THE RULES OF WIRON COMPOUND INDICES FAMILY

WIRON Compound Indices Family Rules, adopted by the Resolution of the Management Board of GPW Benchmark No 86/2022 of 30 November 2022		
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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 1, points 2 and 3 – editorial corrections	8.12.2022

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	a calendar day, with the exception of Saturdays, Sundays and statutory holidays, on which Data Contributors operate on the Polish money market
Index	each of the indices indicated in point 2.1 of the Rules
Index Date	in accordance with the WIRON Rules
Key Element of the Method	an element of the Method, the change of which may be considered as a material change referred to in Article 28 (2) of the Benchmarks Regulation
Licence Agreement	the agreement between the administrator and the User, which entitles to use and apply the Indices
Oversight Committee	the Oversight Committee of Interest Rate Benchmarks, performing the oversight function as defined in Art. 5 of the Benchmarks Regulation
Method of Indices/Method	the principles of selection of the Input Data and determination of each of the Indices
Reference Period	the period for which the interest rate is determined in accordance with the compounded-interest method, based on the values of the WIRON, where the Index Dates are Business Days included in this period (excluding the Reference Period end date)
Reference Period Start Date Determination Convention	the rules of determination of the Reference Period start sate on the basis of the Reference Period end date, adopted by the administrator
User	an entity entitled to use and apply the WIRON Compound Indices
WIRON Compound Rate Index Date	the Reference Period end date, i.e. the next Business Day after the WIRON Index Date, which is the last one used to determine the WIRON Compound Rate
WIRON Compound Index' Index Date	the Reference Period end date, i.e. the next Business Day after the WIRON Index Date, which is the last one used to determine the WIRON Compound Index

1. GENERAL PROVISIONS

1.1. The Rules

1.1.1. The Rules of the WIRON Compound Indices specify:

a) the definition of WIRON Compound Indices and description of the reference market, the measurement of which is the purpose of providing the WIRON Compound Indices,

b) the rules for publication and distribution of WIRON Compound Indices' values,

c) a description of Input Data and the rules of priority of their use under the Provision Method,

d) the procedure of the administrator in case of the need to re-determine and re-distribute the corrected WIRON Compound Indices' values,

e) the procedure in the circumstances where the Input Data is insufficient,

f) the list of Key Elements of the Method and the definition of the material change thereof.

1.1.2. The rules for the cyclical review of the definition and the method, the rules for consulting on the proposed material change in the method and the rules for cessation of providing the WIRON Compound Indices shall be set out in a separate Procedure for the Review and Change of the Methods of Interest Rate Benchmarks, published in accordance with point 1.2.1 of the Rules.

1.1.3. The rules of permanent oversight over the provision of WIRON Compound Indices 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. GPW Benchmark S.A. has outsourced to a third party the task of determining the WIRON Compound Indices based on the WIRON value, in accordance with the Method specified in point 3.4 of the Rules.

1.1.5. Undefined terms written in capital letters in the 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 the Users with announcements and relevant documents by placing them on gpwbenchmark.pl website.

1.2.2. The Users of WIRON Compound Indices 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 Compound Indices

1.3.1. The right to use and apply WIRON Compound Indices shall result 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 WIRON Compound 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 Compound Indices determination process.

2. LIST OF INDICES FROM THE WIRON COMPOUND INDICES FAMILY

2.1. The WIRON Compound Indices Family includes:

2.1.1. the WIRON Compound Rates for backward-looking predefined periods:

a) WIRON 1M Compound Rate

b) WIRON 3M Compound Rate

c) WIRON 6M Compound Rate

2.1.2. the Compound Index[1]

a) WIRON Compound Index.

3. DEFINITION AND METHOD FOR DETERMINING THE WIRON COMPOUND INDICES

3.1. Definition of the Indices

3.1.1. The WIRON Compound Indices are intended to reflect the performance of the WIRON reference market in time.

3.1.2. The WIRON 1M Compound Rate is an interest rate compounded on the basis of WIRON over a 1-month period.

3.1.3. The WIRON 3M Compound Rate is an interest rate compounded on the basis of WIRON over a 3-month period.

3.1.4. The WIRON 6M Compound Rate is an interest rate compounded on the basis of WIRON over 6-month period.

3.1.5. The WIRON Compound Index is the cumulative value of an investment earning interest each day at the WIRON interest rate, expressed in index points.

3.1.6. The WIRON Compound Index Family is a family of benchmarks within the meaning of Article 3(1)(4) of the Regulation on Benchmarks, since:

a) the Indices are determined on the basis of Input Data of the same nature,

b) the Indices intend to measure the same reference market, specified in point 3.2.1 of the Rules.

3.1.7. Each index of the WIRON Compound Index Family is intended to be used as an interest rate benchmark within the meaning of Article 3(1)(22) of the Benchmarks Regulation.

3.1.8. The WIRON 1M Compound Rate, WIRON 3M Compound Rate and WIRON 6M Compound Rate are determined and published with accuracy of 5 decimal places.

3.1.9. The WIRON Compound Index is determined and published with accuracy of 8 decimal places with the initial value at 100.

3.2. The reference market of the WIRON Compound Index Family

3.2.1. The reference market of the WIRON Compound Index Family is the same as the WIRON Reference Market, as specified in point 3.1 of the Rules of WIRON Interest Rate Index.

[1] i.e. an index for which a specific day of the beginning of the calculation has been indicated as the basis for calculating the compounded interest - see point 3.4.3 of the Rules

3.3. The Input Data

3.3.1. As Input Data for determining the WIRON Compound Indices, the administrator uses the WIRON values determined and distributed in real time in accordance with the Rules of WIRON Interest Rate Index.

3.3.2. Data on the WIRON values, used as Input Data for WIRON Compound Indices, are the data which:

a) relates to the Deposit Transactions on the domestic money market, coming from a representative panel of Data Contributors, which the administrator deems adequate to accurately and reliably reflect the reference market indicated in point 3.2 of the Regulations,

b) fully verifiable.

3.3.3. The provisions of the Benchmark Regulation regarding the priority of Input Data shall not apply to the WIRON Compound Indices Family.

3.3.4. The Method of WIRON Compound Indices does not provide for the use of extrapolation models or methods by the administrator.

3.3.5. The Method of WIRON Compound Indices does not provide for the exercise of discretion in relation to Input Data by the administrator or by the entity commissioned by the administrator to perform tasks related to the determination of WIRON Compound Indices.

3.3.6. The WIRON Compound Indices are mathematical transformations of WIRON values.

3.4. The Method of WIRON Compound Indices

3.4.1. The WIRON Compound Rate - determination method

a) WIRON Compound Rate shall be determined for a given WIRON Index Date Compound Rate as an interest rate resulting from the compounding of interest resulting from a number of WIRON values, the Index Dates of which are individual Business Days of the Reference Period (excluding the Reference Period end date), for which the Reference Period end date is the Index Date and the Reference Period start date is the Business Day resulting from the shift of the Reference Period end date back by a predefined period (i.e. 1M, 3M or 6M) in accordance with the Reference Period Start Date Determination Convention specified in point 3.4.3.

b) The algorithm for determining the WIRON Compound Rate for the predefined maturity x:

$$CR_{x,y} = \left[\left(\prod_{i=1}^{bd}\left(1 + \frac{WIRON_i * a_i}{365}\right)\right) - 1\right] * \frac{365}{d}$$

where:

- $CR_{x,y}$ – the value of the WIRON Compound Rate[2] for the predefined period x (i.e. 1M, 3M or 6M) and the Index Date of the WIRON Compound Rate y; the value of $CR_{x,y}$ is determined with accuracy of 5 decimal places[3].

[2] WIRON Compound Rate and WIRON are interest rates, i.e. the WIRON Compound Rate can be equal to 5.12345%, which reflects the number 0.0512345, and the WIRON can be equal to 5.123%, which corresponds to the number 0.05123.

[3] rounding refers to index value expressed in %, e.g. the index value rounded to 5 decimal places is 5.12345%.

- $WIRON_i$ – the value of the WIRON, for which the Index Date is the *i-th* Business Day belonging to the Reference Period determined for a given value of $CR_{x,y}$ (algorithm for determining the Reference Period – see: 3.4.3).

a_i –number of calendar days for which the $WIRON_i$ is applied[4].

- *bd* – the number of Business Days falling in the Reference Period determined for a given value of $CR_{x,y}$, including the Reference Period start date and excluding the Reference Period end date.

- *d* – number of calendar days in the Reference Period determined for a given value of $CR_{x,y}$, including the Reference Period Start Date and excluding the end date.

3.4.2. The Reference Period Start Date Determination Convention

The Reference Period end date shall be the WIRON Compound Rate Index Date.

The start date of the Reference Period shall be the Business Day resulting from the shift of the Reference Period end date back by a predefined period (i.e. 1M, 3M or 6M) in accordance with the "modified preceding" convention, which is the following:

If a potential Reference Period start date, i.e. resulting from the calendar shift[5] of a given Reference Period end date backwards by a certain number of months, would fall on a day that is not a Business Day or a non-existent day (e.g. 30th February), then the nearest Business Day preceding this potential Reference Period start date is selected as the Reference Period start date, unless it falls already in the month preceding the month of the potential Reference Period start date. In this case, the nearest Business Day following the potential Reference Period start date shall be selected as the Reference Period start date. If, in turn, the potential Reference Period start date is a Business Day, that Business Day is selected as the Reference Period start date.

3.4.3. The WIRON Compound Index - determination method

a) The WIRON Compound Index is a cumulative value, expressed in index points, of an investment with a specified start value on the start date that is renewed each day including interest capitalization, on each subsequent WIRON Index Date starting from the start date, at an interest rate equal to the WIRON value as of that Index Date. The Index Date of the WIRON Compound Index is identical with its publication date.

b) For the WIRON Compound Index, the Start Date was set for January 2, 2019, and the start value for 100.

c) The algorithm for determination of the WIRON Compound Index:

$$CI_y = \begin{cases} CI_0, & y = 0 \\ CI_{y-1} * \left(1 + \dfrac{WIRON_{y-1} * a_{y-1}}{365}\right), & y > 0 \end{cases}$$

where:

[4] e.g. the value of WIRON for which the Index Date is Monday is valid for one day - until Tuesday (if a given Tuesday is a Business Day), and the value of WIRON index for which the Index Date is Friday is valid for 3 days - until Monday (if a given Monday is a Business Day).

[5] e.g. the result of a calendar shift of the n-th day of a given month by 1 month is the n-th day of the previous month.

- CI_y – the value of WIRON Compound Index as of the Index Date *y*; the value of the CI_y is determined with accuracy of 8 decimal places, whereby for its determination the unrounded value CI_{y-1} is used[6]

- CI_0 – the start value of WIRON Compound Index (where y=0 is the start date).

- WIRON $_{y-1}$ – the value of WIRON[7] as of the Index Date y-1, i.e. the Business Day preceding the Index Date of WIRON Compound Index *y*.

- a_{y-1} – the number of calendar days, for which WIRON value for the Index Date *y-1* i.e. $WIRON_{y-1}$ is used.[8]

d) The Method of determining the compounded interest rate for any Reference Period based on the WIRON Compound Index

The WIRON Compound Index can be applied to determine the compounded interest rate for any Reference Period, by using the following formula:

$$CIR_{k,l} = \left(\frac{CI_l}{CI_k} - 1\right) * \frac{365}{d}$$

where:

$CIR_{k,l}$ - the value of WIRON Compound Index as of the WIRON Compound Index Date y, for which the Reference Period start date is *k* and the Reference Period end date is *l*.

CI_k, CI_l - values of WIRON Compound Index as of the WIRON Compound Index Dates *k* and *l*.

d - the number of calendar days over the Reference Period, for which the Reference Period start date is *k* and the Reference Period end date is *l*, including the Reference Period start date but excluding the Reference Period end date.

$d <= 365$.

4. PUBLICATION AND DISTRIBUTION OF THE WIRON COMPOUND INDICES

4.1. The WIRON Compound Indices shall be published on the administrator's website on each Business Day on which they are determined, from December 2, 2022 to December 31, 2022 at 9:30 a.m. or shortly after. From 1 January 2023, WIRON Compound Indices shall be published on each Business Day at 1:30 p.m. or shortly after.

4.2. The administrator shall make available the values of the WIRON Compound Indices in real time, i.e. at 9:30 a.m. or shortly after from 2 December 2022 through data distributors and under conditions specified by the latter.

5. THE RE-DETERMINATION AND RE-DISTRIBUTION PROCEDURE

5.1. The Re-determination and Re-distribution Procedure of the WIRON Compound Indices shall be applied if:

[6] rounding refers to the index value expressed in index points, so for example the index value rounded to 8 decimal places is 100.12345678.

[7] The WIRON is an interest rate, i.e. can be equal to e.g. 5.123%, which corresponds to the number 0.05123.

[8] e.g. the value of WIRON, for which the Index Date is Monday, is valid for one day - until Tuesday (if a given Tuesday is a Business Day), and the value of the WIRON, for which the Index Date is Friday, is valid for 3 days – until Monday (if a given Monday is a Business Day).

5.1.1. the WIRON values would be re-determined and re-distributed,

5.1.2. the administrator finds out incorrect determination of the values of the WIRON Compound Indices for reasons other than indicated in point 5.1.1.

5.2. In the circumstances referred to in point 5.1.1 or 5.1.2, the values of the WIRON Compound Indices shall be re-determined and re-distributed.

5.3. The WIRON Compound Indices shall be re-distributed at 12:00 p.m. or shortly after.

6. UNDETERMINED VALUE OF THE WIRON COMPOUND INDICES

6.1. The WIRON Compound Indices shall be deemed undetermined on a given Business Day if its value was not distributed by 12:00 p.m. or shortly after.

6.2. The WIRON Compound Indices shall be deemed undetermined on a given Business Day if their values were not distributed by 12:00 p.m. or shortly after.

6.3. In the circumstances referred to in point 6.1 and 6.2, the publication referred to in point 4.1 does not take place.

7. FINAL PROVISIONS

7.1. Amendments to the Rules

7.1.1. The administrator, upon a positive opinion of the Oversight Committee, may amend the Rules.

7.1.2. The administrator shall publish the announcements on any changes to the Regulations and the dates of their entry into force in accordance with point 1.2.1.

7.1.3. 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.

7.1.4. 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.

8. ENTRY INTO FORCE

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

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Annex 1. The „material change" to the WIRON Compound Indices Method

1. The material change to the Method is a change to any of the Key Elements of the Method.
2. The administrator defines the following Key Elements of the Method of Indices:
   a. Key Elements of the Method for the WIRON 1M Compound Rate, WIRON 3M Compound Rate, WIRON 6M Compound Rate
      i. **base index** – WIRON
      ii. **the Reference Period Start Date Determination Convention**

iii. **rounding accuracy** – to 5 decimal places.

b. Key Method Elements for the WIRON Compound Index.

i. **base index** – WIRON

ii. **base date** – 2 January, 2019

iii. **base value** – 100

iv. **Rounding accuracy** – 8 decimal places