



NATIONAL BANK OF SERBIA

INSURANCE SUPERVISION DEPARTMENT  
PENSION FUNDS SUPERVISION DIVISION

# **VOLUNTARY PENSION FUNDS IN SERBIA**

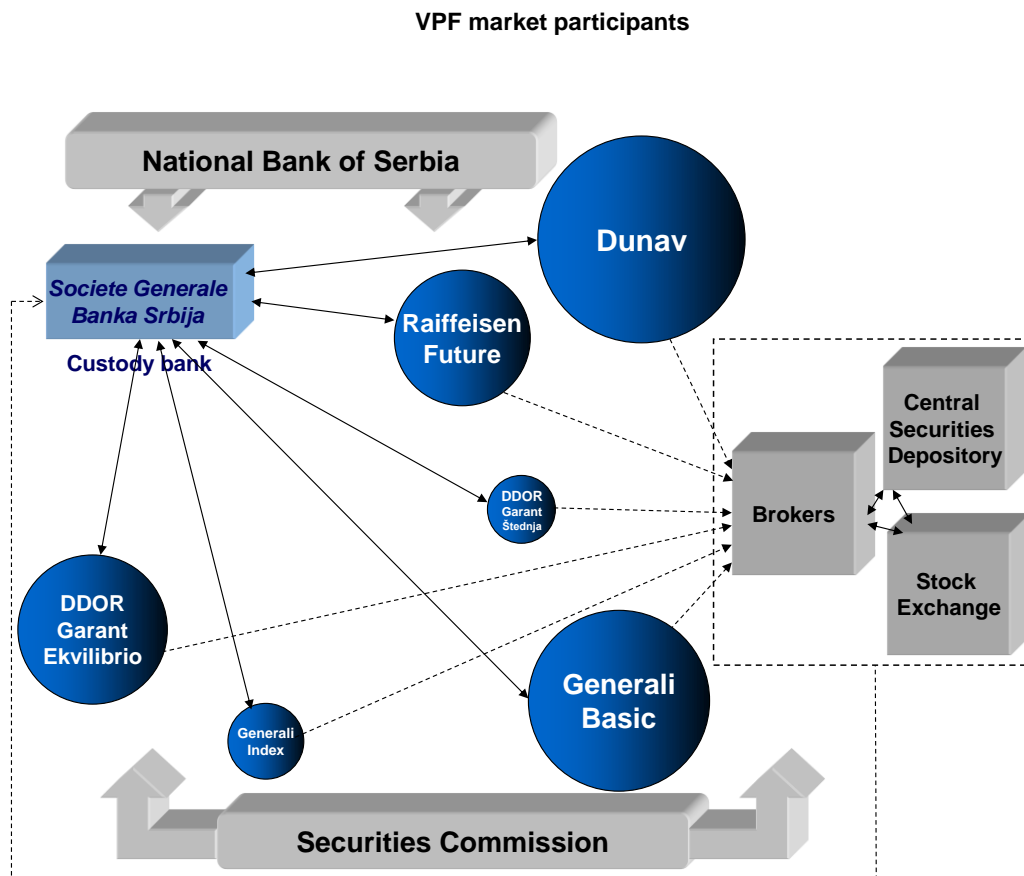
**Fourth Quarter Report 2017**

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## 1. VPF market participants

At end-Q4 2017 the market of voluntary pension funds (VPFs) included four companies managing seven VPFs, one custody bank and five agent banks<sup>1</sup>.



At end-Q4 2017, a total of 125 persons were employed in VPF management companies, by three more than in the previous quarter.

The NBS licenses for dissemination of information about VPF operation, based on completed professional examination and the fulfilment of other requirements. By end-Q4 2017 the NBS issued 733 licenses to sales agents.

Management companies and intermediary banks engage sales agents. At end-Q4 2017, 92 sales agents were engaged by management companies and 434 by intermediary banks.

<sup>1</sup> Raiffeisen banka 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

At end-Q4 2017, net assets of VPFs came to RSD 36.2 bn, up by 3.6%. The changes in the value of net assets reflect changes in net contributions<sup>2</sup>, withdrawals of funds and investment returns. In Q4 2017, total contributions amounted to RSD 895.56 mn, withdrawals to RSD 303.84 mn, and investment returns to RSD 693.33 mn.

*At end-Q4 2017 net assets came to RSD 36.2 bn.*

### End-of-period net assets of the VPF sector

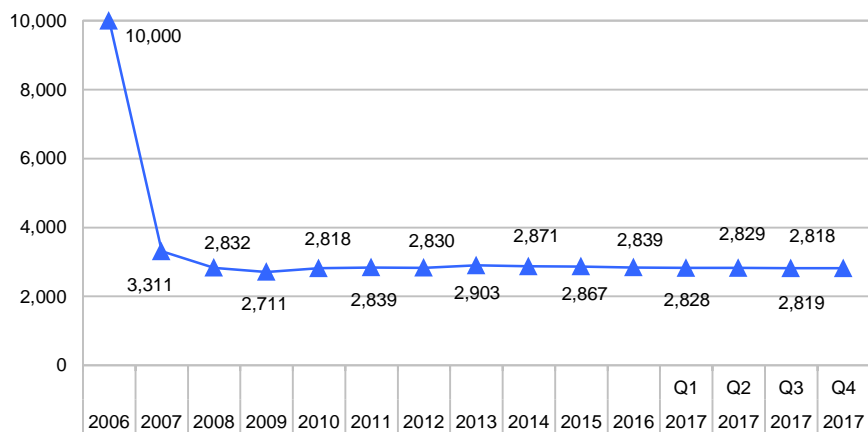
(in RSD bn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
3.1	4.6	7.2	9.9	12.5	16.1	19.7	23.6	28.9	32.8	33.4	34.1	34.9	36.2

Source: National Bank of Serbia.

### End-of-period sector concentration

(Herfindahl–Hirschman Index)



Source: National Bank of Serbia.

Measured by the Herfindahl Hirschman index (HHI), market concentration in the sector<sup>3</sup> at end-Q4 2017, amounted to 2,818 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

<sup>2</sup> Net contributions are total contributions minus the front-load fee.

<sup>3</sup> In terms of the share in total net assets.

funds were classified as “large” and two as “medium”. Together, they made up 96% of the market, with the largest fund accounting for around 41%.

#### 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			
											Q1	Q2	Q3	Q4
Large (20 and above)	3	2	2	3	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
Small (0 - 4.99)	4	6	5	4	5	5	2	2	3	3	3	3	3	3

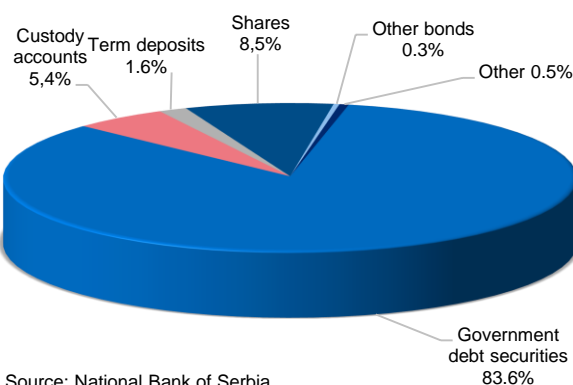
Source: National Bank of Serbia.

### 3. Structure of VPF assets

At end-Q4 2017, the structure of investment of VPF assets remained broadly unchanged. Government bonds accounted for the major part of VPF assets – 83.6%. Balances in custody accounts and bank time deposits made up 7%, shares 8.5%, 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%.

*Most assets were invested in government debt instruments – 83.6%.*

Structure of VPF assets

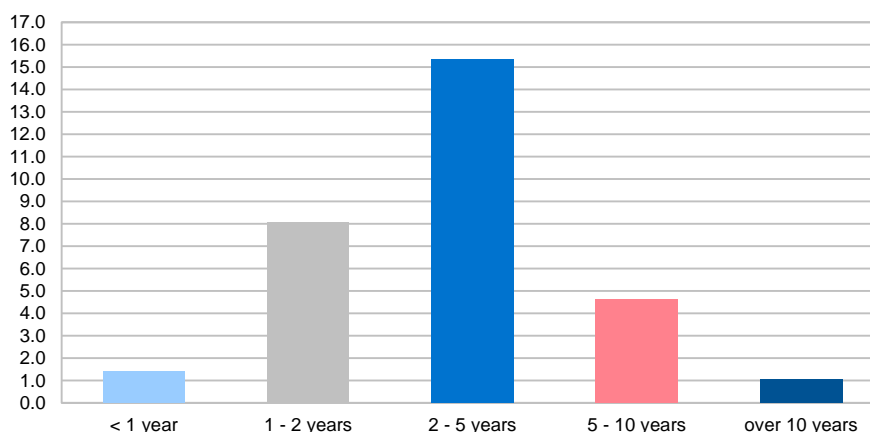


Source: National Bank of Serbia.

At end-Q4 2017, 4.6% of government debt instruments were with maturity of up to one year, 26.1% between one and two years, 50.5% between two and five years, 15.2% between five and ten years, and 3.5% over ten years.

The average maturity of assets<sup>4</sup> invested in government debt securities was 3.4 years.

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



Source: National Bank of Serbia.

At end-Q4 2017, 86.4% of total assets were in dinars and 13.7% of total assets were in a foreign currency (EUR and USD).

#### 4. Return on investment

At end-Q4 2017, the FONDex<sup>5</sup> reached 2,713.39<sup>6</sup>. The growth of the FONDex, as the weighted average return of all funds, came at 2.0%, in Q4 2017 or 4.7% for the past year. Since the start of VPF operation<sup>7</sup> the return of the FONDex has equalled 9.4%.

Given the structure of VPF investment, the return is influenced by: the change in the yield curve on government debt instruments<sup>8</sup>, 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 US dollar.

The volume of issues in the primary market of government debt instruments (T-bills and treasury bonds) dropped as compared to Q3 2017.

<sup>4</sup> The maturity of instruments weighted by their share in total investment in government debt instruments.

<sup>5</sup> FONDex is an index that represents movements of the investment units value of all VPFs in the market.

<sup>6</sup> On 15 November 2006, when the first VPF became active, the starting value of FONDex equalled 1,000.

<sup>7</sup> Annual rate

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

The total market value of issues of long-term government instruments dinar-denominated in Q4 2017 was RSD 47.5 bn. The following securities were issued: two-year securities (RSD 11.5 bn) at the rate of 4.1%, three-year (RSD 15.2 bn) at the rate of 4.3% and seven-year (RSD 20.8 bn) at the rate of 5%.

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

Maturity	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
3m	-	-	-	-	-
6m	-	0.8	-	-	-
12m	7.5	1.7	-	-	-
18m	-	-	-	-	-
24m	-	24.5	23.1	-	11.5
36m	38.3	-	37.4	33.6	15.2
60m	-	-	-	-	-
84m	23.9	-	-	-	20.8
120m	-	0.8	-	-	-
Total	69.7	27.1	60.5	33.6	47.5

Source: Ministry of Finance.

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

Maturity	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
3m	-	-	-	-	-
6m	-	2.6%	-	-	-
12m	3.5%	3.5%	-	-	-
18m	-	-	-	-	-
24m	-	4.7%	4.7%	-	4.1%
36m	4.7%	-	5.0%	4.8%	4.3%
60m	-	-	-	-	-
84m	5.6%	-	-	-	5.0%
120m	-	4.0%	-	-	-

Source: Ministry of Finance.

Q4 2017 saw the issue of euro-denominated government debt instruments worth EUR 174.1 mn: one-year (EUR 49.8 mn) at the rate of 0.5%, three-year (EUR 74.7 mn) at the rate of 1.5% and five-year (EUR 49.7 mn) at the rate of 2.4%.

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

(in EUR mn)

Maturity	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
12m	49.6	49.6	52.7	59.7	24.9	49.8
24m	23.0	74.0	71.4	49.6	35.2	-
36m	-	44.2	92.8	90.0	49.5	74.7
60m	98.2	-	97.6	99.1	73.8	49.7
84m	-	-	-	-	-	-
120m	-	-	-	-	17.9	-
180m	-	71.3	-	-	50.0	-
Total	170.7	239.1	314.6	298.4	251.3	174.1

Source: Ministry of Finance.

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

Maturity	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
12m	0.8%	0.8%	0.7%	0.6%	0.6%	0.5%
24m	1%	1%	1%	10%	10%	-
36m	-	17%	19%	19%	19%	15%
60m	2.9%	-	2.7%	2.7%	2.6%	2.4%
84m	-	-	-	-	-	-
120m	-	-	-	-	4.0%	-
180m	-	4.2%	-	-	4.2%	-

Source: Ministry of Finance.

Prices of Belgrade Stock Exchange (BSE) shares, measured by *BELEX15*<sup>9</sup> rose by 5.4% in Q4 2017 (index value was 759.80 at end-December). The index rose by 5.9% over the past year.

The key policy rate equalled 3.5% at end-December 2017. The level of interest rates earned by funds on dinar balances in custody accounts mirrored movements in the key policy rate.

In Q4 2017, the dinar appreciated vis-à-vis the euro, rising by around 0.75% relative to end-Q3 2017. In the same period, the dinar edged up 2.2% against the US dollar.

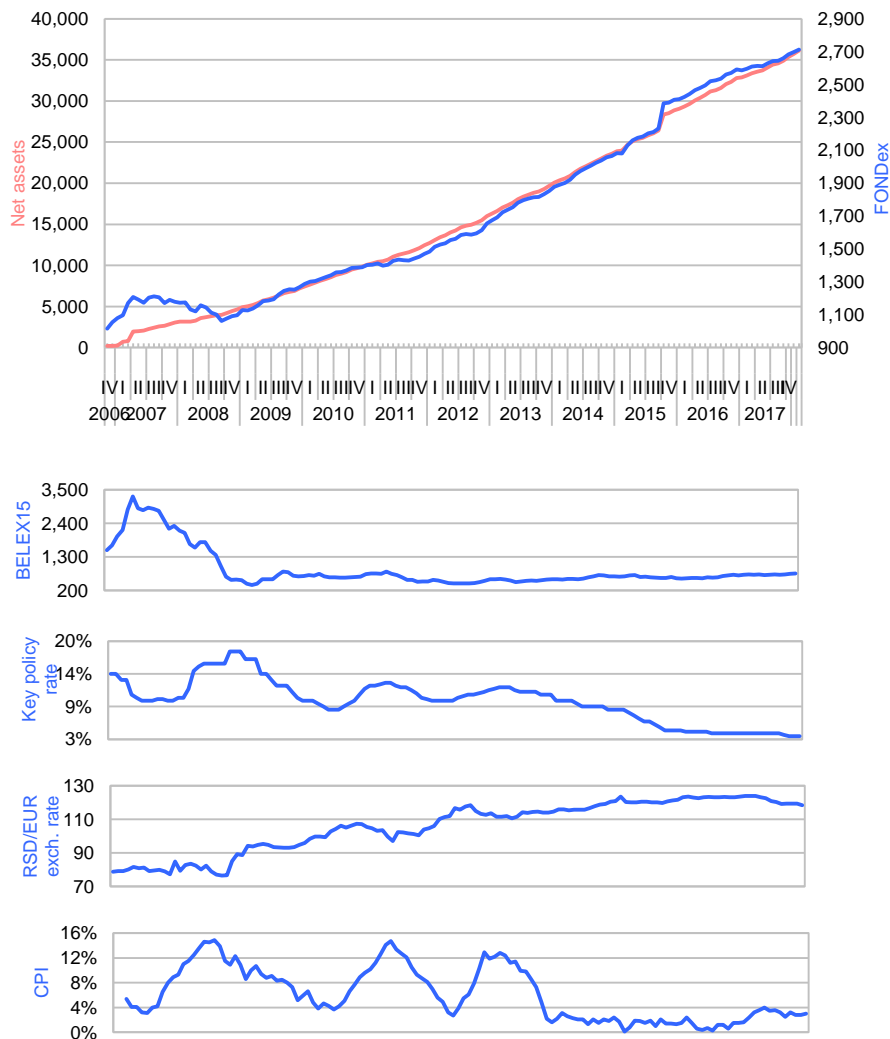
Price growth rates came at 0.2%, 0% and 0% in October, November and December, respectively. Consumer prices gained 3%<sup>10</sup> in December 2017, as compared to the same month last year.

<sup>9</sup> Of the total investment in shares, the bulk pertained to shares covered by BELEX15, which means that BELEX15 is a relevant benchmark for shares in the fund's portfolio.

<sup>10</sup> 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 of fund members. Company fees entail contribution and management fees. Account transfer fee may be charged only in the amount of 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, funds actively

investing in more complex instruments are intended for younger persons who pay contributions over a longer horizon. Such funds charge higher fees, but assume a higher degree of risk and are expected to post higher returns. 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 fund members' assets, the expected return, the level of risk assumed by a fund (and a member), 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. Although visible in the first instance, when making deposit into the fund, it is not the largest cost incurred by a member.

The contribution fee equalled RSD 61.04 mn in 2017, whereas at end-Q4 2017, it equalled 1.97% approximately.

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 Q4 2017, the management fee equalled RSD 177.29 mn, amounting to 91% of total fees charged. The total amount of management fee is constantly rising, due to the rise in fund's net value and higher basis of this fee.

Over the past year, the management fee equalled RSD 678.65 mn and profit reached RSD 1.6 bn.

#### **Fees charged by management companies**

(in RSD mn)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
											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	14.5	14.7	14.7	17.1
Management fee	37.8	73.5	117	171	220	284	358	432.8	514.9	614	162.4	166.6	172.3	177.3

Source: National Bank of Serbia.

## **6. Trading in securities**

VPF trading volumes equalled RSD 8.8 bn in Q4 2017.

The average share of VPFs in BSE trading was around 10.7% during Q4 2017.

**VPF securities trading**

(in RSD bn)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
Securities trading	17	13.1	14.9	19.3	13.2	12.9	21.2	14.5	11.5	3.7	6.0	5.7	8.8
Purchases	18	8.1	8.1	10.6	7.1	9.0	12.1	7.9	6.4	2.3	3.1	3.9	5.4
Belgrade Stock Exchange	0.8	0.4	1.3	0.7	0.3	0.4	0.5	0.9	1.1	0.8	0.3	1.2	1.5
Unregulated market	0.3	0.4	0.3	1.3	0.1	0.7	0.9	1.8	1.1	0.9	0.4	2.0	2.6
Auctions of government se	0.0	7.3	6.5	8.6	6.7	7.9	10.7	5.2	4.2	0.7	2.4	0.7	1.3
Sales	0.4	0.4	0.8	3.8	4.2	2.0	5.4	3.6	3.0	1.0	2.2	1.2	3.1
Belgrade Stock Exchange	0.1	0.1	0.6	0.4	0.3	0.6	0.3	0.5	1.9	0.9	0.3	0.0	1.4
Unregulated market	0.3	0.3	0.2	3.4	3.9	1.4	5.0	3.2	1.1	0.0	1.9	1.1	1.7
Maturity	0.2	4.6	6.1	4.9	2.0	2.0	3.7	2.9	2.1	0.4	0.7	0.7	0.4
Purchase to sale and maturity ratio	2.4	16	12	12	11	2.3	13	12	7.5	17	11	2.1	16
Share in total BSE trading (in%)	12%	1%	8.0%	3.8%	2.6%	3.4%	4.1%	6.1%	6.7%	13.3%	4.2%	7.1%	10.7%

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 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 2017, stock exchange fees, charged against VPF assets, accounted for 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.

**Amount of transaction costs**

(in RSD mn)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
											Q1	Q2	Q3	Q4
Total	10.0	5.3	7.4	9.5	7.0	4.7	6.0	6.2	5.6	7.3	3.6	2.4	2.1	2.5
Brokerage fees	4.5	2.2	3.8	4.5	2.9	2.0	2.5	2.0	1.3	2.3	2.0	0.9	0.8	0.9
Custody bank fees	1.8	1.5	2.0	2.4	2.2	1.5	1.9	2.0	2.0	2.0	0.4	0.5	0.5	0.6
Stock exchange fees	1.6	0.8	0.4	1.1	0.8	0.3	0.6	0.6	0.8	1.0	0.7	0.3	0.3	0.5
Central Securities Depository fees	1.0	0.6	1.2	1.5	1.1	0.9	0.9	1.6	1.6	2.0	0.4	0.6	0.5	0.4
Other fees	1.1	0.2	-	-	-	-	0.1	0.0	-	0.0	0.1	0.2	0.1	0.1

Source: National Bank of Serbia.

## 8. Number and structure of VPF users

At end-Q4 2017, 185,445 VPF users<sup>11</sup> were in the accumulation phase.<sup>12</sup> Total membership contracts stood at 253,900.<sup>13</sup>

VPF users accounted for 9.3%<sup>14</sup> of total employees.

### Number of contracts and users

(in thousands)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
											Q1	Q2	Q3	Q4
No of contracts	159	202	216	220	234.4	240.4	244.5	252.1	258.1	250.5	252.5	254.2	251.5	253.9
No of users	-	156.0	165	167	174.9	179.8	183.5	188.0	190.5	183.6	185.2	186.7	184	185
Percentage of active users (in %)	-	41.6%	36.0%	43.9%	35.1%	30.5%	30.3%	31.3%	25.3%	28.5%	28.8%	31.7%	28.9%	33.6%

Source: National Bank of Serbia.

### Structure of users by payment dynamics

(in units and %)

	Period	No of users	Share (%)
	Users making contributions	1 month	62,259
3 months		67,009	36%
6 months		68,954	37%
12 months		71,987	39%
From the start of membership (1)		164,822	89%
No holdings (2)		20,623	11%
<b>Total (1+2)</b>		<b>185,445</b>	

Source: National Bank of Serbia.

The amount of accumulated funds depends on the amount of contributions, returns earned by the fund, 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 around RSD 219,000 and is constantly rising.

<sup>11</sup> The number of users is the number of members of one or more VPFs. This number is smaller than the number of membership contracts as a significant number of users have more than one membership contract in one or several funds.

<sup>12</sup> VPF membership has two phases – the accumulation phase (when contributions are made) and the withdrawal phase (when the accumulated funds are withdrawn).

<sup>13</sup> The number of membership contracts is a sum of the number of individual membership contracts and the number of all pension plans.

<sup>14</sup> The source for the number of employees: National Bank of Serbia.

At end-Q4 2017, the number of users who are members of two or more VPFs was 39,803 or 21% of the total number of users.

#### Average accumulated funds at end-period

(in RSD thousand)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
-	34.6	52.2	70.5	84.5	105.3	127.3	148.3	179.4	200.6	202.5	204.9	213.3	219.3

Source: National Bank of Serbia.

In terms of gender composition and the respective amounts of funds, Q4 2017 saw no significant changes relative to prior periods. Men remained dominant, accounting for 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	145,642
2	31,933
3	7,686
4	164
5	15
6	3
7	2
Total	185,445

Source: National Bank of Serbia.

#### Number of users by membership contract

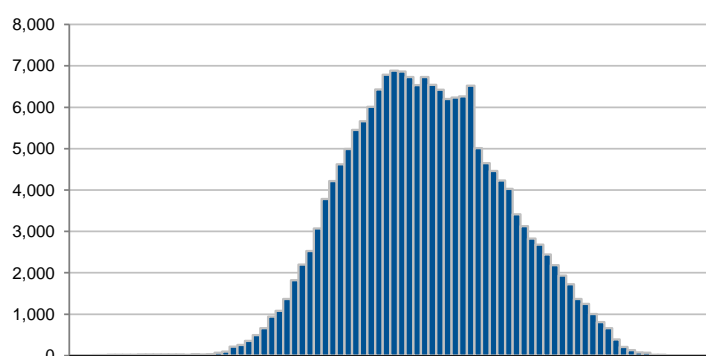
(in units)

No of contracts	No of users
1	133,171
2	40,175
3	9,052
4	2,341
5	478
6	167
7	38
8	9
9	11
10	3
Total	185,445

Source: National Bank of Serbia.

#### Distribution of users and accumulated funds by age

(in units, RSD)



Source: National Bank of Serbia.

At end-Q4 2017, the average age of VPF users was around 46 years, with users aged 40–60 making up the dominant share of around 61%. Further, the percentage of users above the age of 53 was similar as in prior years, accounting for 26% of the total.

## 9. Contributions, withdrawals and transfers

In Q4 2017, of total contributions, individual payments accounted for 29.69%, employer contributions for 30.34% and pension schemes for 39.97%. Since the beginning, total payments in the VPF are constantly rising.

*Net contribution payments came at RSD 3.13 bn in 2017.*

### Total contributions

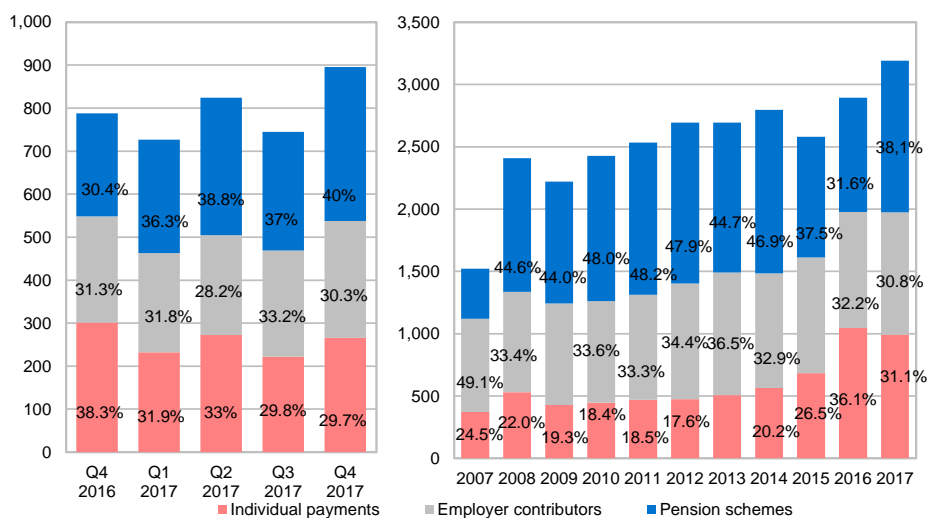
(in RSD bn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
150	2.25	2.22	2.43	2.53	2.70	2.70	2.80	2.58	2.89	0.73	0.82	0.75	0.90

Source: National Bank of Serbia.

### Volume and structure of total contributions

(in RSD mn, %)



Source: National Bank of Serbia.

Though there is a possibility for individual contributions, most contributions are made through employers who, in this way, display a high level of responsibility towards their staff. Great potential for further growth in the membership base are

companies with high staffing levels. That way, employees, or employers, can save up since contribution from employers' funds up to RSD 5,589<sup>15</sup> per employee per month is exempt from the household income tax and contributions for mandatory social insurance. Payments in the same amount made by the employer through administrative ban, income retention and withholding from salary are also tax-exempt. This represents an additional incentive to employees and employers to direct a part of contributions to saving in VPFs.

Withdrawals are generally lump-sum. Though this contradicts the nature of VPFs which assumes the use of accumulated funds over a longer period, such practice of withdrawal is expected as members entitled to withdrawal are not long-standing fund members and their accumulated sum is therefore relatively small. The next period is likely to see an increase in scheduled and other types of withdrawals, as the accumulation phase lengthens and the accumulated sum goes up.

#### Total withdrawals

(in RSD mn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
1414	384.6	448.5	458.1	517.6	751.7	945.2	1213.4	1226.2	1195.6	330.4	356.2	351.9	303.8

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 longer the VPF system operates, the amount of withdrawals will also rise in absolute terms.

*In 2017, total withdrawals amounted to RSD 1.34 bn.*

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 2017 transfers came at RSD 263 mn.*

#### Total inter-fund transfers

(in RSD mn)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
										Q1	Q2	Q3	Q4
19.5	235.1	141.5	216.1	165.9	72.3	137.17	126.3	219.7	267.5	48.8	104.8	27.8	81.7

Source: National Bank of Serbia.

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