

Pursuant to Article 14, paragraph 1, item 4 and Article 36 of the Law on the National Bank of Serbia (RS Official Gazette, Nos 72/2003, 55/2004 and 44/2010), the Executive Board of the National Bank of Serbia issues

## **DECISION ON CONDITIONS AND MANNER OF IMPLEMENTING OPEN MARKET OPERATIONS**

### **General provisions**

1. This Decision sets forth the types of operations and transactions implemented by the National Bank of Serbia (NBS) in the open market, types of securities eligible for those operations, conditions under which banks may participate in open market operations, and the terms and conditions of conducting those operations.

2. The NBS implements open market operations through purchase and sale of securities with a view to regulating liquidity of the banking sector, influencing short-term interest rates and signalling the monetary policy stance.

### **Types of operations and transactions**

3. Depending on their objectives, dynamics and manner of implementation, open market operations may be classified into:

- 1) main operations,
- 2) longer-term operations,
- 3) fine-tuning operations.

The NBS conducts the operations referred to in paragraph 1 hereof with banks which meet the conditions laid down by this Decision, at securities auctions (hereinafter: auction) or outside auctions – bilaterally, through the following types of transactions:

- 1) repo transactions,
- 2) outright transactions.

A repo transaction, under the terms hereof, means the purchase and sale of securities where parties to the agreement have agreed that the seller shall sell securities to the buyer on the purchase date, and the buyer shall pay the purchase price for such securities to the seller, assuming at the same

time the obligation to sell the same securities to the seller on the agreed repurchase date, when the seller shall pay the agreed repurchase price.

An outright transaction, under the terms hereof, means the purchase and sale of securities which does not involve the obligation of reselling or repurchasing securities.

4. Main operations play the most important role in terms of achieving the objectives of open market operations, and may be implemented in order to supply liquidity to the banking sector or to absorb excess liquidity from the banking sector.

Main operations are conducted on a regular basis, at standard auctions, according to the predetermined auction calendar. They are conducted at the NBS's key policy rate.

The NBS's Executive Board shall determine by a separate decision which open market operations and/or transactions of the purchase or sale of securities are deemed to be main operations.

5. Longer-term operations are conducted chiefly in order to supply liquidity to the banking sector and/or to absorb excess liquidity from the banking sector in the longer term.

As a rule, longer-term operations are conducted at standard auctions, but may also be conducted on a bilateral basis.

6. Fine-tuning operations are conducted when needed, to prevent or ease the effects of sudden disturbances in banking sector liquidity, and particularly their effect on short-term interest rates.

As a rule, fine-tuning operations are conducted at quick auctions, but may also be implemented on a bilateral basis.

### **Securities**

7. Under the terms hereof, the NBS may purchase and sell dinar securities without a currency clause, issued by:

- 1) the National Bank of Serbia;
- 2) the Republic of Serbia;
- 3) an international financial organisation and a development bank, or a financial institution which was founded by a foreign state and whose credit rating was set at "AAA" by Standard&Poor's or Fitch-IBCA, and/or "Aaa" by Moody's;

4) a domestic company with a solvency scoring of minimum '(D) acceptable solvency' as assigned by the Serbian Business Registers Agency or with other solvency/creditworthiness assessment equivalent to '(D) acceptable solvency', and whose original maturity is maximum ten years.

The foreign currency clause referred to in paragraph 1 hereof means the currency clause pursuant to the law on foreign exchange operations, as well as any other clause establishing dinar exchange rate risk protection.

Under the terms of paragraph 1 hereof:

- an international financial organisation is a financial organisation that the Republic of Serbia holds membership of or with which it entered into an agreement to regulate activities of that financial organisation in the Republic of Serbia;
- a development bank or financial institution founded by a foreign state is a bank and/or institution founded by a member state of the European Union or the Organisation for Economic Cooperation and Development (OECD);
- a domestic company is a company or other legal entity headquartered in the Republic of Serbia, except for a company or legal entity supervised by the NBS in accordance with the provisions of the law governing the status, organisation, powers and functions of the NBS.

When purchasing and selling the securities referred to in paragraph 1, subparagraph 4 of this Section, the NBS shall take into account the total nominal value of those securities in the NBS portfolio, maximum exposure to individual issuers of such securities, their maturity, as well as other criteria, in accordance with the Governor's decision

8. To ensure the collection of receivables against purchase/sale of securities, in cases when the NBS is the buyer in a repo transaction, it may apply the downward adjustment to the nominal value of securities, while in cases when the NBS is the seller in a repo transaction, it may apply the upward adjustment to the nominal value.

If the NBS purchases amortising bonds in a repo transaction, the downward adjustment shall apply to the portion of the nominal value of securities remaining on their repurchase date. If the NBS sells amortising bonds in a repo transaction, the upward adjustment shall apply to the remaining portion of the nominal value of these securities on their sale date.

If indexed securities are subject to a repo transaction, the downward/upward adjustment shall apply to the nominal value of these

securities, i.e. to the remaining portion of their nominal value which is determined in line with paragraph 2 hereof, multiplied by the index ratio valid on the sale date.

The index ratio referred to in paragraph 3 hereof shall be determined in line with the act on the issue of indexed securities.

The governor or a person authorised by the governor shall adopt the decision determining the amount of adjustments referred to in paragraph 1 hereof, by types of securities whereby the NBS performs repo transactions and by their remaining maturity, bearing in mind the market value of these securities and current market and monetary developments.

The decision referred to in paragraph 5 hereof shall be published on NBS's website.

### **Participants**

9. To participate in open market operations, a bank must:

- 1) be a member of the Central Securities Depository and Clearing House (hereinafter: Central Securities Depository);
- 2) have a master repo agreement with the NBS, in case of repo transactions, or a master outright agreement, in case of outright transactions;
- 3) must not have been prohibited to engage in certain securities purchase/sale transactions with the NBS pursuant to Section 35 hereof.

A bank meeting the conditions referred to in paragraph 1 hereof shall purchase and sell securities in its own name and for its own account.

Master repo agreement referred to in paragraph 1, indent 2) of this Section shall be a financial collateral arrangement within the meaning of the law governing financial collateral, and shall regulate in particular the relations between the National Bank of Serbia and a bank in terms of carrying out repo purchase/sale of securities, concluding a separate repo agreement on such purchase/sale, performance of obligations by parties to the agreement, as well as termination of the master and separate repo agreement.

### **Auctions**

10. The purchase and sale of securities at auctions, including the sending of auction notices, the submission of banks' bids for purchase/sale of securities, and the processing and acceptance of those bids are performed via the web platform *Monetary Operations of the NBS* (hereinafter: web platform).

The access to and use of the web platform is regulated in more detail in the user manual.

Exceptionally, in case of technical problems in operation of the web platform, the submission of banks' bids for the purchase/sale of securities and the acceptance of those bids may also be performed via e-mail or telefax.

If due to technical problems in the web platform's operation, a bank fails to submit the bid within the deadline specified in the decision to hold an auction, the governor or a person authorised by the governor may, at the bank's request, extend the deadline for the submission of bids.

Bids submitted by banks via e-mail or telefax in line with paragraph 3 hereof, as well as the request for extension of the deadline for the submission of bids referred to in paragraph 4 hereof, shall be taken into processing by the NBS only if those bids and the request were submitted before the expiry of the deadline for the submission of bids, determined by the decision to hold an auction.

11. For auctions held on a regular basis, the governor or a person authorised by the governor shall issue a decision determining the calendar of auctions the NBS plans to hold over a specific period. The decision shall be published on NBS's website.

12. Depending on the timeframe of their implementation, the NBS may organise:

- 1) standard auctions,
- 2) quick auctions.

As a rule, standard auctions are conducted on the first business day after auction notices are sent out to banks.

As a rule, quick auctions are conducted on the same business day, i.e. on the day auction notices are sent out to banks.

13. The NBS may hold the following types of auctions:

- 1) fixed rate auctions – at the interest rate pre-defined and announced by the NBS;
- 2) variable rate auctions – at the interest rate that has not been pre-defined by the NBS.

Variable rate auctions may be:

1) multiple rate auctions where each participant whose bid was accepted by the NBS purchases/sells securities at the interest rates it has offered;

2) single rate auctions where each participant whose bid was accepted by the NBS purchases/sells securities at the same interest rate.

14. The governor or a person authorised by the governor shall issue a decision to hold an auction, which shall contain the following main data:

- 1) type of operation;
- 2) type of transaction;
- 3) type of auction;
- 4) auction date;
- 5) type of securities;
- 6) interest rate – in case of fixed rate auctions;
- 7) date of purchase/sale of securities;
- 8) period for which a repo transaction is concluded, and/or the repurchase date – in case of repo transactions;
- 9) downward/upward adjustment applied to the nominal value of securities – in case of repo transactions;
- 10) minimum amount that a bank's bid may be made out to;
- 11) number of bids that a bank may submit at a variable rate auction;
- 12) deadline for bid submission.

In addition to data referred to in paragraph 1 hereof, the decision to hold an auction may also contain data on the maximum amount of securities to be purchased/sold by the NBS, their issue/maturity dates, minimum or maximum interest rate that a bank's bid may contain to be accepted for processing, maximum amount that a bank's bid may be made out to, and other information relevant for the purchase/sale of securities.

15. The NBS shall publish the decision to hold an auction on its website and shall send out auction notices to banks – for standard auctions, as a rule, one business day before the auction date, and for quick auctions, as a rule, on the auction date.

The auction notice shall contain data specified in the decision to hold an auction and shall be sent out to banks via the web platform and e-mail.

The NBS may publish the auction notice on its Refinitiv and/or Bloomberg pages.

### **Fixed rate auctions**

16. At fixed rate auctions, participants may submit to the NBS only one bid specifying the amount of securities they intend to purchase/sell at the interest rate predefined and announced by the NBS.

Following the expiry of the time for bid submission, the governor or a person authorised by the governor shall decide on the total nominal value of securities to be purchased/ sold at the auction.

If the total amount of securities bid by banks is higher than the total amount of securities that the NBS intends to purchase/sell at the auction, the securities shall be proportionately allotted to individual participants, commensurately with the share of each participant's bid in the total amount of securities bid.

17. If the NBS is repo selling securities with different maturity dates, it shall allot securities within accepted bids to individual buyers according to the criterion of the maturity date of securities and the criterion of the amount of securities specified in the buyers' bids, allotting securities with the latest maturity date to buyers bidding the lowest amount of securities.

If securities cannot be allotted to individual buyers according to the criteria referred to in paragraph 1 hereof, they shall be allotted by the sequence of bid receipt, beginning from the bid last received.

If the NBS is repo purchasing securities with different maturity dates, it shall purchase the securities within the accepted bids of individual sellers according to the criterion of their maturity date, beginning from securities with the earliest maturity date.

In the event set out in paragraph 3 hereof, the NBS may also purchase securities according to the sequence in which the securities are specified in participants' bids – if such an option is envisaged by the decision to hold an auction.

### **Variable rate auctions**

18. At variable rate auctions, participants may submit one or more bids to the NBS, in accordance with the decision to hold an auction, specifying the amount of securities they intend to purchase/sell, along with applicable interest rates.

19. The sequence of individual bids shall be determined based on the level of interest rates specified therein, starting from the lowest to the highest

interest rate – if the NBS is selling securities, and from the highest to the lowest interest rate – if the NBS is purchasing securities.

Once the sequence referred to in paragraph 1 hereof is determined, the governor or a person authorised by the governor shall decide on the maximum and/or minimum interest rate that a bid may be made out to in order to be accepted and on the total nominal value of securities to be purchased and/or sold at the auction.

The total amount of securities shall be allotted according to the sequence referred to in paragraph 1 hereof. If several bids with the same maximum/minimum interest rate are accepted, and the total amount of securities specified in those bids is higher than the total amount of unallotted securities that the NBS purchases/sells – the allotment shall be made proportionately to the share of those bids in the total amount of securities specified in the bids at the maximum/minimum interest rate.

20. At single rate auctions, the NBS shall sell securities at the highest accepted interest rate, and shall purchase securities at the lowest accepted interest rate.

21. If the NBS is repo selling securities of different maturity dates at a multiple rate auction, it shall allot securities within accepted bids to individual buyers according to the criterion of the maturity date of securities and the criterion of the interest rate specified in the buyers' bids, allotting securities with the latest maturity date to buyers bidding the highest interest rate.

If the NBS is repo selling securities of different maturity dates at a single rate auction, it shall allot securities within accepted bids to individual buyers according to the criterion of the maturity date of securities and the criterion of the quantity of those securities, allotting securities with the latest maturity date to buyers bidding the smallest quantity of securities.

If securities cannot be allotted to individual buyers according to the criteria referred to in paragraphs 1 and 2 hereof, they shall be allotted by the sequence of bid receipt, beginning with the bid last received.

22. If the NBS is repo purchasing securities of different maturity dates at a multiple rate auction and/or single rate auction, it shall purchase the securities within the accepted bids of individual sellers according to the criterion of their maturity date, beginning with those with the earliest maturity date.

In the event set out in paragraph 1 hereof, the NBS may also purchase securities according to the sequence in which the securities are



specified in participants' bids – if such an option is envisaged by the decision to hold an auction.

If the NBS is repo purchasing securities of different denomination structure, the nominal value of securities per participant shall be rounded to the nearest whole denomination, so that the quantity of securities allotted per participant may be lower/higher than specified in individual participants' bids.

23. Provisions of the decision on auction holding shall apply to outright and repo transactions but, depending on the type of transaction, some elements shall be regulated in a different way (elements of the bid for purchase/sale of securities, elements of a separate agreement, pricing of securities).

### **Separate agreement and notification on auction results**

24. The NBS and a bank shall conclude a separate agreement on each individual transaction of purchase/sale of securities at an auction.

The separate agreement referred to in paragraph 1 hereof shall be deemed concluded when the NBS accepts the bank's bid in whole or in part. This agreement shall be delivered to the bank, as a rule via the web platform.

25. Based on data on concluded agreements on the purchase/sale of securities, the NBS shall publish on its website a summary report on auction results – as a rule on the auction date.

The NBS may publish the summary report on auction results on the Refinitiv and/or Bloomberg electronic services.

### **Bilateral purchase/sale of securities**

26. The NBS may engage in bilateral purchase/sale of securities by contacting directly one or more banks and inviting them to submit bids for the sale/purchase of securities.

The NBS may engage in bilateral repo purchase/sale of securities even without contacting a bank directly, and shall do so by:

- 1) giving its bid for the repo purchase/sale of securities based on the bank's individual request for the submission of a bid for repo sale/purchase;
- 2) accepting the bank's bid for repo sale/purchase of securities.

Bilateral purchase/sale referred to in this Section shall be conducted directly with banks, outside auctions.

27. Contacting banks for the purposes of engaging in bilateral purchase/sale of securities, the submission of banks' bids, acceptance of those bids and exchange of necessary data and notices – may be performed by e-mail, telefax or in writing.

28. The governor or a person authorised by the governor shall issue decisions on the performance of bilateral purchase/sale of securities.

In accordance with the decision referred to in paragraph 1 hereof, a separate agreement on the purchase/sale of securities shall be concluded. The agreement shall regulate the terms and conditions of the purchase/sale of securities in more detail, specifying in particular: the type of transaction, total amount of securities purchased/sold, type of securities, interest rate, and/or price of securities, the level of downward/upward adjustment in repo transactions, manner and timeframe for the settlement of mutual obligations, as well as other elements.

The agreement referred to in paragraph 2 hereof shall be in writing, and shall be concluded by the governor or a person authorised by the governor.

### **Price, payment and transfer of securities**

29. The price of securities purchased and sold in accordance with this Decision shall be determined depending on the type of transactions and shall be calculated according to the formulas set out in the schedule which is integral to this Decision (Schedule 1).

30. The clearing and settlement of obligations and receivables in securities and cash, arising from the transactions of purchase/sale of securities concluded within the meaning of this Decision shall be performed by the Central Securities Depository – in the manner determined by regulations of the Central Securities Depository.

### **Settlement of obligations**

31. On the date of purchase and/or repurchase of securities, the bank shall settle its financial obligations and/or obligations in respect of the transfer of securities entirely in accordance with the separate agreement on the purchase/sale of securities.

If during a repo transaction in which the NBS purchased securities referred to in Section 7, paragraph 1, subparagraphs 3 or 4 hereof, the issuer of purchased securities no longer fulfils the condition relating to the credit rating or the solvency/creditworthiness rating determined by the said provisions, the NBS may require from the bank to replace these securities with securities referred to in the said paragraph.

Bearing in mind current market and monetary developments and if it assesses that the current value of purchased securities does not suffice to ensure the collection of NBS's receivables against the repo purchase of securities, the NBS may require from the bank additional securities referred to in Section 7, paragraph 1 hereof.

The bank shall fully comply with NBS's requirements referred to in paragraphs 2 and 3 hereof, within the deadlines specified in these requirements. Otherwise, the NBS may act in line with Sections 35 and 36 hereof.

32. If, on the repurchase date, the bank acting as the seller of securities in a repo transaction fails to perform its financial obligations arising from the repurchase, the ownership of purchased securities shall remain with the NBS.

33. If, on the repurchase date, the bank acting as the buyer of securities in a repo transaction fails to perform its obligations in respect of the transfer of purchased securities, the NBS shall not pay the repurchase price to the seller and the ownership of purchased securities shall remain with the bank.

34. The buyer of securities shall have the purchased securities at its free disposal for the duration of the repo transaction, while the seller in the transaction shall be entitled to any proceeds generated from such securities, including the amount paid out during the repo transactions in respect of the pay-out of a portion of their nominal value.

The proceeds referred to in paragraph 1 hereof shall be the interest yielded by the purchased securities and payable over the duration of repo transaction.

The buyer shall credit in full the proceeds referred to herein to the seller's account, including the full amount in respect of the pay-out of the portion of the nominal value during the repo transaction, on the same day when the issuer of securities which are subject of a repo transaction, credits the proceeds generated from such securities, i.e. a portion of the nominal value, to the account of the buyer in such transaction. The payment may be effected by no later than 12 o'clock on the following business day.

If a bank fails to perform in full its obligation of the payment of proceeds, i.e. its obligation to credit the paid-out portion of the nominal value in accordance with paragraph 3 hereof, the NBS shall determine a new repurchase price, less the amount of proceeds, i.e. the amount of the paid-out portion of the nominal value that the bank failed to credit to its account.

35. If a bank fails to perform its obligations in accordance with the master and/or separate agreement on the purchase/sale of securities, the NBS may impose restrictions on the bank's transactions of purchase/sale of securities with the NBS within the meaning of this Decision

The type of transactions referred to in paragraph 1 hereof, as well as the period during which the restriction is applicable, shall be determined by the governor.

The NBS may publicly announce to which banks the restriction referred to in this Section shall apply.

36. A repo transaction may be terminated prior to the agreed repurchase date if the NBS and the bank consensually terminated the agreement on the concluded repo transaction (consensual termination of the repo agreement).

If the bank fails to perform its obligations in accordance with the master and/or separate repo agreement on the purchase/sale of securities, the NBS may terminate in writing:

- the master repo agreement (unilateral termination of the master repo agreement), in which case all separate repo agreements shall also be terminated;
- the separate repo agreement, and/or separate repo agreements (unilateral termination of the separate repo agreement, and/or separate repo agreements), in which case the master repo agreement shall remain in force.

Should the date of termination of the repo agreement fall prior to the agreed repurchase date, a new repurchase price of securities shall be determined on the date of such termination, calculated on the basis of the number of days that elapsed from the day of conclusion until the day such repo agreement is terminated, at the interest rate determined by the governor or a person authorised by the governor.

If the bank, in the event of terminating the repo agreement in accordance with this Decision, fails to perform its obligations in respect of the transfer of securities on the date the agreement is terminated, the NBS shall not pay to such bank the repurchase price of securities, in which case the ownership of securities shall remain with the buyer bank, and if the bank fails

to meet its financial obligations under the repurchase of securities, the ownership of purchased securities shall remain with the NBS.

37. The NBS shall issue guidelines to regulate in more detail operational issues regarding the implementation of transactions of purchase/sale of securities within the meaning of this Decision.

### **Transitional and closing provisions**

38. Obligations arising from master and individual agreements on the purchase/sale of securities concluded between the NBS and banks, which have not fallen due until the implementation date hereof, shall be performed in accordance with those agreements.

39. This Decision repeals the Decision on the Requirements for and Manner of Implementing Open Market Operations by the NBS (RS Official Gazette, Nos 133/2004, 8/2005, 39/2006, 64/2006, 116/2006 and 73/2008).

40. This Decision enters into force eight days following its publication in the RS Official Gazette and shall apply as of 31 July 2011.

NBS EB No 49  
16 June 2011  
Belgrade

Chairman  
of the NBS Executive Board  
G o v e r n o r  
NBS

Dejan Šoškić, PhD

## FORMULAS

### FOR CALCULATING THE PRICE OF SECURITIES BY TYPE OF TRANSACTION

#### I. OUTRIGHT TRANSACTIONS

##### 1. Price of short-term discount securities:

$$D = N \times \frac{1}{1 + \frac{p \times d}{100 \times G_d}},$$

where:

D – price per security

N – nominal value per security

p – annual interest rate

d – number of days from the date of purchase/sale until the maturity date of securities

G<sub>d</sub> – number of days in a year (360 days)

##### 2. Price of long-term coupon-paying securities

###### a) price not including interest accrued – clear price:

$$D = \frac{N}{\left(1 + \frac{p}{100 \times f}\right)^{\frac{d_1}{d}}} \times \left[ \frac{p_k}{100 \times f} \times \frac{1 - \frac{1}{\left(1 + \frac{p}{100 \times f}\right)^K}}{1 - \frac{1}{1 + \frac{p}{100 \times f}}} + \frac{1}{\left(1 + \frac{p}{100 \times f}\right)^{K-1}} \right] - N \times \frac{p_k}{100 \times f} \times \frac{d_2}{d},$$

###### b) price including interest accrued – dirty price

$$D = \frac{N}{\left(1 + \frac{p}{100 \times f}\right)^{\frac{d_1}{d}}} \times \left[ \frac{p_k}{100 \times f} \times \frac{1 - \frac{1}{\left(1 + \frac{p}{100 \times f}\right)^K}}{1 - \frac{1}{1 + \frac{p}{100 \times f}}} + \frac{1}{\left(1 + \frac{p}{100 \times f}\right)^{K-1}} \right],$$

where:

D – price per security

N – nominal value per security

p<sub>k</sub> – annual coupon rate

f – number of coupons during a year

p – annual yield rate demanded on the purchase/sale of securities

K – total number of coupons falling due from the date of purchase/sale/ until the maturity date of securities

$d_1$  – number of days from the date of purchase/sale until the maturity date of the next coupon

$d_2$  – number of days from the start of the coupon period which includes the date of purchase/sale until the date of purchase/sale of securities

d – number of days in a coupon period which includes the date of purchase/sale of securities

### 3. Price of long-term interest free securities:

$$D = \frac{N}{\left(1 + \frac{p}{100}\right)^{\frac{d_1}{G_d}}}$$

where:

D – price per security

N – nominal value per security

p – annual yield rate demanded on the purchase/sale of securities

$d_1$  – number of days from the date of purchase/sale until the maturity date of securities

$G_d$  – number of days in a year (365 days)

## II. REPO TRANSACTIONS

### 1. Purchase price of securities

#### a) NBS – buyer of securities:

$$D = N - \frac{N \times U_m}{100}$$

where:

D – purchase price per security

N – nominal value per security

$U_m$  – downward revision

#### b) NBS – seller of securities

$$D = N + \frac{N \times U_v}{100}$$

where:

D – purchase price per security

N – nominal value per security

$U_v$  – upward revision

### 2. Repurchase price of securities

$$R = D \times \left(1 + \frac{p \times d}{100 \times G_d}\right)$$

where:

R – repurchase price per security

D – purchase price per security

p – annual interest (repo) rate

d – number of days of the duration of repo agreement

$G_d$  – number of days in a year (360 days)