0.001-0.003 pp.). On the other hand, for the supplementary measure of volatility, RANGE.5D.MAX, the values of the Minimum Volume Threshold in the range of 24-25 million PLN translate into values that do not exceed the midpoint of the volatility range of this measure (i.e., below 2.882 pp). To sum up, the analysis for the cut-off level of 20% supports the recommendation for the Minimal Volume Threshold value within the range derived from the analysis for the 12.5% cut-off level, namely 24-25 million PLN.

4. CHANGE OF THE WIRON METHOD AND THE PERFORMANCE OF COMPOUND INDEXES BASED ON THE EXAMPLE OF WIRON 1M COMPOUND RATE SIMULATION

WIRON ON and WIRON 1M Compound Rate





Comment:
Considering the proposed method changes, the Administrator presents the behaviour of the indexes and the WIRON 1M Compound Rate at a critical point in time, which is the transition between 2023 and 2024. According to the principles of determining compound index values, compound indeces react to changes in the base index (WIRON), smoothing out its volatilitybut at the same time fully reflecting situations that constitute a real representation of the reference index market, albeit influenced by specific factors. The Administrator has presented informational material[9] regarding this period and outlined the factors affecting the money market on December 29, 2023. Considering the proposed variants, the results of the WIRON 1M Compound Rate simulation are presented based on hypothetical scenarios. Observing these hypothetical WIRON scenarios confirms that the index's characteristics remain intact, and the index trajectory almost parallelly shifts upward relative to the historical WIRON, depending on the selected variant. The differences in the observed decline for the WIRON 1M Compound Rate based on WIRON and WIRON_25_0.125[10] are 1 basis point, and for WIRON_25_0.2, it is 2 basis points. This means that the impact of the method change on the trajectory of the Compound Index during the analyzed period can be considered insignificant.

[9] WIRON_Information_Material_29.12.2023.pdf (gpwbenchmark.pl)
[10] WIRON - the WIRON index in the current parameterization; WIRON_25_0.125 - the WIRON index with the Minimum Volume Threshold of PLN 25 million and the Main Adjustment cut-off level set at 12.5%; WIRON_25_0.2 - the WIRON index with the Minimum Volume Threshold of PLN 25 million and the Main Adjustment cut-off level set at 20%.

Questionnaire

☐ I support the proposal to change the WIRON provision method by changing the Minimum Volume Threshold from PLN 1 million to PLN 25 million and changing the Main Adjustment cut-off level from 25% to 12.5%.

☐ I support the proposal to change the WIRON provision method by changing the Minimum Volume Threshold from PLN 1 million to PLN 25 million and changing the Main Adjustment cut-off level from 25% to 20%.

☐ I do not support the change to the WIRON provision method in the scope proposed above

Comment:
