



NATIONAL BANK OF SERBIA

**INSURANCE SUPERVISION DEPARTMENT
PENSION FUNDS
SUPERVISION DIVISION**

**VOLUNTARY PENSION FUNDS
SECTOR IN SERBIA**

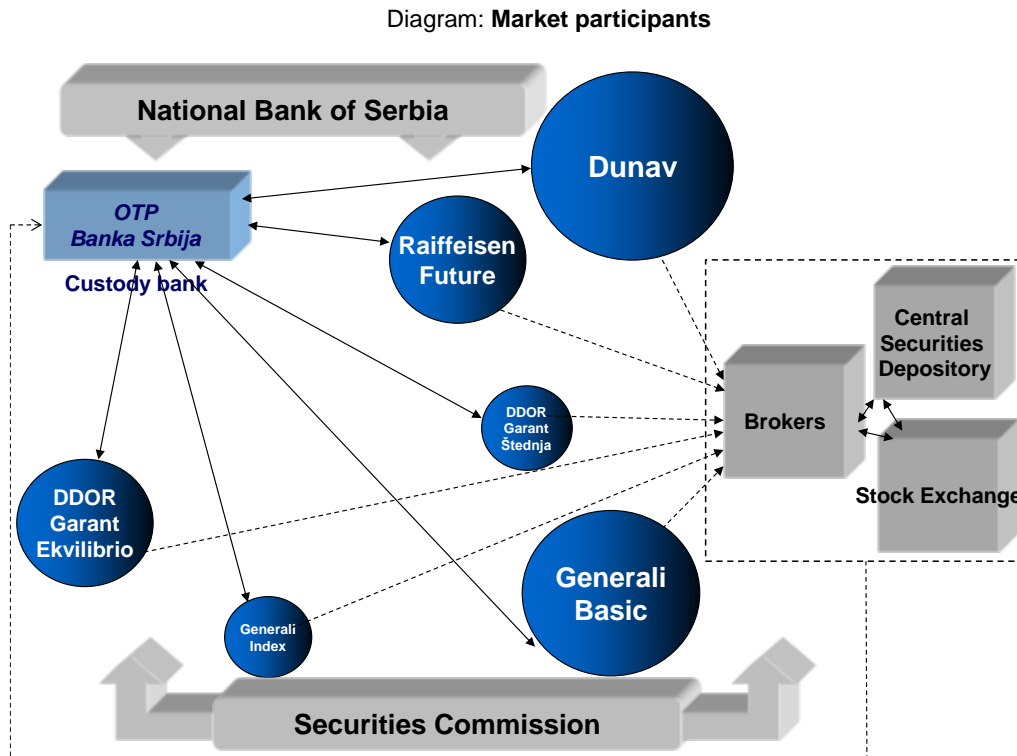
Third Quarter Report 2022

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1 Market participants

At end-Q3 2022, the market of voluntary pension funds (VPFs) included four companies managing seven VPFs, one custody bank, five intermediary banks and one insurance brokerage undertaking¹.



At end-Q3 2022, VPF management companies employed 125 persons, unchanged from a quarter earlier.

The NBS licences sales agents, who passed professional examinations and fulfilled other requirements, to disseminate information about VPF operation. By end-Q3 2022, a total of 1002 sales agent licences were granted.

Management companies, banks and insurance undertakings as brokers may engage sales agents. At end-Q3 2022, management companies hired 107 persons, intermediary banks 535 persons and insurance undertakings 99 persons as sales agents.

¹ Raiffeisen Bank a.d. Beograd, OTP banka Srbija a.d. Novi Sad, NLB Komercijalna banka a.d. Beograd, Addiko Bank a.d. Beograd and Naša AIK Banka a.d. Beograd, joint-stock insurance undertaking DDOR Novi Sad, Novi Sad.

2 VPF net assets

At end-Q3 2022, VPF net assets equalled RSD 47.1 bn, falling by 1.4% q-o-q. The changes in the value of net assets reflect net contributions², withdrawals and investment returns. In Q3 2022, total contributions amounted to RSD 1,022.1 mn, withdrawals to RSD 733.4 mn and investment losses to RSD 915.1 mn.

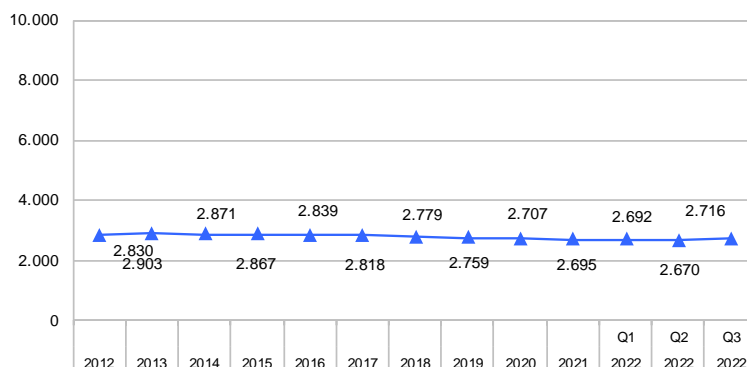
At end-Q3 2022, net assets equalled RSD 47.1 bn.

End-of-period net assets of the VPF sector

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
											Q1	Q2	Q3
12.5	16.1	19.7	23.6	28.9	32.8	36.2	40.2	45.2	47.0	49.1	48.9	47.8	47.1

Source: National Bank of Serbia.

End-of-period sector concentration (Herfindahl–Hirschman Index)



Source: National Bank of Serbia.

Measured by the HHI, market concentration in the sector³ at end-Q3 2022 amounted to 2,716 points, indicating high concentration in the VPF market.

Number of funds in groups by market share (in units)

Share in net assets (%)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
											Q1	Q2	Q3
Large (20 and above)	2	2	2	2	2	2	2	2	2	2	2	2	2
Medium (5 - 19.99)	2	2	2	2	2	2	2	2	2	2	2	2	2
Small (0 - 4.99)	5	2	2	3	3	3	3	3	3	3	3	3	3

Source: National Bank of Serbia.

² Net contributions are total contributions minus the front-load fee.

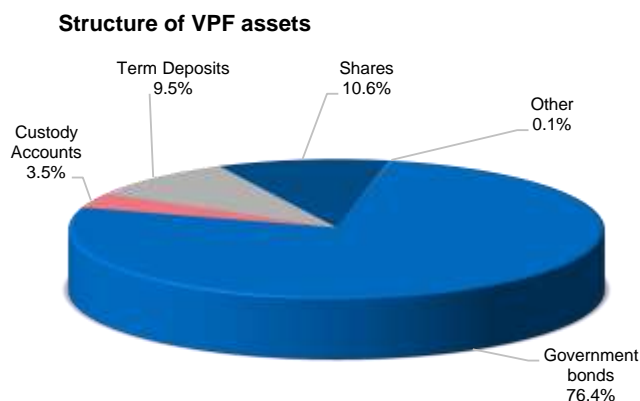
³ In terms of the share in total net assets.

According to the size of VPF net assets relative to total net assets of the sector, two funds were classified as “large” and two as “medium”. Together, they held 92% of the market share, with the largest fund accounting for around 40%.

3 Structure of VPF assets

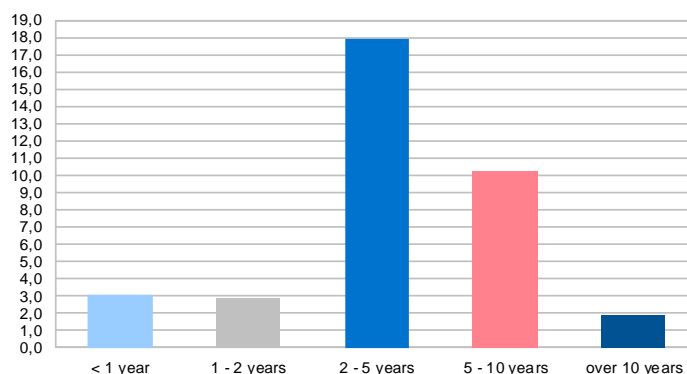
At end-Q3 2022, the structure of investment of VPF assets remained broadly unchanged from the previous period. Government bonds accounted for a major part of VPF assets – 76.4%. Balances in custody accounts and bank time deposits made up 13% and shares 10.6%. Investment in units of open-end investment funds and receivables made up the category “other” which accounted for 0.1%.

Majority of assets were invested in government debt instruments – 76.4%.



Source: National Bank of Serbia.

Maturity structure (government fixed income securities) (in RSD bn)



Source: National Bank of Serbia.

The portfolio of government debt instruments (Republic of Serbia's bonds) kept the dominant position in total VPF assets at the end of the period, with an upward trend in the share of these instruments in VPF assets (from 75.3% at the end of the previous quarter to 76.4%).

Compared to the end of the previous quarter, aggregate exposure to shares of domestic legal entities dropped from 15.1% to 10.6% of total fund assets primarily as a result of the decrease in the number of shares in the funds' portfolio.

At end-Q3 2022, 8.5% of government debt instruments were with the maturity of up to one year, 8% between one and two years, 49.8% between two and five years, 28.4% between five and ten years, and 5.3% over ten years.

The average maturity of assets⁴ invested in government debt instruments was 4.72 years.

At end-Q3 2022, 84.9% of total assets were in dinars and 15.1% in a foreign currency (EUR).

4 Return on investment

At end-Q3 2022, FONDex⁵ reached 3,022.93 points⁶. FONDex, the weighted average return on all funds, recorded an adjustment of -3.9% for the past year. Since the start of VPF operation⁷, FONDex return has equalled 7.2%. Given the structure of VPF investment, the return is influenced by: the change in the yield curve on government debt instruments⁸, change in the prices of shares, change in the value of investment units of open-end investment funds, level of the key policy rate and banks' interest rates, and changes of the dinar exchange rate against the euro.

In Q3 2022, in the primary market of dinar-denominated government debt instruments one-year government securities were issued at the rate of 3.9% (RSD 31.7 mn).

⁴The maturity of instruments weighted by their share in total investment in government debt instruments.

⁵ FONDex is the index which indicates movements in investment units of all VPFs in the market.

⁶ The initial FONDex value on the first business day of the first VPF, 15 November 2006, was 1,000.

⁷ Annual rate.

⁸ A decline in the interest rate leads to an increase in the prices of debt instruments and vice versa. The prices of longer-maturity instruments are more sensitive to interest rate changes.

**Accepted rate of issued dinar-denominated government debt instruments,
by maturity**

Maturity	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	3.9%
18m	-	-	-	-	-
24m	-	-	2.8%	-	-
36m	-	-	-	-	-
60m	-	-	-	-	-
84m	-	-	-	-	-
120m	-	-	-	-	-
144m	-	-	-	-	-

Source: Ministry of Finance.

**Market value of issued dinar-denominated government debt instruments,
by maturity**
(in RSD bn)

Maturity	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	31.7
18m	-	-	-	-	-
24m	-	-	9.9	-	-
36m	-	-	-	-	-
60m	-	-	-	-	-
84m	-	-	-	-	-
120m	-	-	-	-	-
144m	-	-	-	-	-
Total	-	-	9.9	-	31.7

Source: Ministry of Finance.

There were no issues of euro-denominated government debt instruments in Q3 2022.

**Accepted rate of issued euro-denominated government debt instruments,
by maturity**

Maturity	Q1 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022
12m	-	-	-	-	-	-
24m	-	-	-	0.8%	-	-
36m	-	-	-	-	-	-
60m	-	-	-	-	-	-
84m	-	-	-	-	-	-
120m	-	-	-	-	-	-
144m	-	1.6%	-	-	-	-
180m	-	-	-	-	-	-
240m	2.3%	-	-	-	-	-

Source: Ministry of Finance.

**Market value of issued euro-denominated government debt instruments,
by maturity**
(in EUR mn)

Maturity	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022
12m	-	-	-	-	-	-
24m	-	-	-	200.0	-	-
36m	-	-	-	-	-	-
60m	-	-	-	-	-	-
84m	-	-	-	-	-	-
120m	-	-	-	-	-	-
144m	-	8.9	-	-	-	-
180m	-	-	-	-	-	-
240m	55.5	-	-	-	-	-
Total	55.5	8.9	-	-	-	-

Source: Ministry of Finance.

The prices of shares in the Belgrade Stock Exchange (BSE), measured by the BELEX15 index, fell by 1.5% at end-Q3 2022 (the value of the index was 827.37 at end-September). The index rose by 3.1% over the past year.

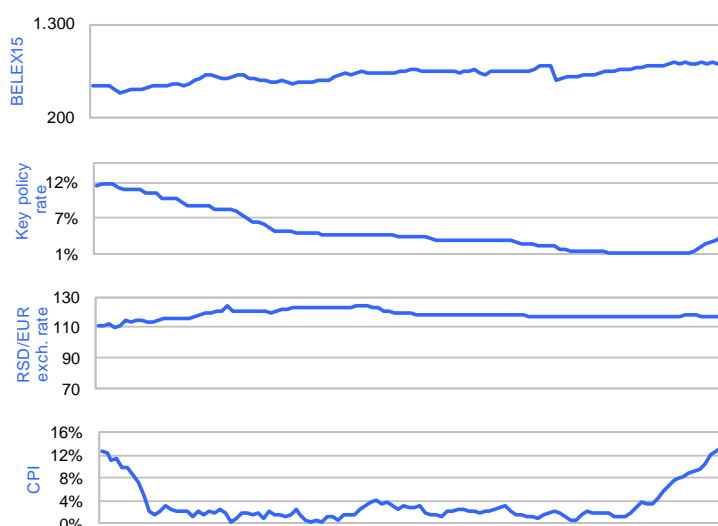
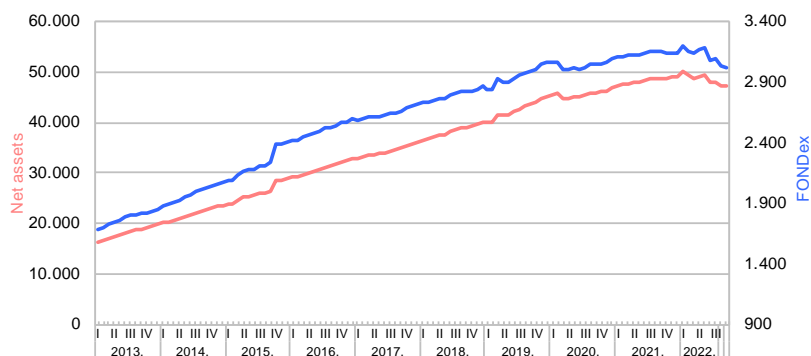
The key policy rate equalled 3.5% at end-September 2022. The level of interest rates earned by funds on dinar assets in custody accounts mirrored the movements in the key policy rate.

In Q3 2022, the dinar gained in value vis-à-vis the euro by 0.1% relative to the end of the previous quarter, coming at RSD 117.32 per euro at the end of this quarter. In the same period, the dinar lost 6.5% against the US dollar.

Price growth rates came at 1%, 1.2% and 1.5% in July, August and September, respectively. Y-o-y consumer prices gained 14% in September 2022.⁹

⁹ Source: Statistical Office of the Republic of Serbia.

Movements in net assets, FONDex and key indicators of VPF
(in RSD mn, units, %)



Source: National Bank of Serbia, Belgrade Stock Exchange, Statistical Office.

5 Fees charged by management companies

The Law on Voluntary Pension Funds and Pension Schemes sets out that management companies charge fees for their services and account transfer to fund members. Management company fees include contribution and management fees. The account transfer fee may not exceed the actual transfer costs.

Though fees are among the parameters that members should consider when choosing a fund, they should not be viewed in isolation. The level of fees is contingent on the fund's investment policy and its investment activity. As a rule, more active funds, intended for younger persons who will pay contributions over a longer horizon, invest more in more complex instruments, assuming a higher degree of risk. Such funds are expected to post higher returns, hence their fees are higher. On the other hand, a fund investing passively in safer financial instruments should charge lower fees. A fund's investment policy, i.e. planned investment of the fund members' assets,

the expected return, the level of risk assumed by funds (and members), and fees charged by companies, should all be taken into account when opting for a fund.

The contribution fee is paid only once, as a front-load fee. Though visible in the first instance, it is not the largest cost incurred by a member.

The total amount of contribution fees paid in Q3 2022 amounted to RSD 21.2 mn and the level of the fee in the same period was 2.1% on average.

The management fee is calculated daily against the value of VPF net assets and is included directly in the investment unit value, meaning that the calculated and published investment unit value is exclusive of the management fee.

In Q3 2022, the total value of management fees equalled RSD 148.4 mn, which is around 88% of the total fees charged.

Fees charged by management companies

(in RSD mn)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
												Q1	Q2	Q3
Contribution fee	57.9	60.1	58.7	55.4	53.0	56.8	61.0	66.3	71.8	76.2	80.9	20.2	20.8	21.2
Management fee	220.0	284.1	357.8	432.8	514.9	614.4	678.7	474.0	526.7	567.9	599.4	151.6	151.3	148.4

Source: National Bank of Serbia.

6 Trading in securities

VPF trading volumes equalled RSD 4.4 bn in Q3 2022.

The average share of VPFs in BSE trading was 9.8% during the quarter.

VPF securities trading

(in RSD bn)

	2015	2016	2017	2018	2019	2020	2021	2022		
								Q1	Q2	Q3
Securities trading	14.5	11.5	24.2	16.1	48.7	26.3	33.5	5.6	0.8	0.8
Purchases	7.9	6.4	14.7	9.3	27.1	13.8	18.6	3.2	0.0	0.0
Belgrade Stock Exchange	0.9	1.1	3.7	2.7	3.2	2.7	1.9	0.8	0.0	0.0
Unregulated market	1.8	1.1	5.8	3.2	16.7	7.6	13.7	0.4	0.2	0.2
Auctions of government secur	5.2	4.2	5.1	3.4	7.1	3.6	3.0	2.1	0.0	0.0
Sales	3.6	3.0	7.4	5.5	19.6	11.2	12.0	0.9	0.0	0.0
Belgrade Stock Exchange	0.5	1.9	2.7	3.2	1.4	3.1	3.7	0.6	0.0	0.0
Unregulated market	3.2	1.1	4.7	2.3	18.1	8.1	8.3	0.2	0.0	0.0
Maturity	2.9	2.1	2.2	1.3	2.1	1.4	3.0	1.6	0.5	0.5
Purchase to sale and maturity ratio	1.2	7.5	1.5	1.4	1.3	1.1	1.2	1.3	0.4	0.6
Share in total BSE trading (in%)	6.1%	6.7%	33.0%	9.4%	5.1%	11.9%	13.5%	17.0%	0.4%	9.8

Source: National Bank of Serbia, Belgrade Stock Exchange.

7 Transaction costs

Transaction costs incurred in the purchase, sale and transfer of securities (Central Securities Depository fees, stock exchange fees, tax charges) and the costs of current maintenance of real estate property that fund assets are invested in are charged against fund assets. Other costs are charged against the assets of management companies.

The total transaction costs in Q3 2022 amounted to RSD 1.9 mn. In the same period, Central Securities Depository fees had a greater share in transaction costs compared to stock exchange fees, while custody bank fees made up the bulk of costs paid by management companies from their assets compared to brokerage fees.

Amount of transaction costs

(in RSD mn)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
										Q1	Q2	Q3
Total	6.0	6.2	5.6	7.3	10.5	8.3	17.2	10.3	4.8	2.5	0.6	1.9
Brokerage fees	2.5	2.0	1.3	2.3	4.4	3.0	8.0	3.7	0.7	0.6	0.1	0.2
Custody bank fees	1.9	2.0	2.0	2.0	1.9	1.8	3.1	2.3	1.6	0.5	0.3	0.3
Stock exchange fees	0.6	0.6	0.8	1.0	1.8	1.3	1.9	1.3	0.5	0.4	0.1	0.1
Central Securities Depository fees	0.9	1.6	1.6	2.0	1.8	1.6	3.4	2.2	1.7	1.1	0.1	1.3
Other fees	0.1	0.0	-	0.0	0.6	0.6	0.7	0.9	0.0	0.0	0.0	0.0

Source: National Bank of Serbia.

8 Number and structure of VPF users

At end-Q3 2022, 214,859 users¹⁰ were in the accumulation phase¹¹, with 293,927 VPF membership contracts¹².

VPF users accounted for 9.3%¹³ of the total number of employees.

Number of users by number of funds in which they are members

(in units)

No of funds	No of users
1	171.129
2	37.022
3	6.419
4	263
5	19
6	5
7	2
Total	214.859

Source: National Bank of Serbia.

Number of users by membership contract

(in units)

No of contracts	No of users
1	155.526
2	45.528
3	9.412
4	3.314
5	725
6	275
7	56
8	21
9	2
Total	214.859

Source: National Bank of Serbia.

¹⁰The number of users is the number of people who are members of VPF(s). This number is lower than the number of membership contracts as a significant number of users have more than one concluded membership contract in the same or in different funds.

¹¹VPF membership has two phases – the accumulation phase (when contributions are made) and the withdrawal phase (when the accumulated funds are withdrawn).

¹²The number of membership contracts is the sum total of individual membership contracts and the number of members of all pension schemes.

¹³The source for the number of employees: NBS.

Structure of users by payment dynamics

(in units and %)

	Period	No of users	Share (%)
Users making contributions	1 month	77.348	36.0%
	3 months	83.328	38.8%
	6 months	87.308	40.6%
	12 months	93.078	43.3%
	From the start of membership (1)	192.514	89.6%
No holdings (2)		22.345	10.4%
Total (1+2)		214.859	

Source: National Bank of Serbia.

The amount of accumulated funds depends on the amount of contributions, return earned by funds, level of fees, and the length of the accumulation phase. As the level of contributions and the period of accumulation increase and funds earn returns, average balances in members' individual accounts go up. The average amount of funds accumulated in the accounts of members who have made at least one contribution payment was RSD 244.9 thousand. At end-Q3 2022, the number of users who are members of two or more VPFs was 43,730 or around 20% of the total number of users.

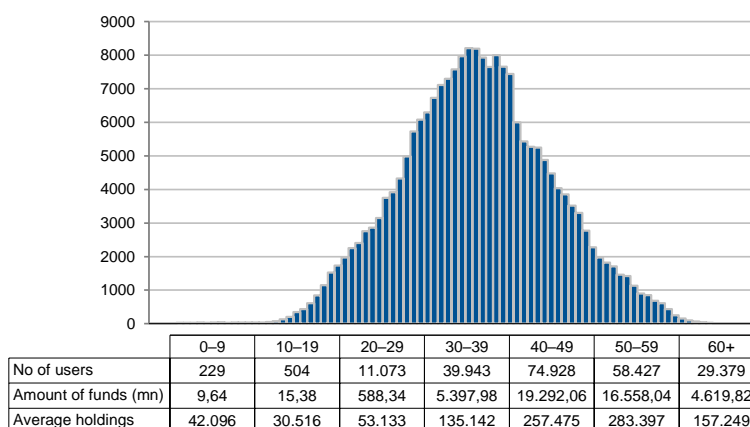
Average accumulated funds at period end

2012	2013	2014	2015	2016	2017	2018,0	2019	2020	2021	2022		
										Q1	Q2	Q3
105.3	127.3	148.3	179.4	200.6	219.3	235.8	239.9	257.4	260.0	257.7	249.3	244.9

Source: National Bank of Serbia.

Distribution of users and accumulated funds by age

(in units, RSD)



Source: National Bank of Serbia.

In terms of gender composition and the respective amounts of funds, Q3 2022 saw no significant changes relative to prior periods. Men remained dominant, accounting for 56.4% of all users.

At end-Q3 2022, the average age of VPF users was around 47 years, with users aged 40–60 making up the dominant share of 62%. Also, the percentage of users above

the age of 53 was similar as in prior years, accounting for 30.2%, while the percentage of users above the age of 58 accounted for 17.7%.

9 Contributions, withdrawals and transfers

Of total contributions in Q3 2022, individual payments accounted for 37.1%, employer contributions for 33.2% and pension schemes for 29.7%. The total contributions to VPFs in Q3 2022 amounted to RSD 1.02 bn.

Total net contributions came at RSD 1 bn in Q3 2022.

Total contributions

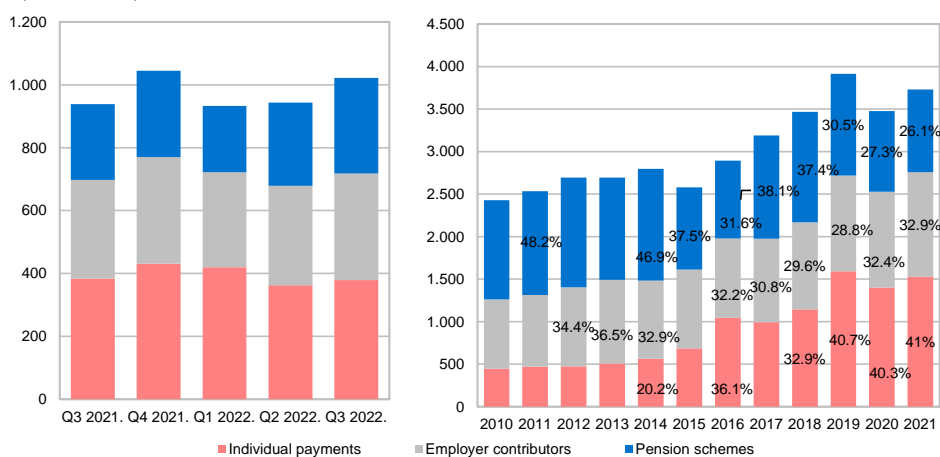
(in RSD bn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
										Q1	Q2	Q3
2.70	2.70	2.80	2.58	2.89	3.19	3.47	3.92	3.48	3.73	0.93	0.90	1.02

Source: National Bank of Serbia.

Volume and structure of total contributions

(in RSD mn, %)



Source: National Bank of Serbia.

Although most contributions are made through employers who, in this way, display a high level of responsibility towards their staff, the last quarter saw a noticeable q-o-q increase in the number of individual contributions. There is an ample potential for further growth in the membership base, both through individuals who increasingly recognize the importance of saving for old age, and through companies, especially having in mind that only every tenth employee has a VPF account. This way, employees and employers can save up since contributions from employer's funds up to RSD 6,541¹⁴ per employee per month are exempt from the household income tax and contributions for mandatory social insurance. Payments in the same amount made by the employer through wage garnishment are also tax-exempt. This represents an additional incentive to employees and employers to direct a part of the wage to saving in VPFs.

Withdrawals are generally lump-sum. Since the withdrawals are made by the members who fulfil the requirements, and are usually not long-standing fund members,

¹⁴Under Government decree, this amount is adjusted for previous-year inflation once a year.

their accumulated sum is relatively small, and this kind of withdrawals is expected, even though it is not in accordance with the nature of VPFs which assumes the use of accumulated funds over a longer period. Lengthening of the accumulation periods and increase in the accumulated sums are accompanied with the rise in the share of scheduled

and other types of withdrawals. In Q3 2022, one-off withdrawals made up the bulk of total withdrawals (RSD 594.7 mn), while scheduled withdrawals amounted to RSD 124.3 mn.

Total withdrawals
(in RSD mn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
										Q1	Q2	Q3
751.7	945.2	1213.4	1226.2	1195.6	1342.4	1412.0	1679.8	2159.6	2223.5	1227.3	948.0	733.4

Source: National Bank of Serbia.

Total fund withdrawals are rising every year, measuring RSD 733.4 mn in Q3 2022. This phenomenon is a result of system development. Namely, as contributions and net assets increase and the VPF system matures, the amount of withdrawals will also rise in absolute terms.

In Q3 2022, total withdrawals amounted to RSD 733.4 mn.

Transfers are inter-fund transfers. A member may transfer a part or all of his assets from one fund to another, covering only the actual transfer costs.

In Q3 2022, transfers came at RSD 68.3 mn.

In Q3 2022, total inter-fund transfers amounted to RSD 68.3 mn.

Total inter-fund transfers
(in RSD mn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022		
										Q1	Q2	Q3
72.3	137.2	126.3	219.7	267.5	263.0	229.7	210.3	252.6	199.0	387.4	247.7	68.3

Source: National Bank of Serbia.