



**NATIONAL BANK OF SERBIA**

**REPORT ON DINARISATION OF THE SERBIAN  
FINANCIAL SYSTEM**

**Q4 2020**

April 2021

## **Introductory note**

A more extensive use of the dinar in the Serbian financial system and better currency matching of income and expenses of the non-bank sector would improve the country's financial stability, lessen the risk of exchange rate volatility in the most vulnerable sectors of the economy, and enhance the effectiveness of monetary policy. To support the process of dinarisation, in April 2012 the National Bank of Serbia (NBS) and the Government of the Republic of Serbia signed the Memorandum on the Strategy of Dinarisation of the Serbian Financial System. Bearing in mind that in the period after the conclusion of the Memorandum in 2012, the macroeconomic stability had been ensured and financial stability strengthened further, in December 2018 the NBS and the Serbian Government signed the new Memorandum on the Strategy of Dinarisation, confirming their commitment to additionally support dinarisation and contribute to financial stability. In the new Memorandum on the Dinarisation Strategy these institutions reflected on the results of the measures and activities undertaken so far, and, based on them, defined additional measures and activities that will ensure further dinarisation and reduce FX risk in the system.

Pursuant to the Memorandum, the NBS and the Government have committed to monitoring and analysing the degree of dinarisation and to regularly informing the public about the measures and activities undertaken, as well as about the progress achieved in the process of dinarisation. For that purpose, the NBS prepares and publishes the quarterly Report on Dinarisation of the Serbian Financial System as one of its supporting communication tools. The Report provides information about developments in the dinar market and highlights measures and activities taken or planned by market players and regulatory authorities with a view to supporting the process of dinarisation. Making this information accessible to the wider public will help raise awareness of the need to hedge against the exchange rate risk, as well as understanding of the measures and activities to be taken by the NBS and the Government in order to encourage the process of dinarisation of the Serbian financial system.

Reports on Dinarisation of the Serbian Financial System are available on the NBS website ([www.nbs.rs](http://www.nbs.rs)).

## **Dinarisation strategy**

The dinarisation strategy rests on three inter-connected pillars.

**The first pillar** is the most general, but also the most important one. It envisages monetary and fiscal policy measures to maintain macroeconomic stability and ensure conditions for sustainable economic growth.

**The second pillar** consists of measures to promote further development of the dinar securities market and introduce new dinar products in the domestic financial market.

**The third pillar** aims to promote hedging against the risks associated with exchange rate exposure in the non-bank sector and to discourage further build-up of those risks. The NBS will lead the efforts in this field, working together with the banking sector on introducing and developing FX risk hedging instruments.

#### **ABBREVIATIONS**

**bn** – billion  
**lhs** – left-hand scale  
**mn** – million  
**NPL** – non-performing loan  
**pp** – percentage point  
**Q** – quarter  
**rhs** – right-hand scale  
**SDR** – special drawing rights  
**Y** – year  
**W** – week

Other generally accepted abbreviations are not cited.

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# I. Dinarisation of the Serbian financial system

The degree of dinarisation of the corporate and household receivables and deposits reached a new all-time high at end-2020.

In Q4 2020, the degree of dinarisation of corporate and household receivables, in terms of outstanding business, continued up, reaching the highest level thus far – 37.3%. Looking at new business, the degree of dinarisation of corporate and household loans edged down for the second consecutive quarter, while still remaining relatively high.

The share of dinar in total corporate and household deposits rose to an all-time high of 40.1%, benefiting from further vibrant growth in dinar savings which posted new record highs. In terms of new business, the share of dinar in total corporate and household deposits declined, as it is typical for the end of the year.

The dinarisation of Serbian public debt continued to increase, to 30.5%, contributing to higher resilience of public finance to the FX risk.

## 1. Dinarisation of receivables

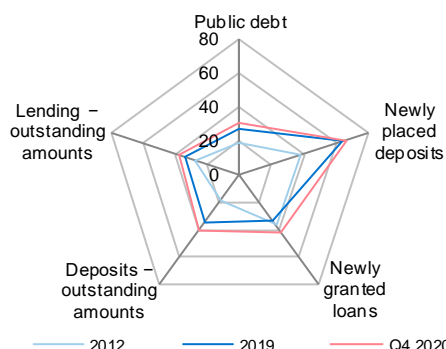
The dinarisation of corporate and household receivables in the segment of outstanding business went further up, reaching its highest level thus far at end-Q4 2020. This was largely a result of continued dinar lending to corporates, on the back of favourable terms of borrowing and anti-crisis measures of the NBS and Government of the Republic of Serbia. The dinarisation of new loans to corporates and households declined for the second quarter in a row, while, on annual level, remained substantially higher compared to 2019.

### Corporate and household receivables

Under the impact of NBS monetary policy easing, measures aimed at ensuring sustainable household lending, approval of loans under the Guarantee Scheme and other anti-crisis measures of the NBS and Serbian Government, as well as low interest rates in the euro area money market, corporate and household receivables continued to increase. In Q4 these receivables gained RSD 5.6 bn in nominal terms. Compared to Q3, this growth was much more moderate, largely as a consequence of the maturing of larger amounts of previously approved loans, after the expiry of the second moratorium in October.

The rise in corporate and household receivables in Q4 reflected the **increase in their dinar component** (by RSD 21.2 bn). This is attributable to **the further rise in dinar corporate loans** approved to corporates, **partly under the Guarantee Scheme**, for the financing of their current assets and liquidity needs, in response to their growing demand for liquidity. In the same period, **FX and FX-indexed corporate and**

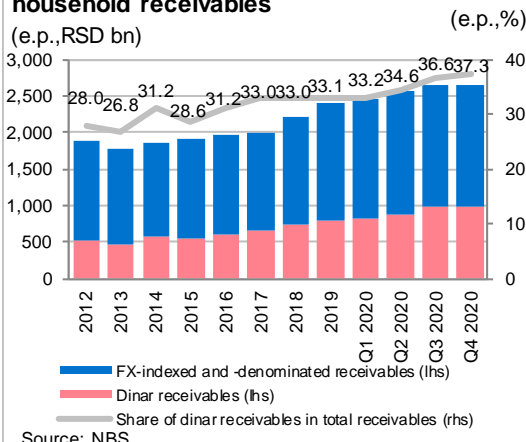
Chart I.1 Dinarisation indicators\* (%)



\*Apart from public debt, all categories include the household and corporate sector component. Within each category - the share of dinar component in total of the category.

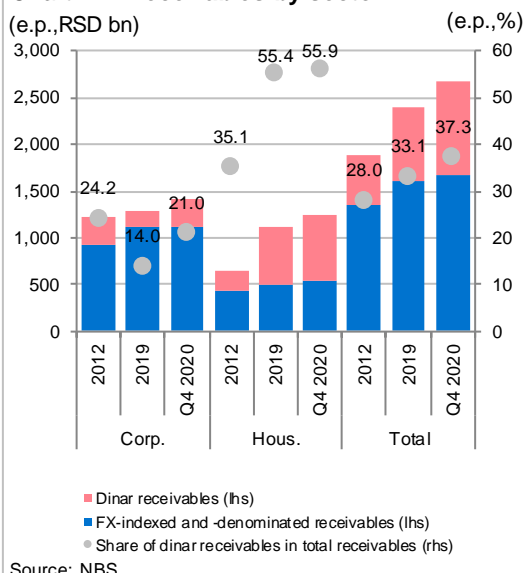
Sources: NBS, Ministry of Finance.

Chart I.1.1 Share of dinar receivables in total corporate and household receivables



Source: NBS.

Chart I.1.2 Receivables by sector



Source: NBS.

**household receivables decreased** (by RSD 15.6 bn), which can be put down to higher repayment of corporate loans, after the lifting of the second moratorium in October. In terms of purpose, the reduction in FX-indexed loans was particularly pronounced in case of investment loans, while the stock of current assets loans also contracted significantly.

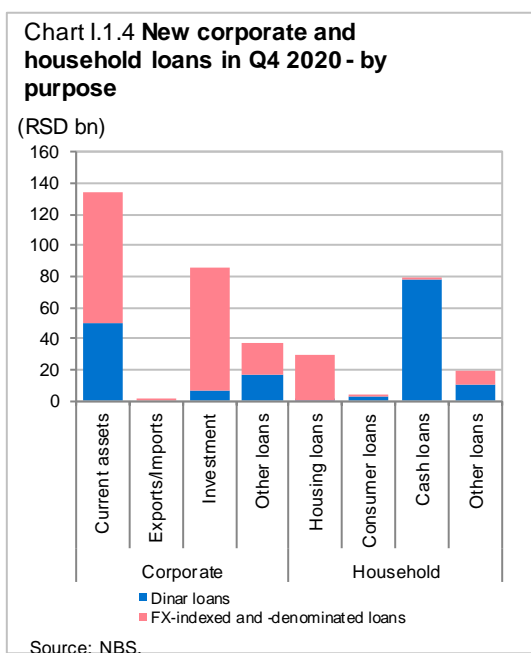
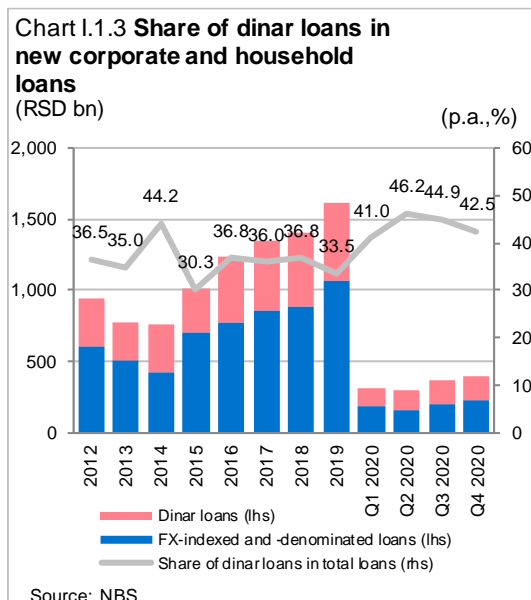
In line with these movements, the share of dinar in total corporate and household receivables increased in Q4 (by 0.7 pp), reaching 37.3% at end-December, which has been the **highest value of this indicator since the comparable statistics was introduced**. Excluding the exchange rate effect, this indicator equalled 37.1% at end-Q4, which is an increase by 0.8 pp relative to end-Q3 and by 4.2 pp compared to the same quarter last year.<sup>1</sup>

Observing the corporate sector, the increase in the indicator is even more pronounced – in Q4 its value rose by 1.7 pp, to 21.0% at end-December (20.9% excluding the exchange rate effect).

**The degree of dinarisation of household receivables decreased in Q4 (by 0.7 pp to 55.9%), amid the rise of FX-indexed receivables, driven by housing loans.** The stock of housing loans rose on the back of previously adopted measures aimed at facilitating the access to housing loans, as well as favourable terms of borrowing and the rise in disposable household income.<sup>2</sup> An important driver was also lower loan repayment as a result of facilities (adopted by the NBS in December) for borrowers who were unable to regularly service their credit liabilities due to circumstances caused by the coronavirus spread. In the same period, dinar household receivables shrunk moderately (by RSD 4.0 bn), due to the lower amount of non-categorised loans. Cash loans, as the dominant category of household loans, continued to increase. Their share in total household loans measured 45% at end-Q4, with 99% of these loans approved in dinars.

### New corporate and household loans

In Q4, banks approved to the corporate and household sectors new loans worth RSD 389.7 bn – RSD 21.2 bn more than in the previous quarter. **In the structure of these loans, 42.5% were approved in dinars.** Though this marks a decline from Q3 (by 2.4 pp), the level of this indicator is still relatively high. At the level of 2020, the indicator averaged 43.6%, and in 2019 – 33.5%. **This was supported by favourable terms of dinar borrowing, implementation of measures by the NBS and Serbian Government**



<sup>1</sup> Calculated at the dinar exchange rate against the euro, US dollar, Swiss franc, pound sterling and the Japanese yen as at 30 September 2014, taking into account the currency structure of loan receivables.

<sup>2</sup> Such as lowering the minimum downpayment for first-time home buyers from 20% to 10%, and loosening the requirements regarding the degree of completion of the constructed facility.

### concerning the Guarantee Scheme and other measures favouring dinar lending.

Of the total amount of new corporate and household loans, **around two thirds** (RSD 258.2 bn) were approved to corporates. In terms of purpose, the contraction was recorded for current assets loans, which were, compared to other categories, largely approved in dinars (37.1%). In Q4, these loans were **predominantly** used by micro, small and medium-sized enterprises, **which were covered by the Guarantee Scheme.**

Investment loans posted more sizeable growth (by about 40%) in Q4 and made up around one third of the total approved amount of corporate loans. Same as in the previous period, these loans were typically approved in foreign currency (92.2%), mainly in the segment of micro, small and medium-sized enterprises.

**The degree of dinarisation of new corporate loans in Q4 amounted to 28.5%**, down by 3.3 pp relative to Q3, reflecting somewhat higher approval of FX and FX-indexed loans. However, compared to the previous period, this indicator remained relatively high – at the level of 2020 it measured 31.5%, and in 2019 – 16.9%.

The weighted average interest rate on new dinar corporate loans edged down by 0.1 pp relative to September, measuring 3.2% in December. This decrease is a result of considerably lower interest rates on investment loans (by 1.1 pp to 2.9%), while interest rates on current assets loans and other non-categorised loans remained unchanged (3.4% and 3.0%, respectively).

Interest rates on FX and FX-indexed corporate loans increased in this period (on average by 0.3 pp to 3.0%), and this growth was characteristic for the most prevalent types of loans – investment loans (up by 0.5 pp to 3.6%) and current assets loans (up by 0.1 pp to 2.7%).

**The volume of new household loans in Q4** amounted to RSD 131.5 bn. Compared to Q3, this amount was higher by RSD 11.4 bn, and the **dinar component rose somewhat more moderately compared to the FX component.** However, dinar loans remained dominant in the structure of new household loans (69.8%), and their share, though lower than in Q3 (by 2.1 pp), was at the level of the annual average.

FX-indexed household loans increased by RSD 6.0 bn in Q4, owing to the rise in housing loans against the background of lower interest rates, the rise in household disposable income and solid supply in the housing market.

Chart I.1.5 Dinarisation of new corporate and household loans - by purpose

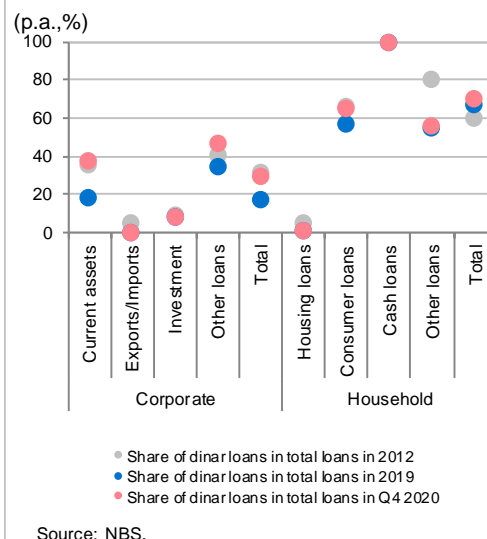


Chart I.1.6 Interest rates on new corporate loans

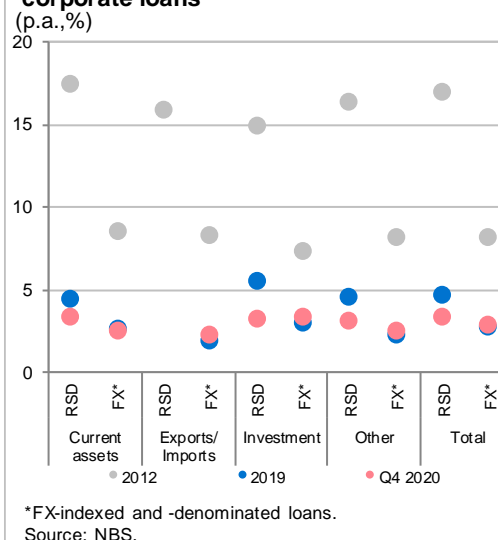
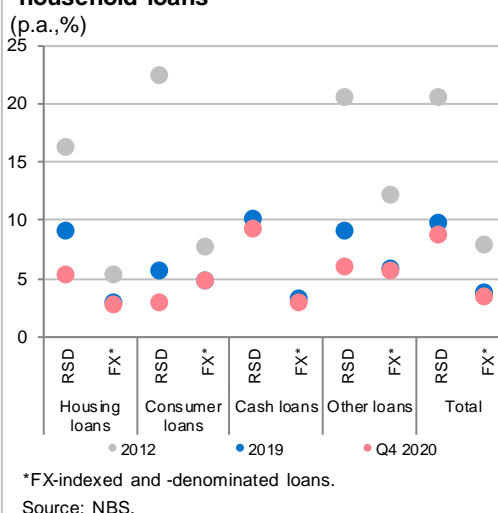


Chart I.1.7 Interest rates on new household loans





The volume of dinar household loans increased by RSD 5.4 bn in Q4, driven by the rise in cash loans, which remained the dominant category (60%). The interest rate on these loans in December remained unchanged relative to September (9.2%). Interest rates on other categories of dinar loans dropped, moving from 2.1% on consumer loans to 5.3% on other non-categorised loans.

In December, interest rates on FX-indexed household loans remained at the same level as in September (3.3%). In accordance with the mild decline in EURIBOR interest rates, the rates on housing loans also edged down (by 0.1 pp to 2.6%), while the rates on other categories of FX-indexed loans went up.

## 2. Deposit dinarisation

*The degree of dinarisation of corporate and household deposits in Q4 2020, in terms of outstanding business, continued to rise, posting record high levels on the back of further growth in dinar savings. Typically for Q4, the dinarisation of new corporate and household deposits was somewhat lower than in the quarter before, while at the level of 2020 it was higher compared to the previous year.*

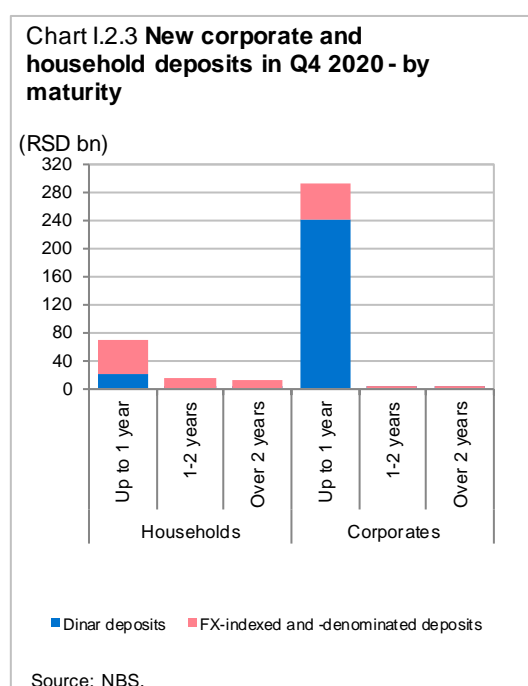
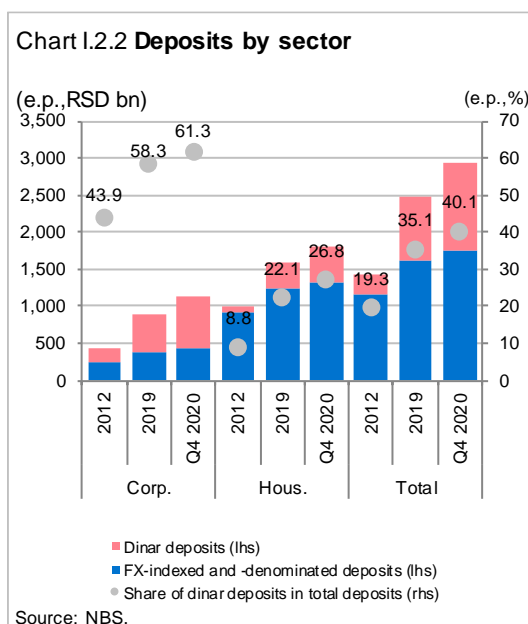
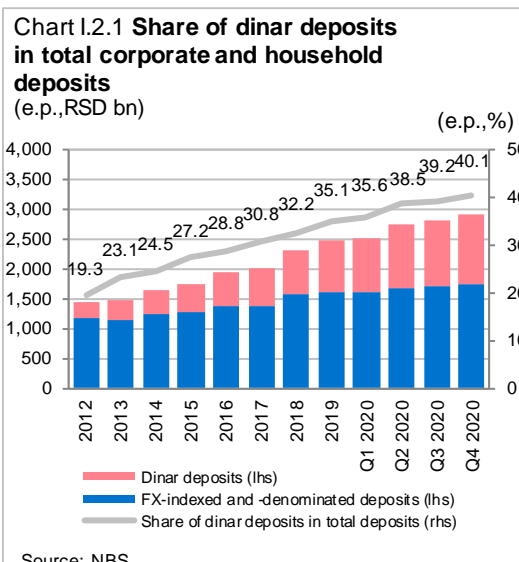
### Corporate and household deposits

Corporate and household deposits, in terms of outstanding business, gained RSD 100.3 bn in Q4, reaching RSD 2,924.2 bn at end-December. **Deposit growth, typical for the year-end, was particularly pronounced in December and was largely associated with the higher government spending late in the year.** In terms of deposit structure, dinar deposits recorded growth more than twice higher than FX deposits (RSD 67.7 bn relative to RSD 32.7 bn), which reflected on further growth in the dinarisation of total deposits (by 0.9 pp) to 40.1%, the highest level of this indicator thus far.

Speaking of dinar deposits, the increase was more pronounced in **households** (by RSD 38.2 bn) and primarily concerned transaction deposits (by RSD 29.8 bn) and also dinar savings of residents (RSD 3.7 bn), which continued to rise, month after month, reaching the record high level at end-Q4 (RSD 92.5 bn).

In the same period, FX deposits of households recorded somewhat more moderate growth, which continued to go hand in hand with the change in the maturity structure of deposits, in favour of those maturing in less than one year.

These movements caused further growth in the dinarisation of household deposits. At end-Q4, this indicator reached the new highest level of 26.8%, which is an increase by 1.1 pp relative to end-Q3 and by 4.8 pp relative to end-2019.



In Q4, **corporate deposits** recorded growth (by RSD 28.4 bn), which largely stemmed from the increase in dinar deposits (by RSD 29.5 bn), due to higher government spending in December. This growth was particularly pronounced in transaction deposits, in companies in trade and construction sectors. In the same period, corporate FX deposits decreased slightly (by RSD 1.1 bn). The degree of dinarisation of corporate deposits continued up in Q4 (by 1.1 pp), reaching 61.3% at end-December, the highest level since 2008, when comparable data became available. Since the start of the year, this indicator gained 3.0 pp.

### New corporate and household deposits

In Q4 2020, corporates and households placed RSD 399.5 bn worth of new deposits with banks, which is RSD 63.5 bn more than in the previous quarter. **Higher deposits are typical for the end of the year and reflect the rise in FX deposits** (by RSD 39.6 bn) compared to Q3. Though the amount of new dinar deposits increased to a lesser extent (by RSD 23.9 bn), these deposits nevertheless made up around two thirds of new deposits (66.5%). At the level of 2020, this share (70.0%) was higher by 7.9 pp compared to the previous year.

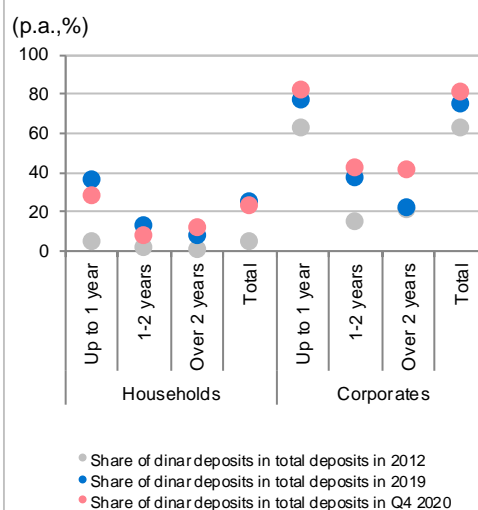
**The rise in new deposits stemmed from the household sector primarily** (by RSD 38.0 bn), with the rise in FX deposits being particularly pronounced (by RSD 34.1 bn). The hike in FX deposits was recorded for all maturities and was particularly notable for maturities under one year.

Dinar deposits increased to a much lesser extent (by RSD 22.3 bn), so their share in the structure of total new household deposits declined relative to Q3 (by 7.6 pp), to 22.6%. Still, at the level of the year, this share (27.0%) was higher by 2.0 pp compared to 2019.

The weighted average interest rate on termed dinar household deposits in Q4 edged down slightly compared to the previous quarter (by 0.1 pp), to 2.3%. In terms of maturity structure, interest rates were the lowest for deposits maturing in less than one year (2.2%), and these rates decreased further in Q4 (by 0.1 pp). In longer maturities, interest rates were higher and recorded growth in Q4 – moving up to 3.6% for maturities over two years.

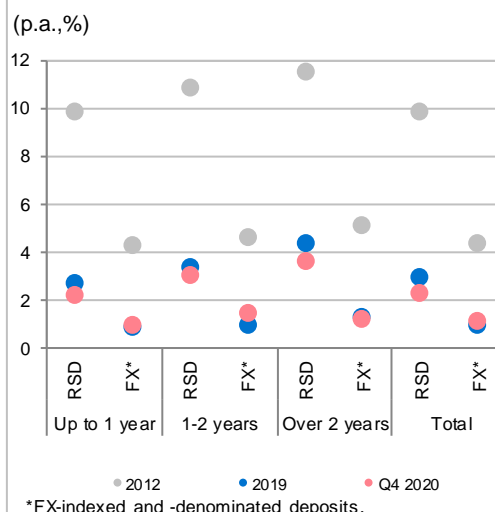
Speaking of FX household deposits, in Q4 banks on average offered somewhat higher interest rates compared to Q3 (1.1%), while interest rates increased for deposits of all maturities (by 0.1 pp each). Thus, interest rates on FX deposits ranged from 1.0% – on deposits maturing in up to one year, to 1.4% – on deposits maturing within one to two years.

Chart I.2.4 Dinarisation of new corporate and household deposits - by maturity



Source: NBS.

Chart I.2.5 Interest rates on new term deposits of households



\*FX-indexed and -denominated deposits.

Source: NBS.

### Dinar and FX savings

**In Q4 household savings deposited with banks in the Republic of Serbia continued up every month. Dinar savings kept posting more dynamic growth than FX savings**, encouraged by relatively higher interest rates on dinar than on FX savings, the relatively stable exchange rate of the dinar against the euro and stimulating tax treatment of dinar savings.

At end-Q4, dinar savings<sup>3</sup> measured RSD 93.1 bn, which was their highest level thus far. Compared to Q3, Q4 saw an increase in dinar savings by RSD 3.8 bn (4.2%). At the level of 2020, dinar savings went up by RSD 13.5 bn (16.9%), recording dynamic growth for the third year in a row. This testifies to the preserved trust in dinar and the banking system amid the coronavirus pandemic and heightened risk aversion.

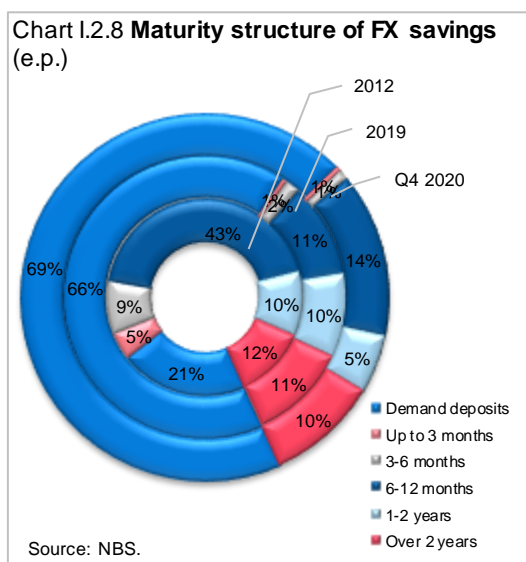
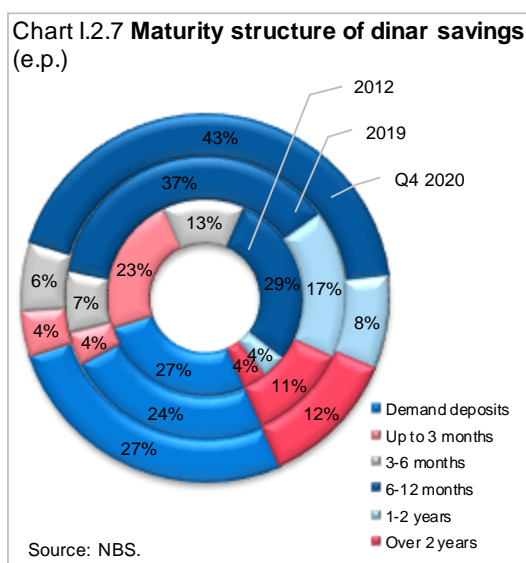
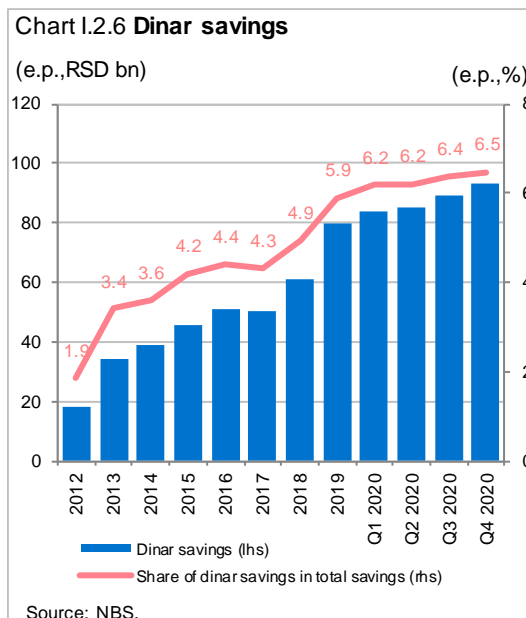
The analysis of term composition of dinar savings indicates that Q4 saw a rise in savings with maturities of up to one year (by RSD 5.7 bn), which account for almost 80% of total dinar savings, with a larger part of the growth pertaining to savings with maturities of six months to one year (RSD 4.3 bn).

Savings deposits termed for over one year decreased in the same period (by RSD 2.5 bn), due to reduced savings termed from one to two years (by RSD 3.4 bn). On average, banks offer a 3.4% interest rate on savings with these maturities, while interest rates on savings with shorter maturities are lower (2.2% on average).

At end-Q4, FX savings (both residents' and non-residents' savings) reached EUR 11,435.8 mn, rising by EUR 280.1 mn (2.5%) from end-September, and by EUR 631.6 mn (5.8%) from the end of last year.

Similar as with dinar savings, FX savings deposited for periods shorter than a year increased (by EUR 461.4 mn) owing to the rise in demand deposits (by EUR 259.4 mn) and savings with six- to twelve-month maturities (by EUR 206.2 mn). Demand savings remained the dominant form of FX savings (68.7%). FX savings deposited for over one year for which banks offer relatively favourable interest rates dropped by EUR 181.2 mn in Q4.

The weighted average interest rate on FX savings equalled 1.1% in Q4, up by 0.1 pp from Q3. In terms of maturity, the lowest interest rates were recorded for FX deposits termed for up to one year (1.0% on average), and the highest for deposits termed for one to two years (1.4%).



<sup>3</sup> Dinar savings include the savings of both residents and non-residents.

The share of dinar savings in total savings continued up. At end-Q4 it measured 6.5%, up by 0.1 pp compared to Q3, and by 0.6 pp compared to end-2019.

### Is it more profitable to save in dinars or foreign currency?

Despite the crisis caused by the renewed spread of the pandemic, the steady growth in household savings was preserved. As the dinarisation of the Serbian financial system is the NBS's strategic commitment, promotion of greater use of dinars in the financial system is significant, particularly in the conditions of crisis.

In the past eight years, dinar savings increased more than five times (a rise of over RSD 75 bn), exceeding RSD 93 bn in December 2020. FX savings went up from EUR 8.3 bn to EUR 11.4 bn in the same period.

Table I.2.1. Profitability of savings placed on deposit for a year

Type of savings	Date of deposit placement	Initial deposit	EURRSD exchange rate*	Interest rate (% p.a.)**	Maturity date	EURRSD exchange rate	Deposit at the end of term**	Amount of deposit at the end of term	
								in RSD	in EUR***
Savings in RSD	Dec 2019	100,000	117.5383	2.80	Dec 2020	117.5777	102,800	102,800	874
Savings in EUR	Dec 2019	851	117.5383	1.04	Dec 2020	117.5777	858	100,918	858
Difference in favour of savings in RSD - deposit placed for a year								1,882	16
Difference in favour of savings in RSD - deposit placed for a 3M period								362	3
Difference in favour of savings in RSD - deposit placed for a 2Y period								5,189	44
Difference in favour of savings in RSD - deposit placed for a 8Y period, annual rollover								33,611	286

\*monthly average exchange rate of the dinar against the euro.

\*\*weighted average interest rate on RSD and EUR savings placed on deposit for a year - new business.

\*\*\*for savings in euros, after tax on interest income.

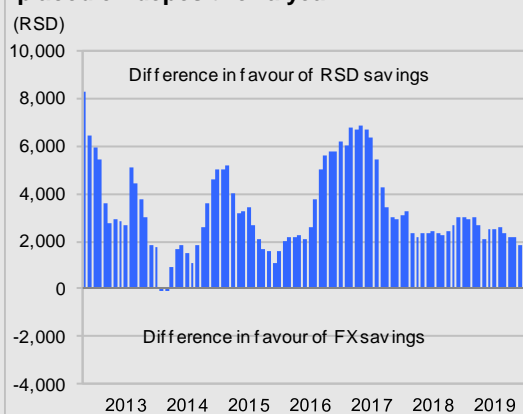
Same as all the prior analyses, the latest one also shows that it is more profitable to save in dinars than in euros, both in the long and short term. The analysis for the period from December 2012 until December 2020 shows that in case of savings termed for one year (without roll-over) it was more lucrative to save in dinars in as much as 98% of observed annual subperiods (Chart I.2.9). A person who deposited RSD 100,000 in December 2019 at the 2.80% interest rate received around RSD 1,900 more in December 2020 than the person who deposited the equivalent amount in euros in the same period, at the rate offered at the time (1.04%) (Table I.2.1). In case of savings termed for three months, dinar savings were more lucrative than savings in euros in 86% of the observed quarterly subperiods, while for deposits with two-year maturity, dinar savings were more lucrative than savings in euros in all of the observed two-year subperiods.

The same conclusions are valid for dinar savings termed for one year and rolled over in the period of eight years. A person who deposited RSD 100,000 eight years ago would earn over RSD 33,600 (EUR 286) more in December 2020 than a depositor saving in euros (the equivalent of RSD 100,000) in the same period.

Greater profitability of dinar savings can be attributed to the monetary and financial stability over a longer period (primarily low inflation, the relatively stable exchange rate and high level of FX reserves), relatively higher interest rates on dinar savings than on euro savings, more favourable tax treatment of savings in the domestic currency and timely adopted monetary, prudential and fiscal measures aimed at mitigating the effect of the pandemic-induced crisis.

In cooperation with the Serbian Government, the NBS will continue to promote the process of dinarisation of the Serbian financial system and to analyse and underscore the profitability of savings in the domestic currency.

Chart I.2.9. Profitability of savings placed on deposit for a year



Source: NBS.

### 3. Dinarisation of public debt

*The degree of public debt dinarisation kept going up, posting a record high level at the end of the quarter, driven by the further increase in dinar government borrowing in the domestic securities market amid the pandemic.*

At end-Q4 public debt came at RSD 3,135.8 bn, rising by RSD 7.6 bn compared to the end of the previous quarter. The same period also saw a rise in its share in GDP by 0.7 pp, to 57.4%.

**Public debt rose because the dinar portion of the debt** increased (by RSD 38.4 bn), largely as a result of higher debt **on account of long-term securities issued in the domestic market** (by RSD 35.5 bn nominal).

he FX portion of public debt, unlike the dinar portion, decreased in the same period (by RSD 262.4 mn), primarily as a result of reduced dollar debt (by USD 862.9 mn), after the early payment of a part of the debt under eurobond issues in dollars 2011 (in the amount of USD 900 mn). Funds for this purpose were collected with the issue of eurobond in dollars in the amount of USD 1.2 bn with ten-year maturity. Liabilities incurred on this account were converted to euros in a hedging transaction and the euro amount of public debt increased in this period (by EUR 678.3 mn). The amounts of SDR and CHF portions of public debt dropped to a smaller extent (SDR 8.0 mn and CHF 1.7 mn, respectively).

The increase of the dinar share of public debt in total public debt continued on the back of the said events (by 1.1 pp) to 30.5%, which is a record high level of this indicator. The euro share of the debt also went up (by 2.4 pp to 49.6%), whereas the dollar share went down (by 3.4 pp, to 13.2%). Changes in the public debt composition reflect partly the effect of cross-currency trends (the weakening of the dollar against the euro).

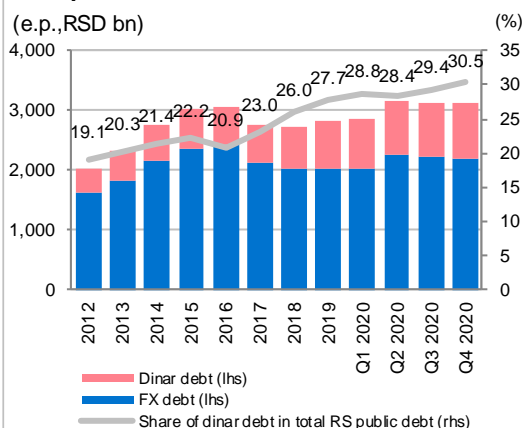
#### Primary market of government securities

Public debt incurred from securities issued in the domestic market came at RSD 1,258.8 bn at end-Q4, rising by RSD 20.5 bn q-o-q.<sup>4</sup>

In the currency structure of the government securities portfolio, the stock of dinar securities rose by RSD 35.5 bn in Q4, reaching RSD 947.9 bn at quarter-end and making up 75.3% of the total government securities portfolio. The share increased by 1.6 pp from Q3 and by 5.0 pp from end-2019.

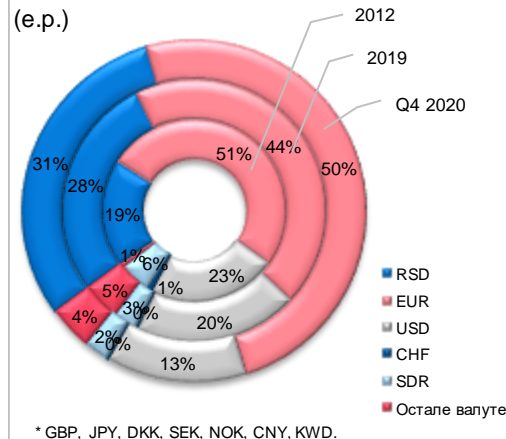
The higher stock of dinar securities in Q4 is dominantly attributable to the rise in the stock of benchmark bonds with 12-year maturity realised in

Chart I.3.1 Share of dinar debt in total public debt



Source: Ministry of Finance.

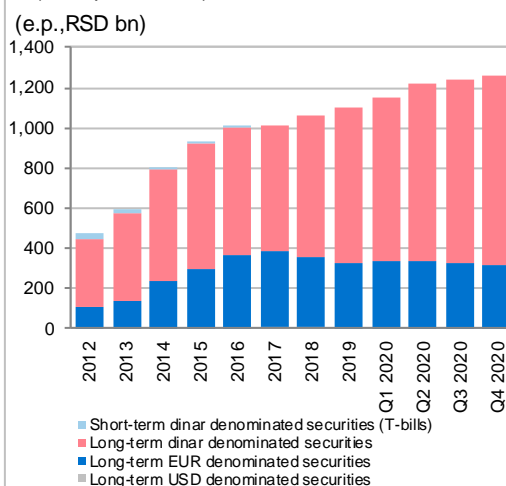
Chart I.3.2 Currency structure of RS public debt



\* GBP, JPY, DKK, SEK, NOK, CNY, KWD.

Source: Ministry of Finance.

Chart I.3.3 Maturity and currency structure of government securities issued in the domestic fin. market (end-quarter data)



Source: Ministry of Finance.

<sup>4</sup> Including savings bonds.



three auctions with significant interest of foreign investors (over 80% of the realised amount). The stock of debt also went up on account of dinar government securities with five-year maturity (by RSD 4.5 bn) and two-year maturity (by RSD 1.2 bn). In the same period, the security termed for five years matured and a portion of the dinar debt was repaid on that account (RSD 14.0 bn).

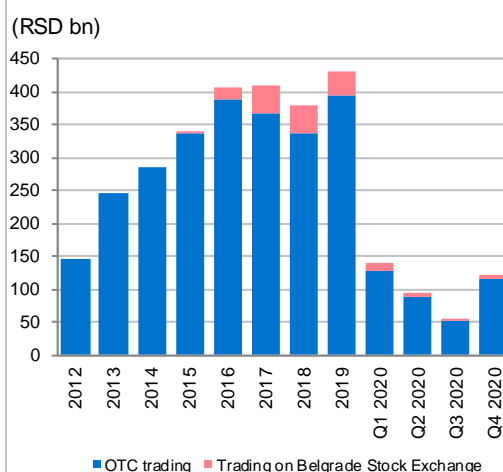
There was no new borrowing on account of FX government securities issued in the domestic market in Q4 as the FX liquidity needs were met in the international financial market. The country settled its liabilities arising from previously issued three- and five-year securities, in the amount of EUR 77.4 mn and EUR 50.0 mn, respectively.

### Secondary market of dinar government securities

After a three-quarter contraction of trading in dinar government securities in the secondary market, Q4 saw more than double the rise from Q3. In Q4 the trading equalled RSD 124.8 bn, up by RSD 68.9 bn from Q3.

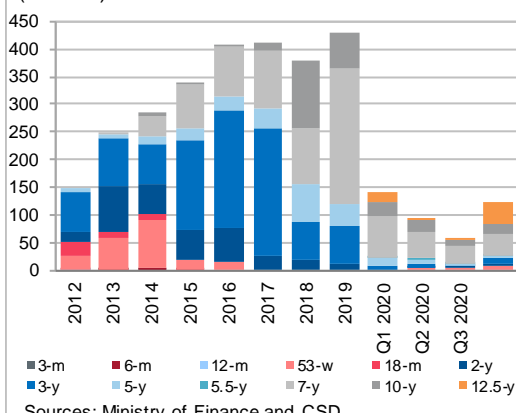
More than a half of the increase in secondary trading in dinar securities is made up of bonds with twelve-year and half-year maturity, which were traded the most in addition to seven-year securities. The trading in securities with other maturities also intensified except for five-year securities, the trading of which decreased somewhat. Secondary trading in dinar government securities on the Belgrade Stock Exchange increased by RSD 2.5 bn (75%) in Q4 and equalled RSD 5.9 bn. The share of BSE trading in total secondary trading in these securities decreased to 4.7%.

Chart I.3.4 Secondary trading in dinar government securities



Sources: Ministry of Finance, CSD and BSE.

Chart I.3.5 Secondary trading in dinar government securities, by maturity of securities (RSD bn)



Sources: Ministry of Finance and CSD.

## II. FX hedging instruments

In Q4 the NBS continued to organise regular three-month and two-week swap auctions of foreign currency in order to boost the development of the interbank swap market. To support the domestic financial system and the domestic economy in the face of heightened coronavirus (Covid-19) spread, as of 16 November the NBS started organising additional three-month swap auctions of purchase of foreign currency (euros) for dinars.

In Q4, residents concluded forward FX purchases with banks worth EUR 37.4 mn, down by EUR 32.7 mn from the quarter before, and forward FX sales worth EUR 19 mn, also down by EUR 4.4 mn.

### 1. NBS FX swap auctions

In Q4, the NBS organised 26 regular three-month FX swap actions where it swap sold and bought EUR 55 mn each. Total bank demand at regular three-month swap FX sale auctions amounted to EUR 55 mn, while total demand at three-month swap FX purchase auctions reached EUR 289 mn. The weighted average accepted swap points at three-month swap auctions of sale of foreign currency in Q4 2020 amounted to 761 on average, i.e. they ranged from 594 to 889, while weighted average accepted swap points at swap auctions of purchase of foreign currency amounted to 842, ranging from 750 to 897.

The NBS also organised 26 regular two-week FX swap auctions. The total demand of banks at two-week swap auctions of sale of foreign currency came at EUR 67 mn, while the total demand at two-week swap auctions of purchase of foreign currency equalled EUR 300 mn. At the two-week swap auctions held in Q4, the NBS swap sold and bought EUR 67 mn each.

The weighted average accepted swap points at two-week swap auctions of sale of foreign currency in Q4 2020 amounted to 131 on average, i.e. they ranged from 118 to 152, while the weighted average accepted swap points at swap auctions of purchase of foreign currency amounted to 145 on average, i.e. they moved between 122 and 162.

In the face of the repeated tightening of containment measures in the country, the NBS made a decision to organise additional three-month swap auctions of purchase of foreign currency on a weekly basis starting from mid-November. The aim was to enable banks to obtain additional cheap dinar liquidity at fixed swap points (interest rate on dinars is equal to the rate on deposit facilities increased by 10 bp while the rate on euros is 0%). When the domestic economy started recovering faster than expected, the NBS's additional swap auctions were an attempt at maintaining the level of available and cheap liquidity in the banking, and hence corporate sector at a

Table II.1.1. NBS swap transactions, quarterly data

Period	Swap FX sale	Total amount offered by banks on swap FX sale auctions	Swap FX purchase	Total amount offered by banks on swap FX purchase auctions
2012	171.0	497.0	188.0	903.1
2013	124.0	1,214.0	124.0	189.0
2014	180.0	649.5	180.0	689.5
2015	550.5	1,519.5	550.5	905.0
2016	440.0	1,293.9	440.0	805.0
2017	546.5	1,145.2	546.5	1,020.0
2018	324.0	1,286.0	324.0	1,342.0
2019	513.5	2,096.5	513.5	1,265.0
2020	800.5	1,531.0	956.0	1,836.5
Q1	212.0	462.0	308.0	520.0
Q2	373.5	766.0	226.0	272.5
Q3	93.0	181.0	93.0	248.0
Q4	122.0	122.0	329.0	796.0

Source: NBS.

Table II.1.2. NBS swap transactions in 2020, monthly data

Month	Swap FX sale				Swap FX purchase			
	3M		2W		3M		2W	
	Realization	Offered by banks	Realization	Offered by banks	Realization	Offered by banks	Realization	Offered by banks
January	30.0	55.0	3.0	56.0	30.0	35.0	3.0	42.0
February	10.0	83.0	49.0	86.0	10.0	47.0	49.0	112.0
March	81.0	124.0	39.0	58.0	177.0	205.0	39.0	79.0
<b>Total in Q1</b>	<b>121.0</b>	<b>262.0</b>	<b>91.0</b>	<b>200.0</b>	<b>217.0</b>	<b>287.0</b>	<b>91.0</b>	<b>233.0</b>
April	115.0	115.0	103.5	129.0	91.0	91.0	40.0	40.0
May	25.0	25.0	83.0	83.0	38.0	50.5	10.0	10.0
June	40.0	300.0	7.0	114.0	40.0	69.0	7.0	12.0
<b>Total in Q2</b>	<b>180.0</b>	<b>440.0</b>	<b>193.5</b>	<b>326.0</b>	<b>169.0</b>	<b>210.5</b>	<b>57.0</b>	<b>62.0</b>
July	43.0	52.0	10.0	35.0	43.0	70.0	10.0	40.0
August	15.0	36.0	0.0	20.0	15.0	34.0	0.0	19.0
September	15.0	20.0	10.0	18.0	15.0	55.0	10.0	30.0
<b>Total in Q3</b>	<b>73.0</b>	<b>108.0</b>	<b>20.0</b>	<b>73.0</b>	<b>73.0</b>	<b>159.0</b>	<b>20.0</b>	<b>89.0</b>
October	35.0	35.0	42.0	42.0	35.0	103.0	42.0	140.0
November	10.0	10.0	25.0	25.0	88.0	164.0	25.0	85.0
December	10.0	10.0	0.0	0.0	139.0	229.0	0.0	75.0
<b>Total in Q4</b>	<b>55.0</b>	<b>55.0</b>	<b>67.0</b>	<b>67.0</b>	<b>262.0</b>	<b>496.0</b>	<b>67.0</b>	<b>300.0</b>
<b>Total in 2020</b>	<b>429.0</b>	<b>865.0</b>	<b>371.5</b>	<b>666.0</b>	<b>721.0</b>	<b>1,152.5</b>	<b>235.0</b>	<b>684.0</b>

Source: NBS.



sufficiently high level in order to ensure the continued incentives. The total bank demand at additional swap auctions organised from mid-November until the end of the year measured EUR 207 mn, which was also the amount of realisation, whereby the NBS provided additional dinar liquidity to banks for a period of three months in the amount of RSD 24.3 bn.

## 2. FX hedging instruments

In Q4, the share of forward FX purchases by residents from banks in total FX purchases equalled 0.9% (vs. 1.8% in the previous quarter) and was the highest in November – 1.2%. In Q4 ten domestic companies used the possibility of FX hedging by concluding this type of transactions with banks, totalling EUR 37.4 mn (EUR 70.1 mn in Q3). The weighted average maturity of forward FX purchases was 50 days, with the longest maturity of FX transactions recorded in November – 194 days. The average value of forward FX purchase contracts of residents equalled EUR 0.3 mn.

In terms of the currency structure of forward FX purchases, the euro accounted for 74%, and the US dollar for 26%.

Q4 saw forward FX sales by six residents, in the total amount of EUR 19 mn (compared to 23.4 mn in Q3), and the weighted average maturity of transactions was 107 days.

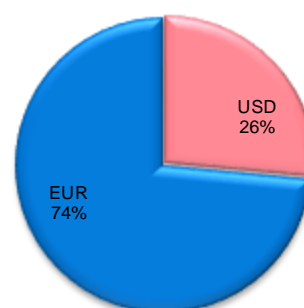
Period	Forward purchase by residents			Forward sale by residents		
	Amount in EUR mln	Weighted average maturity in days	% share in total purchase	Amount in EUR mln	Weighted average maturity in days	% share in total sale
2012	754.7	38	6.7	1.3	18	0.0
2013	533.8	24	5.0	1.4	39	0.0
2014	430.0	24	5.0	0.8	49	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
2018	212.7	55	1.5	49.9	450	0.4
2019	108.9	72	0.7	63.4	349	0.4
2020	178.7	118	1.2	69.4	217	0.5
Q1	32.8	86	0.9	16.7	387	0.5
Q2	38.4	40	1.1	10.3	379	0.4
Q3	70.1	212	1.8	23.4	116	0.7
Q4	37.4	50	0.9	19.0	107	0.5

Source: NBS.

Month	Forward purchase by residents			Forward sale by residents		
	Amount in EUR mln	Weighted average maturity in days	% share in total purchase	Amount in EUR mln	Weighted average maturity in days	% share in total sale
January	1.1	81	0.1	2.7	564	0.2
February	12.1	66	1.0	10.7	279	1.0
March	19.6	99	1.5	3.3	598	0.3
<b>Total in Q1</b>	<b>32.8</b>	<b>86</b>	<b>0.9</b>	<b>16.7</b>	<b>387</b>	<b>0.5</b>
April	10.2	50	1.0	8.2	330	0.8
May	9.7	46	0.8	2.0	570	0.2
June	18.5	29	1.3	0.1	68	0.0
<b>Total in Q2</b>	<b>38.4</b>	<b>40</b>	<b>1.1</b>	<b>10.3</b>	<b>379</b>	<b>0.4</b>
July	17.8	134	1.3	4.1	62	0.4
August	25.9	320	2.1	9.4	54	1.0
September	26.4	158	1.9	9.9	196	0.9
<b>Total in Q3</b>	<b>70.1</b>	<b>212</b>	<b>1.8</b>	<b>23.4</b>	<b>116</b>	<b>0.7</b>
October	14.2	57	1.1	6.6	63	0.6
November	15.4	49	1.2	5.2	137	0.4
December	7.8	36	0.5	7.2	125	0.4
<b>Total in Q4</b>	<b>37.4</b>	<b>50</b>	<b>0.9</b>	<b>19.0</b>	<b>107</b>	<b>0.5</b>
<b>Total in 2020</b>	<b>178.7</b>	<b>118</b>	<b>1.2</b>	<b>69.4</b>	<b>217</b>	<b>0.5</b>

Source: NBS.

Chart II.2.1. Currency structure of FX forward transactions between residents and banks in Q4 2020



Source: NBS.

**Table A Indicators of dinarisation of receivables, loans and deposits**  
(%)

Period	Share of dinar in total receivables, outstanding amounts, e.p.			Share of dinar in total loans, new business, p.a.*			Share of dinar in total deposits, outstanding amounts, e.p.			Share of dinar in total deposits, new business, p.a.*		
	Corporates	Households	Total	Corporates	Households	Total	Corporates	Households	Total	Corporates	Households	Total
2008	33.8	22.2	29.2				50.3	12.5	27.6			
2009	26.2	22.1	24.7				52.5	10.9	25.6			
2010	32.2	27.6	30.5	41.8	51.1	43.5	45.0	8.5	19.8	51.4	2.7	25.0
2011	27.3	32.6	29.2	33.3	44.0	35.9	44.9	10.1	21.5	51.3	3.8	32.8
2012	24.2	35.1	28.0	31.0	59.6	36.5	43.9	8.8	19.3	62.0	4.6	38.1
2013	20.0	37.9	26.8	24.6	63.6	35.0	52.4	11.5	23.1	65.2	8.2	44.1
2014	25.0	41.0	31.2	33.2	71.7	44.2	53.6	12.3	24.5	67.6	12.3	46.5
2015	19.4	42.8	28.6	16.8	67.8	30.3	55.6	13.9	27.2	69.1	16.0	52.8
2016	19.4	47.0	31.2	21.5	74.1	36.8	54.0	15.8	28.8	69.3	20.1	56.6
2017	17.5	51.8	33.0	19.3	71.0	36.0	56.5	16.9	30.8	75.6	22.7	64.4
2018	15.4	53.6	33.0	18.3	73.1	36.8	53.1	19.2	32.2	81.1	20.3	66.7
2019.	14.0	55.4	33.1	16.9	66.9	33.5	58.3	22.1	35.1	74.9	25.0	63.9
Q1 2020	14.7	55.1	33.2	27.3	69.4	41.0	58.6	22.4	35.6	85.5	27.3	72.6
Q2 2020	16.4	55.8	34.6	39.0	67.3	46.2	60.3	24.9	38.5	77.8	29.0	70.2
Q3 2020	19.3	56.6	36.6	31.8	71.9	44.9	60.2	25.7	39.2	81.2	30.2	72.0
Q4 2020	21.0	55.9	37.3	28.5	69.8	42.5	61.3	26.8	40.1	81.0	22.6	66.5

\* Indicators are calculated based on data on the amount of new loans and deposits during the period.

For the year 2010, indicators relate to the period September-December.

Source: NBS.

**Table B Currency structure of household savings and public debt**

Period*	Household savings				Public debt (central government)			
	Dinar savings (RSD mn)	FX savings (EUR mn)	Total savings (RSD mn)	Share of dinar savings in total savings (%)	Public debt in RSD (RSD bn)	Public debt in foreign currency (RSD bn)	Total public debt (RSD bn)	Share of RSD public debt in total public debt (%)
2008	10,575.0	4,679.1	425,145.0	2.5	19.9	758.1	778.0	2.6
2009	12,400.0	5,904.5	578,577.0	2.1	120.6	823.8	944.4	12.8
2010	13,848.7	7,105.8	763,495.8	1.8	187.1	1,095.4	1,282.5	14.6
2011	19,664.1	7,611.2	816,110.9	2.4	248.9	1,298.6	1,547.5	16.1
2012	17,882.9	8,272.3	958,597.0	1.9	385.4	1,629.3	2,014.8	19.1
2013	34,015.4	8,418.5	999,125.2	3.4	469.1	1,840.0	2,309.0	20.3
2014	38,615.1	8,524.6	1,069,732.9	3.6	588.6	2,164.6	2,753.2	21.4
2015	45,968.2	8,628.6	1,095,435.6	4.2	668.9	2,349.7	3,018.6	22.2
2016	51,063.9	8,987.3	1,160,744.3	4.4	639.8	2,424.8	3,064.6	20.9
2017	50,152.0	9,373.2	1,160,614.5	4.3	632.5	2,117.2	2,749.7	23.0
2018	61,079.9	9,955.1	1,237,720.8	4.9	708.4	2,011.8	2,720.2	26.0
2019	79,573.6	10,804.3	1,350,075.9	5.9	781.3	2,034.4	2,815.6	27.7
Q1 2020	83,674.7	10,819.7	1,355,037.8	6.2	821.4	2,035.0	2,856.3	28.8
Q2 2020	85,495.7	10,988.0	1,377,416.6	6.2	896.5	2,257.7	3,154.2	28.4
Q3 2020	89,305.8	11,155.7	1,400,997.8	6.4	919.5	2,208.7	3,128.2	29.4
Q4 2020	93,057.4	11,435.8	1,437,685.6	6.5	958.0	2,177.8	3,135.8	30.5

\* Indicators show data at end-period.

Sources: NBS, Ministry of Finance.

**Table C Overview of measures and activities contributing to dinarisation of the Serbian financial system**

Period of adoption of measure/implementation of activity	Description of measure/activity
June 2005	RR differentiation rate on dinar and FX sources of bank financing.
May 2011	LTV limit for FX-indexed mortgage loans of 80%, with no such limit prescribed for dinar loans. In December 2017 this limit was loosened to 90% in cases when the loan is approved as a measure of government support to certain categories of natural persons. Prescribed minimum mandatory down payment/deposit for FX and FX-indexed loans to natural persons (except mortgage loans) of 30%.
Since May 2011	Limiting the ratio of net open FX position to capital at 20%, as of 2011 (increased from 10%, with a view to encouraging credit activity).
June 2011	First-degree liquid receivables include also 90% of fair value of dinar RS securities with minimum maturity of 3 months. This does not apply to FX securities.
December 2011	Prescribed requirement for banks to inform clients in writing, prior to signing an agreement, of the risks they assume if they opt for an FX-denominated or FX-indexed service. Also, the offered agreement must contain the information on the currency in which the service is agreed. Prescribed requirement for advertising of credit and deposit services and leasing operations: when the advertising message contains numerical data, the currency in which the service is denominated must be stated in a representative example. Prescribed requirement for banks and lessors to offer financial services in dinars, unless the consumer requires otherwise.
April 2012	The NBS and the Republic of Serbia Government signed the Memorandum on the Strategy of Dinarisation of the Serbian Financial System.
May 2012	Societe Generale Banka Srbija a.d. Beograd issued the first dinar bond in the domestic market, without a currency clause, with three year maturity.
September 2012	By the adoption of the Law Amending the Law on Personal Income Tax, the tax on interest on FX savings was increased from 10% to 15%.
April 2013	The NBS included dinar securities without an FX-clause issued by IFOs with the top credit rating in the portfolio of securities used by the NBS in open market operations and on the list of eligible collateral in approval of NBS's daily liquidity facilities and short-term loans against the pledge of securities.
November 2013	The NBS adopted the Decision on Terms and Conditions of Performing Foreign Credit Transactions in Dinars, which provides for more favourable conditions under which international financial institutions and development banks or financial institutions founded by a foreign state (IFO) may approve dinar loans to domestic banks, legal persons and entrepreneurs, as well as conditions and manner in which domestic banks may approve dinar loans to non-residents.
May 2014	The Republic of Serbia Government adopted the programme for subsidising dinar loans to corporates.
October 2014	A first-time issue of a 10-year dinar bond by the government.
November 2015	Long-term government securities admitted to the prime listing of the Belgrade Stock Exchange.
January 2016	RR rate on the portion of FX base comprised of dinar liabilities indexed to an FX-clause was increased to 100% from 50% which had been applied since June 2012.
February 2016	A first-time larger-size issue of benchmark dinar bond by the government, with a view to reopening the issue and selling the bond several times a year.
October 2016	Domestic banks started to offer non-FX indexed housing loans in dinars, at relatively favourable terms (rates below 5%) and with a long repayment term (up to 30 years).
December 2016	The domestic financial market saw the first issuance of a dinar bond by an international financial institution – EBRD. The nominal size of the issue was RSD 2.5 bn.
June 2017	The first trading in EBRD-issued dinar bonds in the Belgrade Stock Exchange (in the amount of RSD 60 mn). A part of EBRD proceeds from the issue of dinar bonds in the domestic market was onlent to corporates through domestic banks. The loans were mainly used for financing of agriculture and refinancing. The NBS set the systemic risk buffer rate at 3% of total FX and FX-indexed receivables or a bank approved to corporates and households in the Republic of Serbia, for banks whose share of FX and FX-indexed in total corporate and household receivables exceeds 10%.
December 2017	The Government issued a new type of bond in the domestic financial market – saving bond.
Since April 2018 (the last change), as well as before	Differentiated RR remuneration rate: 1.25% on dinar RR, no remuneration on FX RR.
June 2018	The Law on Financial Collateral was adopted.
December 2018	The NBS and the Republic of Serbia Government signed the new Memorandum on the Strategy of Dinarisation of the Serbian Financial System. Amendments to the Law on Public Debt introduced the institute of primary dealer and envisaged the possibility of using financial derivatives for the purposes of public debt management.
December 2019	Amendments to the Decision on Capital Adequacy of Banks envisage lower capital requirements for banks to cover risks arising from dinar receivables to micro enterprises, small and medium-sized enterprises, entrepreneurs and farmers. Also, capital reduction is envisaged for banks whose share of new FX and FX-indexed loans approved to corporates, entrepreneurs and farmers for specific purposes has exceeded the defined level. Amendments to the Law on Public Debt enable foreign legal persons (e.g. Euroclear) to clear and settle transactions related to the purchase and sale of government securities in the domestic capital market.
February 2020	Amendments to the Law on the Capital Market harmonise the provisions of that Law with the Law on Public Debt, in terms of the possibility for foreign legal persons (e.g. Euroclear) to clear and settle transactions related to the purchase and sale of financial instruments in the domestic capital market. On 18 February 2020, Serbia issued its first 12Y government bond, at a coupon rate of 4.50%. Thus, the yield curve of longer maturities was extended, enabling banks to form the price of long-term dinar loans.
May 2020	The NBS introduced bonds issued by the domestic companies with a certain credit rating (determined by the Business Registers Agency) in the portfolio of securities traded in the NBS open market, and in the list of acceptable collateral when approving NBS loans for daily liquidity and short-term loans based on the securities pledge.
July 2020	Amendments to the decision on interest rates, which the NBS applies in its monetary policy conduct, envisage that banks which approve dinar loans to clients under the guarantee scheme at rates at least 50 bp lower than the maximum (one-month BELIBOR + 2.5 pp) are entitled to the remuneration rate for dinar reserve requirements from the NBS (which currently stands at 10 bp) increased by 50 bp, on the amount equal to the amount of those loans approved under more favourable terms, and which do not exceed the amount of calculated dinar reserve requirements.

## Methodological notes

- Dinarisation indicators, for each category, represent the share of dinar component in the total amount of that category.
- Receivables include dinar and FX loans (including FX-indexed ones), advances, securities, corporate shares and receivables from interest and fees. Dinar receivables are receivables extended in dinars without an FX-clause. An FX-clause is a currency clause as defined by the Law on Foreign Exchange Operations and any other clause stipulating hedge against the risk of dinar exchange rate volatility.
- The corporate sector (enterprises) comprises public enterprises and companies. Public enterprises are enterprises founded by the state, performing activities in the general (public) interest. Companies also include bank clients in the area of health and education not financed from the budget (private clinics, hospitals, schools and other institutions charging fees for their services based on production costs).
- The household sector comprises domestic natural persons, foreign natural persons – residents, private households with employed persons, registered farmers and entrepreneurs, and non-profit institutions serving households (NPISH).
- Receivables are expressed by the gross principle, i.e. not reduced by allowances for impairment. When excluding the exchange rate effects, the exchange rate of the dinar against the euro, the US dollar, Swiss franc, UK pound sterling and Japanese yen is taken into account.
- The new loans category does not include refinancing loans at interest rates significantly below the market rates, nor revolving loans, current account overdrafts and credit card loans.
- The new deposits category includes termed deposits and notice deposits while it does not include overnight deposits.
- Deposits include dinar and FX (including FX-indexed) deposits.
- Household savings include savings of residents and savings of non-residents.
- Public debt of the Republic of Serbia refers to the debt of the central level of government.

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