



NATIONAL BANK OF SERBIA

**INSURANCE SUPERVISION DEPARTMENT
PENSION FUNDS SUPERVISION DIVISION**

**VOLUNTARY PENSION FUNDS SECTOR
IN SERBIA**

Fourth Quarter Report 2021

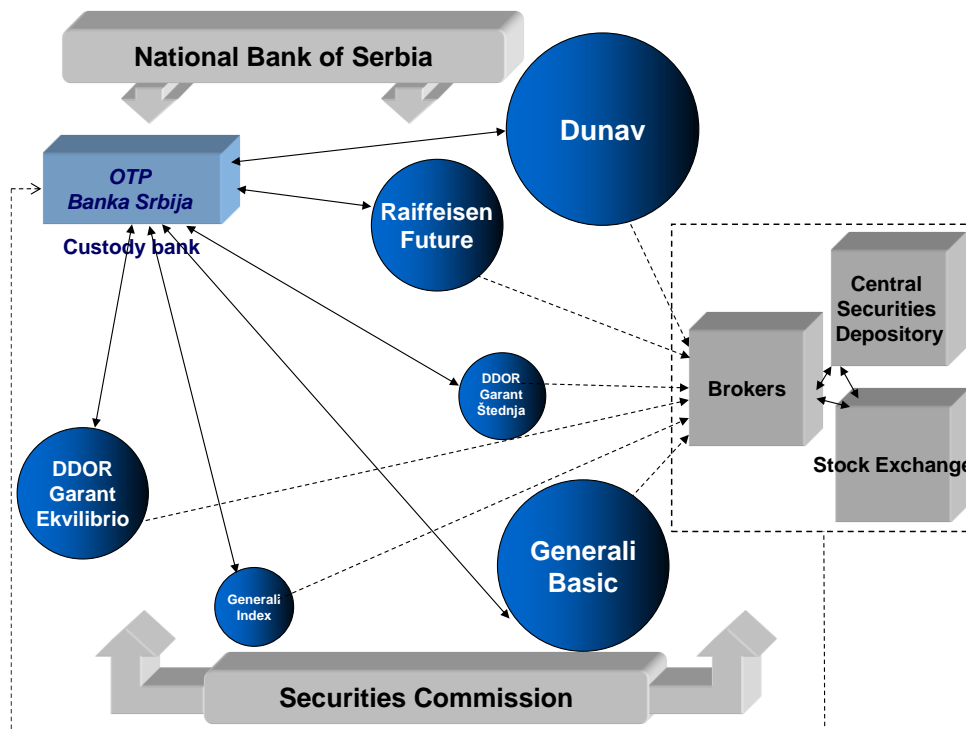
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1 Market participants

At end-Q4 2021, the market of voluntary pension funds (VPFs) included four companies managing seven VPFs, one custody bank, five intermediary banks and one insurance brokerage undertaking¹.

Diagram: **Market participants**



At end-Q4 2021, total employment in VPF management companies was 125, Employment is three times higher than in the previous quarter.

The NBS licences sales agents, who passed professional examinations and fulfilled other requirements, to disseminate information about VPF operation. By end-Q4 2021, a total of 996 sales agent licences were granted.

Management companies, banks and insurance undertakings as brokers may engage sales agents. At end-Q4 2021, management companies hired 113 persons, intermediary banks 517 persons and insurance undertaking 99 persons.

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

2 VPF net assets

At end-Q4 2021, VPF net assets equalled RSD 49.1 bn. In 2021 net assets went up by 4.3% from end-2020. The changes in the value of net assets reflect net contributions², withdrawals and investment returns. In 2021, total contributions amounted to RSD 3,731 mn, withdrawals to RSD 2,223 mn, up by around 7.3% and 3.0% respectively, from 2020.

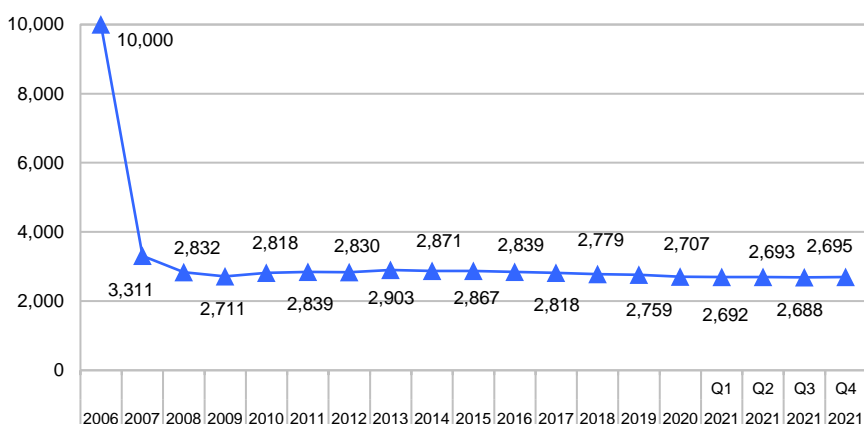
At end-2021, net assets equalled RSD 49.1 bn.

End-of-period net assets of the VPF sector

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
										Q1	Q2	Q3	Q4
12.5	16.1	19.7	23.6	28.9	32.8	36.2	40.2	45.2	47.0	47.7	48.2	48.8	49.1

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-2021 amounted to 2,695 points, indicating high concentration in the VPF market.

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 93% of the market share, with the largest fund accounting for around 40%.

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

Share in net assets (%)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
										Q1	Q2	Q3	Q4
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.

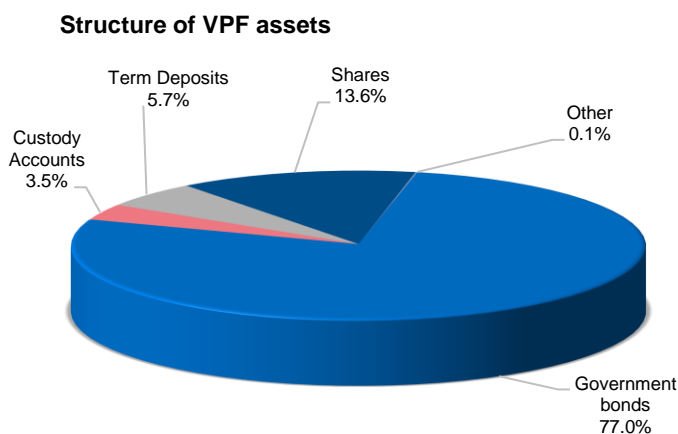
² Net contributions are total contributions minus the front-load fee.

³ In terms of the share in total net assets.

3 Structure of VPF assets

At end-Q4 2021, the structure of investment of VPF assets remained broadly unchanged from the previous period. Government bonds accounted for a major part of VPF assets – 77.0%. Balances in custody accounts and bank time deposits made up 9.2% and shares 13.6%. 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 – 77.0%.



Source: National Bank of Serbia.

Government debt instruments portfolio (Republic of Serbia’s bonds) kept the dominant position in total VPF assets at the end of the period, with the downward trend in the share of these instruments in VPF assets (from 79.6% at the end of the previous quarter to 77.0%). Also, relative to end-2020, the share of government debt instruments portfolio recorded an increase in total fund assets by around 4%.

Compared to the end of the previous quarter, aggregate exposure to shares of domestic legal entities rose from 12.9% to 13.6% of total fund assets as a result of the current trends in the Serbian financial market. Moreover, portfolio of shares of domestic legal entities in total fund assets increased from end-2020, when it accounted for 12.0%.

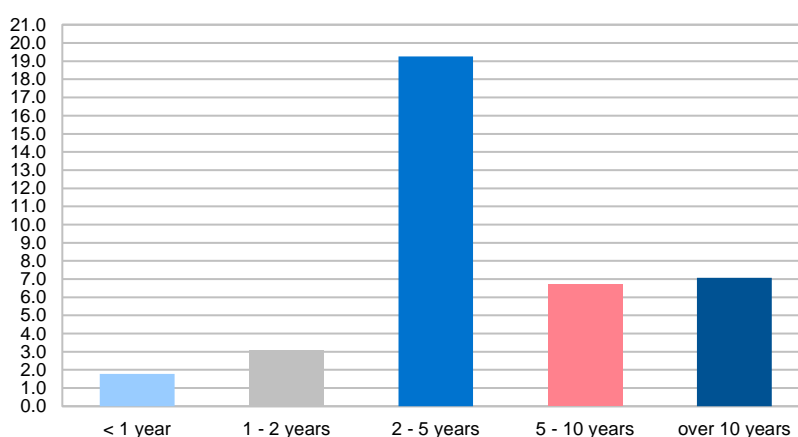
At end-Q4 2021, 4.7% of government debt instruments were with the maturity of up to one year, 8.1% between one and two years, 50.9% between two and five years, 17.7% between five and ten years, and 18.7% over ten years.

The average maturity of assets⁴ invested in government debt instruments was 5.49 years.

At end-Q4 2021, 86.1% of total assets were in dinars and 13.9% in a foreign currency (EUR).

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

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



Source: National Bank of Serbia.

4 Return on investment

At end-Q4 2021, the value of FONDex⁵ reached 3,134.18 points⁶. The rise in FONDex is the weighted average return on all funds, and it came at 1.3% for the past year. Since the start of VPF operation⁷, FONDex return has equalled 7.8%. 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.

There were no issues of government securities in the primary market of dinar-denominated government debt instruments in Q4 2021.

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

Maturity	Q4 2020	Q12021	Q2 2021	Q3 2021	Q4 2021
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	-
18m	-	-	-	-	-
24m	▲ 2.0%	▲ 16%	▲ 16%	-	-
36m	-	-	-	-	-
60m	▲ 2.6%	-	-	-	-
84m	-	-	-	-	-
120m	-	-	-	-	-
144m	▲ 3.9%	-	-	-	-

Source: Ministry of Finance.

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 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.

Market value of issued dinar-denominated government debt instruments, by maturity

(in RSD bn)

Maturity	Q3 2020	Q12021	Q2 2021	Q3 2021	Q4 2021
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	-
18m	-	-	-	-	-
24m	9.0	9.1	21.0	-	-
36m	-	-	-	-	-
60m	13.2	-	-	-	-
84m	-	-	-	-	-
120m	-	-	-	-	-
144m	1.5	-	-	-	-
Total	23.6	9.1	20.1	-	-

Source: Ministry of Finance.

There was no issue of euro-denominated government debt instruments in Q4 2021.

Market value of issued euro-denominated government debt instruments, by maturity

(in EUR mn)

Maturity	Q3 2020	Q4 2020	Q12021	Q2 2021	Q3 2021	Q4 2021
12m	-	-	-	-	-	-
24m	-	-	-	-	-	-
36m	-	-	-	-	-	-
60m	-	-	-	-	-	-
84m	-	-	-	-	-	-
120m	-	-	-	-	-	-
144m	-	-	24.9	-	8.9	-
180m	-	-	-	-	-	-
240m	-	-	30.4	55.5	-	-
Total	-	-	55.2	55.5	8.9	-

Source: Ministry of Finance.

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

Maturity	Q3 2020	Q4 2020	Q12021	Q2 2021	Q3 2021	Q4 2021
12m	-	-	-	-	-	-
24m	-	-	-	-	-	-
36m	-	-	-	-	-	-
60m	-	-	-	-	-	-
84m	-	-	-	-	-	-
120m	-	-	-	-	-	-
144m	-	-	17%	-	16%	-
180m	-	-	-	-	-	-
240m	-	-	2.3%	2.3%	-	-

Source: Ministry of Finance.

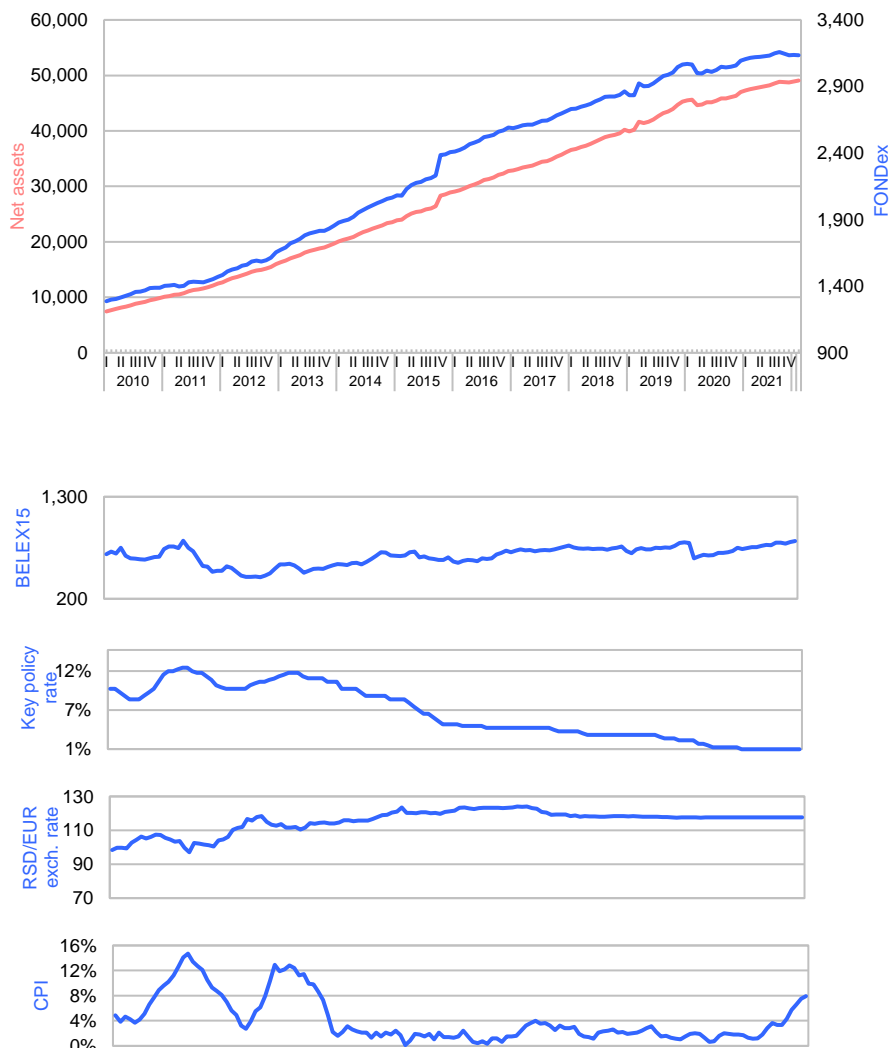
The prices of shares in the Belgrade Stock Exchange (BSE), measured by the BELEX15 index rose by 2.2% at end-Q4 2021 (the value of the index was 820.78 at end-December). The index rose by 9.6% over the past year.

The key policy rate equalled 1.0% at end-December 2021. The level of interest rates earned by funds on dinar assets in custody accounts mirrored the movements in the key policy rate.

In Q4 2021, the dinar stayed almost unchanged vis-à-vis the euro, coming at the level of RSD 117.58 per euro at the end of this quarter. In the same period, the dinar lost 2.6% against the US dollar.

Price growth rates came at 0.9%, 0.9% and 0.4% in October, November and December, respectively. Consumer prices gained 7.9%⁹ in December 2021 year-on-year.

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



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

⁹ Source: Statistical Office of the Republic of Serbia.

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 entail 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 Q4 2021 amounted to RSD 22.4 mn and the level of the fee in the same period was 2.1% on average. In annual terms, the total amount of contribution fees paid in 2021 amounted to RSD 80.9 mn, up by 6.2% relative to 2020, when it amounted to RSD 76.2 mn.

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 2021, the total value of management fees equalled RSD 599.4 mn, which is around 88% of the total fees charged, up by 5.5% relative to 2020.

Fees charged by management companies

(in RSD mn)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
											Q1	Q2	Q3	Q4
Contribution fee	57.9	60.1	58.7	55.4	53.0	56.8	61.0	66.3	71.8	76.2	19.0	19.7	19.8	22.4
Management fee	220.0	284.1	357.8	432.8	514.9	614.4	678.7	474.0	526.7	567.9	145.2	148.8	152.3	153.2

Source: National Bank of Serbia.

6 Trading in securities

VPF trading volumes equalled RSD 2.4 bn in Q4 2021. In annual terms, the volume of VPF turnover measured RSD 33.5 bn, up by around 27% from 2020 when it equalled RSD 26.4 bn.

The average share of VPFs in BSE trading was 3.0% during the quarter.

VPF securities trading

(in RSD bn)

	2015	2016	2017	2018	2019	2020	2021			
							Q1	Q2	Q3	Q4
Securities trading	14.5	11.5	24.2	16.1	48.7	26.3	17.8	5.7	7.6	2.4
Purchases	7.9	6.4	14.7	9.3	27.1	13.8	10.0	2.6	4.7	1.3
Belgrade Stock Exchange	0.9	1.1	3.7	2.7	3.2	2.7	0.4	0.3	0.8	0.3
Unregulated market	1.8	1.1	5.8	3.2	16.7	7.6	8.0	1.9	2.7	1.0
Auctions of government secur	5.2	4.2	5.1	3.4	7.1	3.6	1.6	0.3	1.1	0.0
Sales	3.6	3.0	7.4	5.5	19.6	11.2	5.9	2.4	2.6	1.2
Belgrade Stock Exchange	0.5	1.9	2.7	3.2	1.4	3.1	1.8	1.7	0.0	0.2
Unregulated market	3.2	1.1	4.7	2.3	18.1	8.1	4.1	0.6	2.6	1.0
Maturity	2.9	2.1	2.2	1.3	2.1	1.4	1.9	0.7	0.4	0.0
Purchase to sale and maturity ratio	1.2	7.5	1.5	1.4	1.3	1.1	1.3	0.8	1.6	1.1
Share in total BSE trading (in %)	6.1%	6.7%	33.0%	9.4%	5.1%	11.9%	26.3%	20.6%	10.9%	3.0%

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 Q4 2021 amounted to RSD 0.7 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. In addition, the total transaction costs in 2020 amounted to RSD 10.3 mn, while in 2021 they measured RSD 4.8 mn, down by around 54%.

Number of contracts and users

(in thousands)

	2014	2015	2016	2017	2018	2019	2020	2021			
								Q1	Q2	Q3	Q4
No of contracts	252.1	258.1	250.5	253.9	261.7	275.8	279.5	279.5	282.4	286.4	288.7
No of users	188.0	190.5	183.6	185.4	192.3	201.6	205.0	205.1	206.8	209.0	210.7
Percentage of active users (in %)	31.3%	25.3%	28.5%	33.6%	33.4%	34.4%	35.3%	34.0%	34.2%	33.8%	35.9%

Source: National Bank of Serbia.

8 Number and structure of VPF users

At end-Q4 2021, 210,697 users¹⁰ were in the accumulation phase¹¹, with 288,734 VPF membership contracts¹². Compared to end-Q4 2020, the number of users and the number of membership contracts rose by around 2.8% and 3.3%, respectively.

¹⁰ The number of users is the number of people who are members of VPF(s). VPF membership has two phases – the accumulation phase (when contributions are made) and the withdrawal phase (when the accumulated funds are withdrawn).

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

VPF users accounted for 9.5%¹³ of the total number of employees.

Amount of transaction costs

(in RSD mn)

	2013	2014	2015	2016	2017	2018	2019	2020	2021			
									Q1	Q2	Q3	Q4
Total	6.0	6.2	5.6	7.3	10.5	8.3	17.2	10.3	19	12	0.9	0.7
Brokerage fees	2.5	2.0	1.3	2.3	4.4	3.0	8.0	3.7	0.2	0.3	0.1	0.1
Custody bank fees	1.9	2.0	2.0	2.0	1.9	1.8	3.1	2.3	0.5	0.4	0.4	0.3
Stock exchange fees	0.6	0.6	0.8	1.0	1.8	1.3	1.9	1.3	0.2	0.2	0.1	0.1
Central Securities Depository fees	0.9	1.6	1.6	2.0	1.8	1.6	3.4	2.2	0.8	0.3	0.4	0.3
Other fees	0.1	0.0	-	0.0	0.6	0.6	0.7	0.9	0.2	0.0	0.0	0.0

Source: National Bank of Serbia.

Structure of users by payment schedule

(in units and %)

	Period	No of users	Share (%)
	Users making contributions	1 month	75,563
3 months		81,928	39%
6 months		85,004	40%
12 months		89,910	43%
From the start of membership (1)		188,631	90%
No holdings (2)		22,066	10%
Total (1+2)		210,697	

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 260 thousand. At end-Q4 2021, the number of users who are members of two or more VPFs was 43,498 or around 21% of the total number of users.

Average accumulated funds at period-end

2010	2011	2012	2013	2014	2015	2016	2017	2018.0	2019	2020	2021			
											Q1	Q2	Q3	Q4
70.5	84.5	105.3	127.3	148.3	179.4	200.6	219.3	235.8	239.9	257.4	260.8	261.0	261.0	260.0

Source: National Bank of Serbia.

In terms of gender composition and the respective amounts of funds, Q4 2021 saw no significant changes relative to prior periods. Men remained dominant, accounting for 57.2% of all users.

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

¹³ The source for the number of employees: NBS.

Number of users by number of funds in which they are members
(in units)

No of funds	No of users
1	167,199
2	36,609
3	6,624
4	238
5	20
6	5
7	2
Total	210,697

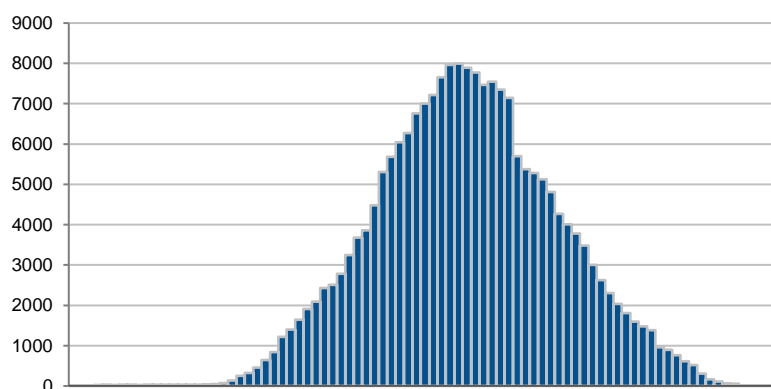
Source: National Bank of Serbia.

Number of users by membership contract
(in units)

No of contracts	No of users
1	151,762
2	45,115
3	9,742
4	3,191
5	647
6	174
7	55
8	11
9	
Total	210,697

Source: National Bank of Serbia.

Distribution of users and accumulated funds by age
(in units, RSD)



	0-9	10-19	20-29	30-39	40-49	50-59	60+
No. of users	244	504	10,779	40,002	73,971	56,605	28,025
Amount of funds (mln)	10.19	14.43	553.49	5,868.46	20,003.00	17,008.73	4,893.38
Average holdings	41,762	28,631	51,349	146,704	270,417	300,481	174,608

Source: National Bank of Serbia.

At end-Q4 2021, the average age of VPF users was around 47 years, with users aged 40–60 making up the dominant share of around 62%. The percentage of users above the age of 53 was similar as in prior years, accounting for 29.8%, while the percentage of users above the age of 58 accounted for 17.3%.

9 Contributions, withdrawals and transfers

Of total contributions in Q4 2021, individual payments accounted for 41.3%, employer contributions for 32.5% and pension schemes for 26.3%. The total contributions to VPFs in Q4 2021 amounted to RSD 1.04 bn.

Net contributions came at RSD 3.65 bn in 2021.

Total contributions

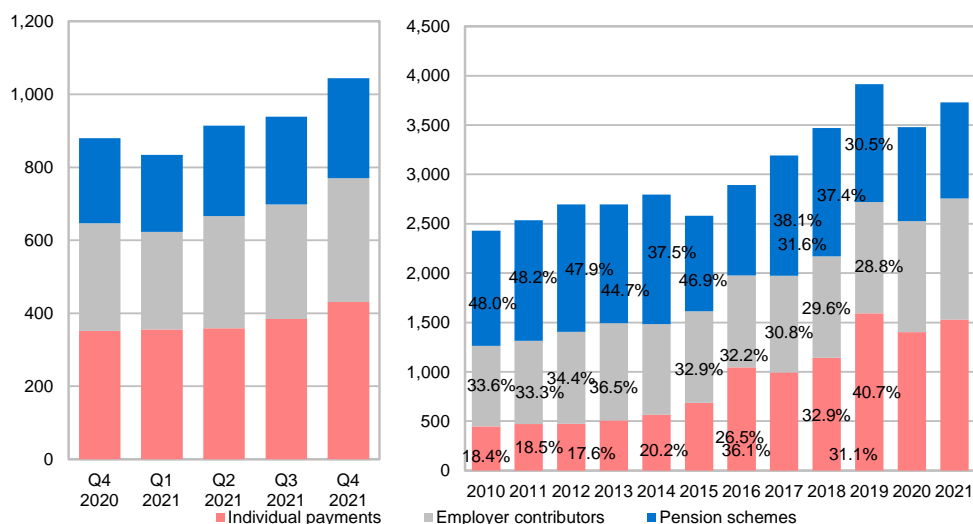
(in RSD bn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
									Q1	Q2	Q3	Q4
2.70	2.70	2.80	2.58	2.89	3.19	3.47	3.92	3.48	0.83	0.91	0.94	1.04

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, there is a noticeable 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 6,062¹⁴ 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, 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 2021, lump-sum withdrawals made up the dominant share of total withdrawals (RSD 1.8 bn, down by 35.1 mn from 2020), while scheduled withdrawals amounted to RSD 340.4 mn, up by 73.9 mn from 2020.

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

Total withdrawals

(in RSD mn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
									Q1	Q2	Q3	Q4
751.7	945.2	1213.4	1226.2	1195.6	1342.4	1412.0	1679.8	2159.6	528.8	529.3	543.7	558.7

Source: National Bank of Serbia.

Total withdrawals rise year after year, reaching RSD 558.7 mn in Q4 2021. 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 addition, the total withdrawals in 2021 measured RSD 2.2 bn, while in 2020 they equalled RSD 2.16 bn.

In 2021, total withdrawals amounted to RSD 2.22 bn.

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 2021, transfers equalled RSD 199 mn.

In Q4 2021, the amount of assets transferred to another fund equalled RSD 101.2 mn, while in annual terms, it reached RSD 199.0 mn in 2021, down by around 21% from 2020, when transfers measured RSD 252.6 mn.

Total inter-fund transfers

(in RSD mn)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
									Q1	Q2	Q3	Q4
72.3	137.2	126.3	219.7	267.5	263.0	229.7	210.3	252.6	27.9	43.6	26.3	101.2

Source: National Bank of Serbia.