How we entered the COVID-19 crisis
What have we done and achieved
What lies ahead

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Governor of the National Bank of Serbia

Kopaonik Business Forum, May 2021
Serbia has achieved one of the best economic results in Europe in 2020.

Results of the domestic economy at the start of 2021 are again above expectations. Serbia reached its pre-crisis level of economic activity sooner than many world economies – already in Q1 this year.
Government and NBS measures greatly mitigated the negative effects of the crisis, saved jobs and production capacity.

If we had not passed a number of measures immediately, and then continued to react with additional measures, the fall in economic activity in 2020 would have been at least 6%, while recovery and return of GDP to the pre-crisis level would have taken several years. This would have meant the loss of billions of euros, the loss of jobs and endangered stability. The price of not reacting would have been too high.
Serbia was better prepared for the COVID-19 crisis than the global economic crisis of 2008-2009.

### Inflation (in %, average)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>8.0%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

### FX reserves, gross (in EUR bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
</tr>
</tbody>
</table>

### FX reserves, net (in EUR bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
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</tbody>
</table>

### NPL % (year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
</table>

### Key policy rate (in %, year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

### Dinar savings (in RSD bn, year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>100</td>
<td>80</td>
<td>60</td>
<td>40</td>
<td>20</td>
</tr>
</tbody>
</table>

### Euro savings (in EUR bn, year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>12.0</td>
<td>12.0</td>
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</tbody>
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### Dinar savings (in RSD bn, year-end)

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<tr>
<th>Year</th>
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### Euro savings (in EUR bn, year-end)

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<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
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<td>12.0</td>
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<td>12.0</td>
<td>12.0</td>
</tr>
</tbody>
</table>

### Fiscal result (% of GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>-2.0</td>
<td>-4.0</td>
<td>-6.0</td>
<td>-8.0</td>
<td>-10.0</td>
</tr>
</tbody>
</table>

### Current account deficit (% of GDP)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>15%</td>
<td>10%</td>
<td>5%</td>
<td>0%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

### Serbia’s risk premium (in bp, year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>EMBI Global Composite</td>
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<td>EMBI Global Composite</td>
<td>EMBI Global Composite</td>
<td>EMBI Global Composite</td>
</tr>
</tbody>
</table>

### Serbia’s credit rating (year-end)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
</table>
# NBS’s response to the COVID-19 crisis

## Monetary policy measures

### Key policy rate

<table>
<thead>
<tr>
<th>Period</th>
<th>Key Policy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2020</td>
<td>Cut by 0.5 pp, to 1.75%</td>
</tr>
<tr>
<td>April 2020</td>
<td>Cut by 0.25 pp, to 1.5%</td>
</tr>
<tr>
<td>May 2020</td>
<td>Cut by 0.25 pp, to 1.25%</td>
</tr>
<tr>
<td>June 2020</td>
<td>Cut by 0.25 pp, to 1.0%</td>
</tr>
<tr>
<td>July 2020</td>
<td>Rate corridor narrowed from ±1.25 pp to ±1.0 pp</td>
</tr>
<tr>
<td>August 2020</td>
<td>Rate corridor narrowed from ±1.0 pp to ±0.9 pp</td>
</tr>
</tbody>
</table>

### Support to dinar liquidity

<table>
<thead>
<tr>
<th>Additional Swap Auctions, 3M Maturity</th>
</tr>
</thead>
</table>

### Additional Swap Auctions, 3M Maturity

- Additional swap auctions on a weekly basis (Mondays), 3M maturity
  - Rate corridor narrowed from ±1.0 pp to ±0.9 pp

### Outright purchase of government securities in the secondary market

- Corporate bonds included in the list of eligible collateral in NBS monetary operations

### More favourable conditions for Guarantee Scheme loans

- Approval of dinar loans under the Guarantee Scheme at lower interest rates – minimum 50 bp reduction is compensated by the NBS through the higher remuneration rate on allocated required reserves

### Additional NBS measures

#### Moratorium

- Moratorium on debt payments

#### Housing loans

- Reduction of mandatory downpayment for first-time home buyers from 20% to 10%
- Reduction of the minimum degree of completion of a building eligible for financing via bank housing loans
- Extension of repayment term for housing loans by up to five years

#### Other loans

- Extension of repayment term for household loans (except housing) by up to eight years
- Until end-2021 banks allowed to extend household dinar loans (up to 90,000 dinars) only based on signed statement on employment/pension

#### Precautionary repo line with the ECB

- Precautionary repo line with the ECB established to supply additional euro liquidity to local banks in case of need

### Source

NBS.
With regulatory measures, we endorsed citizens and corporates to more easily overcome the crisis in financial terms.

### March 2020: the first moratorium on the repayment of liabilities
- Included all citizens, farmers, entrepreneurs, and corporates
- Lasted 3 months and was accepted by around 90% (more than 3 million) debtors

### June 2020: facilitated access to housing loans for first-time home buyers
- The amount of the housing loan that may be approved to a first-time home buyer was increased to 90% of the value of mortgaged real estate

### July 2020: extended deadline for the repayment and refinancing of consumer, cash and other loans
- Available to citizens who took the loan before 18 March 2020
- Enabled the refinancing or the change of the date of maturity of the last instalment (up to 10 years for car loans, and up to 8 years for other consumer, cash and similar non-purpose loans)
- Temporary measures made it easier for banks to manage their credit risk in the conditions of the pandemic for the loans in question

### July 2020: the second moratorium
- Included all liabilities of citizens and corporates maturing in August and September 2020, as well as unsettled liabilities maturing in July 2020
- Accepted by around 79% (almost 2.5 million) debtors

### August 2020: facilitated access to housing loans and short-term dinar loans
- Minimum degree of completion of a building financed by a housing loan was lowered
- Possibility of extending the deadline for the repayment of housing loans by five years
- Simplified procedure for approving short-term dinar loans up to 90,000 dinars
- Facilities are valid until end-2021

### December 2020: new facilities in the repayment of liabilities of clients who are the most affected by the pandemic
- Includes debtors affected by the pandemic (inter alia: those in arrears more than 30 days, corporates – those recording a fall in business income or interrupted business due to the pandemic, citizens – unemployed and those whose average net income is below the average wage in the Republic of Serbia, etc.)
- Possibility of rescheduling or refinancing, with the approval of a six-month grace period and extended repayment term
The COVID-19 crisis affected non-residents’ behaviour in Serbia less than in comparable emerging markets.

Factors affecting developments in the FX market (in EUR mn, monthly averages by year)

An analysis of factors affecting developments in Serbia’s FX market shows that the transmission of the COVID-19 crisis onto the exchange rate was carried out mainly via its influence on economic activity and citizen behaviour, and not through the outflow of capital from the country amid the withdrawal of foreign investors. This speaks in favour of our domestic economy’s increased resilience to external shocks, as well as to volatility in global capital flows.
Despite rising uncertainty in the international financial market, stability was preserved in domestic markets.

**Implied volatility index – VIX**

* VIX (Chicago Board Options Exchange Market Volatility Index) is a measure of implied volatility on S&P 500 index options; EM–VXY (J.P. Morgan emerging markets implied volatility index) is a measure of aggregate volatility of emerging economies’ currencies on the basis of quarterly forward options.

**Movements in the dinar exchange rate (EUR/RSD)**

**NBS key policy rate and interest rates in the interbank money market (in%)**

* Excluding coupon securities whose interest rate is linked to NBS key policy rate.

**Effective rates at auctions of dinar government securities (in%)**

Source: Ministry of Finance.
### Efficiency of the interest rates channel in Serbia; fall in risk premium due to domestic factors

#### Estimated coefficients of models for loans to households, corporates and for BELIBOR

<table>
<thead>
<tr>
<th>BELIBOR maturity</th>
<th>1W</th>
<th>2W</th>
<th>1M</th>
<th>3M</th>
<th>6M</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Belibor (β1)</strong></td>
<td>1.10***</td>
<td>1.10***</td>
<td>1.09***</td>
<td>1.06***</td>
<td>1.04***</td>
</tr>
<tr>
<td><strong>EMBI (β2)</strong></td>
<td>0.6**</td>
<td>0.56**</td>
<td>0.55**</td>
<td>0.58**</td>
<td>0.57**</td>
</tr>
<tr>
<td><strong>Constant (β0)</strong></td>
<td>5.06***</td>
<td>5.16***</td>
<td>5.1***</td>
<td>4.71***</td>
<td>4.62***</td>
</tr>
<tr>
<td><strong>R2</strong></td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**Long-term equation for interest rates on household loans**

**Belibor (β1)**: 1.10***

**EMBI (β2)**: 0.6**

**Constant (β0)**: 5.06***

**R2**: 0.95

#### Determinants of Serbia's risk premium

**Dependent variable**: **DEMBI (log)**

**Long-term link**:

- **GDP per capita (log)**: -12.163***
- **GDP (y-o-y growth rates, %)**: -0.068**
- **Current account balance / GDP (%)**: -0.128***
- **CPI (log)**: 6.012***
- **Inflation (y-o-y growth rates, %)**: 0.111***
- **Public debt / GDP (%)**:
  - Model 1: 0.043***
  - Model 2: 0.011**
  - Model 3: 0.066***
- **LIBOR (%)**:
  - Model 1: 0.390***
  - Model 2: 0.548***
  - Model 3: 0.439***
- **Global oil price (log)**:
  - Model 1: 59.793
  - Model 2: 21.713
  - Model 3: 1.957
- **Error adjustment toward equilibrium**:
  - Model 1: -0.138***
  - Model 2: -0.264***
  - Model 3: -0.254***
- **Exogenous variable**: **VIX (log)**:
  - Model 1: 0.456***
  - Model 2: 0.504***
  - Model 3: 0.328***
- **R²**:
  - Model 1: 0.68
  - Model 2: 0.67
  - Model 3: 0.62
- **Adjusted R²**:
  - Model 1: 0.62
  - Model 2: 0.61
  - Model 3: 0.53
- **JB Normality test**:
  - Model 1: 1.08
  - Model 2: 0.47
  - Model 3: 0.17
- **Analysed period**: Q2 2008 – Q3 2019

Source: NBS calculation.

*** Means statistical significance at 1% significance level, ** at 5% significance level.

#### Interest rates in Serbia’s money market (rates in %, changes in bp)

- **February 2020 (average)**
  - Bencion: 1.03
  - IW: 1.10
  - TND: 1.11
  - SND: 1.15
- **April 2021 (average)**
  - Bencion: 1.03
  - IW: 1.10
  - TND: 1.11
  - SND: 1.15

Source: NBS.

#### Risk premium indicator – EMBI Composite, EMBI Europe and EMBI for Serbia (in bp)

Source: J.P. Morgan.
Financial conditions are supporting economic activity

FCI decomposition, 13 variables (in pp)

![FCI decomposition chart]

Movement of FCI and GDP

![Movement of FCI and GDP chart]

**Movements of the financial conditions index of corporates over a longer period show that all components that reflect the economic policy gave a significant contribution to favourable financing conditions.**

**NBS’s monetary policy measures provided the major boost to such movements.**

**Increase in Serbia’s credit rating, as well as decrease in its country risk premium, allowed corporates to seek financing in the international market as well, under favourable terms.**

**FDI inflows broaden the spectrum of corporate financing.**

**Even during 2020, most of these factors continued to exert a positive effect on corporate financing conditions, most notably favourable financing conditions in the domestic lending market, as well as preserved lending activity, thanks to the NBS’s and Government's anti-crisis measures.**
Serbia’s goods export reached pre-crisis levels already at the end of summer.

Contributions to y-o-y growth rate of Serbia’s goods export (in pp)

FDI in manufacturing industry by branch (in EUR mn)

Observed by country, the indicator of the concentration of export has declined continuously since 2015 and in 2020 it reached the value that suggests the largest geographic diversification of exports to date. This means that even in pandemic conditions, Serbia additionally increased the degree of the geographic distribution of export, which contributed to its greater resilience to disruptions in external demand.

We come to similar conclusions when we take a look at the degree of concentration of exports measured by product, which in 2020 was lower than in 2019, meaning that the export distribution by product increased even further.

Serbia’s goods export returned to the pre-crisis level already in the summer of 2020, and in Q4 it was 6.8% higher y-o-y. Also, Serbia’s comparative advantages in the production of agricultural products and food, with the development of agricultural capacities and above-average agricultural season, contributed to the resilience of Serbia’s export.
Lending activity contributes to balanced recovery of investments and consumption

**Interest rates on dinar loans (in %)**

**Contributions to y-o-y growth rate of total loans in Q1 (in pp)**

**Contributions to y-o-y growth of household loans**
(in pp, excluding the effect of exchange rate changes)

**Contributions to y-o-y growth of corporate loans**
(in pp, excluding the effect of exchange rate changes)

Lending activity remained not only a stable source of private sector financing, but its structure – both in terms of currency, and sector and purpose – was also well-balanced, which contributed to an even recovery of investments and consumption.

The structure of lending growth remained favourable this year as well, because within corporate loans, the highest growth since the start of the year was recorded by investment loans, and within household loans – by housing loans.
Even during the COVID-19 crisis, Serbia kept its credit rating (Fitch and S&P) and raised it in March 2021 (Moody’s).

Improvements from ten years ago, which the rating agencies emphasize, pertain to the achieved and preserved low and stable inflation, relative stability of the exchange rate, adequate level of FX reserves, stronger fiscal position, as well as greater diversification of investment and export by sector and geography, which enables a more balanced economic growth.

They also cite the full coverage of the current account deficit by FDI inflows, unlike in the period before the global financial crisis of 2008, when portfolio investments, as the most volatile category of inflows, were a dominant source of financing deficit of the then twin deficit.

They assess that responsible economic policy conduct created room for the adoption of comprehensive monetary and fiscal measures which mitigated the effects of the pandemic and created conditions for economic growth. They conclude that political stability, with the majority support to the politics of President Vučić, is a guarantee of the continuity of sound economic policies, which is among the key factors that bring Serbia closer to investment grade.
Corporate sources of financing are drastically better than in the period before 2015, when the investment cycle in Serbia began.

Given the significant degree of correlation between the corporate financial conditions index and GDP movements, this index can also be used as one of the indicators of economic activity. The dynamics of its movements during 2020, indicating that the extremely favourable conditions for financing corporates were maintained, also suggests that even in the coming period, we can expect a further positive contribution to economic recovery on the grounds of financing conditions.
Strong export growth in Q1 is attributed to growth in manufacturing exports.

In 2021, we expect two-digit growth rate of Serbia’s goods export, owing to contributions of both factors on the supply side – i.e. further investment growth in export-oriented sectors – and of the recovery of external demand, with the expected successful vaccine rollout across the world.

In Q1 this year in Serbia there was a current account surplus (of almost EUR 160 mn), which is the result of the improvement in all of its components, mostly in the goods trade, with y-o-y export growth of 16.6% and a 0.2% fall in import.
Orderly public finances created room for a strong fiscal policy response, which was efficiently used, without jeopardising the principle of sustainability of public finance.

Finding an optimal measure during the pandemic between short-term support to people’s health and the economy, and ensuring medium-term sustainability of public finances was one of the biggest challenges for policy makers across the world. Such measure was established in Serbia.

Using the composite indicator of fiscal sustainability for Serbia, in February we estimated that additional fiscal measures that were announced back then, do not endanger the sustainability of public finances. **Based on the decomposition of factors that affect the movement of the share of public debt in GDP, we estimated that the key role in the dynamics of this indicator will be that of dynamic economic growth and favourable financing conditions, which will ensure that the share of public debt in GDP moves at around 60% this year and steadily declines in the medium term.**
Inflation trending around target midpoint over the next year

**Headline and core inflation (y-o-y rates, in %)**

Our inflation projection indicates that going forward, inflation will remain low and stable, under the following assumptions – relatively stable exchange rate, anchored inflation expectations, moderate wage growth and low euro area inflation. Nothing comes on its own; rather, it is people who make policies and measures to ensure such conditions.

At the same time, there is a global discussion as to the possible tightening of financial conditions and further capital flows to emerging countries. Then, the prices of primary commodities, which are on the rise and mainly driven by optimism over the acceleration of global economic growth, also reflect on the rise of global inflation. Still, the prevailing view is that such inflation growth is temporary, and leading central banks continue to stimulate favourable financing conditions with their monetary policies.
Dynamic economic recovery in conditions of preserved stability and improved investment environment

**One-year ahead inflation expectations (in %)**

Dinar exchange rate movements and NBS transactions in the FX market

Risk premium indicator for debt in euros – EURO EMBIG (in bp)

**Investments in fixed funds (in % of GDP)**

**Asset quality – NPLs (in RSD bn and %)**

**Share of goods and services export and import in GDP (in %)**

Source: Galup, Ipsos/Ninamedia, Bloomberg and NBS.
* Ipsos and Galup until December 2014, Ninamedia since December 2014 and Ipsos since January 2018.

Source: SORS and NBS calculation.
* NBS estimate.

*As at 13 May 2021.

Source: NBS.
* NBS estimate.