

RULES OF THE WIRON INTEREST RATE INDEX

Rules of the WIRON Interest Rate Index, adopted by the Resolution of the Management Board of the GPW Benchmark No. 85/2002 of 30 November 2022

Status: public

In force from: 1.12.2022

Consolidated text: 23 May 2025

Changes to the text:

Resolution	change	entry into force
94/2022 of 7.12.2022	Editorial corrections and additions: • definitions: improved alphabetical order • points 1.1.1(g), 1.1.2, 1.1.3, 1.2.2, 1.3.1, 1.4.1 – editorial corrections • point 2.3.1 (categories of Data Providers) - removal of redundant repetitions • points 2.3.9, 2.4.2, 2.4.3 – editorial corrections • point 3.1 - editorial corrections • points 4.2.1, 4.2.2. - editorial corrections • Annex No. 1, points 2 and 3 – editorial corrections	08.12.2022
22/2023 of 20.02.2023	change of point 3 and point 4	23.03.2023
95/2023 of 4.10.2023	Introduction of new provisions to points 2.5.1(e), 4.1.2; amendment to point 4.1.3	06.11.2023
10/2024 of 01.02.2024	Change: of point 2.5.1. e) (i) and (iv) concerns the determination of the Maximum Volume Threshold of a Single Transaction in connection with a change in the method. Transfer of a note 2 in point 2.3.1	04.03.2024
11/2024 of 15.02.2024	Correction of typos in points 2.5.1. lit e), 4.1.2, 4.1.3.	15.02.2024
44/2025 of 23.04.2025	Changing the order of items within point 2.5.1; Change of point 2.1.3 and Annex 1	26.05.2025
63/2025 of 23.05.2025	Adding the definition of Transaction Cancellation, the definition of a Deposit Transaction has been clarified; change of points 1.1, 2.3.10, 4.1.1, 4.2 and 4.3; change in the level of the Minimum Volume Threshold of a Single Transaction (point 2.5.1. e) and the cut-off level in the Main Adjustment (point 2.5.3. b (iii))	2.07.2025 for Index Date 01.07.2025

Translation according to legal condition as of 23rd May 2025.

NOTE: Only the Polish version of this document is binding. Translation is provided for information only, although all efforts have been made to ensure its accuracy.

DEFINITIONS

Benchmarks Regulation	Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation 596/2014
Business Day	calendar day other than Saturday, Sunday or public holiday, on which Data Contributors operate on the Polish money market
Code of Conduct	the Transaction-based Benchmarks Family Code of Conduct, together with the annexes which are an integral part thereof, including any changes and additions
Data Contributor	the entity which has received confirmation of being granted the Data Contributor status from the administrator and has not lost this status in accordance with the rules set out in the Code of Conduct
Data Delivery Procedure (DDP)	Administrator's procedure defining the rules for contribution of the Data, including the Input Data, to the Administrator, provided as Annex No. 9 to the Code of Conduct
Deposit Transaction	the transaction of the Data Contributor in which the Data Contributor accepts or places cash at fixed rate in PLN for a fixed period, on which interest is charged for the period the cash was accepted or placed, without any collateral to secure fulfilling of obligations resulting from that transaction, excluding non-negotiated transactions, i.e. those that are not concluded upon individual agreement of transaction terms, but instead are concluded according to predefined rules
Eligible Transactions Pool	the Input Data after carrying out the activities specified in point 2.5.1 of these Rules
Error	an event which does not constitute Suspicious Input Data, yet has attributes of an unintentional defect, occurring at the stage of compilation of the Data in the accounting or transaction systems of Data Contributors or when contributing the Data to the Administrator
Index Date	the date of the Deposit Transactions which are the Input Data used for determination of the WIRON value
Input Data	the data contributed by the Data Contributor to the administrator, indicated in point 6 of the Code of Conduct, which are the input data within the meaning of Article 3(1)(14) of the Benchmarks Regulation
Licence Agreement	an agreement under which the administrator grants a licence to use and apply benchmarks and indices

Oversight Committee	the Oversight Committee of Interest Rate Benchmarks, performing the oversight function as defined in Art. 5 of the Benchmarks Regulation
Transaction Cancellation	an event that does not constitute an Error, consisting of a cancellation or other modification of a transaction by the client between the transaction date and the currency date
User	an entity entitled to use and apply the WIRON
WIRON Method/ Method	the principles of the Input Data preparation and WIRON value determination
WIRON Re-determination and Re-distribution Procedure	the procedure specifying the premises and actions to be taken in case of the need to re-determine and re-distribute (i.e. publish in real time through the data distributors) the WIRON value

1. GENERAL PROVISIONS

- 1.1. The Rules of WIRON Interest Rate Index (*Warsaw Interest Rate Overnight*) (hereinafter: "the Rules")
 - 1.1.1. The Rules specify the Method, including:
 - a) the definition of WIRON and description of the Reference Market, the measurement of which is the purpose of providing WIRON,
 - b) the rules for publication and distribution of WIRON values,
 - c) a description of the types of Input Data and the rules of priority of their use under the WIRON Method,
 - d) the procedure of the administrator in case of the need to re-determine and re-distribute the corrected WIRON values,
 - e) the mechanisms to recognize circumstances in which the Input Data is insufficient or their quality ceases to meet the standards necessary for accurate and reliable determination of the WIRON,
 - f) the procedure in case of the circumstances referred to in point (e),
 - g) the list of Key Elements of the WIRON Method and a definition of its material change.
 - 1.1.2. The rules for the cyclical review of the definition and the Method, consultations on the proposed material change of the Method and the cessation of provision of the WIRON shall be set out in a separate Procedure for the Review and Change of the Methods of Interest Rate Benchmarks, an excerpt of which is published in accordance with point 1.2.1 of the Rules.
 - 1.1.3. The rules of permanent oversight over the provision of WIRON by GPW Benchmark S.A. (the administrator), carried out by the Oversight Committee, shall be defined in separate regulations of the Oversight Committee published in accordance with point 1.2.1.
 - 1.1.4. Undefined terms written in capital letters in these Rules have the meaning given in the Code of Conduct.
- 1.2. Exchange of information between the administrator and the Users
 - 1.2.1. The administrator shall provide Users with announcements and relevant documents by placing them on gpwbenchmark.pl website.
 - 1.2.2. The Users of WIRON shall communicate with the administrator using the contact details provided at gpwbenchmark.pl or in the manner indicated in the concluded Licence Agreements.
- 1.3. Right to use the WIRON
 - 1.3.1. The right to use and apply WIRON results from the Licence Agreement, the template of which is published in accordance with point 1.2.1.
- 1.4. Complaints
 - 1.4.1. The principles for submitting and dealing with complaints to the administrator shall be published in accordance with point 1.2.1, in the Transaction-based indices' documentation section.
 - 1.4.2. Complaints shall be dealt with by the administrator immediately, in a fair manner, without the participation of persons directly involved in the WIRON determination process.

2. THE WIRON DEFINITION AND METHOD

2.1. Definition

- 2.1.1. WIRON is an index provided on the basis of data on Deposit Transactions and presents the average level of the volume-weighted interest rate, where „volume” is understood as the nominal value, of O/N maturity Deposit Transactions concluded by Data Contributors with credit institutions, financial institutions and large enterprises on the Reference Market. described in point 2.2.
- 2.1.2. WIRON is intended to be used as an interest rate benchmark within the meaning of Art. 3(1)(22) of the Benchmarks Regulation.
- 2.1.3. The administrator defines the WIRON as an interest rate index that is close to a risk-free rate, i.e. the interest rate measured upon assumption of reduced market risk, including the risk of market expectations regarding future interest rates, as well as liquidity risk, credit risk.
- 2.1.4. The WIRON value is determined and published with an accuracy of 3 decimal places¹.
- 2.1.5. The WIRON value is determined in accordance with the ACT/365 interest rate convention.
- 2.1.6. The WIRON value is expressed as a percentage (% , 1/100) of the nominal value.
- 2.1.7. The WIRON value is determined and published the next Business Day after the Index Date.

2.2. Reference Market

- 2.2.1. The Reference Market subject to measurement by the WIRON is the wholesale money market in the segment of O/N Deposit Transactions in Polish zloty, i.e. which begins on the transaction date and ends on the next Business Day following transaction date (overnight).

2.3. Input Data

- 2.3.1. The Input Data for WIRON is the data on O/N Deposit Transactions, concluded by Data Contributors with²:
 - a) Credit Institutions,
 - b) Credit Institutions – loro,
 - c) Financial Institutions – foreign banks,
 - d) Non-monetary Financial Institutions,
 - e) Mortgage Banks,
 - f) Cooperative Banks,
 - g) Cooperative Savings and Credit Unions,
 - h) Other Non-monetary Financial Institutions and
 - i) Large enterprises.

¹ The rounding applies to the value expressed in %, so an example of WIRON rounded to 3 decimal places is 5.123%

² Terms written in capital letters in this point correspond to the categories specified in the description of the mechanism for reporting and collecting transaction data, i.e. the Data Delivery Procedure.

- 2.3.2. The WIRON is based on transactional data from a representative panel of Data Contributors that the administrator considers as:
 - a) data sufficient to accurately and reliably reflect the Reference Market indicated in point 2.2 of the Rules,
 - b) fully verifiable data.
- 2.3.3. The WIRON Method does not provide for an exercise of discretion in relation to the Input Data by the administrator or the Data Contributors.
- 2.3.4. In absence of sufficient Input Data, the administrator shall apply the Fallback Procedure for determining WIRON, specified in point 2.6.
- 2.3.5. The administrator shall have procedures in place to verify the WIRON's ability to ensure representativeness of the Input Data for the Reference Market, which the WIRON intends to measure.
- 2.3.6. The WIRON Method does not provide for the use of extrapolation models or methods by the administrator.
- 2.3.7. The Administrator uses the Input Data contributed within the meaning of art. 3(1) (8) of the Benchmarks Regulation; the Input Data is the data on Deposit Transactions, contributed daily by the Data Contributors on the basis of the rules specified in the Code of Conduct and annexes thereto, i.e.:
 - a) the Data Delivery Procedure (or DDP), which specifies the type and scope of the data to be contributed, and
 - b) the Technical Standards, i.e. a set of defined detailed conditions for data contribution, including their format and specification.
- 2.3.8. The Data Contribution Procedure and the Technical Standards shall define the minimum quality standards of the Input Data, including the format accepted by the administrator, types of data, the required scope of the specified attributes of the Input Data and the timeframes applicable to the Data Contributors as regards the contribution thereof.
- 2.3.9. The Administrator shall publish the contents of the Data Delivery Procedure and an extract from the Technical Standards in accordance with point 1.2.1.
- 2.3.10. In cases where the Data Contributor reports an Error or Transaction Cancellation after the deadline specified in point 3.4 of the Data Delivery Procedure, but before the time of distribution in accordance with point 3.2 of the Rules, the administrator shall take steps to ensure that only the correct Input Data are taken into account in determining the WIRON value.
- 2.4. Data Contributor qualification criteria
 - 2.4.1. The criteria for qualifying an entity as a Data Contributor shall be set out in the Code of Conduct.
 - 2.4.2. The selection of the panel of Data Contributors shall take into account the assessment of activity on the Reference Market, the potential to conclude transactions on the Reference Market and the ability to fulfil the obligations arising from the Code of Conduct together with annexes.
 - 2.4.3. The composition of the Data Contributors panel shall be published by the administrator in accordance with point 1.2.1.
- 2.5. The WIRON Method
 - 2.5.1. Preparation of the Eligible Transactions Pool

- a) The rules for the Data contribution by Data Contributors ensure the selection of Input Data by the administrator in accordance with the classification resulting from the DDP, including the selection of DDP data sets: 3.1.1 corresponding to point 2.3.1 lit. a) of the Rules, 3.1.4 corresponding to point 2.3.1(a) of the Rules, 3.1.5 corresponding to point 2.3.1(b) – (g) of the Rules, 3.1.10 corresponding to point 2.3.1(h) of the Rules, 3.1.14 corresponding to point 2.3.1(i) of the Rules as well as elimination of Deposit Transactions of Small and Medium-sized Enterprises, the data on which are reported under the DDP 3.1.14 group, and which, in accordance with the WIRON definition set out in point 2.3.1, are not taken into account in determining the WIRON value;
- b) rules for contribution of the data on Deposit Transactions by Data Contributors ensure selection of the Input Data with O/N maturity;
- c) in WIRON value determination, the O/N maturity Deposit Transactions concluded during the entire given Business Day, are taken into account. The administrator carries out the verification of information on conclusion time of a Deposit Transaction, which is an element of qualitative verification of the Input Data, ensuring compliance with the rules set out in the CDP and the Technical Standards. In case of sets 3.1.1, 3.1.4, 3.1.5, 3.1.10, information on the time of conclusion of the Deposit Transaction is an element of verifying the completeness of the information contributed; in case of 3.1.14 there is no such requirement;
- d) the administrator applies the Input Data Matching Procedure, which consists in identifying the Input Data provided by the Data Contributors, which describe the same Deposit Transaction, if both parties have the status of a Data Contributor. Pursuant to the Procedure, the administrator verifies within a given set: the name and category of the counterparty, the date of conclusion, the value date, the maturity date, the volume and the interest rate level of the Deposit Transaction, with the rounding precision at the level of 4 decimal places;
- e) the administrator applies the Minimum Volume Threshold of a Single Transaction of PLN 15 million; Deposit Transactions with a volume below this threshold are not eligible for the Eligible Transactions Pool on the basis of which the WIRON value is determined;
- f) the administrator applies the Maximum Volume Threshold of a Single Transaction. For Deposit Transactions of a volume above that threshold, before qualifying them to the Eligible Transaction Pool on which the determination of the WIRON value is subsequently based, the value of volume is adjusted down to the level of that threshold, which is subject to change on an annual basis, and is determined as follows:
 - (i) for set of :
 - DDP groups 3.1.1, 3.1.4, 3.1.5, 3.1.10, 3.1.14 in the category of Large enterprises

value of a 3-year average is calculated from the quantiles of 99.99%³ order of the quarterly distribution of the transaction volume, after exclusion of the extreme values from these quantiles, increased by the standard deviation on this set of quantiles.

³ A quantile of 99.99% of the empirical distribution of a variable (e.g. volume) in a sample is a value of a variable that divides the sample into two parts in such a way that at least 99.99% of the units in the sample have a value of this variable equal to or lower than the value of the quantile and at least 0.01% of the units in the sample have a value of this variable equal to or higher than the value of the quantile.

(ii) for the determined level of the Maximum Volume Threshold of a Single Transaction, rounding is applied to the nearest PLN 50 million.

(iii) level of the Maximum Volume Threshold of a Single Transaction is valid throughout the calendar year, commencing 6 months after the end of a three-year period of analysis;

Maximum Volume Threshold of a Single Transaction shall be set on the full set of Input Data within the range specified in point (i)⁴

g) the administrator applies a filter of outliers, according to which the Eligible Transaction Pool on which the determination of the WIRON value is based on a given Business Day does not include Deposit Transactions classified as "extreme observations". Extreme observations are defined as Deposit Transactions at an interest rate farther from the median for interest rates of Deposit Transactions on a given Business Day by more than the absolute value of the median of interest rates of Deposit Transactions on a given Business Day plus 8 pps, i.e. outside the range defined below:

$< \text{daily median O/N rates} - (|\text{daily median O/N rates}| + 8 \text{ pps}); \text{daily median O/N rates} + (|\text{daily median O/N rates}| + 8 \text{ pps}) >$

2.5.2. Conditions and procedures concerning the quality of the Eligible Transactions Pool

a) the administrator defines the following verifiable conditions that must be met by the Eligible Transactions Pool, achieved in consequence of the preliminary preparation of the Eligible Transactions Pool (point 2.5.1), in order to be able to carry out the Main Adjustment and to determine the WIRON value on a given Business Day:

(i) the Maximum Threshold of Single Data Contributor Share in the volume of a Transaction Pool is 75%,

(ii) the minimum number of Data Contributors is 3,

(iii) the Minimum Total Volume Level is PLN 1 billion.

b) in the event that any of the conditions set out in point a) is not met, the Fallback Procedure set out in point 2.6 is used to determine the WIRON.

c) the administrator applies the Volume Scaling-down Procedure in case of a concentration in a given transaction set, according to which the volumes of Deposit Transactions of a Data Contributor meeting the criteria of a dominant entity ("dominator") in a given set of Deposit Transactions are scaled down.

1) For the purposes of this Procedure two datasets for analysis were defined:

i. the dataset of Deposit Transactions of financial institutions (3.1.5 of PPD) and other financial institutions (3.1.10 of PPD),

ii. the dataset of Deposit Transactions of large enterprises (subgroup within 3.1.14 PPD).

2) In the event that the share of one of the above datasets in the Eligible Transactions Pool exceeds 50%, the verification is carried out whether there is such a Data Contributor, which would have a share in the volume of this dataset exceeding 50% ("dominator").

⁴ The impact of the Minimum Volume Threshold for a Single Transaction is not taken into account when determining the Maximum Volume Threshold.

- 3) If there is a dominator in a given dataset, the volumes of its Deposit Transactions from this set are scaled down by multiplying them by the proportion determined as the quotient of 50% of the total volume of this set and the volume of Deposit Transactions of the dominator in this dataset.

2.5.3. Main Adjustment and the WIRON determination method

- a) Upon completing the processes set out in 2.5.2, the administrator applies the algorithm reducing the scope of the Eligible Transactions Pool, on the basis of which the WIRON is determined (the Main Adjustment), to these Input Data interest rate of which is relatively close to the average of the observed interest rate levels on a given day. Input Data of a statistically less typical nature are cut off symmetrically.
- b) Under the Main Adjustment, the administrator:
 - (i) accumulates Deposit Transactions into aggregates (sets) bringing together Deposit Transactions with the same interest rate, where the volume of the aggregate is the sum of the volumes of Deposit Transactions included therein,
 - (ii) arranges aggregates according to their interest rate in ascending order,
 - (iii) determines the value of the volume to be cut off from the bottom and the volume to be cut off from the top of an ordered series of aggregates as 12,5% of the total volume of the Pool,
 - (iv) cuts off the maximum number of aggregates from an ordered series of aggregates, both from the bottom and from the top, the total volume of which does not exceed the value of the cut-off volume,
 - (v) if the total volume of cut-off aggregates, either from the bottom or from the top, does not equal the volume to be cut off, the administrator cuts off that part of the volume from the next aggregate in the series (i.e. the first or last in an ordered series of untrimmed aggregates, respectively) which, together with the total volume of cut-off aggregates is equal to the volume to be cut off,
- c) WIRON is determined as the volume-weighted average interest rate from the aggregates remaining after the Main Adjustment, rounded to 3 decimal places, in accordance with the formula:

$$\frac{\sum_i (r_i * v_i)}{\sum_i v_i}$$

where:

r_i – interest rate of aggregate i ,

v_i – volume of aggregate i .

2.6. The Fallback Procedure for WIRON determination

- 2.6.1. The Fallback Procedure is applied if it is not possible to determine the WIRON in the manner specified in point 2.5.3.
- 2.6.2. The WIRON value for day t is determined on the basis of the Fallback Procedure according to the following formula:

$$NBP_RATE_t * \frac{365}{360} + \frac{1}{5} \sum_{k=1}^5 \left(WIRON_{t-k} - NBP_RATE_{t-k} * \frac{365}{360} \right)$$

where:

NBP_RATE_t - NBP reference rate applicable on day t ⁵

$NBP_RATE_t * \frac{365}{360}$ - rounded according to the accuracy specified for WIRON, the NBP reference rate applicable on day t , converted from ACT/360 to ACT/365 convention

$WIRON_{t-k}$ - WIRON determined on Business Days preceding day t (regardless of whether it was determined in a standard manner or as a result of the Fallback Procedure), rounded with the accuracy specified for WIRON.

2.6.3. No time limits to the use of the Fallback Procedure, i.e. the maximum number of days for the Fallback Procedure application, are introduced.

2.6.4. If the need to apply the Fallback Procedure is frequent, the administrator shall carry out a review of the WIRON Method.

3. PUBLICATION AND DISTRIBUTION OF THE WIRON VALUE

3.1. The WIRON shall be published on the administrator's website on each Business Day on which it is determined:

3.1.1. from December 2, 2022 to December 31, 2022 at 9:30 am or shortly after;

3.1.2. from January 1, 2023 to March 31, 2023, at 1:30 pm or shortly after;

3.1.3. from April 3, 2023 at 12:55 pm or shortly after.

3.2. The administrator shall distribute the WIRON in real time, i.e. at 9:30 a.m. or shortly after from December 2, 2022 to March 31, 2023; and at 8:55 a.m. or shortly after from April 3, 2023, through data distributors and under the conditions specified by the latter.

4. THE WIRON RE-DETERMINATION AND RE-DISTRIBUTION PROCEDURE

4.1. The WIRON Re-determination and Re-distribution Procedure shall be applied, if on a given Business Day:

4.1.1. the Data Contributor reports an Error or a Transaction Cancellation in the Input Data:

a) in the period of December 2, 2022 to March 31, 2023 between 9:30 am and 11:30 am,

b) from April 3, 2023 between 8:55 am and 11:30 am.

4.1.2. the Data Contributor contributes the Input Data between 8:15 am and 11:30 am, or

4.1.3. the administrator finds out that the WIRON determination was incorrect for reasons other than those indicated in point 4.1.1 or 4.1.2.

4.2. The WIRON Re-determination and Re-distribution Procedure shall consist in:

⁵ Expressed in %

- 4.2.1. comparing the WIRON value published in accordance with point 3.2 with the value resulting from WIRON re-calculation,
- 4.2.2. the re-determination and re-distribution of WIRON, should the difference resulting from the comparison referred to in point 4.2.1 be not less than 2 basis points.
- 4.3. Re-distribution referred to in point 4.2.2 takes place at 12:00 p.m. or shortly after.

5. UNDETERMINED VALUE OF THE WIRON

- 5.1. WIRON shall be deemed undetermined on a given Business Day if its value was not distributed by 12:00 p.m. or shortly after.
- 5.2. In the case referred to in point 5.1, the publication referred to in point 3.1 shall not take place.

6. FINAL PROVISIONS

- 6.1. Amendments to the Rules
 - 6.1.1. The administrator, upon obtaining a positive opinion of the Oversight Committee, may amend the Rules.
 - 6.1.2. The administrator shall publish the announcement on changes to the Rules and the dates of their entry into force in accordance with point 1.2.1.
 - 6.1.3. Amendments to the Rules shall come into force on the day indicated in the announcement concerning the amendment to the Rules, but not earlier than 30 days after the text of the amended Rules is published on the website.
 - 6.1.4. The administrator may decide on entry into force of the amendment to the Rules after a shorter period of time than indicated in point 6.1.3, if the amendment adapts the Rules to legal provisions in force, stems from supervisory activities of the Polish Financial Supervision Authority, or for Users' safety reasons.

7. ENTRY INTO FORCE

- 7.1. The Rules shall enter into force on 1 December, 2022.

1. A material change to the Method is defined as a change to at least one Key Element of the Method which would impact the WIRON performance in a way that would imply Method change materiality – in compliance with the Method change materiality evaluation principles – in reference to the average WIRON value as well as at least one of the two WIRON volatility measures indicated in point 3.
2. For the purposes of defining a material change to the WIRON Method, the Administrator has defined the following Key Elements of the WIRON Method:
 1. The scope of the market i.e. segment of the money market, the measurement of which is intended in line with the WIRON definition (the segment of Deposit Transactions)
 2. The scope of the entities' segments from which the Deposit Transactions are the Input Data for WIRON in accordance with its definition
 3. Level of the Minimum Volume Threshold of a Single Transaction
 4. Principles of the Main Adjustment
 5. Method of determining the WIRON value
 6. Conditions that trigger the Fallback Procedure (applied after the preparation of the Eligible Transactions Pool):
 - (i) the Maximum Volume Share Threshold of a single Data Contributor,
 - (ii) the Minimum Number of Data Contributors,
 - (iii) the Minimum Total Volume Level
 7. Accuracy of rounding of the WIRON value.
3. As part of the process of evaluating the materiality of a change to the WIRON Method, the Administrator shall introduce materiality evaluation principles that verify the scale and scope of consequences of a change to the Key Elements of the Method by defining the limits beyond which the change of the Method will be treated as a material change. Evaluation of the materiality of a change to the WIRON Method consists in conducting a simulation of counterfactual WIRON index performance within a reference period that takes into account the planned change to the WIRON Method (the so-called model WIRON performance), and comparing it to actual historical WIRON performance (the so-called historical WIRON performance) in the same period by means of the following 3 statistical measures:
 - (i) the arithmetic mean of WIRON values (measure of average value),
 - (ii) average of the WIRON absolute first differences (measure of volatility),
 - (iii) standard deviation of the WIRON first differences (measure of volatility).

For each of the above measures, a statistical test with the significance level of 5% is performed to verify whether the values of a given measure for the model and the historical WIRON performance differ from each other in a statistically significant manner.