

## Legislation

### Rules and Regulations for Treasury Securities Fixing

#### § 1 Definitions

The following terms used in the Rules and Regulations shall mean:

1. **TS**  
- the Treasury Securities offered in the domestic primary market, excluding bonds offered in the retail market.
2. **Benchmark issues**  
- issues of TS referred to in § 2 item 13 of the Rules and Regulations Governing the Activities of the Treasury Securities Dealer,
3. **Issuer**  
- the Minister of Finance of the Republic of Poland,
4. **TS Fixing Organiser**  
- entity setting up principles and supervising TS fixing,
5. **TS Fixing Commissioner, hereinafter referred to as Commissioner**  
- entity acting on behalf of the TS Fixing Organiser which performs certain functions related to TS fixing provided for in an agreement,
6. **Informational Rate, Fixing Rate**  
- price for PLN 100 of TS face value (clean price) given within an accuracy of 1 grosz, set at TS fixing,
7. **TSD**  
- Treasury Securities Dealers,
8. **Treasury BondSpot Poland Market**  
- the electronic market for Treasury Securities run by the Commissioner where Treasury Securities are traded pursuant to an agreement entered into between the Commissioner and the Issuer, hereinafter referred to as "Market".

#### § 2 General terms and conditions

1. TS fixing consists in activities undertaken to set Fixing Rates and Informational Rates of TS bid/offer, hereinafter referred to as TS Fixing.
2. The TS Fixing Organiser is the National Bank of Poland and the Commissioner is BondSpot S.A.
3. The TS Fixing Organiser determines principles of the TS Fixing in agreement with the Issuer and the Commissioner and exercises general supervision over the functioning of TS Fixing.
4. The Commissioner ensures the functioning of the fixing system and its efficiency and technical safety.
5. Responsibilities division between the TS Fixing Organiser and the Commissioner is provided for in the agreement signed between them.

### **§ 3**

#### **Participants of fixing sessions**

1. TSD are TS Fixing Participants.
2. The list of TS Fixing Participants is reviewed and announced by the TS Fixing Organiser through the Commissioner at least 3 days before the date of commencement or conclusion of a TS Fixing Participant's activity.

### **§ 4**

#### **Securities forming the basis for fixing**

1. The Fixing Rates and the Informational Rates are announced for benchmark issues and other issues.
2. The list of TS subject to fixing shall be set by the Issuer.
3. Changes in the TS list forming the basis for TS fixing are announced by the Commissioner at least 7 days before the date of commencing or concluding the announcement of Fixing Rates and Informational Rates for a given TS.

### **§ 5**

#### **Organisation of fixing sessions**

1. The Fixing Sessions ("Sessions") are organised to set the TS Fixing Rates and the Informational Rates.
2. The session are held on the days when there is trading in the Market.
3. The Sessions begin 5 minutes before F Hour and after F Hour the Commissioner announces the Fixing Rates and the Informational Rates.
4. The session is carried on via the Market and in accordance with its Rules and Regulations.
5. F Hour for
  - a. the first Session is 09.30. a.m.,
  - b. the second Session is 04.30. p.m.

### **§ 6**

#### **TS quoting at fixing sessions**

1. During the Session via the Market the Participants submit bid and offer instructions for each TS referred to in § 4. TS quoting during the Session is carried out in accordance with the rules that are in force in the Market for spot transactions, i.e. transactions settled at the date T+2.
2. Each Participant may submit any number of instructions at the Session from its beginning until F Hour.

## **§ 7**

### **Setting TS Fixing Rates and Informational Rates**

1. The Fixing Rates and Informational Rates are calculated on the basis of anonymous bid and offer instructions of a face value being the multiple of PLN 5 million. To calculate the Fixing Rates and Informational Rates those instructions are taken into account that are present in the system and active at the moment of the Session's commencement, annulled in the course of the Session and those on the basis of which transactions have been concluded during the Session.
2. The Fixing Rate and the Informational Rates for a given TS are calculated according to principles referred to in Attachment no 1.
3. TS Fixing Organiser, with the consent of the Issuer, determines and announces through the TS Fixing Commissioner the minimum number of Participants who should submit bid and offer instructions for a given TS so as to enable to determine the Fixing Rate and the Informational Rates for a given TS.
4. If at a given Session bid and offer instructions for a given TS have been submitted by a smaller number of Participants than the number determined in §7.3, the Fixing Rate and the Informational Rates for a given TS are not set for the Session.
5. Changes in the minimum number of Participants for the purpose of calculating the Fixing Rates and the Informational Rates are announced 7 days prior to their entering into force.

## **§ 8**

### **Announcing Fixing Rates and Informational Rates**

1. The Commissioner sets the Fixing Rates and the Informational Rates and their corresponding profitability with the accuracy of 1 basis point calculated according to the formula provided for in Attachment no 2.
2. The Commissioner sets the Fixing Rates and the Informational Rates and their corresponding profitability without a delay in the information services and mass media agreed upon with the Issuer and TS Fixing Organiser, and in other information services and mass media.

## **§ 9**

### **Duties and rights of the Participant**

1. The duties of a TS Fixing Participant consist in:
  - a. Active participation in each TS Fixing according to the principles set forth in the Rules and Regulations by continuously maintaining TS bid and offer prices referred to in §4 on the Platform in the period from the Session's commencement until Hour F inclusive.
  - b. Submitting a written explanation to the Commissioner on the working day following the Session at the latest, of the reasons for failing to participate in the

- TS Fixing on a given day.
2. TS Fixing Participant has the right to motion comments, claims and requests related to the functioning of TS Fixing to the TS Fixing Organiser.

## **§ 10**

### **Duties of TS Fixing Commissioner**

1. The Commissioner is obliged to provide information related to the level of activity of TSD at the Sessions to the Issuer in an agreed form.
2. The Commissioner provides the issuer and the TS Fixing Organiser with information about any irregularities occurred at the Session.

## **§ 11**

### **Final provisions**

1. In specifically justified cases and acting in agreement with the TS Fixing Organiser and Issuer, and upon immediate notification of the Participants the Commissioner may:
  - a. change the hour of the Session's commencement, except that F Hour should not be set later than
    - 12.00 a.m. for the first Session,
    - 4.30 p.m. for the second Session,
  - b. cancel the Session.
2. In cases when it is impossible to carry on the Session, the Commissioner, acting in agreement with the TS Fixing Organiser and Issuer, may cancel the Session.
3. The TS Fixing Organiser, the Commissioner and any persons who in virtue of performing their duties have acquired information related to the course of the Session are obliged to maintain the information received from TS Fixing Participants in confidence.
4. The TS Fixing Organiser and the Commissioner are not liable for any damages incurred as a result of applying Fixing Rates and Informational Rates.
5. The TS Fixing Organiser acting in agreement with the Commissioner and the Issuer has the right to amend the Rules and Regulations.

## **TS Fixing algorithm**

1. To set the Fixing Rate and the Informational Rates all two-sided quotations by TS Fixing Participants present in the system during the Session are taken into account, i.e. quotations in which the Participant declares his readiness to simultaneously bid and offer a given TS that is traded in TS Fixing at a bid and offer price determined by the Participant.
2. One pair of bid/offer price for a given TS is chosen from the set of the above mentioned quotations of each Participant for which the spread between the offer and the bid price is the smallest.
3. If the condition referred to in item 2 is met by a few pairs of prices (price spread is the same) the chosen quotation is the one where the offer price has the lowest value.
4. The number of price pairs representing approximately 20% of the quoting under the fixing procedure which have the biggest price spread are rejected from the set of price pairs chosen in the above mentioned way quoted by individual TS Fixing Participants for a given TS.
5. Informational Rates (Bid Informational Rate, Offer Informational Rate) for a given TS are determined as arithmetic mean of the bid and offer prices that are left at this stage.
6. The Fixing Rate for a given TS is determined as arithmetic mean of the determined Bid Informational Rate and Offer Informational Rate of the TS.

### **Attachment no 2 to the Rules and Regulations of Treasury Securities Fixing**

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#### **1. Profitability to maturity for:**

- a) coupon Treasury bonds in the period of the last coupon payment (calculated for the transactions which settlement dates fall in the last coupon payment period; the profitability to maturity is calculated on the settlement day of the transaction)

- b) zero-coupon Treasury bonds in the last year of maturity period (calculated for the transactions which settlement dates fall in the last year of maturity period; the profitability to maturity is calculated on the settlement day the transaction)

is set through the following formula:

$$r = \left( \frac{(N + N * k)}{C_r} - 1 \right) * (D/d)$$

where:

$r$  - yield to bonds' maturity,

$N$  - face value of bonds,

$k$  - interest on coupon,

$C_r$  -

bonds'

settlement price =  $c + o_n$

price

where:

$c$  - "clean" price for face value of bonds

$o_n$  - value of interest on one bond accrued from the date of the last coupon payment to the date of the transaction settlement.

$D$  - number of days in a year,

$d$  - number of days between the date of transaction settlement and the date of bonds' redemption.

## 2. Internal rate of return for treasury bonds with maturity over one year:

The value of the internal rate of return should be computed with the usage of mathematic iteration method. The resulting WSZ value should be equal to the rate discounting cash-flows spread in time, not necessarily periodical, the sum of which should be equal to the initial payment. The above is expressed by the following formula:

$$P_0 = \sum_{i=1}^N \frac{P_i}{(1 + \text{WSZ})^{\frac{(d_i - d_0)}{365}}}$$

where:

$P_0$  - settlement price of the bond ("clean" price of the bond + interest accrued as of the date of transaction settlement),

$P_i$  -  $i$ -th payment (the value of the coupon on the dates from  $d_{i-1}$  to  $d_i$ ; nominal value of the bond + value of the coupon on the date  $d_i$ ),

$d_i$  -  $i$ -th or last date of payment,

$d_0$  - transaction settlement date,

$WSZ$  - internal rate of return in percent

### 3. Settlement price of a treasury bill:

$$C = \frac{10000}{\left( \frac{r}{360 / d} + 1 \right)}$$

where:

$c$  - settlement price for the face value of the treasury bill,

$r$  - yield to maturity of a treasury bill,

$d$  - number of days between the date of transaction settlement and the date of treasury bill's redemption.

### The following assumptions should be made for the needs of the IT system:

1. Yield to maturity of a treasury bill " $r$ " is quoted in percent within an accuracy of two decimal places,
2. Settlement price for the face value of a treasury bill " $c$ " generated according to the above formula is rounded to 1 grosz in accordance with general rules.