7. Monetary Trends and Policy

Despite the rises in the key policy rate in Q4, inflation continued rising compared to the previous quarter in the next two months of 2023. The last quarter of the year ended on the FX market with pronounced appreciation pressure causing the National Bank of Serbia (NBS) to become a net buyer of hard currency totalling more than 1.4 billion Euro in Q4. That amount on intervention had a positive effect on the level of NBS net own reserves which were increased by more than a billion Euro in Q4. At the same time Net Domestic Assets (NDA) recorded an increase of 194 million Euro which contributed to the rise in the level of primary money in Q4 of 1.25 billion Euro. Although the nominal y.o.y. growth of M2 remained at the same level as in previous quarters, the real growth rate of the M2 was negative for a fourth quarter in a row because of significantly higher inflation. The net placements of banks slowed down visibly in Q4 mainly due to significant repayments by companies of some 270 million Euro and minimal increase among households of 20 million Euro. The growth of net placements by business banks in Q4 was solely the result of increased placements into REPO by banks and the growth of net state debts. Net placements to companies in Q4 were positive because of the higher repayments of debts to banks abroad by companies. At the same time, high growth of credit potential by 1.59 billion Euro was recorded in sources for new placements by the banking sector. That growth was achieved in Q4 mainly through the growth of deposits by companies and households mostly in Dinars. The share of NPLs dropped slightly in Q4 despite the stricter conditions for loans and rising risks in terms of problematic debts. Interest rates on indexed loans saw a growth on average of one percentage point at the level of Q4 with further growth expected. Real interest rates on Dinar loans increased compared to the previous quarter but still in the negative value zone beause of a further rise in inflation and are expected to remain there for most of 2023.

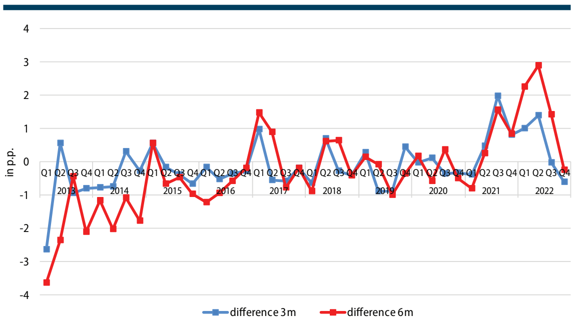
Central Bank: Balances and Monetary Policy

Inflation continued growing in Q4 …

…the NBS continued raising its key policy rate

The y.o.y. growth of prices continued in Q4 to reach 15.1 percent in December 2022. Data for January and February showed that inflation continued to rise with 15.8 percent and 16.1 percent y.o.y. respectively. Since the inflation level greatly exceeded the NBS target framework for 2022, the key policy rate was raised in Q4 three times by 0.5 percentage points each time and stood at 5 percent in December. It was raised three more times in 2023, in January, February and March by 0.25 percentage points taking it to the current level of 5.75 percent. Serbia was late in raising energy prices and inflation will start dropping later than in most European countries (see chapter on prices and exchange rate). Challenges could appear if the crisis spills over from banks in the United States and Switzerland which rocked the international financial markets in the space of a few days. Although inflation trends will be strongly influenced this year by rising fuel prices, the NBS needs to continue implementing its restrictive policies in 2023. The implementation of that policy was justified by the upsets in the international environment which is linked to geo-political conflict and the possible spread of the banking crisis in developed countries.

Graph T7-1. Deviation from projected inflation for 3 and 6 months ahead of real situation 2013-2022



Source: NBS

NBS continues buying hard currency on FX Market due to appreciation pressure

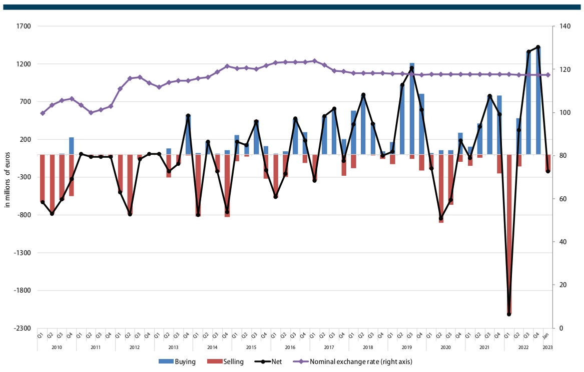
Pressure on the FX Market in Q4 continued causing the Dinar exchange rate to strengthen which led the NBS to intervene in order to prevent an appreciation of the Dinar. The last quarter of 2022 ended with a record amount of hard currency bought totalling 1.425 billion Euro by

Table T7-2. NBS interventions and hard currency reserves 2020-2022

	2020				2021				2022			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
Repo stock (in milions of euros)	88.43	345.75	256.71	272.37	258.67	292.79	367.34	386.12	163.86	71.79	407.18	978.31
NBS interest rate	1.75	1.25	1.25	1.00	1.00	1.00	1.00	1.00	1.00	2.50	3.50	5.00
NBS interest rate	-2.62	-0.36	2.88	0.20	-4.87	-2.57	-8.21	-3.72	-8.21	-15.28	-13.43	-1.10
NBS interest rate	1.75	1.25	1.25	1.00	1.00	1.00	1.00	1.00	1.00	2.50	3.50	5.00
(in milions of euros)	-185.00	1,030.00	1,635.00	1,450.00	50.00	-320.00	-1,100.00	-645.00	2,115.00	1,790.00	425.00	-1,000.00
INCREASE	**in millions of euros, cumulative from the beginning of the year**											
NBS own resreves[1]	-201.91	-322.89	-1127.89	-770.14	-86.00	-44.56	1317.57	1728.18	-1347.40	-907.08	572.43	1,630.58
NDA	592.76	1391.49	1976.15	2017.65	-484.48	-630.84	-1203.02	-1656.03	912.15	260.68	-517.48	-323.11
Government, dinar deposits[2]	100.38	487.16	665.59	420.51	-365.99	-526.99	-390.88	-176.63	-58.14	-605.39	-1091.07	-753.31
Repo transactions[3]	510.15	254.94	339.57	339.18	1.00	1.07	-109.30	-122.00	276.49	315.13	-27.66	-558.82
Other items , net[4]	-17.78	649.39	971.02	1257.97	-119.49	-104.92	-702.84	-1357.41	693.80	550.94	601.25	989.02
H	390.85	1068.59	848.29	1247.52	-570.48	-675.40	114.55	72.14	-435.25	-646.41	54.95	1,307.47
o/w: currency in circulation	42.56	333.93	326.93	485.89	-87.79	-18.30	115.34	243.35	-163.54	-227.18	-108.23	132.66
o/w: excess liquidity	296.70	610.39	322.16	515.50	-535.30	-756.68	-158.15	-399.57	-336.15	-473.83	13.76	958.95
	in millions of euros, cumulative from the beginning of the year											
NBS, net	-268.95	580.95	-336.74	125.20	787.48	604.17	3292.34	2933.18	-2116.45	-1644.96	83.94	2,014.96
Gross foreign reserves	-273.51	574.96	-349.60	110.88	786.49	605.09	3311.12	2967.24	-2149.45	-1678.88	51.62	2,966.20
Foreign liabilities	4.56	5.99	12.86	14.31	0.98	-0.92	-18.79	-34.07	33.01	33.92	32.32	-951.24
IMF	-0.24	1.53	2.95	4.50	-2.19	-5.33	-21.99	-37.98	33.17	33.17	33.17	-948.74
Other liabilities	4.81	4.46	9.91	9.81	3.17	4.40	3.21	3.91	-0.17	0.74	-0.85	-2.50
NBS, NET RESERVES-STRUCTURE												
1. NBS, net	-268.95	580.95	-336.74	125.20	787.48	604.17	3292.34	2933.18	-2116.45	-1644.96	83.94	2,014.96
1.1 Commercial banks deposits	-175.31	-208.87	-317.35	-420.26	-19.04	-127.35	-195.78	-391.28	17.14	-129.68	-209.78	-264.04
1.2 Government deposits	242.35	-694.97	-473.80	-475.07	-854.43	-521.37	-1778.99	-813.72	751.90	867.55	698.27	-120.35
1.3 **NBS own reserves** (1.3 = 1 - 1.1 - 1.2)	-201.91	-322.89	-1127.89	-770.14	-86.00	-44.56	1317.57	1728.18	-1347.40	-907.08	572.43	1,630.58

Source: NBS.
1) Definition of NBS net own reserves is given in section 8 Monetary Trends and Policy, Frame 4, *QM* No. 5.
2) State includes all levels of government: republic and local administration.
3) This category includes NBS treasury bonds and repo operations.
4) Other net domestic assets include: domestic loans (net bank debts not including treasury bonds and repo transactions; net company debts) along with other assets (capital and reserves; items on balance; other assets) corrected by changes to the exchange rate.

Graph T7-3. NBS interventions on FX Market 2010-2022



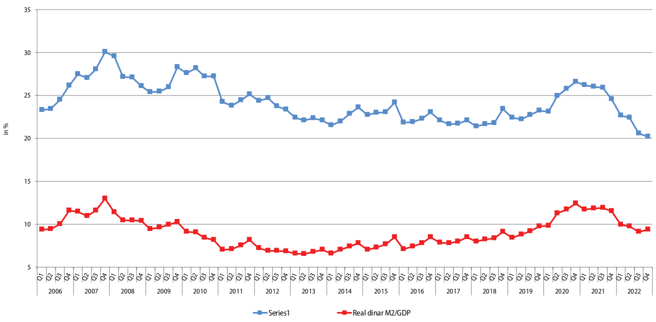
Source: NBS

the NBS on the FX market (in Q3, the NBS bought 1.365 billion Euro on the FX Market). The purchases in Q4 completely neutralized the effects of the large sale of hard currency on the FX Market in Q1 which came because of the uncertainty caused by the Russia-Ukraine conflict. At the level of the whole year, the NBS was a net buyer of hard currency totalling 1 billion Euro (Graph T7-3). The purchase of hard currency in Q4 had a positive effect on the level of NBS net own reserves which were increased by 1.06 billion Euro in the last quarter, contributing at the level of the whole year to the increase in net own reserves by 1.63 billion Euro (Table T7-2). Along with the growth of net own reserves in Q4, an increase in Net Domestic Assets (NDA) was recorded of 194 million Euro. The growth of the NDA was caused by the rise in loans in Dinars by the state of 338 million Euro and an increase in other NDA totalling 388 million Euro. On the other hand, bank placements in REPO had a negative effect on the growth of NDA by 531 million Euro. The growth of net own reserves helped by the growth of NDA caused the level of primary money to rise by 1.25 billion Euro in Q4 increasing the level of primary money for the whole year by 1.31 billion Euro.

The nominal growth of the money mass remained unchanged in Q4 …

… but the real dropped deepened

Graph T7-4. Money mass trends as percentage of GDP, 2005-2022



Source: *QM* calculation

Monetary System: Money Mass Structure and Trends

In Q4 the nominal M2[1] maintained a similar growth rate of 6.9 percent y.o.y. as in the previous quarter (in Q3 the nominal growth of the M2 was 6.8 percent y.o.y. , Table T7-5). The nominal growth of primary money was slightly higher than in the previous quarter standing at 4.6 percent but was still deeply negative in real terms. Almost the entire nominal increase in primary money was based on the growth of NDA of 4.4 percentage points while Net Foreign Assets (NSA) participated with 0.3 percentage points in the overall quarterly growth of primary money. Taking into consideration the growth of prices in general, the real growth rate of the M2 dropped into the negative by -7.1 percent y.o.y. , which is 1 percentage point less compared to the rates in the previous quarter. The nominal growth rate of loans to companies and households in Q4 slowed down to 7.1 percent y.o.y. , which means a drop in real terms of -6,9 percent y.o.y. . The real drop was more pronounced in loans to households which dropped by 7.8 percent y.o.y. in Q4, while the real growth rate of loans to companies recorded a drop of -6.1 percent y.o.y. (See Table T.7-5)

Table T7-5. Growth of money and contributing aggregates, 2020–2022

	2020				2021				2022			
	Mar	Jun	Sep	Dec	Mar	Jun	Spe	Dec	Mar	Jun	Sep	Dec
					y-o-y, in %							
M2 1)	10.1	19.0	18.8	18.1	18.7	12.4	12.7	13.3	8.3	6.0	6.8	6.9
Credit to the non-government sector 2)	11.1	13.4	15.1	11.9	9.8	8.0	6.4	9.7	11.6	12.7	11.2	7.1
Credit to the non-government sector 2), adjusted 3)	11.4	13.6	15.0	11.9	9.8	8.0	6.4	9.7	11.5	12.8	11.4	7.3
Households	9.3	12.8	14.3	11.8	11.9	10.6	8.9	10.6	10.4	9.7	8.3	6.2
Enterprises	13.1	14.2	15.7	11.9	8.1	6.0	4.3	8.9	12.3	15.5	14.1	8.2
M2 1)	8.7	17.1	16.6	16.6	16.7	8.9	6.7	5.1	-0.7	-5.1	-6.1	-7.1
Credit to the non-government sector 2), adjusted 3)	9.4	11.1	12.2	9.7	7.9	6.2	4.6	7.0	8.3	0.9	-2.2	-6.9
Households	7.6	10.5	11.6	9.7	9.6	8.4	6.7	7.7	7.4	-1.9	-4.9	-7.8
Enterprises	10.8	11.7	12.8	9.7	6.5	4.5	2.9	6.4	9.0	3.3	0.2	-6.1
					in bilions of dinars, end of period							
M2 1)	2,850.7	3,104.7	3206.4	3,334.7	3384.4	3489.3	3614.1	3778.0	3666.1	3699.1	3858.2	4037.4
M2 1) dinars	1,210.2	1,403.7	1463.3	1,553.8	1514.5	1587.8	1661.8	1768.0	1608.4	1607.1	1707.1	1876.5
Fx deposits (enterprise and housholds)	1,640.5	1,701.1	1743.1	1,780.9	1869.9	1901.5	1952.3	2010.0	2057.7	2092.0	2151.1	2160.8
					quarterly growth M2 4) and shares							
M2 1)	1.0	8.9	3.3	4.0	1.5	3.1	3.6	4.5	-3.0	0.9	4.3	4.6
NFA, dinar increase	0.8	6.8	1.9	2.8	-1.2	2.2	2.1	2.9	-4.2	0.0	2.7	4.4
NDA	0.1	2.1	1.4	1.2	2.7	0.9	1.5	1.6	1.3	0.9	1.6	0.3

Source: NBS
1) Money mass: components – see Analytical and Notation Conventions *QM*.
2) Loans to non-state sector – loans to companies (including local administration) and households.
3) Trends are corrected by changes to exchange rate. Corrections are based on the assumption that 70 percent of loans to non-state sector (companies and households) are indexed against the Euro.
4) Trends are corrected by changes to exchange rate. Corrections are based on the assumption that 70 percent of loans to non-state sector (companies and households) are indexed against the Euro.

Hard currency deposits contributed most to nominal growth of M2 …

… with lesser contributions by savings and timed deposits

Separating the y.o.y. nominal growth rate of the M2 money mass into its individual elements shows a slight change in the structure of the main causes of its growth compared to the previous quarter. As in the previous quarter, the greatest contribution to the growth of the M2 came from the increase in hard currency deposits accounting for 3.99 percentage points of the overall growth of the money mass. The second biggest contribution to the nominal growth of the M2 came from the nominal increase in savings and timed deposits which accounted of 1.96 percentage points of the growth of the m2 in Q4. The remaining 0.92 percentage points are

1 Monetary aggregate M2 in section Monetary Trends and Policy includes the lesser aggregate M1, savings and timed deposits as well as hard currency deposits in business banks. That means the M2 aggregate which we observe is equal to the monetary aggregate M3 in NBS reports.

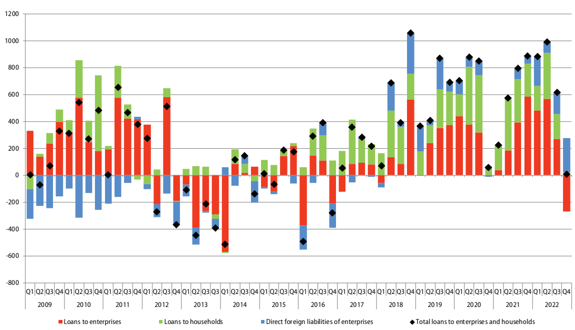
from the nominal growth recorded with the lesser monetary aggregate M1. The growth of the M2 by 6.86 percentage points was nominally halved in 2022 compared to the previous year with the slowing down of the nominal growth most pronounced in the lesser aggregate M1 with a significant slowing down noted with hard currency deposits. If we take into account the fact that inflation picked up speed in 2022, those nominal changes are not enough to bring the real growth rate into the positive zone and we expect a similar trend to continue through most of 2023. In general, we can say that the slowing down of the nominal growth of the money mass and loans and their drop in real terms is the expected result of the restrictive monetary policy which the NBS has been implementing from the second quarter of the previous year. Although that policy slows down economic activity, it is necessary to reduce the imbalance between supply and demand and act to lower inflation.

Banking Sector: Placements and Sources of Financing

In Q4 nominal loans to companies dropped and to households stagnated but both dropped in real terms…. The growth of business bank placements in REPO increased

Credit activity picked up in the previous two quarters but slowed down significantly in Q4 when the growth of net placements by banks stood at 553 million Euro (in Q3 the growth of those net placements totalled more than a billion Euro, Table T7-7). At the level of the year 2022, total net placements by banks recorded an increase of 1.94 billion Euro which is the lowest annual growth of placements since 2018. In terms of the determining elements of the overall net increase of placements, the one thing that causes the most concern is the fact that net placements to companies and households were negative in Q4 which means that existing debtors repaid business banks more on earlier loans than the value of new loans. This was solely the consequence of repayment by companies to domestic banks which stood at 271 million Euro in Q4 while the net placements to households was slightly positive totalling 20 million Euro (in Q3 the net placements to companies stood at 268 million Euro and to households at 185 million Euro). At annual level, the overall net placements to households and companies were just above the level of 2018 with the slower growth of net placements most evident in the households sector with the lowest value since 2016. At quarterly level, the growth of overall net placements was mainly the consequence of increased placement into REPO by 571 million Euro, which neutralized the effects of the loan repayments by companies in Q4. Since business banks withdrew funds from REPO placements in the first half of the year, repo stock at the level of 2022 increased just slightly more than growth in the last quarter. The increased net placements by business banks were helped with the added debts taken by the state which increased its debts to domestic banks in Q4 by 234 million Euro. Despite that, the net debts of the state at annual level were negative at -438 million Euro which practically means that the state paid more money into its accounts with business banks than it withdrew.

Graph T7-6. growth of new loans to companies and households, 2005-2022



Source: *QM* calculation
see footnote 1 in Table T7-5

Growth of cross-border loans compensated by company repayments to domestic banks in Q4

The overall net debts by companies and households in Q4 was almost at zero when we add data on direct company debts abroad to the domestic banking sector. Company repayments to domestic banks were accompanied with an increase in net debts to foreign banks by 256 million Euro which is the biggest amount of net foreign debts in the past 10 years (GraphT7-6).

Business banks expect even stricter standards for loans to companies and households

That amount, along with the minimal net growth of household debt, was almost equal to the company repayments to domestic banks which brought the growth on net placements to companies and households in Q4 to 5 million Euro taking into consideration domestic and foreign sources.

At the level of the year 2022, the overall growth of loans was 2.48 billion Euro which is almost exactly the same as the growth of net loans in the previous two years. The biggest difference was in the structure of growth of net debts with the net growth of household debts visibly slowing down while on the other hand, a growth of company net debts was noted with an increase in the net loans companies took out abroad. The structure of credit placements to companies in Q4 showed that more than half of the loans approved in that quarter were for liquidity and current assets, half of which were intended for micro, small and medium companies. Some 28 percent of new loans were approved for investments, more than two thirds of which drawn by micro, small and medium companies. Among households, credit activity in Q4 saw growth of cash loans which accounted for some 54 percent of the loans to households in that quarter while housing loans accounted for some 26 percent. The latest poll on bank credit activities showed that, in line with predictions from the previous issue, the standards for loans to companies and households become stricter in Q4 and that in Q1 2023 we can expect more moderate stricter standards. The greatest stiffening of conditions for loans to companies was on loans indexed in hard currency and loans to big companies. The conditions for loans to companies were made stricter in the elements of debt cost, maximum time of loan, requirements in terms of collateral and the maximum amount of loan. The stricter rules for loans to households were most pronounced for cash and housing indexed loans. The deteriorated conditions for loans to households in Q4 were the rise in interest rates and stricter requirements in terms of collateral while the other segments remained unchanged. Banks expect a slight rise in demand for loans to companies in Q1 2023 with a drop expected for loans to households but less than the drop in the last quarter of 2022. Those predictions were made in the period before the mini-banking crisis broke out in the United States with the bankruptcy of the Silicon Valley Bank and liquidation of the Silvergate and Signature banks as well as the urgent loan which the Swiss central bank approved for the Credit Suisse bank to stop the liquidity crisis and prevent panic from spreading which could

Table T7-7. Bank operations – Sources and structure of placements, corrected[1)] trends, 2020-2022

	2020				2021				2022			
	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec	Mar	Jun	Sep	Dec
	in millions of euros, cumulative from the beginning of the year											
Funding(-, increase in liabilities)	0	-2,196	-3,190	-3,999	-170	-931	-1,979	-3,879	1,153	457	-1,448	-3,031
Domestic deposits	-178	-2,082	-2,931	-3,836	-417	-1,154	-2,001	-3,391	871	673	-605	-2,039
Households deposits	-66	-724	-1,095	-1,642	-352	-885	-1,279	-2,022	646	264	2	-535
dinar deposits	-63	-552	-756	-1,041	-15	-218	-410	-776	716	646	459	-21
fx deposits	-4	-173	-339	-601	-337	-667	-869	-1,246	-70	-383	-457	-514
Enterprise deposits	-111	-1,358	-1,836	-2,194	-65	-270	-722	-1,369	225	409	-606	-1,504
dinar deposits	-75	-983	-1,270	-1,578	326	89	-137	-671	548	762	223	-628
fx deposits	-36	-375	-566	-616	-391	-358	-586	-698	-323	-353	-829	-876
Foreign liabilities	-216	-403	-432	-290	78	95	31	-485	-22	-377	-862	-773
Capital and reserves	393	290	173	127	169	129	-9	-3	303	162	19	-218
Gross foreign reserves(-,decline in assets)	-60	450	504	672	860	987	891	895	-12	-328	54	-239
Credits and Investment[1)]	269	1,332	2,276	2,451	211	985	1,705	2,711	16	368	1,386	1,939
Credit to the non-government sector, total	602	1,407	2,149	2,214	225	784	1,491	2,307	663	1,583	2,036	1,785
Enterprises	438	815	1,133	1,131	38	219	610	1,191	475	1,052	1,320	1,049
Households	164	592	1,016	1,083	187	565	881	1,116	188	531	716	736
Placements with NBS (Repo transactions and treasury bills)	-514	-257	-346	-330	-14	20	95	114	-221	-314	22	593
Government, net[2)]	181	182	472	567	0	180	119	290	-426	-902	-672	-438
MEMORANDUM ITEMS												
Required reserves and deposits	1,076	1,213	1,117	1,086	-269	-186	40	128	89	154	729	1,566
Other net claims on NBS[3)]	-730	-271	-277	-44	-195	-383	-130	223	-836	-596	-627	-383
o/w: Excess reserves	-594	-348	-340	48	-220	-430	71	9	-443	-487	-420	-173
Other items[4)]	-562	-567	-492	-219	-436	-470	-526	-80	-421	-35	-67	174
Effective required reserves (in %)[5)]	19	18	19	17	16	16	16	16	16	16	17	19

Source: NBS

1) Growth is calculated under the assumption that 70 percent of overall placements are indexed against the Euro. Growth for originally Dinar deposits are calculated based on the average exchange rate for the period. For hard currency deposits as the difference calculated on the basis of the state at the ends of periods. Capital and reserves are calculated based on the Euro exchange rate at the ends of periods and do not include the effects of exchange rate changes in calculating the remainder of the balance.

2) NBS bonds includes state bonds and NBS treasury bonds sold at repo rates and rates set on the market for permanent auction sales with a due date of more than 14 days.

3) Net loans to the state: Loans approved to the state reduced by the state deposits in business banks; the negative prefix designates a higher rise of deposits than of loans. State includes all levels of government: republic and local administration.

4) Other NBS debts (net): The difference between NBS loans to banks on the basis of cash and free reserves and debts to the NBS.

5) Items on bank balance: other assets, deposits by bankrupt companies; inter-bank relations (net) and other assets not including capital and reserves.

6) Effective mandatory reserve is the share of mandatory reserve and deposits in the overall deposits (households and companies) and bank debts abroad. The basis for calculation of the mandatory reserves does not include subordinate debt because that data is not available.

seriously jeopardize the banking system. Bearing in mind this fairly turbulent period on the inter-banking market and the relatively negative reactions by domestic banks which immediately neutralized their exposure to Credit Suisse, we believe that banks will be even more cautious when approving loans in 2023.

Credit potential increases significantly in Q4 …

… mainly due to growth of household and company deposits

A big rise in sources for new placements by business banks by 1.59 billion Euro was recorded in Q4. At the level of 2022, domestic banks achieved an increase in sources for new placements of 3.03 billion Euro, more than two thirds of which is the result of growth of net domestic deposits (in 2021 the growth of sources for new placements was 3.88 billion Euro, Table T7-7). The quicker growth of credit potential among business banks in Q4 was almost solely the consequence of increased net domestic deposits which recorded a growth of more than 1.43 billion Euro. Most of the growth of net domestic deposits was the result of increased company deposits by 898 million Euro in Q4 while households increased their deposits with business banks by 537 million Euro. The hard currency structure of the increase in net deposits by companies and households shows that more than 90 percent of the growth of sources for new placements was generated from increased Dinar deposits while the rest is the consequence of the growth of hard currency deposits. Along with the growth of net domestic deposits in Q4, the decision by business banks to increase their capital and reserves by 237 million Euro had a positive effect on the growth of credit potential. Following the reduction of capital and reserves at the start of the year, the overall capital and reserves of business banks at the level of the year 2022 increased by 2 billion Euro. The only negative contribution to the growth of credit potential in Q4 came from the repayment of 89 million Euro by business banks abroad but despite the significantly higher net debts in previous quarters, that amount rose to 773 million Euro.

Table T7-8. Share of NPLs according to debtor type, 2008-2022

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019				2020				2021				2022				2023	
	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Q4	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Jan	Feb
	balance at the end of period																											
Corporate	12.14	14.02	17.07	19.06	27.76	25.5	24.40	19.48	13.83	9.63	9.57	9.07	8.35	7.69	6.90	6.32	6.08	5.90	5.66	5.04	5.16	4.91	4,13	4.22	4.25	4.16	4.12	4.15
Entrepreneurs	11.21	15.8	17.07	15.92	20.82	43.29	29.92	27.42	16.96	9.07	8.82	8.57	8.67	7.82	7.82	6.93	6.42	6.10	5.64	5.32	5.03	6.01	6,08	6.48	6.51	6.41	6.66	6.56
Individuals	6.69	6.71	7.24	8.32	8.59	9.97	10.53	9.66	6.43	4.72	4.66	4.62	4.46	4.36	4.43	3.36	3.55	3.46	3.69	3.63	3.84	3.90	3,6	3.69	3.93	3.85	3.96	3.78
Ammount of dept by NPL (in bilions of euros)	1.58	1.94	2.63	3.19	4.09	3.70	3.52	2.83	2.16	1.52	1.51	1.46	1.43	1.38	1.32	1.18	1.22	1.19	1.20	1.13	1.19	1.21	1.08	1.14	1.19	1.16	1.16	1.14

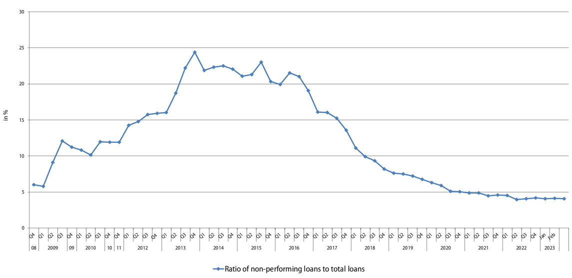
Source: *QM* calculation

Share of NPLs drops slightly in Q4…

… despite deteriorating economic trends and higher interest rates

The share of NPLs in overall placements at the end of 2022 dropped slightly compared to the previous quarter and was practically at the same level as in Q2. According to the Credit Bureau and QM methodology[2] the share of NPLs stood at 4.08 percent which is a minimal change of 0.08 percentage points compared to the previous quarter (GraphT7-9). The drop at quarterly level is evident in individual segments with the biggest being with entrepreneurs standing at 0.2 percentage points in Q4. Since the overall amount of NPLs placed to companies is relatively low, this drop did not have any great significance in the change in the overall share compared to the drops of 0.09 percentage points and 0.08 percentage points recorded with companies and households respectively (Table T7-9). Viewed at the level of 2022, the share of NPLs dropped compared to the level at the end of 2021 which was not expected bearing in mind the slowing of economic activities, drop in the real value of earnings and increases in interest rates during last year. The first data for January and February 2023 showed minimal changes in terms of the share of NPLs even though bankers have been showing more reservation than before about the risk of a rise in NPLs in the coming period according to the latest poll on credit activity.

Graph T7-9. Share of NPLs in overall placement, 2008-2022



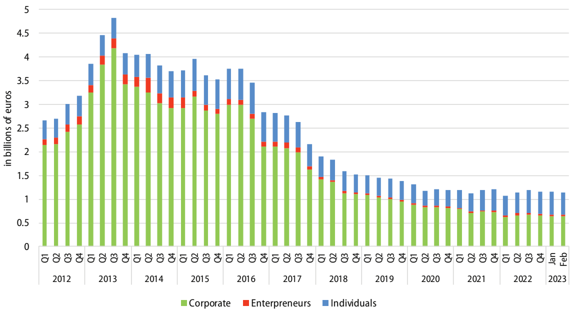
Source: *QM* calculation

2 For details about calculation of share of NPLs see *QM*6 – Spotlight On 1: NPLs in Serbia – what is the real measure?

The key central banks are continuing to raise their interest rates…

… with first signs of weakness in the banking system

Graph T7-10. Remaining debt on loans falling late, 2012-2022



Source: *QM* calculation

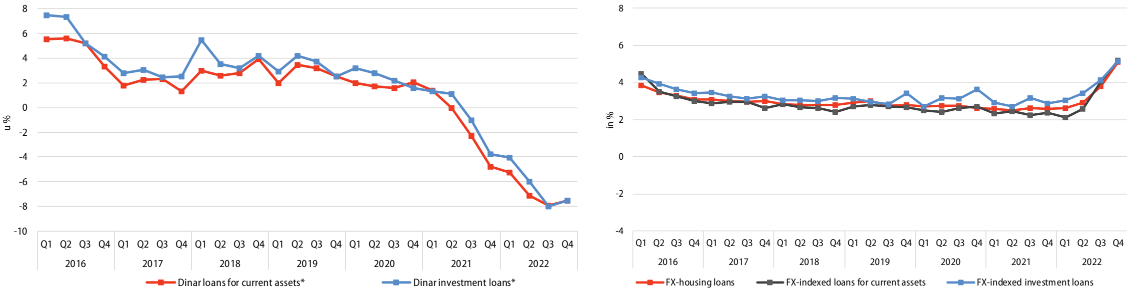
Interest rates: state and trends

At its last meeting in March, the European Central Bank (ECB) said that data suggests that inflation will remain at a high level for longer than initially projected. The ECB Board decided to raise three key policy rates by 50 base points in line with the plan to secure a timely return of inflation to the medium-term target of 2 percent. Current ECB projections are for inflation to stand at around 5.3 percent in 2023 then at 2.9 percent in 2024 and return to 2.1 percent in 2025. The ECB raised interest rates across the Euro zone despite fears that higher cost of loans could cause a domino effect in the banking sector which has already been shaken up by the loss of confidence in Credit Suisse – the second biggest bank in Switzerland. The decision to continue raising the ECB key policy rate came just hours after the Swiss central bank jumped in with a loan of 50.4 billion Euro (50 billion Swiss Francs) for Credit Suisse. That intervention was intended to ease fears about the liquidity of one of the 30 banks which are considered to be too big to fail at global level. The Credit Suisse crisis ended when UBS took it over but there is still a risk of a crisis in one of the big global banks. A fairly turbulent period in the banking system was recorded in the United States where three banks were shut down in March in a period of 72 hours with the American regulatory body for deposit insurance being forced to react for SVB and Signature to prevent the crisis from spilling over into the rest of the banking sector. Just four days later the First Republic Bank also reported problems but interestingly this time private banks (J. P. Morgan Chase, Bank of America, Wells Fargo, Citigroup and Truist) joined forces and secured 30 billion Dollars in liquidity support to stabilize the market. The FED meeting in mid-March said key policy rates would be raised again by an additional 0.25 percentage points which will be the second increase this year following the increase by the same amount in February. Efforts to lower inflation in the US faced difficulties because the FED pumped 300 billion Dollars into the banking sector in just seven day to support liquidity.

Those changes took place in March and have not had a significant effect on the banking sector in Serbia. The average weighted interest rate in Serbia changed significantly in Serbia in Q4 in terms of indexed loans because of the rise of the Euribor since the start of the year. Real interest rates on Dinar loans increased slightly thanks to rising inflation which mainly neutralized the growth of nominal rates to the end of the year. The average weighted interest rates on housing loans increased in Q4 by 1.32 percentage points compared to the previous quarter reaching the record high level of 5.11 percent in December, last recorded in the first half of 2012 (GraphT7-11b). The average weighted interest rates on indexed current asset loans rose in Q4 by 1.13 percentage points compared to the previous quarter which raised those interest rates to the level of 5.17 percent, the highest level in the past seven year. The lowest increase of 1.02 percentage points at quarterly level was with interest rates on indexed investment loans which stood at 5.16 percent in December. At annual level, the average weighted interest rate on indexed loans rose on average by 2.55 percentage points which, bearing in mind their level at the end of 2021, meant that they had practically doubled.

Much lower changes in Q4 were noted with real interest rates on Dinar loans (GraphT7-12a). Since y.o.y. inflation in Q4 was at 1.1 percentage points over the value in the previous quarter, the nominal increase of interest rates on Dinar loans of 1.53 percentage points on average did not have a full effect on the growth of real interest rates. Viewed individually, the average real weighted interest rate on Dinar current asset loans increased by 0.4 percentage points but it was still deeply in the negative zone with -7,55 percent. At annual level, the real interest rate for those loans dropped by -2.76 percentage points. Something similar was recorded with the average real weighted interest rate on Dinar investment loans which grew by 0.74 percentage points in Q4 but continued to be deeply negative in real terms (-7,53 percent). At annual level, this interest rate deepened its fall by -3.78 percentage points, double the lowest value since the start of the year.

Graph T7-11. Interest rates on Dinar and indexed loans, 2016–2022



Source: *QM* calculation
* real interest rates