Update on fees and charges

This version:

- Incorporates comments received during and after the Technical Committee meeting held in Dublin, 22-23 February 2018
- Has most of the data in sections 1. and 2. verified [Brazil, Chile, Croatia, Hungary and Iceland pending confirmation]
- Includes a new section (2.3.) on charge ratios (values, historical comparison, and sensitivity analysis)
- Provides tentative conclusions.

4-5 June 2018 Paris, France



Update on fees and charges

Project Background

1. At the IOPS Annual General Meeting in Hong Kong, China, held on 9 November 2016, the IOPS Members decided to follow up on the IOPS research into fees and charges as part of the IOPS Programme of Work (POW) for 2017-2018. Bearing in mind the on-going work of the OECD, Delegates agreed to develop a joint project with the OECD Working Party on Private Pensions aimed at analysing good practices and effects of policy interventions to lower costs of funded pensions.

2. The project will be accomplished through two papers. This paper provides an update of the IOPS work in the area of costs and fees. The second paper¹, developed by WPPP with close collaboration of IOPS, discusses current challenges with regard to the costs of private pension provision, past and recent policy interventions aimed at lowering fee levels, evaluates these interventions and provides policy recommendations.

3. This document provides analysis of data on fees and charges that were collected from the IOPS members at the 2017 OECD Global Pension Statistics exercise. Section 1 presents fees charged in the surveyed IOPS jurisdictions and identifies changes that took place since publication of the last paper in 2014. Section 2 focuses on the impact cost and expenditures have on members' pension savings. It reviews to what degree various cost items are covered by fees charged to pension scheme members and calculates charge ratios as a measure for the impact of costs on the final level of pension savings. Section 3 concludes.

Project team: The OECD, Iceland, Italy, India, Mexico, the Slovak Republic, South Africa, Turkey, Uganda, the World Bank.

Introduction

4. Costs and fees related to the process of saving for retirement are one of the most important factors affecting the final value of retirement income. Proper information about level and structure of costs and fees is crucial for effective governance of pension plans. Such information also has a great value to the members of pension schemes, particularly the DC and hybrid ones where members face investment risks and need to take various decisions related to their retirement saving process.

5. The goal of this paper is twofold. First, it provides an update of the current situation with regard to the structure, level and types of fees and charges present in the surveyed IOPS jurisdictions. Therefore, it is a follow-up of the IOPS Working Papers No. 20 (April 2014) and No. 6 (June 2008). Such updated information can be of use for various stakeholders. However, as it has been already stated in the previous edition, a direct comparison of fees and charges across jurisdictions is a difficult task for a number of reasons such as for example system design, charging methods, size and maturity of systems.(also see IOPS, 2014: 5).

¹ Pension costs in the accumulation phase: policy options to improve outcomes in occupational schemes (2018), OECD Working Party on Private Pensions, [DAF/AS/PEN/WD(2018)3]

6. Consequently, the second goal of the paper was to gain some more understanding of the nature of costs incurred in IOPS jurisdictions. In particular, in line with the joint work developed by the Working Party on Private Pensions (WPPP, 2017)² and IOPS, we made an attempt to learn more about *the total member reductions*³ of their pension savings, i.e. the types of costs/expenditures that are covered by the existing fees charged directly to the members and the other costs that are charged indirectly.

7. It must be emphasized that owing to differences in the design of pension systems, it is difficult to compare fees and charges across various jurisdictions. Although the paper presents some "clusters" of jurisdictions that share similar fee characteristics, we need to recall the caveat that making conclusions on the basis of international comparisons can be misleading.

Scope and coverage

8. The project covers all private pension funds including occupational and personal, and mandatory and voluntary. Focus is naturally given to DC and hybrid plans.

1. Fees charged in the surveyed IOPS jurisdictions

9. This section presents an overview of fees currently charged in selected IOPS jurisdictions as well as a summary of changes since the last IOPS paper on this subject was published.

1.1. Current market average fees and maximum legally allowed fees

10. Table 1 summarises (asset-weighted) market averages and maximum legally allowed fees charged in selected jurisdictions. The information is based on 2017 OECD Global Pension Statistics exercise, where more granular data were collected to understand better the fees charged in different type of pension schemes. Schemes in each jurisdiction were classified into three different categories: 1) Occupational plans⁴, 2) Personal plans⁵ to which access can be linked to employment or professional activity⁶, and 3) Personal plans to which access is not linked to employment or professional activity⁷.

² Analysis of policy measures to contain costs of running funded private pension plans (<u>DAF/AS/PEN/WD(2017)5</u>), a draft report presented at the joint WPPP/IOPS meetings in Paris, June 2017 and Cost of running private pensions: focus on "Value for Money" (<u>DAF/AS/PEN/WD(2017)13</u>), a draft report presented at the WPPP meeting in Paris, December 2017.

³ *Total member reductions* – "any reduction in the build-up of the plan participant's pension portfolio that is the result of a payment to either the pension provider or a third party. This includes deductions that are made before contributions are invested, such as a fee on contributions, deductions that are made from the assets in the portfolio, such as annual management charges or performance fees, and deductions that are made for specific transactions, such as switching fees" (WPPP, 2017: 4)

⁴ Occupational pension plans: "Access to such plans is linked to an employment or professional relationship between the plan members and the entity that establishes the plan (the plan sponsor). Occupational plans may be established by employers or groups thereof (e.g. industry associations) and labour or professional associations, jointly or separately. The plan may be administered directly by the plan sponsor or by an independent entity (a pension fund or a financial institution acting as pension provider). In the latter case, the plan sponsor may still have oversight responsibilities over the operation of the plan." (OECD definition)

⁵ Personal pension plans: "Access to these plans does not have to be linked to an employment relationship. The plans are established and administered directly by pension fund or a financial institution acting as pension provider without any intervention of employers. Individuals independently purchase and select material aspects of the arrangements. The employer may nonetheless make contributions to personal pension plans. Some personal plans may have restricted membership." (OECD definition)

⁶ Personal pension plans, to which access can be linked to employment or professional activity: "Access to these plans is linked to employment or professional activity or there is at least one option that allows accessing to

11. Similarly to the results presented in the previous IOPS Working Paper No. 20 (April 2014), the data reveal the variety of types and levels of fees in the analysed jurisdictions. However, most commonly, fees are charged on assets. Amongst 88 different pension schemes in 45 selected jurisdictions (40 belonging to IOPS⁸), majority, i.e. 79 schemes (90%) in 41 jurisdictions imposed fees on assets. Other types of fees included the ones charged on contributions (23 jurisdictions, 47% of analysed schemes), returns (performances fees) (10 jurisdictions, 23% schemes), and salaries (5 jurisdictions, 8% of schemes). Also some pension schemes imposed less common charges such as transfer fee, redemption fee, entry fee, switching fee, exit fee which are mostly expressed in fixed terms.

12. 40 pension schemes (i.e. 45% of the sample) charged fees on one component only; either on contributions, salaries, assets or returns⁹. On the other hand, 35 schemes (40%) applied fees charged on two different components, and 12 schemes (14%) had fees charged on three components. No pension scheme reported imposing fees on all four components (assets, contributions, returns, salaries). In one jurisdiction (Iceland) in case of occupational plans the number of fees can vary depending on the fund, which makes it hard to classify them to one of these groups. Of course, one needs to be careful when analysing these results because the number of components on which fees are charged does not directly speak about cost effectiveness of each pension schemes. Such effectiveness is rather related to different characteristics (like level of market competition, transparency, maturity of capital market, degree of regulation) and the nature and purposes of each pension scheme.

13. One can also observe that many (31) jurisdictions introduced legal caps on fees. In most cases, the average fees do not equal the legal cap, which can be explained as a positive effect of market competition. However, the difference between the cap and the actual level may be insignificant. To verify whether this might be the case for our data, we analysed a sub-sample where both the info on average fees and legal caps is available and comparable. We found out that the average fees were lower than the legal caps by at least 10% in 70%, (i.e. 26 out of 37) of schemes. This suggests that in one third of the cases, pension providers tended to cling to the legal maximum values stipulated by governments.

these plans through employment or professional activity. Such plans include mandatory individual account systems, plans for which the access can be provided by the employer without the employer establishing the plan, and plans established for the self-employed for instance." (OECD definition)

⁷ Personal pension plans, to which access is not linked to employment or professional activity: "Access to these plans is not and cannot be linked to employment or professional activity. Individuals independently enrol themselves to these plans with no involvement of their employers in this process." (OECD definition)

⁸ Croatia, Latvia, Slovenia, Sweden, Uruguay are five non-IOPS members included in this analysis.

⁹ For simplicity, we do not take here into consideration "others fees" when calculating these numbers.

		C	ontribu	tions		Salar	ies		Assets			Return	ıs		Others	S	
Jurisdiction	Type of funds	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Notes
Albania	Occupational DC plans							Y ¹⁾	3%	2.1%	Y ²⁾	15%	15%	Y ³⁾	0.5% / 2%-20%	0.5% / 2%-20%	Other: switching fee withdrawal fee
Aibailia	Personal plans L ¹¹							Y ¹⁾	3%	2.1%	Y ²⁾	15%	15%	Y ³⁾	0.5% / 2%-20%	0.5% / 2%-20%	
Armenia	Personal plans NL ¹²							Y	1.5%					Y	1%		Other: redemption fee
Australia	Occupational DC plans							Y		0.59%				Y		0.02%	Other: Represent fees paid by employer
	Personal plans NL							Y		1.31%				Y		0.01%	sponsor
	Occupational DC plans ^{4),5)}	Y	5%					Y			Y			Y			
	Personal plans L ^{5),6)}	Y						Y			Y			Y			
	Personal plans NL: Fonds d'épargne-pension Pensioenspaarfonds	Y						Y ⁷⁾			Y			Y			Others: exit fee, external audit fee, regulatory fee
Belgium	Personal plans NL: Branche 21 life insurance operated by an insurance company	Y						Y						Y			Others: exit costs
	Personal plans NL: Branche 23 life insurance operated by an insurance company	Y						Y			Y ⁸⁾			Y			Others: exit costs
Brazil	Occupational plans (DC, DB and hybrid)	Y	9%	7%				Y	1%	0.34%	Y ⁹⁾						
	Occupational DC plans	Y	7%	3.9%							Y	10%	10%	Y	Fixed		Other: entry fee, switching fee, and etc.
Dulasmia	UPF ¹⁰⁾	Y	4.5%					Y	0.9%	0.00/							
Bulgalla	Personal plans L PPF ¹⁰⁾	Y	4.5%	4.3%				Y	0.9%	0.0%							
	VPF ¹⁰⁾	Y	7%								Y	10%	8.9%	Y	Fixed		Other: entry fee, switching fee, and etc.
Chile ¹¹⁾	Personal plans L				Y		$1.27\%^{12}$							Y		1.41%	
Colombia	Occupational DC plans				Y	3% ¹³⁾								Y			Other: fees on changing manager, fees on passive members

Table 1. Fees charged by pension funds in selected jurisdictions (as of 2016 or 2017)¹⁰

¹⁰ Figures for jurisdictions marked in (*) relate to 2017, otherwise to 2016.
¹¹ Personal plans, to which access can be linked to employment or professional activity.

¹² Personal plans, to which access is not linked to employment or professional activity.

		C	ontribu	tions		Salar	ies		Assets			Return	ıs		Others		
Jurisdiction	Type of funds	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Notes
Costa Rica	ROP ¹⁴⁾							Y	0.5% (2020: 0.35%)	0.49%							
	Occupational DC plans							Y		3.7%				Y			
Croatia ¹⁵⁾	Personal plans L							Y	0.45%	96.53%				Y		0.8%	Other: entry fee, switching fee
	Personal plans NL							Y		21.67%				Y			
Crash Dopublic	Personal plans – Transformed funds ¹⁶⁾							Y	0.8%		Y	10%		Y			Other: fee for transfers, fee for one-off payment
Czech Republic	Personal plans – Participation funds ¹⁷⁾							Y	1 % / 0.4 %		Y	15 % / 10 %		Y			Other: fee for change in the savings strategy, fee for transfers, etc.
Estonia	2 nd pillar							Y ¹⁸⁾						Y			Other: redemption fee up to 0.1% of the net value of a unit (0.05% for conservative funds)
	3 rd pillar							Y						Y			Other: redemption fee and unit issue fee
FYR of	Mandatory pension funds	Y	3%	3.0%				Y	0.04% (monthly)	0.43%				Y	Fixed		Othern switching for
Macedonia	Voluntary pension funds	Y	7%	2.62%				Y	0.15% (monthly)	0.86%				Y	Fixed		Other: switching lee
Ghana	Occupational DC plans							Y	2.5% ¹⁹⁾	2.2%							Other: scheme audit fee
Ollalla	Personal plans L							Y	2.5% ¹⁹⁾	2.0%							Suier: selenie addit ree
Hong Kong*	Mandatory Provident Fund (MPF)							Y	Note ²⁰⁾	1.56% ²¹⁾							
Hungory	Occupational DC plans	Y						Y						Y			
Tungary	Personal plans NL	Y	6%	4.9%				Y	0.8%	0.5%				Y ²²⁾	Fixed		
Iceland	Occupational plans ²³⁾									≈0.2%							Average is approximately calculated based on assets (Fees may not be charged on
	Personal plans ²⁴⁾							Y ²⁵⁾		≈0.5% ²⁵⁾							assets)
India	Personal plans L							Y	0.0102% ²⁶⁾ /0.01% ²⁷⁾	0.0102% ²⁶⁾ / 0.01% ²⁷⁾							
India	Personal plans NL							Y	0.0102% ²⁶⁾ /0.01% ²⁷⁾	0.0102% ²⁶⁾ / 0.01% ²⁷⁾							
	Occupational plans	Y ²⁸⁾						Y ²⁹⁾						Y			
Ireland	Personal plans (Standard PRSA)	Y ²⁸⁾	5%					Y ²⁹⁾	1%					Y			Others: Exit penalties Fee or cost applied to
	Personal plans (Non-Standard PRSA)	Y ²⁸⁾						Y ²⁹⁾						Y			poncy holder for early exit from policy)
Israel	DC Plans	Y	6%	2.85%				Y	0.5%	0.27%							

			C	ontribu	tions		Salar	ies		Assets			Returi	ns		Others	5	
Jurisdiction	Type of	funds	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Notes
	Occupational p	olans ³⁰⁾																
Jamaica	Personal plans	L	Y						Y						Y			Other: transfer fees to other funds or schemes & between unitized funds
Korea	Personal plans	L							Y		0.45%							
Kosovo	Occupational I	OC plans	Y		3%				Y		1.5%	Y		20% ³¹⁾	Y	1% / 2%		Other: exit fee - 1% when member died and assignees withdraw the money - 2% when members get retired and withdraw the money
	Occupational I	OC plans	Y						Y ³²⁾		0.8%							
Latvia	Personal plans	L							Y ³²⁾	1.5% - 2% ³³⁾	1.4%							
	Personal plans	NL	Y						Y ³²⁾		2.1%							
Liechtenstein	Occupational I)C plans	Y		1.93%				Y		0.37%				Y		0.21%	
Lithuania	Personal	2 nd pillar	Y	0.5%	0.05%				Y	0.65% / 1% ³⁴⁾	0.89%				Y	0.05%	0.002%	Other: switching fee
	plans NL	3 rd pillar	Y		•		•		Y	•					N	•		
Maldives	Occupational I	OC plans							Y	0.8% (Monthly)								
Mauritius	Occupational I	OC plans				Y		0.4%	Y		0.6%							
Mexico	Personal plans	L							Y		1.06%							
	Occupational I	OC plans				Y			Y			Y						
Namibia	Personal plans	L	Y						Y			Y						
	Personal plans	NL	Y						Y			Y						
Nigeria	Occupational I	OC plans	Y	N100	N100)			Y	3%	2.25%							N100 is a monthly fee
	Occupational	(a) Salary				Y		1.58%										
	DC plans ³⁰⁾	(b) Mixed				Y		0.63%	Y		1.23%							
		Fund 0							Y		0.80%							
	Personal plans	Fund I							Y		1.17%							
Peru ³⁵⁾ *	L	Fund 2							Y		1.74%							
		Fund 3							Y		2.03%							
	D	Fund 0	v		1 1 0/	v		1 < 10/	I V		0.80%							
	NI	Fund 2	1		1.1 %	1		1.01%	1 V		1.1/%							
		Fund 3							I V		2 03%							
	Occupational I	C plans	<u> </u>			+			Y	0.6%	2.0370							
Poland*	Personal plans	L	Y	1.75%	1.55%				Ŷ	0.54%	0.48%	Y	0.06%	0.031%		1		Fees on return is charged on net assets
	Personal plans	NL	Y						Ŷ				1					

		C	ontribu	tions		Salar	ies		Assets			Return	ns		Others	5	
Jurisdiction	Type of funds	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Y/N	Legal cap	Avg.	Notes
Portugal	Occupational DC plans Personal plans NL							Y ³⁸⁾ Y ³⁸⁾		0.3% 1%				Y Y ³⁹⁾			Other: transfer fees, fees on the issuance and redemption of participation units, etc.
Romania [*]	Mandatory Personal plans Voluntary Personal plans	Y Y	2.5% 5.0%	2.5% 2.78%				Y Y	0.6% 2.4%	0.6% 1.85%				Y Y			Other: transfer penalties for transfers under 2 years of membership
The Russian Federation	Mandatory DC Voluntary Pension Component	Y ⁴¹⁾	3%								Y ⁴⁰⁾ Y ⁴⁰⁾	15% 15%					
Serbia	Occupational DC plans	Y	3%	1.96%				Y	2%	1.81%							
Classels Damshilia	2 nd pillar	Y ⁴²⁾		0.25%				Y	0.3%	0.3%	Y	10%	7.22%	Y	1%		Contributions: 0.25% from monthly contribution
Slovak Republic	3 rd pillar							Y	$\frac{0.8\% \ /}{1.6\%^{43)}}$	1.44%	Y	10%	1.14%	Y ⁴⁴⁾		0.001% / 1.113%	0.001% : switching fee, 1.113% : termination settlement fee
Slovenia (SMA)	Occupational DC plans							Y						Y			
Slovenia (ISA)	Personal plans L							Y	1%	0.98%				Y ⁴⁵⁾	3%/1%/ €15 per switch	0.4% 0.1% ND	Others: entry fee / exit fee / switching fee
Spain	Occupational DC plans							Y ⁴⁶⁾	1.5% / 0.25%	0.2% / 0.036%							
Span	Personal plans NL							Y ⁴⁶⁾	1.5% / 0.25%	1.14% / 0.14%							
Suriname	Occupational DC plans	Y		10%													
Sweden	Premium pension							Y ⁴⁷⁾	0.89% / 0.62% / 0.42%								
	Personal plans L	Y ⁴⁸⁾		0.24%				Y	0.365%/					Y ⁴⁸⁾		0.48%	Others: Entrance fees paid at entrance /
Turkey	Personal plans NL	Y ⁴⁸⁾		1.2%				Y	1.09% / 1.91% / 2.28% ⁴⁹⁾	1.64%				Y ⁴⁸⁾		0.06%	Entrance fee paid at termination / Additional Administrative Expenses Fees in case of Contribution holidays
United Kingdom	Default funds							Y	0.75%								
Uruguay	Personal plans L				Y		1.64%	Y ⁵⁰⁾		0.018%							

Source: 2017 OECD Global Pension Statistics, IOPS Members and desk research.

Note: Figures in (*) are as of 2017 while others are as of 2016.

Notes:

1) Management fee (shall not in any event exceed 3% per annum of the net asset value of the pension fund).

- 2) Personal income tax (any payment from a pension fund to a unit holder as in cases of early withdrawal and receiving pay out retirement benefits is subject to personal income tax and is calculated on the net asset value to be received by the unit holder).
- 3) Others: 0.5% switching fee (calculated on the transferred amount of net assets of the pension plan member who decides to transfer his assets to a new pension fund);

2%-20% withdrawal fee (penalties related to premature withdrawal from pension funds, calculated on the net value of the assets to be withdrawn prematurely, after tax has been deducted and vary based on the number of years the unit holder has been a member of the pension fund).

- 4) Occupational DC plans: Overall, no costs may be deducted from employee contributions (cap=0%). No indemnity or loss of profit sharing can be charged to the member or deducted of his vested reserves as a result of leaving the employer. DC and cash balance schemes, "the beneficiary has the right, at the time of his discharge, of his retirement or in case of abrogation of the pension commitment, to the part of the contribution which has not been paid by him, which has not been used to cover the death and invalidity risks before retirement and which has not been used to cover the fees limited to 5% of the payments." (article 24§2 of the Law dated 2003.04.28 on supplementary pensions, Belgian SLL). The term "fees" is not defined. Since the majority of pension plans in Belgium are of the DB type (in terms of AUM), costs and charges borne by members and beneficiaries are limited compared to those borne by the IORPs themselves. Further, as per the Law on Supplementary Pensions, DC plans are subject to a minimum guaranteed return on employer and employee contribution.
- 5) Occupational DC plans and Personal plans L: Apart from the fees mentioned in 4), pension laws in Belgium do not make a specific reference to particular types of fees or require costs and charges to be broken down and disclosed in a particular way, although "assets" and "returns" fees exist. These are usually disclosed as "administration costs". In practice, IORPs report costs and charges related to transactions/operations in their investment portfolios on an aggregate basis in their annual reporting. Since no distinction is made between the different types of fees, it is not possible to compute an average level of fees for the categories in the table.
- 6) Personal plans L are of two types: for self-employed people and for company leaders. They do not carry a minimum guarantee or a legal cap on contributions
- 7) Fees on assets include administration fees, management fees, distribution fees and custodian fees
- 8) In theory, performance fee can be charged; in practice this is not the case for any current products in Belgium.
- 9) Fees on returns are booked into the "fees on assets" account [clarification is required]
- 10) UPF: Universal pension funds, PPF: Professional pension funds, VPF: Voluntary pension funds
- 11) (i) The average fee over salaries charged to members is weighted by the number of contributors to the system in December 2016.
- (ii) The fee reported in "Others" corresponds to the fee charged on salaries to employers for providing the disability and survivor insurance [clarification is required]
- (iii) There is no a fee charged to members over assets but pension providers deduct directly from pension funds the investment expenses related to indirect investment transactions (such as for mutual funds and other investment vehicles, both domestic and offshore). As of 2016, this cost represented on average 0.24% of assets under management.
- 12) The weighted average fee charged in Chile declined to 1.23% in January 2017 and 1.19% in August 2017
- 13) Legal cap (3%) includes administration fees and the payment of the premium of the death and disability insurance
- 14) ROP (Régimen Obligatorio de Pensiones) is the mandatory supplementary pension scheme in Costa Rica (DC, second pillar)
- 15) Non IOPS members. Data pending confirmation [tbc]
- 16) Transformed funds: The law specifies the maximum annual management fee at 0.8 % value of a fund's assets and 10 % of its profit
- 17) Participants funds: The law specified the maximum annual management fee at 1 % of the value of assets and 15 % of assets' appreciation value. The only exceptions are mandatory conservative funds with annual management fee at 0.4 % of the value assets and 10 % of assets' appreciation value.
- 18) There is no cap in force. However management fee must decline by 10% each time when assets of pension funds managed by the same management company exceed the next level of EUR 100 million
- 19) The limit consists of maximum fees charged by Approved Trustees (1.33%), Pension Fund Managers (0.56%), Pension Fund Custodians (0.28%) and the Supervisory Authority (0.33%) for contributions collection, fund administration/investment and supervision.
- 20) For funds under the Default Investment Strategy there is a cap of 0.75% on management fees & 0.20% on recurrent out-of-pocket expenses
- 21) Refers to the average of the Fund Expense Ratios of MPF constituent funds with their financial year end dates falling within the period from 1 April 2016 to 31 March 2017 which was published in the MPFA website on 29 December 2017.
- 22) Others: Entry fee Switching between portfolios of fund member's individual account may not exceed 0.1 percent of , and may not be higher than 2.000 forints- withdraw money from the personal account (reasonable cost, may not exceed 3000 forints + money transfer cost) [clarification is required]

- 23) In occupational plans, costs can vary depending on the fund
- 24) In personal plans, 85% of the market is managed by the occupational private pension funds, with similar charges as note 23). Other providers (15%) of personal pension savings charge fee as a % of assets
- 25) This legal cap and market average value relate to few providers of personal pension other than the occupational pension funds [tbc]
- 26) Fees for subscribers of Government Sector, NPS-Lite and APY
- 27) Fees for subscribers of private sector (i.e. Corporates and All Citizen models)
- 28) Fees on contributions include an allocation rate (the percentage of members contribution that actually is used for purchasing investment units, which is net of any fees that may be incurred upon initial investment and is effectively the amount that is invested) and bid-offer spreads (the difference between the price at which units can be purchased and the price at which units can be sold back to the investment manager on any given day in unit-linked investments contracts)
- 29) Include annual management charges (associated with costs of fund management) and policy fees (monthly or annual; levied by a life assurance company to cover administration costs)
- 30) In occupational pension plans in Jamaica asset managers and administrators fees are usually paid out of the fund (i.e. by the members) or by the sponsor.
 - These fees are based on contributions paid and/or assets under management
- 31) 20% of profit above the benchmark
- 32) Administrative expenses and investment management charges (fees on contributions separately not available)
- 33) From 1st January 2018 legal cap on assets is 1.03%-1.5%, and from 1st January 2019 legal cap on assets will be reduced to 0.85%-1.1%
- 34) 0.65% for bond 2nd pillar PFs, 1% for other 2nd pillar PFs
- 35) Average values in the table relate to simple average of all pension managers (AFP) by type of fund: Fund 0 (ultra-conservative), Fund 1 (conservative), Fund 2 (balanced) and Fund 3 (risky)
- 36) In the Peru's Private Pension System, fees are charged to members on (a) monthly salary, and (b) a mixed scheme, which is charged on two parts: i) monthly salary and ii) assets on an annual basis. For the implementation of the mixed scheme, a 10 years transition period was established, which began in February 2013
- 37) Related to voluntary pension saving, which are of two types: i) for pension purposes (L) and ii) for non-pension purposes (NL)
- 38) Includes scheme manager fees (remuneration/costs of administration of the pension fund management entity), custodial fees/costs of safekeeping of assets, costs related to portfolio transactions.
- 39) For the specific case of retirement saving schemes in personal plans, transfer fees are subject to a maximum of 0.5% of the transferred amount if there is a capital or return guarantee and cannot be charged otherwise.
- 40) The maximum which pension funds can take from the amount which is equal to earned income reduced by fees for asset management companies and specialized depositaries.
- 41) This fee can be used by pension funds for forming insurance reserve. However, the fee must be specified in pension programme agreement.
- 42) Contribution fees are revenues of the Social Insurance Agency.
- 43) 0.8% for pay out supplementary pension fund, 1.6% for contributory pension fund
- 44) Other fees are paid from a client's individual account.
- 45) Entry fee 3% of contributions / exit fee 1% of assets / switching fee 15€.
- 46) Managing entity fee / Custodian fee
- 47) Equity funds / Mixed funds / Fixed income funds
- 48) Fees apply for the first 5 years of the contract. Only one joint cap is applied for total of entrance fees (paid at entrance and paid at termination), administrative expenses fees and additional administrative expenses Fee in the case of contribution holiday for each year, 8.5% of monthly minimum gross wage (140 TRY for 2016)
- 49) Annual total fund management fee ratio a) Money market funds, Precious metal funds: 1.09%. b) Government bonds and bills funds, Standard funds, Index funds: 1.91%. c) Stock funds, Participation funds, Composite funds, Fund basket funds, Variable funds, Life Cycle / Target funds: 2.28%. d) State contribution funds: 0.365%
- 50) Fees on assets are charged for custody of financial instruments and therefore drive no profit for fund manager

1.2. Summary of changes since the 2014 exercise

14. The previous paper (IOPS Working Papers No. 20, 2014) analysed fees charged by pension funds in 37 jurisdictions. Among these jurisdictions, we received sufficient information from 23 respondents so we can compare the changes that took place in these jurisdictions since 2014.

15. Since more granular data were collected in this year's exercise, it is not easy to directly compare some results with the previous report. Nonetheless, some high level comparison was performed. ("Other fees" position was not analysed due to its heterogeneity.)

16. Table 2 provides a summary of fees charged in 2017 as compared to 2014. All 22 jurisdictions which participated in both 2014 and 2017 exercises maintained their ways of charging fees. We analysed various pension schemes from 14 jurisdictions for which we had sufficient data for both 2014 and 2017.

17. The major tendency is the decrease of average fees as compared to 2014. In some jurisdictions the fees changed in different directions. The only two clear-cut cases where average fee increased were Polish personal plans type L where fees charged on assets increased from 0.46% to 0.51%¹³, and Romanian voluntary personal plans where fees charged on assets increased from 1.79% to 1.85%. With regard to legal maximum fees, nine countries (Bulgaria, Costa Rica, Czech Republic, FYR of Macedonia, Lithuania, Poland, Slovak Republic, Spain, and U.K.) lowered their fee ceilings, whereas three others (Columbia, Hungary and Serbia) increased them. Four jurisdictions (Albania, Ghana, Israel, and Romania) did not change them. Other five jurisdictions reported no legal caps or it was difficult to compare the changes due to different level of details available for 2014 and 2017.

Correctory	Toma offere	da	F	ees in 2017		Fe	es in 2014	
Country	Type of fun	as	Based on	Legal cap	Average	Based on	Legal cap	Average
Albania	Occupational DC Personal plans L ¹⁶	plans	Assets	3%	2.1%	Assets	3%	2.4%
		UPF&	Contributions	4.5%	4.3% ¹⁾	Contributions	5%	4.97%
Dulgorio	Dersonal plans I	PPF	Assets	0.9%	0.8%	Assets	1%	1%
Duigaria	Personal plans L	VDE	Contributions	7%	4.3% ¹⁾	Contributions	7%	2.75%
		VPF	Returns	10%	8.9%	Returns	10%	9.43%
Chile	Personal plans L		Salaries	-	1.27%	Salaries	-	1.42%
Colombia	Occupational DC	plans	Salaries	3%	-	Salaries	1.31%	-
Costa Rica	ROP		Assets	0.5%	0.49%	Assets	1.1%	-
	Transformed funds		Assets	0.8%	-	Assets	0.6%	0.6%
Czech	Transformed funds		Returns	10%	-	Returns	15%	15%
Republic	Participation funds		Assets	$1.0\% / 0.4\%^{2}$	-	Assets	0.6%	0.6%
	r arucipation funds		Returns	15% / 10% ²⁾	-	Returns	15%	15%
EVR of			Contributions	3%	3%	Contributions	4%	4%
Macedonia	Mandatory pensio	n funds	Assets	0.04% (monthly)	0.43%	Assets	0.54%	0.54%
Chana	Occupational DC p	lans	Assots	2.5%	2.2%	Assots	2.5%	
Gilalia	Personal plans		Assets	2.3%	2.0%	Assets	2.3%	-
Hong Kong	Mandatory Provide	ent funds	Assets	-	1.56%	Assets	-	1.7%
Hungary	Personal plans NI		Contributions	6%	4.9%	Contributions	0.9%	-
Tungary	i ersonar plans NL	1	Assets	0.8%	0.5%	Assets	0.2%	-

Table 2. Fees charged by pension funds in 2018 exercise¹⁴ as compared to 2014 exercise¹⁵

¹³ Out of which 0.031% is the average fee on returns, charged on assets.

¹⁴ The numbers are based on from 2016 to 2017, depending on jurisdiction.

¹⁵ The numbers are based on from 2010 to 2013, depending on jurisdiction.

¹⁶ Personal plans, to which access can be linked to employment or professional activity.

		Contributions	6%	2.85%	Contributions	6%	3.8%
Israel	DC Plans	Assets	0.5%	0.27%	Assets	0.5%	0.33%
Korea	Personal plans L	Assets	-	0.46%	Assets	-	0.70%
		Contributions	0.5%	0.05%	Contributions	2%	1.86%
Lithuania	(2 nd pillar)	Assets	0.65% / 1.0% ³⁾	0.89%	Assets	0.65% / 1.0% ³⁾	0.65% / 0.99% ³⁾
Mexico	Personal plans L	Assets	-	1.03%	Assets	-	1.19%
		Contributions	1.75%	1.55%	Contributions	3.5%	3.5%
Poland	Personal plans L	Assets	0.54%	0.48%	A 4 -		0.460/
	_	Returns	$0.06\%^{4)}$	0.031% ⁴⁾	Assets	<mark>0.0%</mark>	0.46%
	Mandatary Darsonal plana	Contributions	2.5%	2.5%	Contributions	2.5%	2.5%
Domonio	Manuatory Personal plans	Assets	0.6%	0.6%	Assets	0.6%	0.6%
Komama	V-h	Contributions	5%	2.78%	Contributions	5%	4.58%
	Voluntary Personal plans	Assets	2.4%	1.85%	Assets	2.4%	1.79%
	Mandatory DC	Returns	15%	-		0.4% (as an	
The Russian	Voluntary Pension	Contributions	3%	-	Assets	equivalent of	-
Federation	Component	Returns	15%	-		all types of fees)	
G 1 '		Contributions	3%	1.96%	Contributions	2.27%	-
Serbia	Occupational DC plans	Assets	2%	1.81%	Assets	2%	-
		Contributions	0.25%	-	Contributions	1.25%	1.25%
611-	2 nd pillar	Assets	0.3%	0.3%	Assets	0.3%	0.3%
Slovak Dopublic	_	Returns	10%	7.22%	Returns	10%	10%
Republic	2 rd :11	Assets	0.8 / 1.6% ⁵⁾	1.44%	Assets	0.9 / 1.8% ⁵⁾	0.9 / 1.8% ⁵⁾
	5 pillar	Returns	10%	1.14%	Returns	10%	10%
<u>Saria</u>	Occupational DC plans	Assets	1.5% / 0.25% ⁶⁾	0.2% / 0.036% ⁶⁾	Assets	2%	0.21%
Spain	Personal plans NL	Assets	$\frac{1.5\%}{0.25\%^{6)}}$	1.14% / 0.14 ^{%6)}	Assets	2%	1.39%
		Contributions	-	0.24%	Contributions	2%	-
T 1	Personal plans L	Assets	-	1.64%	Assets	1.09% / 2.28% ⁷⁾	2%
Turkey		Contributions	-	1.2%	Contributions	2%	-
	Personal plans NL	Assets	-	1.64%	Assets	1.09% / 2.28% ⁷⁾	2%
United Kingdom	Default funds	Assets	0.75%	-	Assets	1.5%	-

1) 4.3% is an average of UPF, PPF, and VPF

2) Exception for mandatory conservative funds

3) Conservative funds / Other funds except conservative funds

4) Fee is charged on assets, even if based on rates of return

5) Pay out supplementary pension funds / contributory pension funds

6) Managing entity fee / Custodian fee

7) Liquid funds / Stock funds. The maximum fees on assets of other funds are included in this range

8) Charged as expenses to pay for custody of financial instruments and therefore drive no profit for fund managers

2. Total member reductions of pension savings in the surveyed IOPS jurisdictions

18. Members were requested to provide, as granular as possible, the list of costs and expenditures that constitute the total member reduction of pension savings. The aim of this section is to identify the most substantial direct and indirect reductions. Section 2.1. presents the items that are already incorporated in the fees, whereas Section 2.2. makes an attempt to enumerate (but <u>not quantify</u>) the most substantial items that indirectly lower the value of pension contributions and/or assets.

2.1. Costs/expenditures covered by fees

19. The fee figures reported by different pension systems in Table 1 might not cover all cost and fee elements paid by members either directly or indirectly. The issue here is whether these fees represent all or only part of the cost and fee elements of the pension plan/funds. This section looks at this issue by analysing extent to which various cost and fee elements are covered by fees charged from the pension plan members. Direct comparison of fees and charges across jurisdictions may lead to inaccurate conclusions due to various reasons including different coverage of pension fees in each jurisdiction. Therefore in Table 3, we present jurisdictions by clusters, i.e. by groups of countries with identical or very similar items already covered by pension fees. We tentatively sorted them out in the descending order, from cluster A (being the most comprehensive) to cluster E (the least comprehensive), of the extent to which the underlying data incorporate the full range of fees, charges and expenses that ultimately affect member benefits.

20. Cluster A groups 15 jurisdictions (17 schemes) with fees covering all or almost all of the following elements: administration fees, investment management fees, custodian fees, investment transaction costs, guarantee fees and others. Cluster B relates to 8 jurisdictions (8 schemes) with fees coverage similar to A but without investment costs of the underlying funds (i.e. without including the cost of indirect investment). Cluster C groups 6 jurisdictions (6 schemes) with coverage similar to B but without custodian fees. Some of these jurisdictions include investment transaction costs and guarantees in fees charged to the members. Cluster D covers 3 jurisdictions (4 schemes) where fees, as compared to cluster C, do include custodian fees and investment transaction costs but do not cover administration costs.

21. Apparently, the ordering in Table 3 must be somewhat discretionary as it relies on subjective assessment. Due to the diversity of cost positions in the countries, it seems impossible to design a more 'scientific' approach. We therefore maintained similar approach introduced in the IOPS Working Papers No. 20 (April 2014).

22. In this way, Namibia has fees that are the most inclusive of typical (yet not exhaustive list) of costs related to saving for retirement. One can therefore assume that the charge ratio that will be calculated for this jurisdiction will provide a reasonably accurate reflection of how much the assets accumulated by a member of the Namibian pension system are being reduced by fees, charges and expenses directly or indirectly charged to the member. On the other hand, Austria has the least inclusive fees because plans/schemes administration fees, investment management fees, custodian fees, investment transaction costs, and guarantee costs would not be taken into account when calculating the charge ratio.

Table 3. What do the pension plan members pay for in their fees?:Cost and fee elements covered in fees charged to the members

	Plan/scheme	Investment r	management	Quatadian	Investment	Cuerentee	Other	
Jurisdiction	administration	Primary	Underlying	fees	transaction	fees	(please	Cluster
	tees	funds only	funds		COSIS		specity)	
Namibia	•	•	•	•	•	•	•	
Poland	•	•	•	•	•	•		
Russian Federation	•	•	•	•	•	•		
Belgium (Fonds d'épargne- pension Pensioenspaarfonds)	•	•	•	•	•		•1)	
Belgium (Branche 21 life insurance operated by an insurance company)	•	•	•		•		• ¹⁾	
Belgium (Branche 23 life insurance operated by an insurance company)	•	•	•	• ²⁾	•		•1)	А
Mauritius	•	•	•	•	•		• ³⁾	
Hong Kong, China	•	•	•	•		•	• ⁴⁾	
Australia	•	•	•	•	•		• ⁵⁾	
Ghana	•	•	•	•	•			
Liechtenstein	•	•	•	•			•	
Serbia	•	•	•		•		• ⁶⁾	
Korea	•	•	•		•			
Jamaica ⁷⁾	•	•	•		•		• ⁸⁾	
India	•	•	•	•			• ⁹⁾	
Nigeria	•	•	•	•				
Bulgaria	•	•	•				•	
Peru	•	•		•	•	•	•	
Romania (2 nd pillar)	•	•		•	•	•	• ¹⁰⁾	
Slovak (2 nd pillar)	•	•		•	•		• ¹¹⁾	
Latvia (voluntary pensions)	•	•		•	•		• ¹²⁾	В
Portugal	•	•		•	•		• ¹³⁾	
Slovenia	•	•		•	•			
Hungary	•	•		•				
Mexico	•	•		•	•		• ¹⁴⁾	
FYR of Macedonia ¹⁵⁾	•	•			•		•	
Albania ¹⁶⁾	•	•					•	С
Costa Rica ¹⁷⁾	•	•			•			
Romania (3 rd pillar)	•	•				• ¹⁸⁾	• ¹⁹⁾	

Colombia	•	•			● ²⁰⁾	
Ireland	•	•				
Slovak (3rd pillar)		•	•	•	• ²¹⁾	
Latvia (mandatory pensions)		•	•	•	•22)	D
Czech Republic (Transformed funds)		• ²³⁾	•	•	• ²⁴⁾	
Czech Republic (Participation funds)		23)	•	•	• ²⁵⁾	
Austria ²⁶⁾ (to be verified)					•	E

* Notes: A cell marked with '•' means that the fee component is included in the charge ratio calculations.
 A blank cell means that the fee component is not included in the charge ratio calculations.
 A crossed cell means that the fee component is not applicable in the jurisdiction.

- 1) Other: exit costs
- 2) Look through approach
- 3) Other: actuarial fees, audit fees, regulatory fees

4) Other: audit fees, legal costs, fund establishment costs, indemnity insurance & out-of-pocket disbursements like postage

5) Other: Advice fees, Exit fees, Insurance fees (for Life, Total Permanent Disability or Income Protection), or Family law requests

6) Other: tax liabilities, costs of the current maintenance of real estate in which fund assets are invested

7) The types of fees identified above represent the fees charged by Asset Managers and Administrators to funds and schemes in the Jamaican private pension industry

- 8) Other: audit, actuarial and legal fees
- 9) Other: Central Recordkeeping charges, Point of Presence fees (entry fee), Retirement advisers
- 10) Other: Audit fee, transfer fee
- 11) Other: Success fee, other costs & fees (under the Act) paid only if the ground of their payment is related directly to the assets
- 12) Other: audit and consultants fees
- 13) Other: transfer fees, fees on the issuance and redemption of participation units, etc. The answer is based on the main costs and fees that are foreseen in the national legislation/regulations. The costs and fees which are effectively charged, as well as who borne those costs and fees in the case of occupational plans, have to be analysed on a case-by-case basis.
- 14) Other: Price vendor fees and market costs
- 15) Investment management fee is monthly fee from the value of the net assets of the pension fund. The fee is calculated on each valuation date of the pension fund assets, and it is charged from the asset of the pension fund on the fifth working day in the month after the valuation. The custodian fees are paid directly by the pension company from its own assets and the fees are listed in the contract between custodian and the pension company. The transaction fees related to transactions of acquisition or transfer of the assets of the pension fund are paid from the assets of the pension fund
- 16) The administration and investment costs are both covered by the management fee. Switching fee and early withdrawal fee are paid by the pension plan members, whereas audit fee, marketing fee, legal fee, etc. are paid by the pension management company
- 17) The information only refers to the main complementary pension scheme (ROP) in the second pillar. Even though investment fees (i.e. invest in mutual funds or ETFs) and investment transaction costs are not included in the charge ratio calculation, those costs are paid by the fund because the fund records the net return in these instruments
- 18) Where available
- 19) Audit fee, transfer fee
- 20) Other: Success fee, switching fee, termination settlement fee, other costs & fees (under the Act)
- 21) Other: Premium of the death and disability insurance, legal fees and administrative costs
- 22) Other: audit and consultants fees
- 23) Investment management fee has to be used to cover above mentioned custodian fees and investment transaction costs as well as commissions for intermediaries, cost of advertising and fees to the bank.

DS 24) Other: Fee for transfers, fee for one-off payment

25) Commissions for intermediaries are specified in the Act No. 427/2011 Coll., on Supplementary Pension Savings. There is also exhaustive list of possible fees, which pension management company can charge from the participant in question (change in the savings strategy, transfers, etc.). There is also cap on commissions for intermediaries

26) In Austria, explicitly covered in fees (see Art. 16a PKG) are only three kinds of costs (costs for calculating a vested amount, costs for administration of non-contributory, investment management fees for (only) beneficiaries managed in the so called security investment- and risk sharing group). These special costs are stated as "other fees"

2.2. Costs/expenditures as indirect member reductions of pension savings

23. This section stocktakes the information about the most substantial items in the surveyed IOPS jurisdictions that indirectly lower plan members' contributions and/or assets. Few replies were received. Respondents indicated (see Table 4) cost elements that indirectly drag on accumulated pension savings such as asset management costs of indirect investments (i.e., the underlying funds management fee), transaction costs and custodian costs. These items are already listed in Table 3 and in some countries are included in the fee paid by members.

24. Other potential indirect sources of member reductions, not indicated by respondents, are the ones covered in the WPPP paper [to be further developed]

Jurisdiction	Answer
Romania	 In the mandatory pillar, the indirect costs of the pension fund relate to the underlying funds management fee (there is no estimate on the value), the audit fee (this is usually a fixed fee stipulated in the contract between the pension fund and the audit company, but depends on the size of the pension fund) and transfer fee (for transfers taking place earlier than 2 years). Other indirect costs of the pension fund like transaction costs, custodian costs, etc. are paid for the pension plan by the pension fund management company (PFMC) and are contained in the AUM fee charged by the PFMC to the pension fund. In the voluntary pillar, the indirect costs of the pension fund relate to the underlying funds management fee, transaction and custodian costs and audit and transfer fees
Ireland	Investment management fees for underlying funds and investment transaction costs
Mauritius	Information not available at this stage
Bulgaria	The costs of acquiring and selling assets are paid indirectly by the pension plan members.
Duigana	There is no estimate on the value of this

Table 4. The most substantial costs which indirectly lower plan members' contributions and/or assets

25. It is noteworthy that respondents do not have knowledge on the quantified possible impact of cost items that are not covered by the fees. The exception was the response from Hong Kong, China. In its MPF System the fees and expenses of MPF funds are collected from the assets of funds invested by members and therefore are not paid directly by members. According to a study of the administrative costs in the MPF System in 2012, scheme administration was the major fees and expenses element, accounting for 43% of the fees and expenses of MPF funds. Investment management accounted for 34% of the fees and expenses of MPF funds.

<u>Request to the Members</u>: Please let us know which are the most substantial, in your opinion, cost and fee elements in your jurisdiction that are paid <u>indirectly</u> by the pension plan members, therefore reducing members' pension contributions or assets. If possible, please provide the value/estimate of each item.

2.3. Charge ratios

26. In this section, charge ratios are calculated in line with the methodology developed in the past (IOPS, 2014). Based upon the information received in sections 2.1, jurisdictions were grouped in the same

comparable clusters A-E, depending on the degree to which the fees charged to members cover the cost and fee elements.

27. The charge ratio measures the impact that any type of charge can have on the final balance of an individual retirement account compared to the hypothetical balance that could be obtained if no fees were charged at all¹⁷. For example, a charge ratio for 40-years horizon shows how much higher pension savings would have been at the end of 40-year saving period had there been no fees charged to the pension scheme member.

28. The calculations use annual data. This is a theoretical exercise since the future cumulative balance is projected as if the current commissions are maintained during a 40-year period. The only exception is when a country has set a timetable to reduce fees in the future by means of an approved legislation (such as in Costa Rica¹⁸, FYR of Macedonia¹⁹, and Latvia²⁰). The real rate of return refers to a standard (yet not necessarily unquestionable) assumption of what a DC pension scheme should yield on average in the long run. Moreover, it does not represent necessarily the historical rate of return for any specific national system. To reflect the current low interest rate environment, the real rate of return is set at 3% (i.e. 2% pp lower than the previous exercise). A sensitivity test was also performed to check the impact of changing real rate of return. The exercise assumes a 100% contribution density and a zero account balance to start with. The result is independent of the wage level.

- 29. The caveats of charge ratios should be spelt out clearly:
 - some of cost elements might be omitted, leading to charge ratios being actually underestimated for some jurisdictions (Cluster E has much bigger possibility of such underestimation than cluster A in Table 3);
 - the fee structure varies greatly from country to country;
 - the effect of absolute fees may vary depending on the rate of return assumed;
 - the level of fees is somehow related to the asset allocation profile. Thus a 'cheap' system (expressed either in terms of low fees or charge ratios) does not necessarily imply that the absolute value of the retirement pot at the end of accumulation savings will be higher than in an 'expensive' system that offers much higher rates of return.

30. The results for the 2016/2017 charge ratio calculation are shown in Table 5. Similarly to the previous exercise, projections of retirement income are based on a 40-year time span. Since that in some countries such a period may not be very representative of actual contribution patterns, the same calculations were run for horizons of 30-year and 20-year working life. Obviously, the accumulation period being shorter, the charge ratio is smaller (less is paid as fees and charges over a shorter period of time). In some pension schemes (i.e. Peruvian occupational DC plans-salary, Chile, Suriname), the charge ratio is the same regardless of the time horizon because there no fees are charged on assets there. In this

¹⁷ More detailed description of the methodology can be found in IOPS Working Papers No. 6(2008). See Appendix 1, page 30.

¹⁸ Yearly legal cap on assets will be lowered to 0.35% from 2020 (current: 0.5%).

¹⁹ Yearly legal cap on assets is lowered to 0.42% (2017~), and 0.36% (2019~; currently: 0.48%), yearly legal cap on contributions is lowered to 2.75% (2017~), 2.5% (2018~), 2.25% (2019~), 2.0% (2020~; currently: 3%).

²⁰ Yearly legal cap on assets is lowered to 1.03%~1.5% (2018~) and 0.85%~1.1% (2019~; currently: 1.5%~2.0%)

case, the charges paid by an individual do not depend on how much has been accumulated over the working-life period.

31. Eleven countries (13 schemes) are listed in 'cluster A', where cost and fee elements are mostly covered in fees charged to the members, followed by 8 countries (19 schemes) in 'cluster B', 4 countries (6 schemes) in 'cluster C', and 2 countries (2 schemes) in 'cluster D'. Unfortunately, no data for Table 1 (average fees) were collected from Austria (currently in 'cluster E'), and 9 countries (12 schemes) were listed as 'others' due to lack of information for Table 3 (cost elements covered by fees) to classify into clusters.

32. Average charge ratio for cluster (A, B, C, D, Others) are (22.4%, 23.3%, 21.4%, 18.1%, 17.0%) respectively. Charge ratios for clusters C and D tend to be decreasing. This effect might be related to the fact that fees in these countries are lower as they cover fewer cost elements as indicated in Table 3. Therefore, charge ratios for these less comprehensive clusters are likely to be underestimated.

33. Average charge ratio may have been affected by the number of fee components, as average charge ratio for pension schemes with one fee component (contribution/salary/asset/performance) are 20.6%, while the average charge ratio with two or three components combined are 21.9% and 24.2% respectively. But the difference is not considerable taking into account the differences of charge ratios in each type of schemes.

34. More clear difference in average charge ratio is observed among different pension schemes as average charge ratio for 'Occupation DC plans' are 19.3%, while the average charge ratio for 'Personal plans L' and 'Personal plans NL' are 22.8% and 27.3% respectively. Average charge ratio for pension schemes which can't be categorized into above categories are 17.1%. The result suggest that occupational DC pension schemes tend to be generally much more cost effective than personal schemes, especially the ones where there is no direct link with employment.

	<i>a</i>			Pro	jection peri	od	# of fee
Cluster	Country	Pension Scheme	9	40y	30y	20y	compo -nents
	Poland*	Personal plans L		12.7%	9.8%	6.9%	2
	Mauritius	Occupational DC plans		16.6%	13.3%	10.1%	2
	Hong Kong*	Mandatory Provident Fund (1	MPF)	30.2%	23.0%	15.5%	1
	Austrolio	Occupational DC plans		13.0%	9.6%	6.2%	1
	Australia	Personal plans NL		26.2%	19.8%	13.2%	1
	Chana	Occupational DC plans		39.3%	30.5%	21.0%	1
	Ghana	Personal plans L		36.6%	28.3%	19.3%	1
Cluster A	Liechtenstein	Occupational DC plans		10.2%	7.9%	5.8%	2
	Serbia	Occupational DC plans		35.2%	27.5%	19.3%	2
	Korea	Personal plans L		10.3%	7.5%	4.9%	1
	India	Personal plans		11.1%	8.2%	5.3%	1
	Nigeria	Occupational DC plans		39.9%	31.1%	21.4%	2
	Bulgaria	Occupational DC plans		10.3%	8.6%	6.9%	2
	Average of clu	uster A		22.4%	17.3%	12.0%	
	Median of clu	ster A		16.6%	13.3%	10.1%	
		Occupational DC plans	(a) Salary	15.8%	15.8%	15.8%	1
Cluster B	Peru*	Occupational DC plans	(b) Mixed	29.6%	23.8%	18.0%	2
		Personal plans L	Fund 0	17.1%	12.7%	8.3%	1

Table 5. Charge ratio calculation

			Fund 1	23.8%	17.9%	11.9%	1
			Fund 2	32.9%	25.2%	17.1%	1
			Fund 3	37.0%	28.6%	19.6%	1
			Fund 0	17.1%	12.7%	8.3%	1
		D	Fund 1	36.9%	32.0%	27.1%	3
		Personal plans NL	Fund 2	32.9%	25.2%	17.1%	1
			Fund 3	37.0%	28.6%	19.6%	1
	Romania*	Mandatory Personal plans		15.3%	12.0%	8.7%	2
	Slovak	2nd pillar		11.6%	8.6%	5.7%	3
	Latvia	Personal plans L		22.6%	17.0%	11.3%	1
	Latvia	Personal plans NL		28.3%	21.7%	14.8%	1
	Portugal	Occupational DC plans		6.9%	5.0%	3.2%	1
	Portugal	Personal plans NL		20.8%	15.6%	10.3%	1
	Slovenia	Personal plans L		20.4%	15.3%	10.1%	1
	Hungary	Personal plans NL		15.5%	12.7%	10.0%	2
	Mexico	Personal plans L		21.9%	16.4%	10.9%	1
	Average of cl	uster B		23.3%	18.2%	13.0%	
	Median of ch	uster B		21.9%	16.4%	11.3%	
	FYR of	Mandatory pension funds		10.1%	8.0%	5.9%	2
	Macedonia	Voluntary pension funds		20.4%	15.8%	11.3%	2
	Albania	Occupational DC plans, P	ersonal plans L	32.3%	24.7%	16.8%	2
Cluster C	Costa Rica	ROP (Régimen Obligatorio	de Pensiones)	8.0%	5.9%	3.8%	1
	Romania*	Voluntary Personal plans		36.3%	28.6%	20.3%	2
	Average of cl	uster C		21.4%	16.6%	11.6%	
	Median of clu	uster C		20.4%	15.8%	11.3%	
	Slovak	3rd pillar		28.8%	21.9%	14.7%	2
Cluster D	Latvia	Occupational DC plans		7.3%	5.5%	3.7%	1
	Average / Me	edian of cluster D		18.1%	13.7%	9.2%	
	Brazil	Occupational plans		14.2%	12.3%	10.4%	2
	Chile	Personal plans L		12.7%	12.7%	12.7%	1
	Joaland	Occupational plans		4.6%	3.4%	2.2%	1
	Icelaliu	Personal plans		11.1%	8.2%	5.3%	1
	Israel	DC Plans		8.9%	7.2%	5.7%	2
0.1	Kosovo	Occupational DC plans		31.4%	24.6%	17.5%	2
Others	Spain	Occupational DC plans		5.4%	4.0%	2.6%	1
(unclassin ed)	Span	Personal plans NL		25.7%	19.4%	12.9%	1
cu)	Suriname	Occupational DC plans		10.0%	10.0%	10.0%	1
	Turkov	Personal plans L		31.6%	24.2%	16.4%	2
	Turkey	Personal plans NL		32.2%	24.9%	17.2%	1
	Uruguay	Personal plans L		16.8%	16.7%	16.6%	2
	Average of of	thers		17.0%	13.9%	10.8%	
	Median of ot	hers		13.4%	12.5%	11.5%	

Note: Figures in (*) are as of 2017 while others are as of 2016.

35. Historical trends of charge ratios are compared in Table 6. Since we used investment rate of 5% in 2008 and 2014 exercises, charge ratios were compared under the same investment rate of 5%. One can observe that charge ratio has dropped in 70% (14/20) of the cases (schemes) when compared to 2014, with only a few exceptions. This result is in line with the tendency of decreased average fees in most of the countries which we analysed in section 1.2.

[request to relevant jurisdictions for potential comments/explanations] Since no 2014 exercise data on average fees was available, we are not able to provide explanations for the developments of charge ratios:

(2014 charge ratio \rightarrow 2018 charge ratio)

- Serbia (29.3% \rightarrow 38.0%)
- India $(6.4\% \rightarrow 12.2\%)$
- Hungary $(5.9\% \rightarrow 16.5\%)$
- Romania (16.1% → 16.5% and 38.5% → 39.1%)

Table 6. Historical trends of charge ratio (investment rate of 5%)

Cluster	Country	Pension Scher	ne	2018	2014	2008
	Poland*	Personal plans L		13.8%	14.4%	18.7%
	Hong Kong*	Mandatory Provident Fund	d (MPF)	32.7%	35.0%	36.4%
	Chang	Occupational DC plans		42.4%	16 10/	/
Cluster A	Gnana	Personal plans L		39.6%	40.4%	n/a
	Serbia	Occupational DC plans		38.0%	29.3%	37.5%
	Korea	Personal plans L		11.2%	16.5%	n/a
	India	Personal plans		12.2%	6.4%	n/a
	Peru*	Occupational DC plans	(a) Salary	15.8%	15.8%	15.0%
	Romania*	Mandatory Personal plans		16.5%	16.1%	n/a
	Slovak	2nd pillar		15.5%	19.2%	19.0%
Cluster B	Latvia	Personal plans L		24.6%	20 60/	m /o
	Latvia	Personal plans NL		30.6%	59.0%	n/a
	Hungary	Personal plans NL		16.5%	5.9%	22.6%
	Mexico	Personal plans L		23.8%	29.7%	31.6%
	FYR of Macedonia	Mandatory pension funds		10.9%	11.7%	20.2%
Cluster C	Albania	Occupational DC plans		35.0%	45.1%	n/a
Cluster C	Costa Rica	ROP (Régimen Obligatorio d	e Pensiones)	8.7%	9.1%	21.1%
	Romania*	Voluntary Personal plans		39.1%	38.5%	n/a
Cluster D	Slovak	3rd pillar		31.6%	43.5%	n/a
Cluster D	Latvia	Occupational DC plans		8.0%	39.6%	n/a

Note: Figures in (*) are as of 2017 while others are as of 2016.

36. A sensitivity analysis is a technique used to determine how different values of an independent variable impact a particular dependent variable under a given set of assumptions. As it shows the impact of independent variables, by comparing different sets of sensitivity analysis one can find out which variable derives the changes of dependent variables the most. It is also a useful tool to anticipate how dependent variables will change when independent variables are adjusted.

37. We performed four different sets of sensitivity analysis (independent variables: investment return, fees on assets, fees on contributions, fees on performance) to compare their impact on charge ratio. In order to adjust the impact, values of each independent variable were set differently. With the fee elements (fees on assets, fees on contributions, fees on performance), values were set as of one quarter (25%) of average fees in each component. (investment return: $\pm 2pp$, fees on assets: $\pm 0.25pp$, fees on contributions: $\pm 0.75pp$, fees on performance: $\pm 2.5pp$)

38. Table 7. depicts the impact of charge ratio when investment return changes. One can observe that the values for charge ratio increase as investment return increases. This is because one suffers bigger opportunity costs when investment returns are higher. Considering the current low interest rate environment and assumed in consequence the base return of 3%, changes in investment return have

relatively small impact on charge ratios. A 2pp decrease of investment return (from 3% to 1%) impacts the ratio by less than 5pp in all cases (on average: -1.95pp). Pension schemes that do not charge fees on assets or returns (e.g. Peru - occupational DC plans - (a) Salary, Chile, Suriname, and Uruguay) are subject to no impact at all.

Cluster	Country	Pension Scheme		Base	Investment Return	
Cluster	Country			(3%)	+2 pp	-2 pp
	Poland*	Personal plans L		12.7%	+1 pp	-1.1 pp
	Mauritius	Occupational DC plans		16.6%	+1.2 pp	-1.3 pp
	Hong Kong*	Mandatory Provident Fund (MPF)		30.2%	+2.5 pp	-2.9 pp
	Australia	Occupational DC plans		13.0%	+1.2 pp	-1.3 pp
	Australia	Personal plans NL		26.2%	+2.3 pp	-2.5 pp
	Chana	Occupational DC plans		39.3%	+3.2 pp	-3.6 pp
Cluster A	Gilalla	Personal plans L		36.6%	+3 pp	-3.4 pp
	Liechtenstein	Occupational DC plans		10.2%	+0.8 pp	-0.9 pp
	Serbia	Occupational DC plans		35.2%	+2.8 pp	-3.1 pp
	Korea	Personal plans L		10.3%	+0.9 pp	-1.1 pp
	India	Personal plans		11.1%	+1 pp	-1.1 pp
	Nigeria	Occupational DC plans		39.9%	+3.2 pp	-3.6 pp
	Bulgaria	Occupational DC plans		10.3%	+4.7 pp	-4.4 pp
		Occupational DC plans	(a) Salary	15.8%	0 pp	0 pp
		Occupational DC plans	(b) Mixed	29.6%	+2 pp	-2.3 pp
		Personal plans L	Fund 0	17.1%	+1.5 pp	-1.7 pp
			Fund 1	23.8%	+2.1 pp	-2.3 pp
	D		Fund 2	32.9%	+2.7 pp	-3.1 pp
	Peru*		Fund 3	37.0%	+3 pp	-3.4 pp
			Fund 0	17.1%	+1.5 pp	-1.7 pp
		Dersonal plans NI	Fund 1	36.9%	+1.7 pp	-1.9 pp
		Personal plans NL	Fund 2	32.9%	+2.7 pp	-3.1 pp
Cluster B			Fund 3	37.0%	+3% pp	-3.4 pp
	Romania*	Mandatory Personal plans		15.3%	+1.2 pp	-1.3 pp
	Slovak	2nd pillar		11.6%	+4 pp	-3.8 pp
	Latvia	Personal plans L		22.6%	+2 pp	-2.2 pp
	Latvia	Personal plans NL		28.3%	+2.3 pp	-2.6 pp
	Portugal	Occupational DC plans		6.9%	+0.6 pp	-0.7 pp
	Portugal	Personal plans NL		20.8%	+1.8 pp	-2.1 pp
	Slovenia	Personal plans L		20.4%	+1.8 pp	-2 pp
	Hungary	Personal plans NL		15.5%	+1 pp	-1.1 pp
	Mexico	Personal plans L		21.9%	+1.9 pp	-2.2 pp
	FYR of	Mandatory pension funds		10.1%	+0.8 pp	-0.9 pp
	Macedonia	Voluntary pension funds		20.4%	+1.6 pp	-1.8 pp
Cluster C	Albania	Occupational DC plans, Pe	ersonal plans L	32.3%	+2.7 pp	-3.1 pp
	Costa Rica	ROP (Régimen Obligatorio	o de Pensiones)	8.0%	+0.7 pp	-0.8 pp
	Romania*	Voluntary Personal plans		36.3%	+2.8 pp	-3.1 pp
Cluster D	Slovak	3rd pillar		28.8%	+2.8 pp	-3.1 pp
Cluster D	Latvia	Occupational DC plans		7.3%	+0.6 pp	-0.7 pp
Others	Brazil	Occupational plans		14.2%	+0.7 pp	-0.7 pp

Table 7. Sensitivity Analysis (variable: Investment return)

Ch	nile	Personal plans L	12.7%	0 pp	0 pp
Ter	-1	Occupational plans	4.6%	+0.4 pp	-0.5 pp
100	eland	Personal plans	11.1%	+1 pp	-1.1 pp
Isr	ael	DC Plans	8.9%	+0.6 pp	-0.6 pp
Ko	osovo	Occupational DC plans	31.4%	+2.4 pp	-2.7 pp
Sm	ain	Occupational DC plans	5.4%	+0.5 pp	-0.6 pp
sp	am	Personal plans NL	25.7%	+2.2 pp	-2.5 pp
Su	riname	Occupational DC plans	10.0%	0 pp	0 pp
T.,	al.org	Personal plans L	31.6%	+2.6 pp	-3 pp
1 u	пкеу	Personal plans NL	32.2%	+2.6 pp	-2.9 pp
Ur	uguay	Personal plans L	16.8%	0 pp	0 pp

Note: Figures in (*) are as of 2017 while others are as of 2016.

39. More interesting observation can be observed in the Tables 8. Fees on assets lower by 0.25 pp reduce charge ratios by 4.12 pp on average²¹ (+0.25 pp \rightarrow +4.36 pp). In some schemes where fees charged on assets are below 0.25%, the decrease in charge ratio is limited since fees cannot go below zero. This is why average impact on charge ratio is higher when fees increase. If we look at each pension scheme, it is worthwhile to note this effect is asymmetric; the impact on charge ratios is higher when fees on assets decrease compared to the case when fees increase. For example, one can see that in case of Poland, charge ratio increase 4.9 pp when fees on assets increase 0.25 pp, but decrease 5.3 pp when fees on assets decrease 0.25 pp. This tendency is the same with other fee structures, which can create higher incentives for jurisdictions to lower fees charged to members.

Table 8. Sensitivity test (Fees on Assets)

Classfor	Country	Dancian Sahama		Daga	Fees on	Assets
Cluster	Country	Pension Schel	Pension Scheme		+0.25pp	-0.25pp
	Poland*	Personal plans L		12.7%	+4.9 pp	-5.3 pp
	Mauritius	Occupational DC plans		16.6%	+4.7 pp	-5 pp
	Hong Kong*	Mandatory Provident Fund	(MPF)	30.2%	+3.7%p	-4 pp
	Australia	Occupational DC plans		13.0%	+4.9 pp	-5.2 pp
	Australia	Personal plans NL		26.2%	+4 pp	-4.3 pp
	Chana	Occupational DC plans		39.3%	+3.1 pp	-3.4 pp
Cluster A	Gilalla	Personal plans L		36.6%	+3.3 pp	-3.6 pp
	Liechtenstein	Occupational DC plans		10.2%	+5.1 pp	-5.5 pp
	Serbia	Occupational DC plans		35.2%	+3.4 pp	-3.7 pp
	Korea	Personal plans L		10.3%	+5.1 pp	-5.4 pp
	India	Personal plans		11.1%	+5 pp	-5.4 pp
	Nigeria Occupation	Occupational DC plans		39.9%	+3.1 pp	-3.3 pp
	Bulgaria	Occupational DC plans		10.3%	+5.1 pp	0 pp
		Occupational DC plans	(a) Salary	15.8%	+4.8 pp	0 pp
Classe			(b) Mixed	(b) Mixed 29.6%	+3.8 pp	-4.1 pp
	Dom*		Fund 0	17.1%	+4.6 pp	-4.9 pp
Cluster D	r ciu	Porconal plane I	Fund 1	23.8%	+4.2 pp	-4.5 pp
		r ersonar plans L	Fund 2	32.9%	+3.6 pp	-3.8 pp
			Fund 3	37.0%	+3.3 pp	-3.5 pp

²¹ Average fees on assets have dropped by 0.12 pp within four years (from 2014 to 2018) for 12 jurisdictions analysed in section 1.2.

				-		
			Fund 0	17.1%	+4.6 pp	-4.9 pp
		Demonal plane NI	Fund 1	36.9%	+3.4 pp	-3.7 pp
		reisonai pians NL	Fund 2	32.9%	+3.6 pp	-3.8 pp
			Fund 3	37.0%	+3.3 pp	-3.5 pp
	Romania*	Mandatory Personal plans		15.3%	+4.7 pp	-5.1 pp
	Slovak	2nd pillar		11.6%	+5 pp	-5.3 pp
	Latvia	Personal plans L		22.6%	+4.2 pp	-4.5 pp
	Latvia	Personal plans NL		28.3%	+3.9 pp	-4.1 pp
	Portugal	Occupational DC plans		6.9%	+5.3 pp	-5.7 pp
	Portugal	Personal plans NL		20.8%	+4.4 pp	-4.7 pp
	Slovenia	Personal plans L		20.4%	+4.4 pp	-4.7 pp
	Hungary	Personal plans NL		15.5%	+4.8 pp	-5.1 pp
	Mexico	Personal plans L		21.9%	+4.3 pp	-4.6 pp
	FYR of	Mandatory pension funds		10.1%	+5.1 pp	-5.5 pp
	Macedonia	Voluntary pension funds		20.4%	+4.4 pp	-4.7 pp
Cluster C	Albania	Occupational DC plans, Per	sonal plans L	32.3%	+3.6%p	-3.9 pp
	Costa Rica	ROP (Régimen Obligatorio de Pensiones)		8.0%	+5.2%p	-5.6 pp
	Romania*	Voluntary Personal plans		36.3%	+3.4 pp	-3.6 pp
Cluster D	Slovak	3rd pillar		28.8%	+3.8 pp	-4.1 pp
Cluster D	Latvia	Occupational DC plans		7.3%	+5.3 pp	-5.6 pp
	Brazil	Occupational plans		14.2%	+4.9 pp	-5.2 pp
	Chile	Personal plans L		12.7%	+5 pp	0 pp
	Icoland	Occupational plans		4.6%	+5.4 pp	-4.6 pp
	Icelaliu	Personal plans		11.1%	+5 pp	-5.4 pp
	Israel	DC Plans		8.9%	+5.2 pp	-5.6 pp
Others	Kosovo	Occupational DC plans		31.4%	+3.7 pp	-4 pp
Others	Spain	Occupational DC plans		5.4%	+5.4 pp	-5.4 pp
	Span	Personal plans NL		25.7%	+4 pp	-4.3 pp
	Suriname	Occupational DC plans		10.0%	+5.2 pp	0 pp
	Turkey	Personal plans L		31.6%	+3.7 pp	-3.9 pp
	TUIKEY	Personal plans NL		32.2%	+3.6 pp	-3.9 pp
	Uruguay	Personal plans L		16.8%	+4.8 pp	-0.4 pp

Note: Figures in (*) are as of 2017 while others are as of 2016.

40. Other sensitivity analyses are summarized in Tables 9. and 10. When fees on contributions drop by 0.75 pp, charge ratios decrease on average by 0.30 pp²² (+0.75 pp \rightarrow +0.61 pp), and when fees on performance drop by 2.5 pp, charge ratios decrease on average by 0.07 pp²³ (+2.5 pp \rightarrow +1.29 pp). Note that similar to the analysis with fees on assets, in some schemes where fees charged on contribution are below 0.75% (below 2.5% in case of performance fees), the decrease in charge ratio is limited since fees cannot go below zero. Also, no impact is observed for lowering fees for the schemes that did not charge fees on contributions or performances.

²² Average fees on contributions have dropped by 1.25 pp within four years (from 2014 to 2018) for six selected jurisdictions analysed in section 1.2

²³ Average fees on performances by 4.06 pp within four years (from 2014 to 2018) for three selected jurisdictions analysed in section 1.2

Classification	Country	Dangian Sahama		Daga	Fees on Contributions	
Cluster	Country	Pension Sch	eme	Base	+0.75 pp	-0.75 pp
	Poland*	Personal plans L		12.7%	+0.7 pp	-0.7 pp
	Mauritius	Occupational DC plans		16.6%	+0.7 pp	-0.7 pp
	Hong Kong*	Mandatory Provident Fund	d (MPF)	30.2%	+0.5 pp	0 pp
	Australia	Occupational DC plans		13.0%	+0.7 pp	0 pp
	Australia	Personal plans NL		26.2%	+0.6 pp	0 pp
	Ghana	Occupational DC plans		39.3%	+0.5 pp	0 pp
Cluster A	Gliana	Personal plans L		36.6%	+0.5 pp	0 pp
	Liechtenstein	Occupational DC plans		10.2%	+0.7 pp	-0.7 pp
	Serbia	Occupational DC plans		35.2%	+0.5 pp	-0.5 pp
	Korea	Personal plans L		10.3%	+0.7 pp	0 pp
	India	Personal plans		11.1%	+0.7 pp	0 pp
	Nigeria	Occupational DC plans		39.9%	+0.5 pp	0 pp
	Bulgaria	Occupational DC plans		10.3%	+0.7 pp	-0.7 pp
		Occupational DC plans	(a) Salary	15.8%	+0.8 pp	-0.7 pp
		1 1	(b) Mixed	29.6%	+0.6 pp	-0.6 pp
		Personal plans L	Fund 0	17.1%	+0.6 pp	0 pp
			Fund 1	23.8%	+0.6 pp	0 pp
	Peru*	1	Fund 2	32.9%	3% +0.7 pp 1% +0.7 pp 9% +0.5 pp 3% +0.7 pp 3% +0.6 pp 5% +0.6 pp 5% +0.6 pp 9% +0.5 pp 9% +0.6 pp 9% +0.5 pp 9% +0.7 pp 9% +0.7 pp 9% +0.6 pp	0 pp
		Personal plans NL Function	Fund 3	37.0%	+0.5 pp	0 pp
			Fund 0	17.1%	+0.6 pp	0 pp
			Fund 1	36.9%	+0.6 pp	-0.6 pp
			Fund 2	32.9%	+0.5 pp	0 pp
Cluster B			Fund 3	37.0%	+0.5 pp	0 pp
	Romania*	Mandatory Personal plans		15.3%	+0.7 pp	-0.7 pp
	Slovak	2nd pillar		11.6%	+0.7 pp	-0.2 pp
	Latvia	Personal plans L		22.6%	+0.6 pp	0 pp
	Latvia	Personal plans NL		28.3%	+0.5 pp	-0.5 pp
	Portugal	Occupational DC plans		6.9%	+0.7 pp	0 pp
	Portugal	Personal plans NL		20.8%	+0.6 pp	0 pp
	Slovenia	Personal plans L		20.4%	+0.6 pp	0 pp
	Hungary	Personal plans NL		15.5%	+0.7 pp	-0.7 pp
	Mexico	Personal plans L		21.9%	+0.6 pp	0 pp
	FYR of	Mandatory pension funds		10.1%	+0.7 pp	-1.8 pp
	Macedonia	Voluntary pension funds		20.4%	+0.6 pp	-0.6 pp
Cluster C	Albania	Occupational DC plans, P	ersonal plans L	32.3%	+0.5 pp	0 pp
	Costa Rica	ROP (Régimen Obligatori	o de Pensiones)	8.0%	+0.7 pp	0 pp
	Romania*	Voluntary Personal plans		36.3%	+0.5 pp	-0.5 pp
Cluster D	Slovak	3rd pillar		28.8%	+0.5 pp	0 pp
	Latvia	Occupational DC plans		7.3%	+0.7 pp	-0.5 pp
	Brazil	Occupational plans		14.2%	+0.7 pp	-0.7 pp
	Chile	Personal plans L		12.7%	+0.7 pp	-0.7 pp
Others	Iceland	Occupational plans		4.6%	+0.7 pp	0 pp
Guiers		Personal plans		11.1%	+0.7 pp	0 pp
	Israel	DC Plans		8.9%	+0.7 pp	-0.7 pp
	Kosovo	Occupational DC plans	Occupational DC plans		+0.5 pp	-0.5 pp

Table 9. Sensitivity test (Fees on Contributions)

	C	Occupational DC plans	5.4%	+0.7 pp	0 pp
	Personal plans NL	25.7%	+0.6 pp	0 pp	
	Suriname	Occupational DC plans	10.0%	+0.7 pp	-0.7 pp
1	Turkey	Personal plans L	31.6%	+0.5 pp	-0.2 pp
		Personal plans NL	32.2%	+0.5 pp	-0.5 pp
	Uruguay	Personal plans L	16.8%	+0.7 pp	-0.7 pp

Note: Figures in (*) are as of 2017 while others are as of 2016.

				D	Fees on Performances	
Cluster	Country	Pension Sci	Pension Scheme		+2.5 pp	-2.5 pp
	Poland*	Personal plans L		12.7%	+1.5 pp	0 pp
	Mauritius	Occupational DC plans		16.6%	+1.4 pp	0 pp
	Hong Kong*	Mandatory Provident Fu	nd (MPF)	30.2%	+1.1 pp	0 pp
	Australia	Occupational DC plans		13.0%	+1.4 pp	0 pp
	Australia	Personal plans NL		26.2%	+1.2 pp	0 pp
	Chana	Occupational DC plans		39.3%	+0.9 pp	0 pp
Cluster A	Gilalla	Personal plans L		36.6%	+1.0 pp	0 pp
	Liechtenstein	Occupational DC plans		10.2%	+1.5 pp	0 pp
	Serbia	Occupational DC plans		35.2%	+1.0 pp	0 pp
	Korea	Personal plans L		10.3%	+1.5 pp	0 pp
	India	Personal plans		11.1%	+1.5 pp	0 pp
	Nigeria	Occupational DC plans		39.9%	+0.9 pp	0 pp
	Bulgaria	Occupational DC plans		10.3%	+1.5 pp	-1.6 pp
		Occupational DC plans	(a) Salary	15.8%	+1.4 pp	0 pp
		Occupational DC plans	(b) Mixed	29.6%	+1.1 pp	0 pp
		Demonstraters I	Fund 0	17.1%	+1.4 pp	0 pp
			Fund 1	23.8%	+1.2 pp	0 pp
	D*	Personal plans L	Fund 2	32.9%	+1.0 pp	0 pp
	Peru*		Fund 3	37.0%	+1.0 pp	0 pp
			Fund 0	17.1%	+1.4 pp	0 pp
		Personal plans NL	Fund 1	36.9%	+1.0 pp	0 pp
			Fund 2	32.9%	+1.0 pp	0 pp
Cluster B			Fund 3	37.0%	+1.0 pp	0 pp
	Romania*	Mandatory Personal plan	18	15.3%	+1.4 pp	0 pp
	Slovak	2nd pillar		11.6%	+1.5 pp	-1.5 pp
	Latvia	Personal plans L		22.6%	+1.3 pp	0 pp
	Latvia	Personal plans NL		28.3%	+1.1 pp	0 pp
	Portugal	Occupational DC plans		6.9%	+1.6 pp	0 pp
	Portugal	Personal plans NL		20.8%	+1.3 pp	0 pp
	Slovenia	Personal plans L		20.4%	+1.3 pp	0 pp
	Hungary	Personal plans NL		15.5%	+1.4 pp	0 pp
	Mexico	Personal plans L		21.9%	+1.3 pp	0 pp
	FYR of	Mandatory pension fund	s	10.1%	+1.5 pp	0 pp
	Macedonia	Voluntary pension funds		20.4%	+1.3 pp	0 pp
Cluster C	Albania	Occupational DC plans,	Personal plans L	32.3%	+1.1 pp	0 pp
	Costa Rica	ROP (Régimen Obligato	rio de Pensiones)	8.0%	+1.6 pp	0 pp
	Romania*	Voluntary Personal plan	5	36.3%	+1.0 pp	0 pp

Table 10. Sensitivity test (Fees on Performances)

Cluster D	Slovak	3rd pillar	28.8%	+1.1 pp	-0.5 pp
Cluster D	Latvia	Occupational DC plans	7.3%	+1.6 pp	0 pp
	Brazil	Occupational plans	14.2%	+1.4 pp	0 pp
	Chile	Personal plans L	12.7%	+1.5 pp	0 pp
	Icolond	Occupational plans	4.6%	+1.6 pp	0 pp
	Iceland	Personal plans	11.1%	+1.5 pp	0 pp
	Israel	DC Plans	8.9%	+1.5 pp	0 pp
Othors	Kosovo	Occupational DC plans	31.4%	+1.1 pp	0 pp
Others	Spain	Occupational DC plans	5.4%	+1.6 pp	0 pp
	Span	Personal plans NL	25.7%	+1.2 pp	0 pp
	Suriname	Occupational DC plans	10.0%	+1.5 pp	0 pp
	Tuelcon	Personal plans L	31.6%	+1.1 pp	0 pp
	Turkey	Personal plans NL	32.2%	+1.1 pp	0 pp
	Uruguay	Personal plans L	16.8%	+1.4 pp	0 pp

3. Conclusions [to be further streamlined]

41. This is the third update in the series of papers that research costs and fees in private pension systems. The paper reviews *fees charged in 88 different pension schemes in 45 selected jurisdictions* (40 belonging to IOPS²⁴). *Fees on assets* were charged in 79 schemes (90%) in 41 jurisdictions, *on contributions* in 23 jurisdictions (47% of analysed schemes), *on returns* (performances fees in 10 jurisdictions (23% schemes), and *on salaries* in 5 jurisdictions (8% of schemes). Also some pension schemes imposed *less common charges* such as transfer fee, redemption fee, entry fee, switching fee, exit fee which are mostly expressed in fixed terms.

42. 40 pension schemes (i.e. 45% of the sample) charged fees on *one component only*; either on contributions, salaries, assets or returns²⁵. 35 schemes (40%) applied fees charged on *two different components*, and 12 schemes (14%) had fees charged on *three components*.

43. Many (31) jurisdictions introduced *legal caps on fees*. In most cases, the average fees do not equal the legal cap, which can be explained as a positive effect of market competition. However in 11 out of 37 schemes average fees were very close to the legal maximum values stipulated by governments.

44. In 14 jurisdictions for which we had sufficient data for both 2014 and 2017, the major tendency is *the decrease of average fees* as compared to 2014. With regard to legal maximum fees, nine countries (Bulgaria, Costa Rica, Czech Republic, FYR of Macedonia, Lithuania, Poland, Slovak Republic, Spain, and U.K.) *lowered their fee ceilings*, whereas three others (Columbia, Hungary and Serbia) *increased them*. Four jurisdictions (Albania, Ghana, Israel, and Romania) *did not change them*. There were no changes in the analysed group with regard to *the structure of fees*.

45. The issue here is whether the fees reported in the paper represent all or only part of the cost and fee elements of the pension plan/funds. We looked at this issue by analysing *extent to which various cost and fee elements are covered by fees* charged from the pension plan members. The direct comparison of fees and charges across jurisdictions may lead to inaccurate conclusions due to various reasons including different coverage of pension fees in each jurisdiction. Therefore we grouped jurisdictions by *clusters*, i.e. by groups of countries with identical or very similar items already covered by pension fees. We tentatively

²⁴ Croatia, Latvia, Slovenia, Sweden, Uruguay are five non-IOPS members included in this analysis.

²⁵ For simplicity, we do not take here into consideration "others fees" when calculating these numbers.

sorted them out in the descending order, from cluster A (being the most comprehensive) to cluster E (the least comprehensive), of the extent to which the underlying data incorporate the full range of fees, charges and expenses that ultimately affect member benefits.

46. The respondents do not have knowledge on the quantified impact of cost items that are not covered by the fees. This finding calls for some action by pension supervisors with regard to obtaining a better picture of cost elements that are included and not included in fees charged to the members and making assessment of their role in total member reductions of pension savings.

47. The paper calculated charge ratios to analyse the impact of fees and charges on the final value of pension savings. For example, a charge ratio for 40-year horizon shows how much higher pension savings would have been at the end of 40-years saving period had there been no fees charged to the pension scheme member. Therefore, charge ratios illustrate the compounded effect of applying fees over the very long term, an effect somehow similar to calculation of mortgage loan costs. The average values of 40-years charge ratios range follows:

- Cluster A (11 jurisdictions, 13 schemes): 22.4%;
- Cluster B (8 jurisdictions, 19 schemes): 23.3%
- Cluster C (4 jurisdictions, 6 schemes): 21.4%
- Cluster D (2 jurisdictions, 2 schemes): 18.1%
- Others (unclassified 9 jurisdictions, 12 schemes): 17.0%

48. Cluster A is the most comprehensive as fees charged to the members in this group of jurisdictions tend to cover all main cost and fee elements indicated in Table 3. Lower values for clusters C, D and others are very likely to be underestimated due to the fact that fees charged in these jurisdictions cover fewer important cost and fee elements, and may therefore lower than in clusters A and B.

49. We did not find substantial differences in charge ratios due to the number of fee components. The average charge ratio for pension schemes with one fee component was 20.6%, for schemes with two components 21.9% and for schemes with three components 24.2%. respectively. Such differences are not considerable taking into account the differences of charge ratios in each type of schemes.

50. Clearer difference in average charge ratio was observed due to the nature of the scheme. The average charge ratios were as follows: 'Occupation DC plans' (19.3%), 'Personal plans L' (22.8%) and 'Personal plans NL' (27.3%), 'Others (unclassified)' (17.1%). The result suggest that occupational DC pension schemes tend to be generally much more cost effective than personal schemes, especially the ones where there is no direct link with employment.

51. Compared to the previous exercise done in 2014, charge ratios (calculated for 40-year horizon and 5% rate of return) have dropped in 14 schemes out of 20 for which we had comparable data. This finding is in line with the tendency of decreased average fees in most of the countries.

52. Notwithstanding general limitations related to cross-country comparisons of fees and charge ratios, the cluster approach allocates jurisdictions to more homogenous groups.

53. The paper also undertook a sensitivity analysis of charge ratios by modifying by one quarter (25%) average fees in each component (investment return: $\pm 2pp$ for 3% base return, fees on assets: $\pm 0.25pp$, fees on contributions: $\pm 0.75pp$, fees on performance: $\pm 2.5pp$). Changes in investment return have relatively small impact on the charge ratio: a 2pp decrease (from 3% to 1%) impacts the ratio by less than 5pp in all cases (on average: -1.95pp). Fees on assets lower by 0.25 pp reduce charge ratios by 4.12 pp on

average. When fees on contributions drop by 0.75 pp, charge ratios decrease on average by 0.30 pp, and when fees on performance drop by 2.5 pp, charge ratios decrease on average by 0.07 pp.

Proposed updated time frame:

Summer- Autumn 2018	Final draft of paper – approval to publish it in IOPS Working
	i aper series

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