



# **Instruments for hedging against exchange rate risk in the Republic of Serbia**

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**Monetary Operations Department  
National Bank of Serbia**

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# I Dinarisation Strategy (1/2)

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- Increased use of the dinar in the domestic financial system
- Measures and activities – Memorandum on the Strategy of Dinarisation of the Serbian Financial System (March 2012, jointly the NBS and the Government of the Republic of Serbia)
- The Dinarisation Strategy rests on three pillars:
  - I. **Strengthening the macroeconomic environment:**
    - Low and stable inflation
    - Managed floating exchange rate regime and
    - Sustainable economic growth
  - II. **Development of the market of dinar securities**
  - III. **Development of foreign exchange hedging instruments**

# I Dinarisation Strategy (2/2)

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- During the last five years huge success has been achieved regarding the first pillar
  - Low and stable inflation
  - Relative stability of the exchange rate
  - Improvement of current account balance
  - Improvement of public finances
  - Significant decrease in the NPL ratio
- Positive remarks of the IMF technical mission regarding dinarisation
- Regarding the second pillar:
  - The yield curve has been extended towards longer maturities (basis for pricing)
  - Higher trading activity in the secondary market of dinar-denominated government securities
  - Preparation for inclusion in the Bond Index
  - Higher share of dinar-denominated public debt (from 2.5% to 23.4% in ten years)



## II Hedging against exchange rate risk – Third pillar (1/2)

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- Exchange rate movements in the future are unpredictable
- **EXPOSURE:**
  - Enterprises, households, state
  - Banks and financial system (credit risk, financial stability)
- **RISK:**
  - Financial loss due to exchange rate differences
  - Loss in competitiveness (market position)
  - Loss of control over business
- **HOW TO PROTECT:**
  - Natural hedging
  - Instruments for hedging against financial risks
- **BENEFITS OF HEDGING:**
  - **Certainty** (the forward exchange rate is known in advance)
  - **More reliable process of business planning**
  - **Stability of doing business**

## II Hedging against exchange rate risk (2/2)

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- **Benefits at the macro level:**
  - Financial stability
  - More efficient monetary policy (part of the Dinarisation Strategy)
  - Improved country credit rating
- **The need for FX hedging does not disappear with:**
  - Active NBS FX interventions (the NBS does not affect the trend of exchange rate movements nor does it target any level of the exchange rate)
  - Fixing the EUR/RSD exchange rate (there is always the risk of change against currencies other than the euro – e.g. the US dollar)
- **The need for FX hedging is imposed by the principles of accountability and ensuring business continuity**



# III Regulatory framework – laws and other regulations (1/2)

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## I. Laws:

- Law on Foreign Exchange Operations
- Law on the Capital Market

## II. Decisions:

- Decision on Operating Terms and Procedures in the Foreign Exchange Market
- Decision on Terms and Conditions of Performing Foreign Payment Transactions
- **Decision on Performance of Financial Derivative Transactions**

# III Regulatory framework – Decision on Performance of Financial Derivative Transactions (2/2)

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- Regulates **foreign exchange payments, collections and transfers** in respect of trading in financial derivatives

## **DOMESTIC ENTERPRISES CAN PERFORM TRANSACTIONS IN FINANCIAL DERIVATIVES THAT ARE TRADED:**

- **IN THE REGULATED MARKET AND/OR MULTILATERAL TRADING PLATFORM** in the country or abroad, without restrictions

- **IN THE OTC MARKET:**

- **with banks:**

- for the purpose of hedging against prescribed risks (exchange rate, interest rate, security and commodity prices, stock market indices)

- **with non-residents:**

- for the purpose of hedging against prescribed risks (exchange rate, interest rate, security and commodity prices, stock market indices)
    - transactions involving dinar payments are not allowed

**Clause on deliverable derivatives:** *except for derivatives for hedging against commodity price risk (which can be non-deliverable), all other financial derivatives can be only deliverable (with the payment of the entire amount of liability)*



# IV Instruments for hedging against exchange rate risk in practice (1/9)

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Forward purchase of foreign exchange

Forward sale of foreign exchange

FX forwards

Covered forward purchase of foreign exchange

“Quasi” (covered) FX forwards

FX swaps

Occasionally

FX options

# IV Instruments for hedging against exchange rate risk in practice (2/9)

## Forward buying of foreign exchange

- Settlement of both currencies included in the contract is at the settlement date in the future
- Enterprise freely uses its funds until the settlement date
- Forward rate is calculated based on interest rates on dinar and foreign currency

## Covered forward buying of foreign exchange

- Enterprise is obliged to pay in advance the whole or part of its dinar liability
- Bank is not exposed to settlement risk or this risk is significantly lower
- The price of transaction is more preferable for the enterprise at first glance

**What is the dynamic of cash inflows and outflows of an enterprise?**



# IV Instruments for hedging against exchange rate risk in practice (3/9)

## Forward rate

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- Result of calculation
- Interest rate differential on two currencies involved – interest rate parity
- The value of the currency with the lower interest rate is always higher in the future
- Forward exchange rate is not the result of prediction
- Interest rates on dinar: BELIBOR, rates on government securities, key policy rate of the NBS...
- Interest rates on foreign exchange: LIBOR, EURIBOR...

Formula:

$$T = S \times \frac{1 + (k_2 \times d / 360)}{1 + (k_1 \times d / 360)}$$

S – spot market exchange rate on the contract date

T – forward exchange rate

d – maturity in days

$k_1$  – annual interest rate on foreign exchange, in %

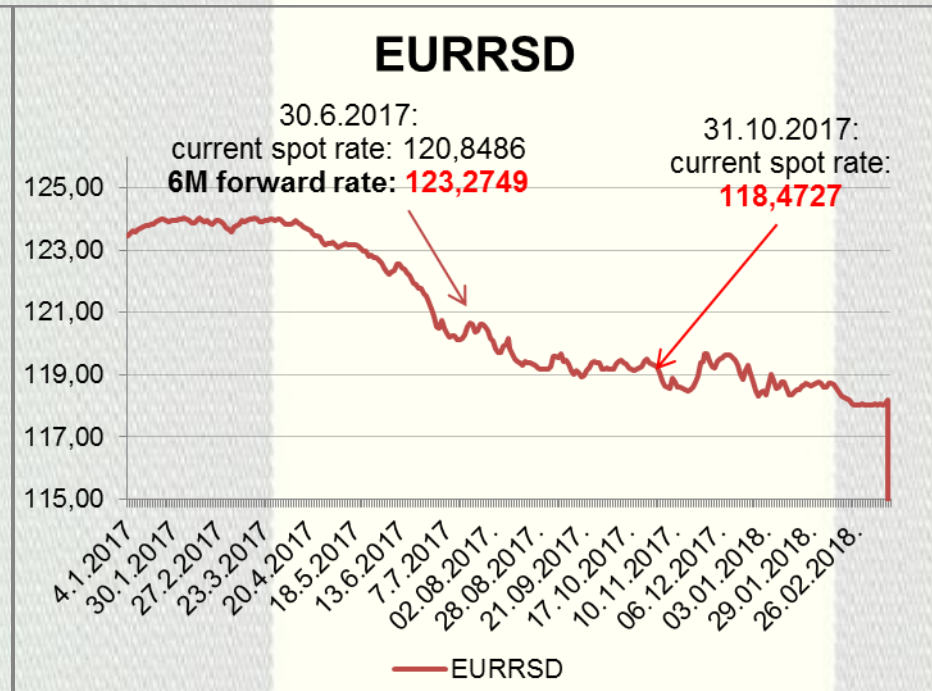
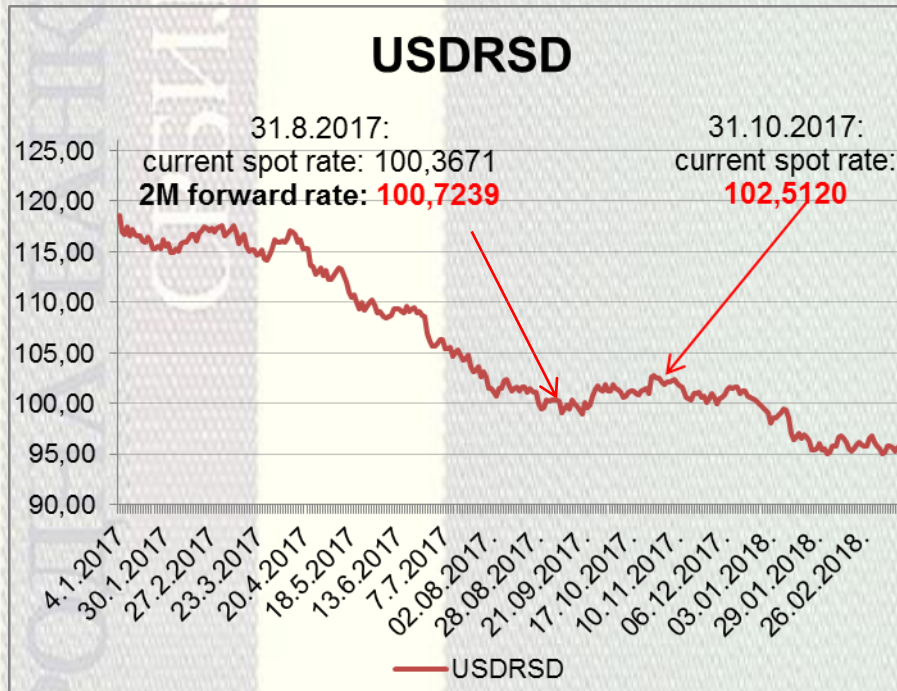
$k_2$  – annual interest rate on the dinar, in %

# IV Instruments for hedging against exchange rate risk in practice (4/9)

## practical examples

Enterprise *buys* foreign exchange forward

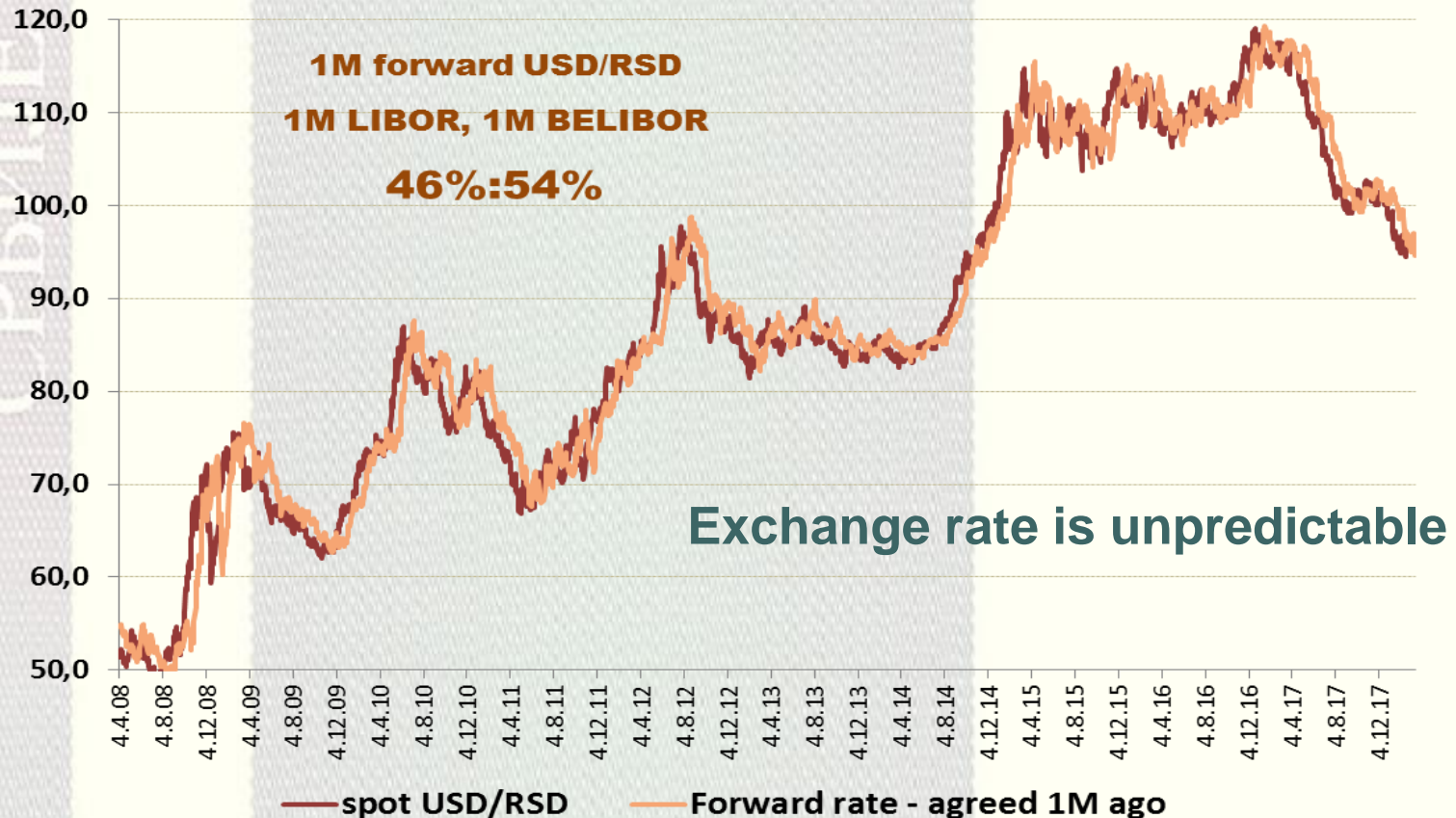
Enterprise *sells* foreign exchange forward





# IV Instruments for hedging against exchange rate risk in practice (5/9)

1M USD/RSD purchase of foreign exchange, as the most common forward in the domestic market



- It is unpredictable whether on the settlement date the forward rate will be higher than the market rate – chance 50%:50%
- Certainty of forward contract

# IV Instruments for hedging against exchange rate risk in practice (6/9)

## Not used enough?

### Use of forward foreign exchange purchase by domestic enterprises

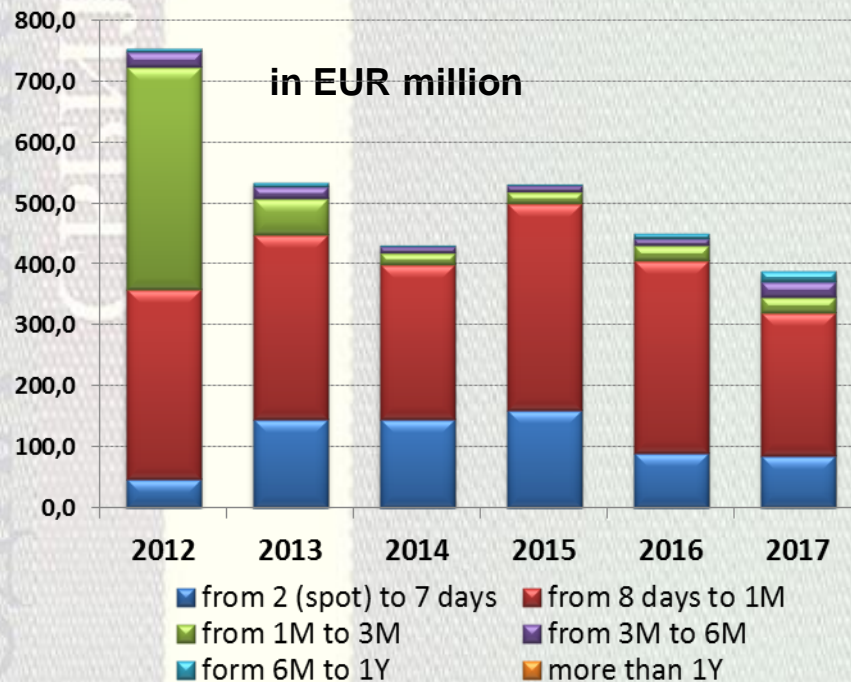
Period	Forward purchase by residents			Forward sale by residents		
	Amount in million euros	Average weighted maturity in number of days	Share in total purchase in %	Amount in million euros	Average weighted maturity in number of days	Share in total sale in %
2012.	754,7	38	6,7	1,3	18	0,0
2013.	533,8	24	5,0	1,4	39	0,0
2014.	430,0	24	5,0	0,8	49	0,0
2015.	531,0	16	4,8	1,5	77	0,0
2016.	450,5	22	3,9	12,9	263	0,1
2017.	388,8	37	3,0	17,1	349	0,2
January 2018	24,9	84	2,5	2,9	365	0,4
February 2018	10,1	61	1,1	12,2	511	1,4



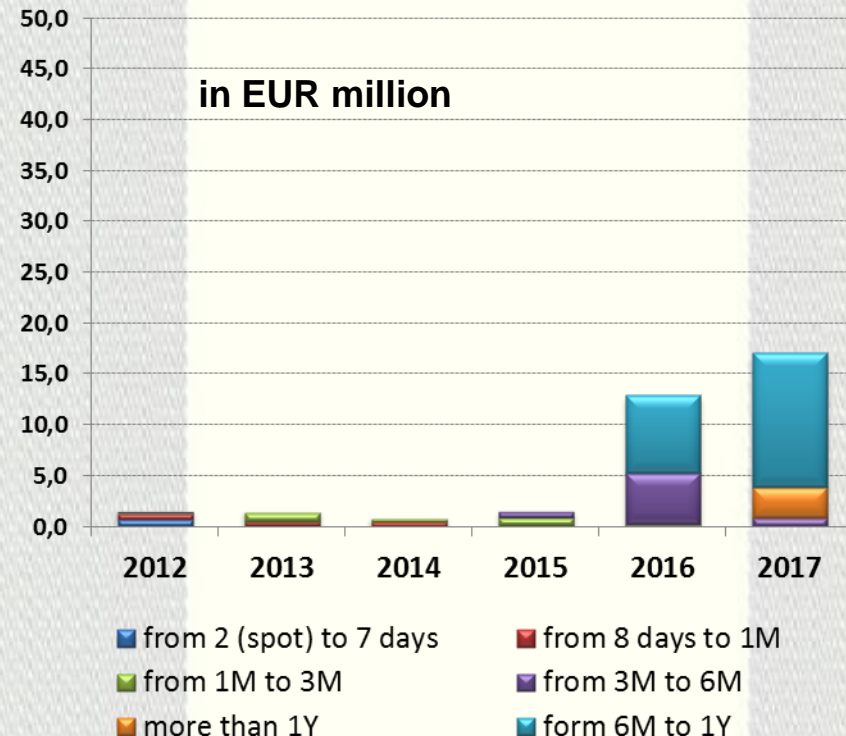
# IV Instruments for hedging against exchange rate risk in practice (7/9)

## TERM structure of forwards

**Forward purchase  
(2012–2017)**



**Forward sale  
(2012–2017)**

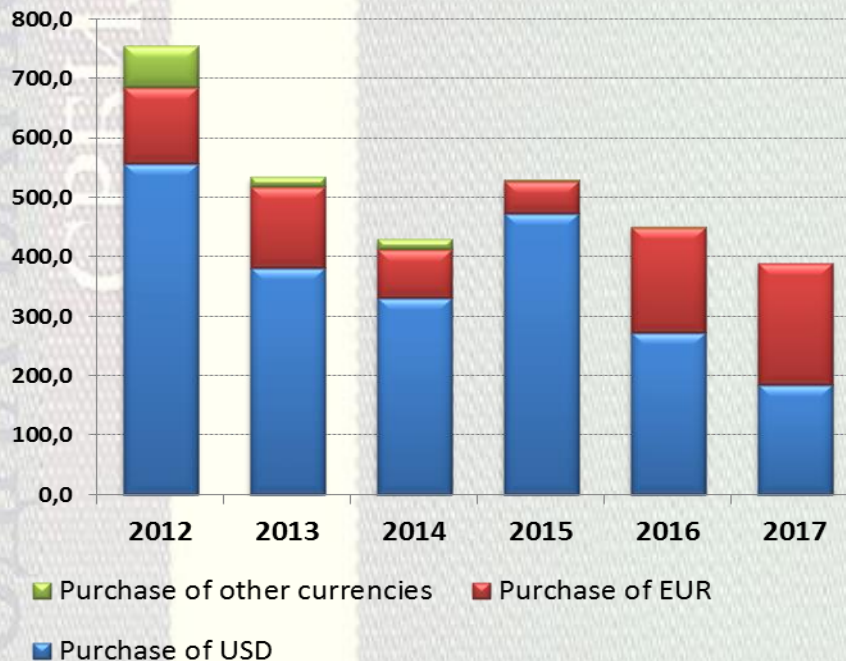


- Prevails forward purchase of foreign exchange by enterprises – up to 1M
- Forward sale of foreign exchange by enterprises appears from time to time; it was somewhat more frequent in 2017

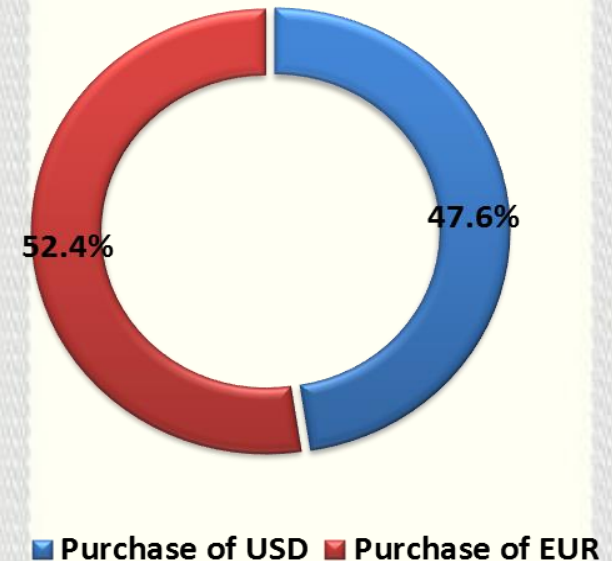
# IV Instruments for hedging against exchange rate risk in practice (8/9)

## CURRENCY structure of forwards

Forward purchase of foreign exchange  
(2012–2017)



Forward purchase of foreign exchange  
2017



- Up to 2017 enterprises mostly used to forward purchase USD (for payments of energy imports)
- In 2017, for the first time, somewhat higher forward purchase of EUR



# IV Instruments for hedging against exchange rate risk in practice (9/9)

## Other hedging instruments

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- Domestic enterprises do not use other FX hedging instruments sufficiently (FX swap, cross-currency swap)

- **FX swap:**

January 2012 – February 2018:

- 99 FX swap transactions (on average around 20 transactions per year)
- the value of the first leg EUR 134.3 million in total (on average below EUR 22 million per year)

- **Cross-currency swap**

January 2012 – February 2018:

- 60 cross-currency swap transactions (on average around nine transactions per year)

- **FX options** – not recorded (since the NBS started collecting data)

# V NBS activities in promoting FX hedging (1/2)

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## a) regulatory

### Decision on Performance of Financial Derivative Transactions (2011)

- More liberal than the previous decision which forbade over-the-counter derivatives
- Directing enterprises to use hedging instruments more, in particular hedging against the FX risk
- Elimination of the constraints to conclude non-deliverable derivatives for the purposes of hedging against commodity price risk (2013)
- Collecting data on financial derivative transactions from banks
- **Current topic – further changes:** changes towards elimination of the constraints – part of the gradual liberalisation of short-term capital flows in the EU integration process



# V NBS activities in promoting FX hedging (2/2)

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## b) promotional and educational

- CONFERENCES with enterprises and banks
- Web page dedicated to FX hedging on the NBS website
- Promotion through speeches, publications, presentations and brochures
- Publishing links for web pages of banks offering FX hedging instruments

## c) market

- Organising 2W and 3M swap EUR/RSD auctions, to promote this segment of the FX market

# VI Web page of the NBS (1/3)

← → http://www.nbs.rs/internet/english/33/index.html NBS | Financial Markets ×

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## Financial Markets

### FX Market

Exchange Rates List

- Middle Rate
- Cash
- Foreign Exchange
- Selected Date
- Selected Period
- Average Exchange Rates

Interbank Foreign Exchange Market  
NBS Operations in the Foreign Exchange Market

- EUR/RSD Swaps
- Press Releases

Minimum and Maximum Amounts Paid and Charged by Banks in Exchange Transactions

### FX Hedging

- About FX hedging
- Frequently Asked Questions
- Banks Offering FX Hedging Instruments

### Money Market

- Daily Banking Sector Liquidity
- NBS Open Market Operations
- Short-term Loan Liquidity Auctions
- BEONIA (Belgrade OverNight Index Average)
- Money Market Rates and Government Securities Market
- Daily Information on Money Market Rates and Government Securities Market
- Historical Overview of Interest Rates in the Money Market and Government Securities Market

### Government Securities Market

Primary Trade in Government Securities

- Overview of Issued Government Securities
- Historical Overview of Issued Government Securities


Secondary Trade in Government Securities

- Daily Information on Secondary Trading in Government Securities
- Historical Overview of Secondary Trading:

2018 Preview



# VI Web page of the NBS (2/3)



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FX Hedging - NBS

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## FX Hedging

Companies which have revenue and expenditure flows in different currencies (primarily international trade businesses) are exposed to exchange rate risk.

### Hedging Instruments

FX hedging instruments available in the market are based on the setting of a fixed price at which foreign currency is bought or sold on a specific future date (forward rate).

### Forward Contracts (Forex Forwards)

Forex forwards are contracts to buy or sell foreign currency for dinars, with both currencies delivered on an agreed future date at an exchange rate agreed in advance (forward rate).

### Covered Forwards

Covered forwards are contracts to buy foreign currency under which a company deposits a part or total of the dinar equivalent value in advance and receives foreign currency on an agreed future date.

### Forex Swaps

Forex swaps involve simultaneous purchase and sale of two currencies at predetermined exchange rates, but at two different value dates.

Questions relating to foreign exchange hedging may be sent to the e-mail address [devizni.hedging@nbs.rs](mailto:devizni.hedging@nbs.rs).

### Q & As About The Decision On Financial Derivative Transactions

18.01.2012. Here are the answers to most frequently asked questions by the public about the application of the provisions of the Decision Financial Derivative Transactions ("RS Official Gazette" No 85/2011).

### Weakening of the Dinar Driven by Economic Movements in Some Eurozone Countries

13.07.2011. The dinar weakened over the last two days in response to elevated uncertainty surrounding economic turmoil in some eurozone countries...

#### Related Topics...


- Website links for bank offers of FX hedging instruments
- Frequently Asked Questions
- Question and Answers about the Decision on Financial Derivative Transactions


# VI Web page of the NBS – List of banks offering FX hedging instruments (3/3)

← → http://www.nbs.rs/internet/english/33/33\_3/kotacije.html NBS | Banks Offering FX He... x

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- FX hedging
- Interest rate hedging

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## VII Recommendations

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- Inform yourself about possibilities regarding FX hedging (useful guideline – NBS web page *FX Hedging*)
- Ask for the specific offer at least five different banks
- Compare and estimate the cost-effectiveness of covered forwards versus classic ones (forward rate, whether the interest on deposit is paid or not, what is the amount of this interest, etc.)
- Talk about and bring out all suggestions, difficulties, or problems when concluding these transactions (to commercial banks, to the NBS – special-purpose e-mail: [devizni.hedging@nbs.rs](mailto:devizni.hedging@nbs.rs))

**Thank you for your attention!**