



NATIONAL BANK OF SERBIA

INSURANCE SUPERVISION DEPARTMENT
PENSION FUNDS SUPERVISION DIVISION

**VOLUNTARY PENSION FUNDS SECTOR
IN SERBIA**

Fourth Quarter Report 2018

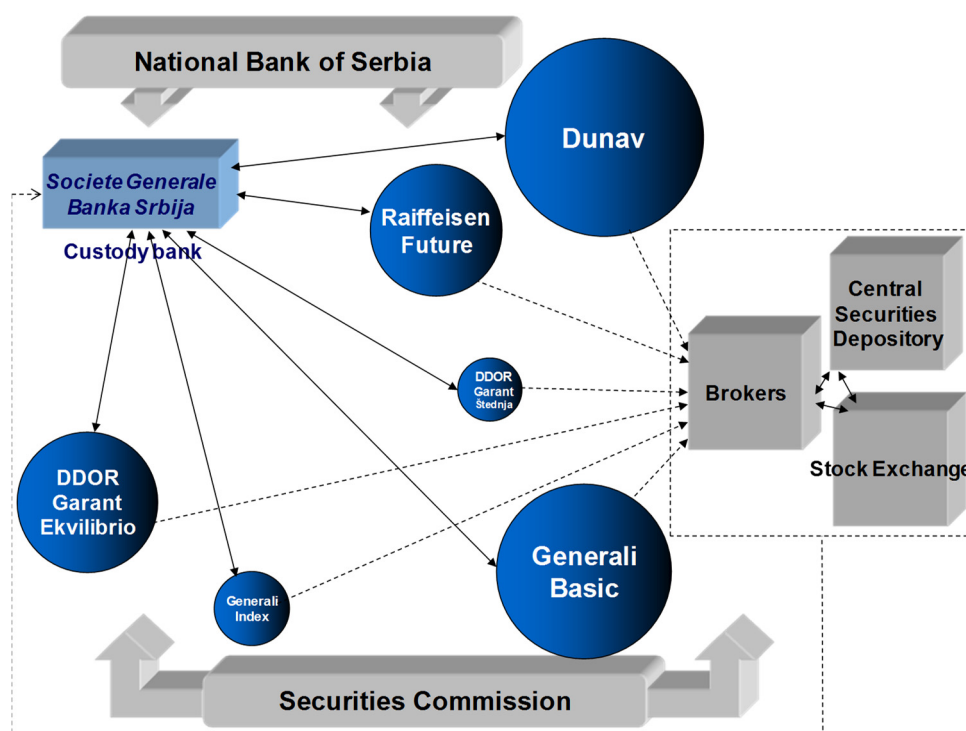
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1 Market participants

At end-Q4 2018, the market of voluntary pension funds (VPFs) included four companies managing seven VPFs, one custody bank and five agent banks.¹

Picture: Market participants



At end-Q4 2018, total employment in VPF management companies was 121, down by 2 from a quarter earlier.

The NBS licenses sales agents, who passed professional examinations and fulfilled other requirements, to disseminate information about VPF operation. By end-Q4 2018, a total of 777 sales agent licences were granted.

Management companies, banks and insurance undertakings acting as brokers may engage sales agents. At end-Q4 2018, management companies hired 94 persons, intermediary banks 448 persons and insurance undertakings 21 persons.

¹ Raiffeisen Bank a.d. Beograd, Societe Generale banka Srbija a.d. Beograd, NLB banka a.d. Beograd, Addiko Bank a.d. Beograd and Sberbank a.d. Beograd

2 VPF net assets

In Q4, VPF net assets expanded by 2.8%, to reach RSD 40.2 bn at year-end. The changes in the value of net assets reflect net contributions,² withdrawals and investment returns. In Q4 2018, total contributions amounted to RSD 946.78 mn, withdrawals to RSD 361.03 mn and investment returns to RSD 521.49 mn.

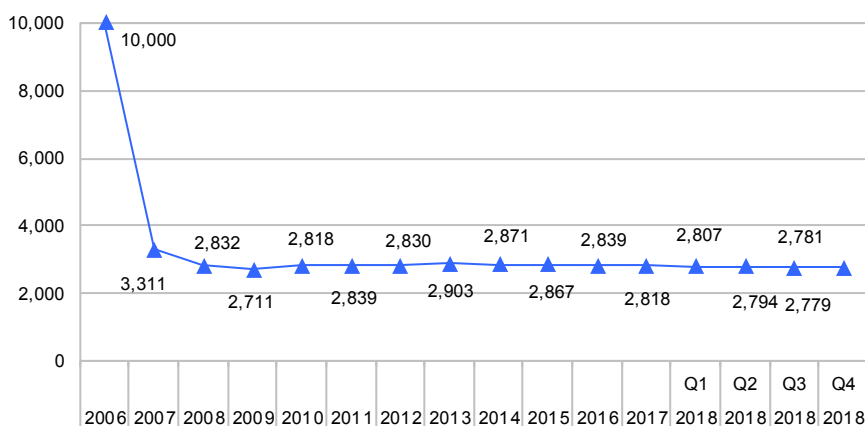
At end-Q4 2018, net assets equalled RSD 40.2 bn.

End-of-period net assets of the VPF sector (in RSD bn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
											Q1	Q2	Q3	
3.1	4.6	7.2	9.9	12.5	16.1	19.7	23.6	28.9	32.8	36.2	37.1	38.1	39.1	40.2

Source: National Bank of Serbia.

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



Source: National Bank of Serbia.

Measured by HHI, market concentration in the sector³ at end-Q4 amounted to 2,779 points, which indicates 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 95% of the market share, with the largest fund accounting for around 40%.

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

³ In terms of the share in total net assets.

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

Share in net assets (%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
												Q1	Q2	Q3	Q4
Large (20 and above)	3	2	2	3	2	2	2	2	2	2	2	2	2	2	2
Medium (5 - 19.99)	-	2	3	1	2	2	2	2	2	2	2	2	2	2	2
Small (0 - 4.99)	4	6	5	4	5	5	2	2	3	3	3	3	3	3	3

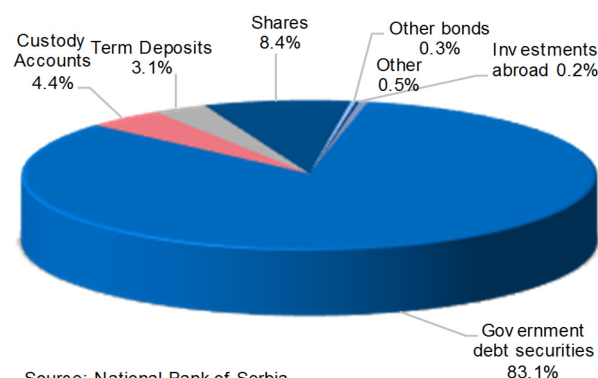
Source: National Bank of Serbia.

3 Structure of VPF assets

At end-Q4 2018, the structure of investment of VPF assets remained broadly unchanged. Government bonds accounted for the major part of VPF assets – 83.1%. Balances in custody accounts and bank time deposits made up 7.5%, shares 8.4% and other securities (the EBRD’s bond) 0.3% of total VPF assets. Investment in units of open-end investment funds and receivables made up the category “other” which accounted for 0.5%. In this quarter, for the first time since the start of VPF operation, 0.2% of total assets were invested in shares of foreign legal entities abroad.

Majority of assets were invested in government debt instruments – 83.1%.

Structure of VPF assets



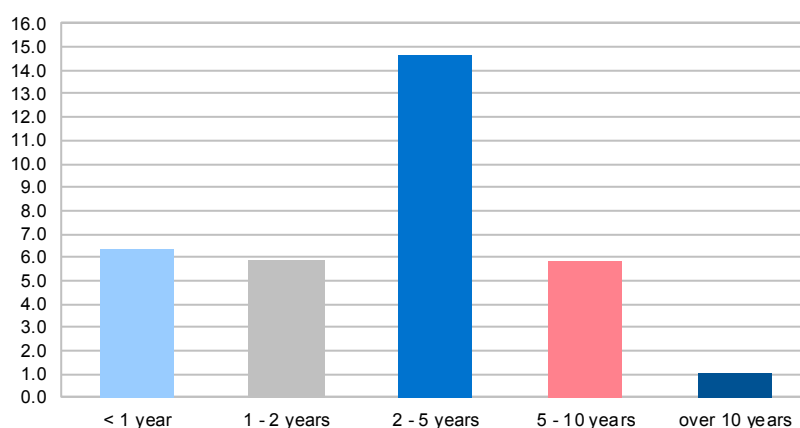
Source: National Bank of Serbia.

At end-Q4 2018, 18.7% of government debt instruments were with the maturity of up to one year, 17.5% between one and two years, 43.6% between two and five years, 17.2% between five and ten years, and 3% over ten years.

The average maturity of assets⁴ invested in government debt instruments was 3.4 years.

⁴ The 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.

At end-Q4 2018, 86.6% of total assets were in dinars and 13.4% of total assets were in a foreign currency (EUR and USD).

4 Return on investment

At end-Q4 2018, the FONDex⁵ reached 2,862.92 points.⁶ The rise in FONDex is the weighted average return on all funds, and it came at 1.3% in Q4 2018, or 5.5% for the past year. Since the start of VPF operation,⁷ the return of the FONDex has equalled 9.1%.

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, level of the key policy rate and banks' interest rates, and changes of the dinar exchange rate against the euro and the dollar.

There were no issues of government securities in the primary market of government debt instruments in Q4.

⁵ FONDex is the index which shows 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	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	-
18m	-	-	-	-	-
24m	11.5	-	-	-	-
36m	15.2	-	-	-	-
60m	-	57.7	27.0	18.5	-
84m	-	-	-	-	-
120m	-	76.7	20.0	10.9	-
Total	26.7	134.4	47.0	29.4	0.0

Source: Ministry of Finance.

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

Maturity	Q4 2017	Q1 2017	Q2 2017	Q3 2018	Q4 2018
3m	-	-	-	-	-
6m	-	-	-	-	-
12m	-	-	-	-	-
18m	-	-	-	-	-
24m	4.1%	-	-	-	-
36m	4.3%	-	-	-	-
60m	-	4.2%	4.0%	3.7%	-
84m	-	-	-	-	-
120m	-	5.2%	4.9%	4.8%	-

Source: Ministry of Finance.

There were also no issues of euro-denominated government debt instruments in Q4 2018.

The prices of shares in the Belgrade Stock Exchange (BSE), measured by BELEX15⁹ rose by 4.8% (reaching 761.69 at end-December). The index rose by 0.2% over the past year.

⁹ Of the total investment in shares, the bulk pertained to the shares covered by BELEX15, which means that BELEX15 is a relevant benchmark for the shares in the funds' portfolio.

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

(in EUR mn)

Maturity	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
12m	24.9	49.8	48.8	49.8	-	-
24m	35.2	-	38.8	13.9	-	-
36m	49.5	74.7	100.3	27.0	-	-
60m	73.8	49.7	97.5	39.3	-	-
84m	-	-	-	65.1	-	-
120m	17.9	-	86.9	-	-	-
180m	50.0	-	-	-	-	-
Total	251.3	174.1	372.3	195.1	-	-

Source: Ministry of Finance.

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

Maturity	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
12m	0.6%	0.5%	0.5%	0.5%	-	-
24m	10%	-	10%	0.7%	-	-
36m	1.9%	1.5%	12%	12%	-	-
60m	2.6%	2.4%	19%	18%	-	-
84m	-	-	-	2.5%	-	-
120m	4.0%	-	3.5%	-	-	-
180m	4.2%	-	-	-	-	-

Source: Ministry of Finance.

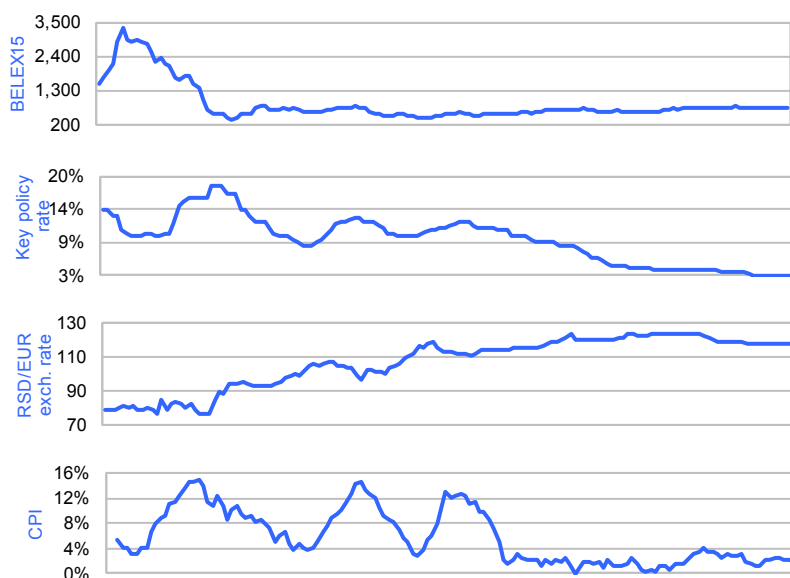
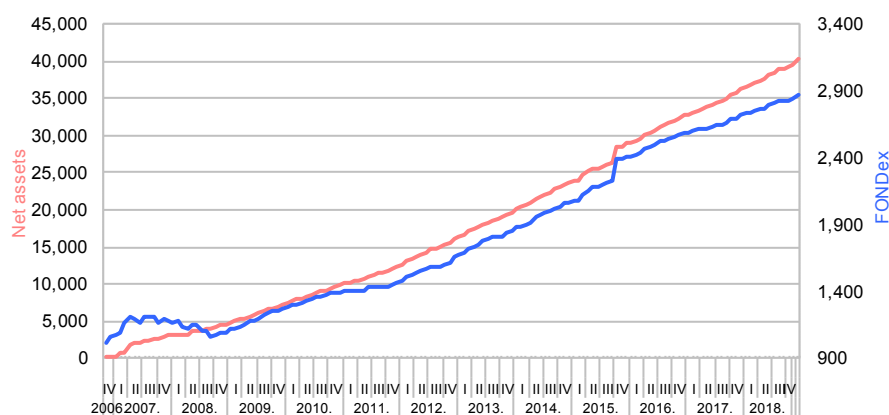
The key policy rate equalled 3% at end-December 2018. The level of interest rates earned by funds on dinar assets in custody accounts mirrored movements in the key policy rate.

In Q4 2018, the dinar appreciated vis-à-vis the euro, edging up by around 0.2% relative to end-Q3. In the same period, the dinar lost around 1.7% against the US dollar.

Price growth rates came at 0.3%, -0.3% and 0.1% in October, November and December, respectively. Consumer prices gained 2% in December 2018 year-on-year.¹⁰

¹⁰ Source: Statistical Office of the Republic of Serbia.

Movements in net assets, FONDex and key indicators since the start of VPF operation
(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 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 2018 amounted to RSD 18.4 mn and the level of the fee in the same period was 1.94% 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.

At end-Q4 2018, the total value of management fees equalled RSD 123.8 mn, which is around 87% of the total fees charged. Their amount is constantly growing, as a result of the rise in the net value of VPF assets and, consequently, an ever-larger base against which management fees are charged.

Over the past year, the management fee equalled RSD 474 mn, while profit of RSD 2 bn was earned in the same period.

Fees charged by management companies

(in RSD mn)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
												Q1	Q2	Q3	Q4
Contribution fee	42.9	56.9	54.9	59.4	57.9	60.1	58.7	55.4	53.0	56.8	61.0	15.6	16.0	16.2	18.4
Management fee	33.8	73.5	117.3	170.7	220.0	284.1	357.8	432.8	514.9	614.4	678.7	112.6	116.5	121.2	123.8

Source: National Bank of Serbia.

6 Trading in securities

VPF trading volumes equalled RSD 3.2 bn in Q4 2018.

The average share of VPFs in BSE trading was 8.3% at the end of the quarter.

VPF securities trading

(in RSD bn)

	2010	2011	2012	2013	2014	2015	2016	2017	2018			
									Q1	Q2	Q3	Q4
Securities trading	14.9	19.3	13.2	12.9	21.2	14.5	11.5	24.2	7.1	4.2	1.5	3.2
Purchases	8.1	10.6	7.1	9.0	12.1	7.9	6.4	14.7	3.9	2.6	1.0	1.9
Belgrade Stock Exchange	1.3	0.7	0.3	0.4	0.5	0.9	1.1	3.7	0.4	1.2	0.2	1.0
Unregulated market	0.3	1.3	0.1	0.7	0.9	1.8	1.1	5.8	0.6	1.1	0.5	0.9
Auctions of government securities	6.5	8.6	6.7	7.9	10.7	5.2	4.2	5.1	2.8	0.2	0.3	0.0
Sales	0.8	3.8	4.2	2.0	5.4	3.6	3.0	7.4	2.8	1.3	0.4	1.0
Belgrade Stock Exchange	0.6	0.4	0.3	0.6	0.3	0.5	1.9	2.7	2.3	0.0	0.4	0.5
Unregulated market	0.2	3.4	3.9	1.4	5.0	3.2	1.1	4.7	0.5	1.3	0.0	0.5
Maturity	6.1	4.9	2.0	2.0	3.7	2.9	2.1	2.2	0.4	0.4	0.2	0.3
Purchase to sale and maturity ratio	12	12	1.1	2.3	13	12	7.5	15	12	16	18	14
Share in total BSE trading (in%)	8.0%	3.8%	2.6%	3.4%	4.1%	6.1%	6.7%	33.0%	13%	8.1%	5.4%	8.3%

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.

At end-Q4 2018, stock exchange fees, charged against VPF assets, accounted for a bigger portion of transaction costs than Central Securities Depository fees, whereas brokerage fees made up the bulk of costs paid by management companies from their assets relative to custody bank fees.

Amount of transaction costs

(in RSD mn)

	2008	###	2010	2011	2012	2013	2014	2015	2016	2017	2018.0			
											Q1	Q2	Q3	Q4
Total	5.3	7.4	9.5	7.0	4.7	6.0	6.2	5.6	7.3	10.5	2.2	1.2	1.2	3.6
Brokerage fees	2.2	3.8	4.5	2.9	2.0	2.5	2.0	1.3	2.3	4.4	0.7	0.1	0.3	2.0
Custody bank fees	1.5	2.0	2.4	2.2	1.5	1.9	2.0	2.0	2.0	1.9	0.6	0.3	0.3	0.6
Stock exchange fees	0.8	0.4	1.1	0.8	0.3	0.6	0.6	0.8	1.0	1.8	0.4	0.1	0.2	0.7
Central Securities Depository fees	0.6	1.2	1.5	1.1	0.9	0.9	1.6	1.6	2.0	1.8	0.5	0.5	0.3	0.3
Other fees	0.2	-	-	-	-	0.1	0.0	-	0.0	0.6	0.1	0.2	0.1	0.2

Source: National Bank of Serbia.

8 Number and structure of VPF users

At end-Q4 2018, 192,295 users¹¹ were in the accumulation phase.¹² Total membership contracts¹³ in VPFs stood at 261,726.

VPF users accounted for 9%¹⁴ of the total number of employees.

Number of contracts and users

(in thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
											Q1	Q2	Q3	Q4
No of contracts	201.6	215.7	220.4	234.4	240.4	244.5	252.1	258.1	250.5	253.9	255.1	255.9	257.5	261.7
No of users	156.0	165.2	166.8	174.9	179.8	183.5	188.0	190.5	183.6	185.4	186.8	187.3	188.8	192.3
Percentage of active users (in %)	41.6%	36.0%	43.9%	35.1%	30.5%	30.3%	31.3%	25.3%	28.5%	33.6%	32.7%	32.4%	31.0%	33.4%

Source: National Bank of Serbia.

Structure of users by payment dynamics

(in units and %)

	Period	No of users	Share (%)
Users making contributions	1 month	64,133	33%
	3 months	70,582	37%
	6 months	73,290	38%
	12 months	77,870	41%
	From the start of membership (1)	170,392	89%
No holdings (2)		21,903	11%
Total (1+2)		192,295	

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 235.8 thousand and is constantly rising.

At end-Q4 2018, the number of users who are members of two or more VPFs was 40,956 or 21% of the total number of users.

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

¹² The 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 there is a significant number of users with more than one membership contract in one or several VPFs.

¹³ The number of membership contracts is the sum total of individual membership contracts and the number of members of all pension schemes.

¹⁴ The source for the number of employees: National Bank of Serbia.

Average accumulated funds at end-period

(in RSD thousand)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018.0			
											Q1	Q2	Q3	Q4
-	34.6	52.2	70.5	84.5	105.3	127.3	148.3	179.4	200.6	219.3	223.5	228.7	233.2	235.8

Source: National Bank of Serbia.

In terms of gender composition and the respective amounts of funds, Q4 2018 saw no significant changes relative to prior periods. Men remained dominant, accounting for around 58% of all users.

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

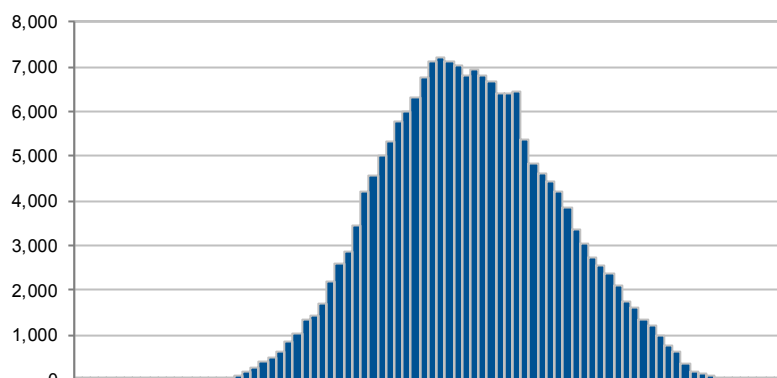
No of funds	No of users
1	15,1339
2	33,377
3	7,380
4	177
5	17
6	3
7	2
Total	192,295

Source: National Bank of Serbia.

Number of users by membership contract
(in units)

No of contracts	No of users
1	138,552
2	41,889
3	8,962
4	2,218
5	473
6	152
7	37
8	8
9	2
10	2
Total	192,295

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	162	396	8,353	41,986	68,793	49,971	22,089
Amount of funds (mln)	5	10	382	6,541	17,279	12,403	3,278
Average holdings	30,864	24,924	45,706	155,781	251,168	248,196	148,419

Source: National Bank of Serbia.

At end-Q4 2018, the average age of VPF users was around 46 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 28% of the total.

9 Contributions, withdrawals and transfers

Of total contributions in Q4 2018, individual payments accounted for 34%, employer contributions for 30% and pension schemes for 36%. Total contributions to VPFs have recorded an increase for the past four years.

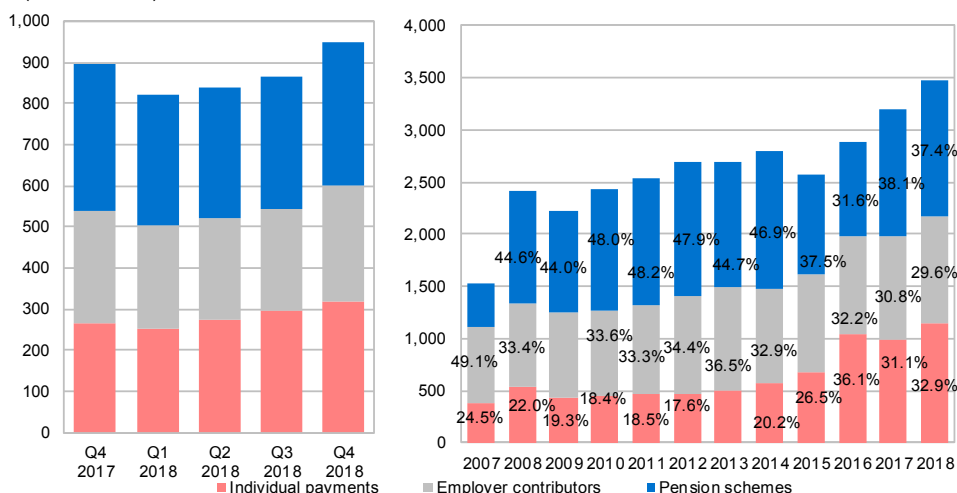
Total net contributions came at RSD 928.3 mn in Q4 2018.

Total contributions
(in RSD bn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018			
											Q1	Q2	Q3	Q4
1.50	2.25	2.22	2.43	2.53	2.70	2.70	2.80	2.58	2.89	3.19	0.82	0.84	0.86	0.93

Source: National Bank of Serbia.

Volume and structure of total contributions
(in RSD mn, %)



Source: National Bank of Serbia.

Though the Law allows for individual contributions, most contributions are made through employers who, in this way, display a high level of responsibility towards their staff. Ample potential for further growth in the membership base are companies with high staffing levels. This way, employees and employers can save up since contributions from employer’s funds up to RSD 5,757¹⁵ per employee per month are exempt from the household income tax and

¹⁵ Under Government decree, this amount is adjusted for previous-year inflation once a year.

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 not long-standing fund members, their accumulated sum is relatively small, and this kind of withdrawals is expected, even though it contradicts the nature of VPFs which assumes the use of accumulated funds over a longer period. The next period is likely to see an increase in scheduled and other types of withdrawals, with lengthening of the accumulation periods and increase in the accumulated sums.

Total withdrawals

(in RSD mn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018.			
											Q1	Q2	Q3	Q4
141.4	384.6	448.5	458.1	517.6	751.7	945.2	1213.4	1226.2	1195.6	1342.4	330.0	391.5	329.5	361.0

Source: National Bank of Serbia.

Withdrawals rise from year to year, as 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 Q4 2018, total withdrawals amounted to RSD 361 mn.

Transfers represent 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 Q4 2018, the transfers came at RSD 59.4 mn.

Total inter-fund transfers

(in RSD mn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018.			
											Q1	Q2	Q3	Q4
19.5	235.1	141.5	216.1	165.9	72.3	137.2	126.3	219.7	267.5	263.0	49.1	100.1	211	59.4

Source: National Bank of Serbia.