

PENSION SAVINGS

The Real Return

2016 EDITION



BF BETTER FINANCE

The European Federation of Investors and Financial Services Users
Fédération Européenne des Épargnants et Usagers des Services Financiers

Pension Savings: The Real Return

2016 Edition

A Research Report by BETTER FINANCE

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Table of Contents

Foreword	7
Executive Summary	14
General Report	21
Introduction.....	21
Country profiles.....	22
Return attribution	27
Conclusion	42
Recommendations.....	46
Country Case: Belgium	48
Introduction.....	48
Pension Vehicles.....	50
Charges.....	57
Taxation and conditions to claim supplementary pensions	62
Pension Returns.....	66
Conclusions.....	75
ANNEX: Case study of a Branch 23 - “Assurance Groupe” occupational pension plan	77
Country Case: Bulgaria	79
Introduction.....	79
Pension vehicles	80
Charges.....	87
Taxation	88
Pension Returns.....	89
Conclusion	100
Country Case: Denmark	102
Introduction.....	102
Pension Vehicles.....	108
Charges.....	112
Taxation	113
Pension Returns.....	114
Conclusion	119
Country Case: Estonia	121
Introduction.....	121
Pension Vehicles.....	127
Charges.....	130
Taxation.....	136
Pension Returns.....	138
Conclusions.....	150
Country Case: France	152
Introduction.....	152
Savings and investment products used for retirement	152
Charges.....	155
Taxation	156
Pension and long term savings returns	157
Conclusions.....	170
Country Case: Germany	171
Introduction.....	171
Pension Vehicles.....	172
Charges.....	180
Taxation	183
German capital markets returns.....	186





Pension Returns.....	188
Conclusions.....	195
Country Case: Italy.....	196
Introduction.....	196
Pension Vehicles.....	201
Charges.....	205
Taxation.....	206
Pension Returns.....	207
Conclusions.....	212
Country Case: Latvia	214
Introduction.....	214
Pension Vehicles.....	222
Charges.....	230
Taxation.....	236
Pension Returns.....	238
Conclusions.....	245
Country Case: Poland	246
Introduction.....	246
Charges.....	260
Taxation.....	266
Pension Returns.....	266
Conclusions.....	273
Country Case: Romania	275
Introduction.....	275
Pension Vehicles.....	281
Charges.....	286
Taxation.....	289
Pension Returns.....	290
Conclusions.....	298
Country Case: Slovakia	300
Introduction.....	300
Pension Vehicles.....	306
Charges.....	310
Taxation.....	312
Conclusions.....	325
Country Case: Spain	327
Introduction.....	327
Pension Vehicles.....	329
Fees and commissions.....	334
Taxation.....	336
Pension Returns.....	341
Conclusion	349
Country Case: Sweden	353
Introduction.....	353
Pension vehicles	360
Charges.....	364
Taxation.....	369
Conclusion	370
Country Case: The Netherlands.....	372
Introduction.....	372
Pension vehicles	376
Charges.....	380
Taxation.....	382

Pension returns	383
Conclusion	393
Country Case: United Kingdom	396
Introduction.....	396
Pension Vehicles.....	400
Charges.....	403
Taxation.....	405
Pension Returns.....	406
Conclusions.....	410
Bibliography	412





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Pension Savings: The Real Return

2016 Edition

Foreword

One can supervise only what one can measure:

Why is this long term savings performance report (unfortunately) unique?

The worst European retail services market

Investment and private pension products are persistently the worst performing retail services markets of all throughout the European Union according to the European Commission's consumer markets scorecards¹.

The Commission also points out that "other reasons for not saving long-term are the often poor performance of financial intermediaries to deliver reasonable return and costs of intermediation"².

Pension savings also appear to be one of the few retail services where neither the customers nor the public supervisors are properly informed about the real net performance of the services rendered for customers. These features of the pension savings markets may well be connected of course.

The actual performance of this market is unknown to clients and to regulators

Indeed, apart from the OECD (the Organisation for Economic Co-operation and Development) publications on the real return of certain "pension funds"³, the contributors to this research report could not find any other more complete or more recent published comprehensive series of net real pension savings returns for EU countries. Even the recent report produced for the European Commission on

¹http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/docs/cms_10_factsheet_en.pdf.

² European Commission - Staff Working Document on long term financing of the EU economy (2013)

³ <http://www.oecd.org/finance/private-pensions/oecd-pensions-outlook2012.htm> and <http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2015.pdf>





“the position of savers in private pension products”⁴ relies only on the above-mentioned OECD report as far as returns and performance are concerned.

Moreover, as analysed in the previous editions of Better Finance’s research on the real return of pension savings, the extremely useful data reported by the OECD⁵ are unfortunately quite incomplete:

- The most recent OECD publication on pension returns, “Pension Markets in Focus 2015”, provides ten year returns (Dec. 2004 – Dec. 2014) maximum which is quite a short time frame for such long-term products;
- Several EU countries are missing for these series of ten year data, including Bulgaria, France, Latvia, Poland, Romania, Slovakia and Sweden.
- A part of occupational pension products, and most - if not all - individual pension products are missing as well, as OECD performance data include only “pension funds” *stricto sensu*, and exclude all “pension insurance contracts and funds managed as part of financial institutions (often banks or investment companies), such as the Individual Retirement Accounts (IRAs) in the United States”;
- It is doubtful that the OECD was able to capture all expenses borne by pension savers - entry fees for example - because the OECD relies mostly on reporting by national authorities and, typically, this is not something covered by them;
- Finally, OECD figures are all before taxes only.

This means the European financial supervisors - the European Commission and the European financial supervisory authorities (Securities and Markets, Insurance and Pensions, and Banking) – do not know the actual performance of the services they are supposed to regulate and supervise.

⁴ Study on the position of savers in private pension products – prepared for the DG Internal Market of the European Commission and the Financial Services User Group (published in August 2013)

⁵ Namely the OECD 2015 “Pension Markets in Focus” (1, 5 and 10 year data).

The failure of European supervisors to report “consumer” performance data

However, the European Supervisory Authorities (ESAs) have a legal duty to collect, analyse and report data on “consumer trends” in their respective fields (article 9(1) of the European Regulations establishing the three ESAs).

To our knowledge, neither the Banking⁶ nor the Insurance and Pensions⁷ Authorities provide any reporting on the performance of retail savings products in their fields of competence (respectively bank savings products, and life insurance and pension saving products). The Securities and Markets authority included “retail investor” portfolio returns in past “Trends, Risks and Vulnerabilities” reports, but stopped doing it in 2016⁸. In addition, these data were actually capital markets performance data, not retail investments performance ones, based on the five year average monthly returns on a portfolio composed of:

- 47% stocks (Stoxx600: large and mid cap European equities),
- 42% deposits (1 year Euribor),
- and 11% bonds (Barclays Euro Aggregate 7-10Y).

Unfortunately such a portfolio has little in common with average retail investor portfolios, which - according to ESMA (the European Securities and Markets Authority) itself in the following page of its Report - is composed of⁹:

- 35% deposits (but for the vast majority certainly not returning the one year “interbank” rate -Euribor- and not even benchmarked against it),
- 32% insurance and pension funds,
- 17% stocks,
- 7% mutual funds
- and 5% bonds.

Performance: capital markets are not a proxy for retail investments

And indeed, our experience and findings clearly confirm that capital market performances have unfortunately very little to do with the performances of the

⁶ EBA – <http://www.eba.europa.eu/documents/10180/1360107/Consumer+Trends+Report+2016.pdf>

⁷ EIOPA – https://eiopa.europa.eu/Publications/Reports/EIOPA-BoS-15-233%20-%20EIOPA_Fourth_Consumer_Trends_Report.pdf

⁸ ESMA – Trends, Risks, Vulnerabilities Report Nr. 1, March 2016 and Nr. 1, March 2015

⁹ ESMA – Trends, Risks, Vulnerabilities Report Nr. 1, March 2014; this detailed breakdown of EU households’ financial assets was not longer published afterwards by ESMA.





actual savings products distributed to EU citizens. And this is particularly true for long-term and pension savings. The main reason for this is the fact that most EU citizens do not invest the majority of their savings directly into capital market products (such as equities and bonds), but into “packaged products” (such as investment funds, life insurance contracts and pension products).

One could then argue that insurance and pension products have similar returns to a mixed portfolio of equities and bonds, since those are indeed the main underlying investment components of insurance and pension “packaged” products. This is actually how ESMA came up with its “retail investor” portfolio return computation. But this was no more than a “leap of faith”, ignoring such realities as fees and commissions charged on retail products, portfolio turnover rates, manager’s risks, etc. Charges alone totally invalidate this approach.

The tables below show two striking – but unfortunately not uncommon – real examples of this largely ignored reality: capital market performance is not a valid proxy for retail investment performance and the main reasons for this are the fees and commissions charged directly or indirectly to retail customers. The European Commission itself publicly stressed this fact (see footnote 2 above).

Table FW 1. Real case of a Belgian occupational pension insurance

Capital markets vs. Belgian Occupational pension insurance 2000-2016* performance

Capital markets (benchmark index) performance**

Nominal performance	100%
Real performance (before tax)	44%

Pension insurance performance (same benchmark)**

Nominal performance	33%
Real performance (before tax)	-4%

* To 30/06/2016

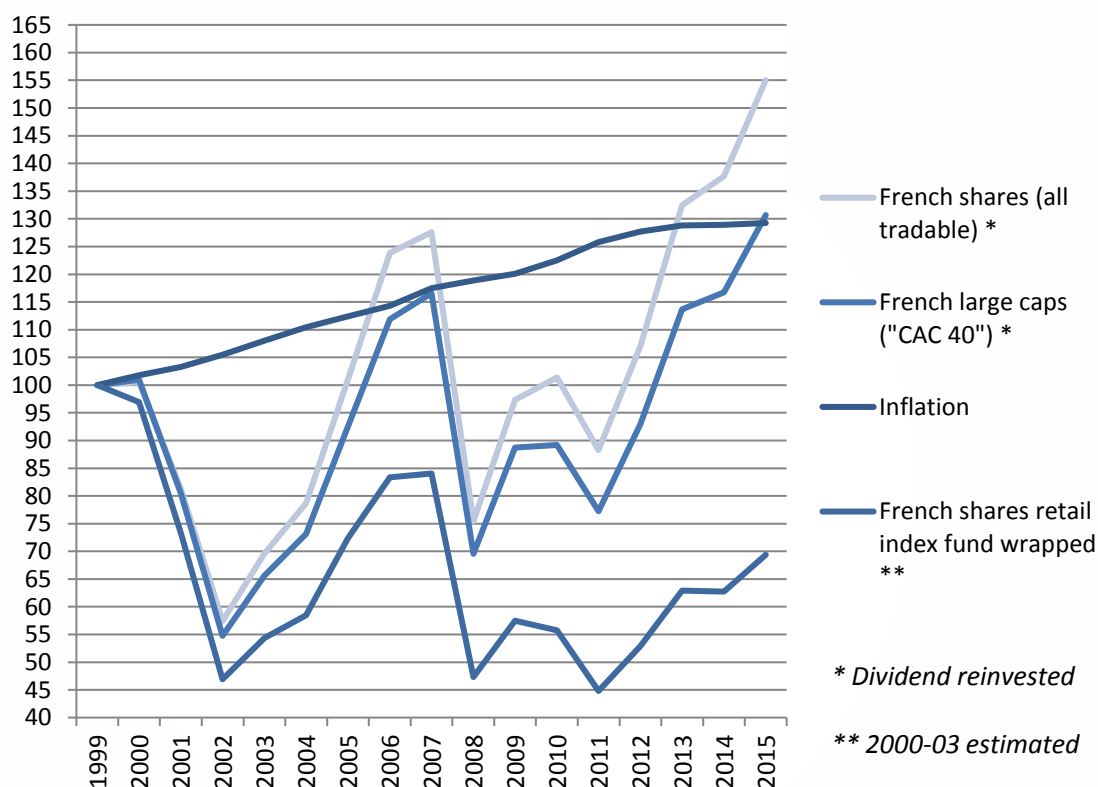
** 50 % Equity / 50 % bonds (MSCI World equity index¹⁰ and JPM Euro Govt Bond Index invested on 31/12/1999)

Sources: Better Finance, provider

¹⁰ « Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2015, J.P. Morgan Chase & Co. All rights reserved. » (J.P. Morgan).

In this real case, the pension product's nominal return amounted to just a third of the return of its chosen capital market benchmark. Belgian occupational pension insurance funds ("Groupe Assurance Pension") unfortunately don't disclose overall annual fees (fees charged at the underlying "unit" of fund level plus those charged at the insurance contract level; see Belgian case study annex in this report).

Graph FW I. Graph1. Real case of French retail equity fund



Source: Better Finance research, provider

In the case illustrated above, a so called retail CAC 40 "index" fund¹¹ actually under-performed the relevant equity index by 8300 basis points after eleven years (+28% instead of +99% for the benchmark from 2003 to 2015), with the performance gap fully attributable to fees. It is quite surprising that with such a huge return gap vis-à-vis its benchmark, this fund is still allowed to portray itself as an "index-tracking" one.

¹¹ Wrapped in an insurance contract as suggested by the seller.





Another issue for European savers revealed in this graph is the use by investment product providers of narrow (large cap only or “blue chip”) equity indexes instead of broader ones, although they claim the former to represent “the equity markets” as a whole. This practice has proven detrimental both:

- to investors as this graph shows (the French large cap equity market underperformed the actual global French equity market by 24 percentage points over the last 16 years: +31% versus +55%);
- and to European SMEs since a lot of investment inflows are thus directed to large caps only, instead of broader instruments including mid and small caps.

The ESMA approach of mistaking capital market returns for retail investment ones, is unfortunately widespread in available public research. This is, for example, the case of the latest research report published by the European Commission on this topic (see footnote 4 above).

The European Union was completely right to legally require the Supervisory Authorities to collect, analyse and report on European savers “trends”. We learn in business schools that one can manage and supervise only what one can measure. And one major legal responsibility assigned to the European supervisory authorities is to “take a leading role in promoting transparency, simplicity and fairness in the market for consumer financial products or services across the internal market, including by... collecting, analysing and reporting on consumer trends...”

2015: The European Commission requires an analysis of the actual net performance of pension savings

On 30 September 2015, the European Commission released its Action Plan on building a Capital Markets Union. Better Finance was happy to see that the lack of transparency and of analysis of the real net performance of pension savings is addressed in this Action Plan: “To further promote transparency in retail products, the Commission will ask the European Supervisory Authorities (ESAs) to work on the transparency of long-term retail and pension products and an analysis of the actual net performance and fees, as set out in Article 9 of the ESA Regulations”.

However, as of August 2016, the ESAs had taken no action to this end and their draft work plans for 2017 do not refer to this Action either.

A customer-based approach to pension savings returns

It is the ambition and challenge of this research initiated by Better Finance and its partners to collect, analyse and report on the actual past performance of long-term and pension savings products for the customer.

Our first report in 2013 established the methodology that is also used for this much-expanded 2016 edition, covering 85% of the EU population.

The net real return of pension saving products should be:

- the long-term return (at least covering two full economic and stock market cycles, since even long-term returns are very sensitive to entry and exit dates. This time, we were able to collect up to 16 years of performance data in most countries covered);
- net of all fees, commissions and charges borne directly or indirectly by the customer;
- net of inflation (since for long-term products only the real return matters; that is the right approach taken by OECD as mentioned above);
- when possible, net of taxes borne by the customer (in the USA it has been mandatory for decades to disclose the past performance of mutual funds after tax in the summary of the prospectus).

The following executive summary, general report and country reports show that this is not an impossible but a very challenging task for an independent expert centre such as Better Finance, since quite a lot of data are simply not available at an aggregate and country level, especially for earlier years. The complexity of the taxation of pension savings in EU countries makes it also extremely difficult to compute after tax returns. There is still a long way to go before achieving “transparency, simplicity and fairness in the market for consumer financial products” as engraved in EU Law.





Pension Savings: The Real Return

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Executive Summary

As stated by the European Commission in a 2013 staff working document, “the crisis has increased savers’ distrust in financial institutions and markets”¹². Similarly, the latest EU Consumer Markets Scorecard¹³ once again ranks pensions and investments as the worst consumer markets of all.

Coverage

The present report documents a principal component of, and reason for, this distrust, namely the frequently poor performance of private pension products, once inflation, charges and (when possible) taxes are deducted from nominal returns and when compared to the relevant capital market benchmarks. It significantly broadens the geographical coverage of the initial research report by Better Finance entitled “Private Pensions: the Real Return”, first published in June 2013. Belgium, Bulgaria, Estonia, Germany, Italy, Latvia, Poland, Romania, Slovakia, Sweden, The Netherlands and the United Kingdom have been added to the initial group composed of Spain, France and Denmark. It also extends the period of time covered in order to measure performance over 16 years from 2000 to 2015 in as far as data was available. As such, the Better Finance research now covers 86% of the EU population.

The countries under review can be divided into three categories:

- countries like The Netherlands, Denmark and the United Kingdom at one end, where pension funds and life insurance assets represent far more than the annual GDP (Gross Domestic Product) and where the real returns of private pensions is of crucial importance;

¹² Commission Staff Working Document “Long-Term Financing of the European Economy” accompanying the Green Paper on Long Investment, European Commission, 25 March 2013, page 10 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2013:0076:FIN:EN:PDF>

¹³ http://ec.europa.eu/consumers/consumer_evidence/consumer_scoreboards/10_edition/docs/cms_10_factsheet_en.pdf

- at the opposite end, countries like Italy and Spain, where pensions mainly depend on the quality and sustainability of pay-as-you-go (PAYG) schemes;
- and the other countries in an intermediate position, where the standard of life of retirees depends both on the sustainability of PAYG systems and the returns of private savings;
- Sweden is an original case where the pillar I mandatory pension is now, for a small part, funded instead of PAYG.

Pension returns drivers

Inflation has declined in recent years in a majority of countries, thus reducing the gap between nominal and real performance. The net real returns across countries are driven by:

- the asset allocation of pension products,
- the performance of capital markets into which pension products are invested,
- the asset managers' skills in terms of picking securities and market timing.
- net real returns of private pensions are however most affected and influenced by the fees and commissions charged by asset managers and other financial intermediaries,
- as well as, ultimately, the tax burden.

Very positive Capital market returns (1999- 2015)

We have chosen a period covering the last 16 years because pension savings returns should be measured on a long-term horizon, and because it includes two market upturns (2003-2006 and 2009-2015) and two downturns (post dotcom bubble of 2001-2003 and the 2008 financial crisis). It is on this period that we based our analysis in as far as data were available. The choice of the time reference actually has a material impact on real returns: in order to keep our research objective, we paid special attention to our choice of period to cover¹⁴.

Starting this year, we also measured the performance of the same investment repeated year after year over the last 16 years for one case (French corporate savings and pension plans; see French case section) to illustrate the impact of

¹⁴ Ideally, one should look at even longer term historical returns but the data are, for the most part, not available for the earlier years.



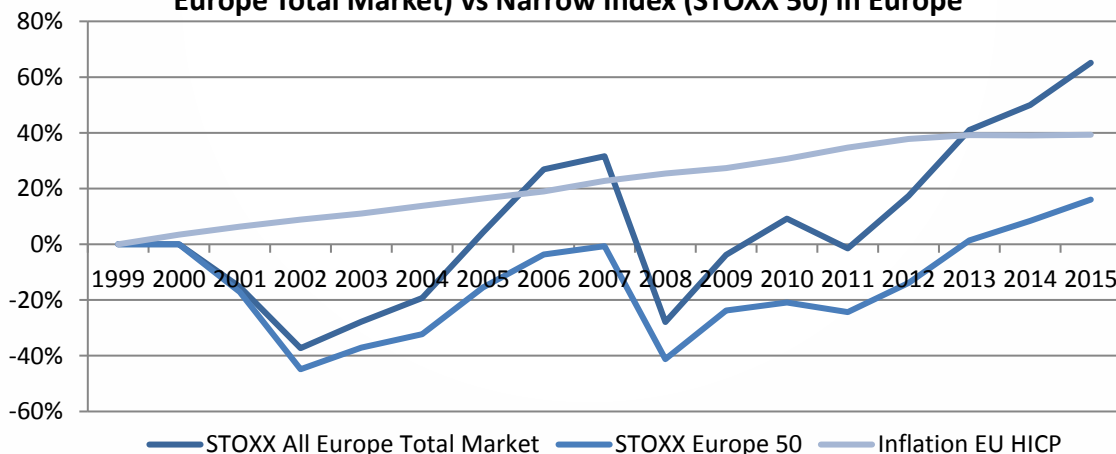


regular pension savings over 16 years versus a one shot investment 16 years ago. However the two are not fully comparable.

Since the beginning of the XXIst century (from 31 December 1999 to 31 December 2015), capital market returns have been positive (slightly for equities and very much for bonds):

- On a nominal basis (before taking inflation into account), world stock markets have grown in value (in euros) by 57%¹⁵, the US stock market by 69%¹⁶ and the European ones by 53%¹⁷.
- On a real basis (net of inflation), European stock market returns also returned to positive cumulated returns by 2015 (+12%) as shown in the graph below, although some European countries such as Greece and Italy are still in negative territory. Several large cap markets also continue to struggle with negative returns. For example, at European level, the very narrow “Stoxx 50” index is still in negative territory after inflation (-23%) but includes only 50 European stocks.

Graph EX 1 - Cumulated Performance of Wide Index (STOXX All Europe Total Market) vs Narrow Index (STOXX 50) in Europe



* Inflation used is HICP (2015 = 100), European Union 28. Monthly data index

* We used the MSCI Europe GR index as a proxy for the 2000 and 2001 performances because we could not find those years for the STOXX All Europe Total Market index (these two indices are broad ones).

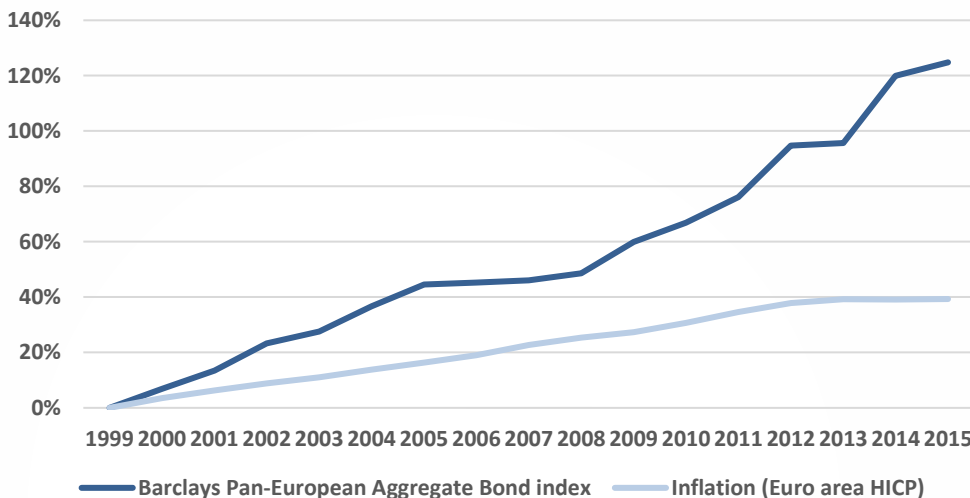
¹⁵ As measured by the MSCI World GR index in euros.

¹⁶ As measured by the MSCI USA GR index in euros.

¹⁷ As measured by the MSCI Europe GR index in euros.

- Bond markets enjoyed an exceptional phase and have performed extremely well thanks to the continuous decline of interest rates over the last 15 years: +120 % on a nominal basis, and +61% in real terms (inflation deducted).

Graph EX 2. Cumulated Performance of European Bond Index



Sources: Barclays Pan-European Total Returns & Eurostat HICP Europe 28 Monthly

Overall, a direct balanced (50% in European equities / 50% in Euro bonds¹⁸) investment from a European saver in capital markets at the eve of the century¹⁹ would have returned a hefty +105% in nominal terms (gross of fees and taxes) and +47% in real terms, which means an annual average real return of +2.5%.

Pension products underperformed

Unfortunately our research findings show that most pension savings did not, on average, return anything close to those of capital markets, and in too many cases even destroyed the real value for European pension savers (i.e. provided a negative return after inflation).

There are striking differences between the asset allocation of pension funds across countries and products. Mutual funds are the main component of investments in Belgium and in Germany. This is also the case for the United Kingdom, although to

¹⁸ Indices used are Stoxx All Europe Total Market (MSCI Europe for first 2 years) for equities and Barclays Pan European Aggregate for bonds.

¹⁹ Rebalanced every year





a lesser extent, where mutual funds tend to replace direct holdings of shares, whose weight fell from 57% to 20% between 2001 and 2014. Conversely, the preponderance of shares (especially from Danish companies) in Denmark to a large extent explains the good performance of pension products in this country. Equities also dominate in Sweden. Bonds dominate in France (life insurance and public employee funds), Italy, Poland (employee pension funds), Spain, Romania and Latvia, with investments chiefly consisting of government bonds. Overall, the period 2000-2015 shows a decline of allocations to equities and an increase of public debt in pension funds allocation, a trend that is today questionable for savers because it may diminish return prospects, as bond interest rates are now at an all-time low.

The decrease in government bond interest rates since 1999 had a positive impact on outstanding assets, especially in countries where this asset class dominates, but it reduces the capacity to offer a good remuneration on new investment flows.

Fees and commissions substantially reduce performances of pension products, especially for personal “packaged” pension products, and for unit-linked life insurance in particular. Charges are often complex, opaque and far from being harmonised between different pension providers and products. Some countries have begun to impose overall caps on fees for some pension products (UK, Romania, Latvia).

Finally, taxes also reduce the performance of investments. The general model applied to pension products is deferred taxation, with contributions being deducted from the taxable income while pensions are taxed. The accumulated capital can be withdrawn at least partially at retirement as a lump sum, which is often not taxable. Our calculations of net returns are based on the most favourable case, i.e. assuming that the saver withdraws the maximum lump sum possible.

Pension returns per country

The best performing national pension products over the last 16 years (end of 1999 to end of 2015) are the Dutch pension funds with an overall real return of + 50% (+2,56% yearly average), even outperforming a direct balanced investment in European capital markets (+47%). The average yearly real returns of pension funds after charges and tax have reached around 4% in Denmark over the period 2002-2013²⁰ and around 4% in Poland over the period 2002-2015²¹. Conversely we found

²⁰ We could not find earlier aggregate returns as for Poland, Bulgaria, Estonia and Latvia.

negative real returns in Bulgaria (universal and occupational pension funds 2004-2015), in France (unit-linked life insurance contracts 2000-2015), in Italy (Open funds 2000-2015 and PIP Unit-Linked 2008-2015), in Latvia (state funded pension funds 2003-2015), in Slovakia (pillar II funded pension, 2005-2015), in Spain (unit-linked 2000-2015) and in the Netherlands (insurance companies, 2000-2015).

Unit-linked insurance products seem to struggle to perform everywhere, mainly due to the high (most often undisclosed) overall level of multi-layer fees.

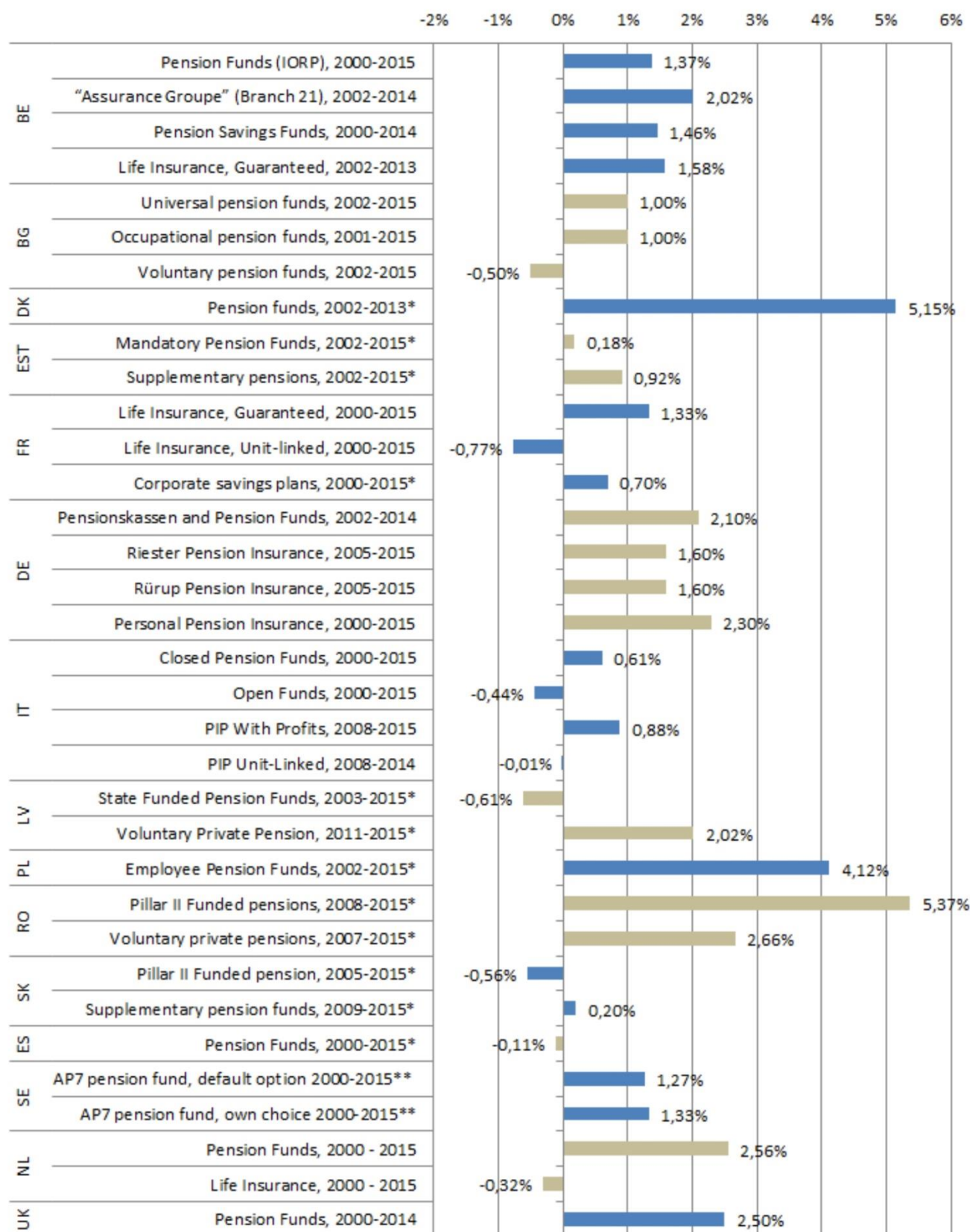
These poor or even negative real returns have led public authorities in some Member States to take measures in order to ensure transparency and cap the fees charged by certain pension providers (in countries such as the UK, Romania and Latvia). The issue is crucial, especially in countries like the United Kingdom where the standard of life of retirees depends heavily on pre-funded pension schemes.

The following graph details the 15 year real returns of the main pension saving product categories in the 15 European countries.

²¹ However, in both cases returns would most likely have been lower, but we have been able to find return data for the earlier years, from 2000 to 2002, when equity markets declined strongly.



ANNUALISED REAL RETURNS OF PENSION SAVINGS AFTER CHARGES, INFLATION AND TAXES (EXCEPT * = BEFORE TAX)



* Before tax ** Before tax and inflation

Source: Better Finance Research

Pension Savings: The Real Return

2016 Edition

General Report

Introduction

In June 2013, Better Finance published a research report entitled: "Private Pensions: The Real Return". This study evaluated the real return of private pension products after charges, after inflation ("real" returns) and – whenever possible – after taxation; and identified the contributing factors for these returns in Denmark, France and Spain. Moreover, the study included an in-depth description of the pension saving vehicles available in each country and the charges and taxes applied to them.

In September 2014, Better Finance published the 2014 edition of the "Pension Savings: The Real Return" research report, which included data updates for the three countries covered in the initial study, as well as five new countries: Belgium, Germany, Italy, Poland and the United Kingdom.

The 2015 edition of the Better Finance research report aimed at updating the existing country cases and expanding the coverage to 15 EU countries with the addition of Bulgaria, Estonia, Latvia, the Netherlands, Romania, Sweden and Slovakia. Hence, the coverage of the research report augmented to approximately 85% of the EU population.

The 2016 edition is an update of the 15 existing country cases with the most recent data available at the time of print, as well as a refinement of pension vehicles in the countries covered since 2015.

The whole research report series showed that real returns of retirement savings have been very low over the reviewed periods, once charges, inflation and taxes had been taken into account. Measuring all elements (inflation, charges and taxes) that reduce investment performance is especially important in a low interest rate environment because the real return for savers can be substantially negative.)





Country profiles

Table GR 1 includes some key characteristics of the pension systems in the covered countries.

A useful indicator of the pressure on pension systems is the old-age-dependency ratio, defined as the ratio between the total number of elderly persons when they are generally economically inactive (aged 65 and over) and the number of persons of working age²². This ratio is low in Slovakia (19%) and Poland (22%). In contrast, the highest ratio is the Italian one (35%). This fact means that the pressure on the Pay as you go (PAYG) system is at the maximum level in this country. Moreover, Bulgaria, Denmark, France, Germany and Sweden all have ratios of 30% or above.

Pension schemes, life insurance contracts and PAYG systems are combined differently in each country to build the overall income of retirees²³. The highest net pension replacement rates for men as percentage of pre-retirement earnings are the ones in the Netherlands (96%). The replacement rate is above 80% in Slovakia, in Italy and in Spain.

The net equity of households in pension fund reserves ranges from a minimum of 4% in Romania to a maximum of 193% in the Netherlands. With the exception of the Netherlands, Sweden (84%) and Denmark (64%), this ratio is inferior to 25% in all countries. This reflects that only those three countries and the United Kingdom (165% pension assets as % of GDP) have been building pre-funded pension schemes for a long time, whereas other countries have widely relied on a publicly-managed PAYG scheme.

However, one should also take into account a second indicator to form a correct perception of savings accumulated for retirement: the ratio of the net equity of households in life insurance reserves and annuities as a percentage of GDP. Indeed, many pension arrangements are organised within the legal framework of life insurance contracts, both in pillar II (occupational and company schemes) and pillar III (individual private contracts) of the pension systems. For instance, the net equity of households in life insurance reserves represents 81% of GDP in Denmark and 76% in France. Moreover, in countries like France, life insurance is widely used by households in order to obtain additional resources at retirement age, even though most products offered by insurance companies are not specifically designed for retirement, i.e. subscribers can withdraw their savings at any moment even when they are not retired. It is not possible to know ex-ante which percentage of life insurance contracts will actually be used during the retirement period, but many polls confirm that this objective is a major motivation for subscribing to a life insurance contract.

²² Eurostat definition.

²³ Looking only at financial sources of pension income; property-related income is not in the scope of this study.

The weight of life insurance is inferior to 10% of GDP in the East European states: Bulgaria, Poland, Romania and Slovakia; and the Baltic States: Estonia and Latvia.

Overall, countries under review can be divided into three categories:

- In the first group of countries (the Netherlands, Denmark, Sweden and the United Kingdom), the sum of pension and life insurance assets (and liabilities) represents amounts superior to the annual GDP. In these countries, the issue of the real returns of private pensions is a crucial one for future retirees, especially for those who are members of defined contribution schemes.
- In a grouping at the other end, citizens have little pre-funded assets available for retirement. The sum of life insurance contracts and pension funds' assets represented about or less than 15% of the GDP in Bulgaria, Estonia, Latvia, Poland, Romania and in Slovakia. In these countries, citizens will predominantly depend on the quality and sustainability of arrangements within the framework of PAYG systems.
- The third group of countries is an intermediate position. Pension funds and life insurance contracts represent 85% of GDP in France, 64% in Belgium, 56% in Germany, 51% in Italy and 29% in Spain. In these countries, citizens depend equally on the sustainability of the PAYG systems and on the returns of pension savings. Governments focus on strengthening the public pension system (as is the case of Italy) and/or on the rise of savings in private pension products (as is the case in Germany). However, when private pension products deliver poor benefits, the legitimacy of such efforts is questioned in the public debate. Controversy about "Riester" products illustrates this risk.

A limitation of the present report is that it does not take into account housing as an asset for retirement. The proportion of households owning their residences varies greatly from one country to another. For example, it is especially low in Germany, where a majority of households rent their residences. In this country, returns of pension savings are all the more important since a majority of retirees cannot rely on their residential property to ensure a decent minimum standard of life.

However, residential property is not necessarily the best asset for retirement: indeed it is an illiquid asset and it often does not fit the needs of the elderly in the absence of a broad use of reverse mortgages. The house might become too large or unsuitable in case of dependency. In that case, financial assets might be preferable, on the condition that they provide a good performance.





Table GR 1 - Country Profiles (at the end of 2015)

Belgium			
Net equity of households in pension funds reserves (in € bn)	81	Net equity of households in pension funds reserves as % of GDP	20%
Net equity of households in life insurance reserves (in € bn)	181	Net equity of households in life insurance reserves as % of GDP	44%
Working population	4.9 m	Age dependency ratio, old (% of working-age population)	28%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			61%
Bulgaria			
Net equity of households in pension funds reserves (in € bn)	5	Net equity of households in pension funds reserves as % of GDP	11%
Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	1%
Working population	3.3 m	Age dependency ratio, old (% of working-age population)	30%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			-
Denmark			
Net equity of households in pension funds reserves (in € bn)	171	Net equity of households in pension funds reserves as % of GDP	64%
Net equity of households in life insurance reserves (in € bn)	217	Net equity of households in life insurance reserves as % of GDP	81%
Working population	2.9 m	Age dependency ratio, old (% of working-age population)	30%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			66%
Estonia			
Net equity of households in pension funds reserves (in € bn)	3	Net equity of households in pension funds reserves as % of GDP	13%
Net equity of households in life insurance reserves (in € bn)	0	Net equity of households in life insurance reserves as % of GDP	2%
Working population	0.7 m	Age dependency ratio, old (% of working-age population)	29%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			60%
France			
Net equity of households in pension funds reserves (in € bn)	195	Net equity of households in pension funds reserves as % of GDP	9%
Net equity of households in life insurance reserves (in € bn)	1.659	Net equity of households in life insurance reserves as % of GDP	76%
Working population	29.1 m	Old-age-dependency ratio	31%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			68%

Germany			
Net equity of households in pension funds reserves (in € bn)	772	Net equity of households in pension funds reserves as % of GDP	26%
Net equity of households in life insurance reserves (in € bn)	925	Net equity of households in life insurance reserves as % of GDP	31%
Working population	41.1 m	Age dependency ratio, old (% of working-age population)	32%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			50%
Italy			
Net equity of households in pension funds reserves (in € bn)	252	Net equity of households in pension funds reserves as % of GDP	15%
Net equity of households in life insurance reserves (in € bn)	574	Net equity of households in life insurance reserves as % of GDP	35%
Working population	25 m	Age dependency ratio, old (% of working-age population)	35%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			80%
Latvia			
Net equity of households in pension funds reserves (in € bn)	3	Net equity of households in pension funds reserves as % of GDP	11%
Net equity of households in life insurance reserves (in € bn)	0	Net equity of households in life insurance reserves as % of GDP	1%
Working population	1 m	Age dependency ratio, old (% of working-age population)	29%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			-
Netherlands			
Net equity of households in pension funds reserves (in € bn)	1.310	Net equity of households in pension funds reserves as % of GDP	193%
Net equity of households in life insurance reserves (in € bn)	166	Net equity of households in life insurance reserves as % of GDP	25%
Working population	8.7 m	Age dependency ratio, old (% of working-age population)	28%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			96%
Poland			
Net equity of households in pension funds reserves (in € bn)	37	Net equity of households in pension funds reserves as % of GDP	9%
Net equity of households in life insurance reserves (in € bn)	18	Net equity of households in life insurance reserves as % of GDP	4%
Working population	17.1 m	Age dependency ratio, old (% of working-age population)	22%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			53%





Romania			
Net equity of households in pension funds reserves (in € bn)	6	Net equity of households in pension funds reserves as % of GDP	4%
Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	1%
Working population	8.9 m	Age dependency ratio, old (% of working-age population)	26%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			-
Slovakia			
Net equity of households in pension funds reserves (in € bn)	8	Net equity of households in pension funds reserves as % of GDP	10%
Net equity of households in life insurance reserves (in € bn)	4	Net equity of households in life insurance reserves as % of GDP	5%
Working population	2.7 m	Age dependency ratio, old (% of working-age population)	19%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			81%
Spain			
Net equity of households in pension funds reserves (in € bn)	166	Net equity of households in pension funds reserves as % of GDP	15%
Net equity of households in life insurance reserves (in € bn)	151	Net equity of households in life insurance reserves as % of GDP	14%
Working population	22.8 m	Age dependency ratio, old (% of working-age population)	28%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			90%
Sweden			
Net equity of households in pension funds reserves (in € bn)	379	Net equity of households in pension funds reserves as % of GDP	84%
Net equity of households in life insurance reserves (in € bn)	112	Net equity of households in life insurance reserves as % of GDP	25%
Working population	5 m	Age dependency ratio, old (% of working-age population)	32%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			56%
United Kingdom			
Pension assets (in € bn)	4.238	Pension assets as % of GDP	165%
Net equity of households in life insurance reserves (in € bn)	787	Net equity of households in life insurance reserves as % of GDP	31%
Working population	31.7 m	Age dependency ratio, old (% of working-age population)	28%
Net pension replacement rates from Public Pension Systems, Men, % of pre-retirement earnings, 2014			29%

Source : OECD, Eurostat, Bank of France, UK Office for National Statistics

Any discrepancies with OECD data arise from the fact that data from this table does not refer to pension funds assets, but to pension entitlements

Return attribution

Inflation

Within the last thirteen years, double-digit inflation rates could be witnessed for Bulgaria (11.6% in 2007), Latvia (14% in 2007 and 10.4% in 2008) and Romania (14.2% in 2003). These three countries did also register the highest average annual inflation rates with Romania clearly leading the way with an annual average over 5%. Sweden is the country with the lowest average annual inflation rate followed by Denmark, Germany, the Netherlands and France who registered all around 1.5% of average annual inflation.

The observable trend of 2014 continued as the year 2015 brought, again, very low inflation rates to nearly all countries with Belgium being an outlier at 1.5% after having recorded a deflation of -0.4% in 2014. Deflationary trends could be witnessed in six countries: Bulgaria (-0.9%), Estonia (-0.2%), Poland (-0.4%), Romania (-0.7%), Slovakia (-0.5%) and Spain (-0.1). Bulgaria recorded the third straight year of deflation while Romania witnessed its first deflation during the observed period.

Table GR 2 - Inflation [in %]													
	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
Belgium	1.6	2.0	2.8	2.1	3.1	2.7	0.3	3.4	3.2	2.1	1.2	-0.4	1.5
Bulgaria	5.6	4.0	7.4	6.1	11.6	7.2	1.6	4.4	2.0	2.8	-0.9	-2.0	-0.9
Denmark	1.2	1.0	2.3	1.6	2.4	2.5	1.1	2.8	2.4	1.9	0.5	0.1	0.3
Estonia	1.2	4.8	3.7	5.1	9.7	7.5	-1.9	5.4	4.1	3.6	2.0	0.1	-0.2
France	2.4	2.2	1.8	1.7	2.8	1.2	1.0	2.0	2.7	1.5	0.8	0.1	0.3
Germany	1.1	2.2	2.2	1.4	3.1	1.1	1.0	1.7	2.3	2.0	1.3	0.0	0.2
Italy	2.5	2.3	2.0	2.1	2.8	2.4	1.1	2.1	3.7	2.6	0.6	0.0	0.1
Latvia	3.6	7.3	7.1	6.7	14.0	10.4	-1.4	2.4	3.9	1.6	-0.4	0.3	0.4
Netherlands	1.6	1.3	2.0	1.7	1.6	1.7	0.7	1.8	2.5	3.4	1.4	-0.1	0.5
Poland	1.7	4.3	0.8	1.4	4.3	3.3	3.9	2.9	4.6	2.1	0.6	-0.7	-0.4
Romania	14.2	9.3	8.7	4.9	6.7	6.4	4.7	7.9	3.2	4.6	1.3	1.0	-0.7
Slovakia	9.4	5.9	3.8	3.7	2.5	3.5	0.0	1.3	4.6	3.4	0.4	-0.1	-0.5
Spain	2.7	3.3	3.7	2.7	4.3	1.4	0.9	2.9	2.3	3.0	0.3	-1.1	-0.1
Sweden	1.8	0.9	1.2	1.5	2.5	2.1	2.8	2.1	0.4	1.0	0.4	0.3	0.7
United Kingdom	1.3	1.6	1.9	3.0	2.1	3.0	2.9	3.6	4.3	2.6	2.0	0.5	0.2

Source: Eurostat (HICP - Annual rate of change), Index, 2015=100

The low inflation rates go hand in hand with a reduction in public sector deficits since 2011 with the exception of Bulgaria and Sweden. In 2015, a surplus was





observable in Estonia and Germany while last-mentioned registered a surplus for the second consecutive year. The largest public sector deficit as percentage of the GDP was observable in the United Kingdom at -4.4%.

In total, eight countries had an outstanding level of public debt below the theoretical 60% ceiling of the Maastricht Treaty, while six countries surpass this ceiling with the Netherlands being fairly close to it at 65%.

Table GR 3 - Public sector deficit and debt [in %]

	Public Sector Deficit as a % of GDP		Public Debt as a % of GDP	
	2014	2015	2014	2015
Belgium	-3.1	-2.6	106.6	106.1
Bulgaria	-5.4	-2.1	27.0	26.7
Denmark	1.5	-2.1	44.8	40.1
Estonia	0.8	0.4	10.4	9.7
France	-4.0	-3.5	95.4	96.2
Germany	0.3	0.7	74.7	71.2
Italy	-3.0	-2.6	132.5	132.7
Latvia	-1.6	-1.3	40.8	36.4
Netherlands	-2.4	-1.8	68.2	65.3
Poland	-3.3	-2.6	49.4	50.3
Romania	-0.9	-0.7	39.5	37.8
Slovakia	-2.7	-3.0	53.9	52.9
Sweden	-1.6	0.0	43.4	44.2
United Kingdom	-5.6	-4.4	91.2	88.2

Source: Eurostat, Own Research

Asset Mix

There are striking differences between pension funds' asset allocations across European countries.

In Belgium, mutual funds represent the main component of investments (73% in 2015). However, this figure provides very little information on the type of exposure of pension funds, since the composition of the portfolio of investment funds held by pension funds is unknown. Moreover, mutual funds are one of the modalities of delegated portfolio management, the other being mandates given to professional portfolio managers.

The specificity of Denmark is the predominance of corporate securities, both shares and bonds. Public bonds play a minor role because public deficits are small, as explained in the initial study.

In Germany, mutual funds have become the predominant share of pension funds' assets (59%). An additional feature of German pension funds is the importance of loans in their assets (about 8% at the end of 2015). Most of these loans are attributed to employees in companies.

In Italy, public bonds and bills represent more than half of the pension funds' assets. Households are traditionally strong investors in Italian government bonds, but they have progressively diminished their exposure to these types of products and institutional investors, pension funds among others, have been compensating for their withdrawal.

In Poland, equity accounted for 82% of the PFE assets since 2014, when this asset part almost doubled. There are no investments recorded in mutual funds.

In Spain, the weight of public debt increased after the financial crisis but decreased again for the year 2015.

The United Kingdom is traditionally the country where shares form a major part of asset allocation of pension funds. It decreased from 56% to 16% between 2000 and 2015, but this trend is offset by a growing recourse to investment funds, which might have simply replaced mandates as a legal framework for outsourced portfolio management.

In two countries, the Netherlands and Denmark, financial derivatives represent 5% of total assets.

Overall, the period 2000-2015 shows a decline in equities and a symmetrical increase in mutual funds assets. There is also an increase in public debt in the asset allocation of pension funds, partially due to unrealised capital gains generated by the historical decrease of interest rates²⁴.

Table GR 4 -Pension funds' asset allocation, [in % of total assets]

		Currency and deposits	Debt securities	Equity	Investment fund shares/ units	Other
Belgium	2000	3%	6%	21%	70%	1%
Belgium	2001	4%	4%	15%	75%	1%
Belgium	2002	5%	6%	9%	78%	1%
Belgium	2003	3%	5%	12%	79%	1%

²⁴ A decrease in market interest rates translates into an increase in the mark-to-market value of fixed interest debt products held by investors.





Belgium	2004	3%	4%	11%	81%	1%
Belgium	2005	3%	7%	11%	80%	1%
Belgium	2006	2%	7%	10%	80%	1%
Belgium	2007	2%	8%	11%	78%	1%
Belgium	2008	5%	9%	8%	75%	3%
Belgium	2009	3%	9%	8%	77%	2%
Belgium	2010	4%	11%	9%	74%	1%
Belgium	2011	2%	14%	10%	71%	3%
Belgium	2012	3%	13%	9%	74%	1%
Belgium	2013	3%	11%	9%	71%	5%
Belgium	2014	3%	12%	7%	74%	5%
Belgium	2015	3%	12%	7%	73%	5%
Bulgaria	2012	19%	60%	13%	7%	1%
Bulgaria	2013	19%	54%	15%	11%	1%
Bulgaria	2014	11%	55%	19%	14%	1%
Bulgaria	2015	11%	57%	18%	13%	1%
Denmark	2012	4%	56%	18%	20%	3%
Denmark	2013	3%	52%	18%	23%	4%
Denmark	2014	4%	50%	16%	22%	8%
Denmark	2015	3%	49%	15%	25%	8%
Estonia	2010	9%	17%	4%	66%	4%
Estonia	2011	16%	25%	5%	54%	1%
Estonia	2012	15%	25%	5%	55%	0%
Estonia	2013	17%	21%	6%	56%	0%
Estonia	2014	17%	21%	5%	57%	0%
Estonia	2015	20%	22%	3%	55%	0%
Germany	2000	60%	21%	4%	0%	15%
Germany	2001	62%	19%	4%	0%	15%
Germany	2002	62%	18%	2%	0%	17%
Germany	2003	63%	15%	3%	0%	20%
Germany	2004	57%	13%	2%	9%	17%
Germany	2005	45%	9%	3%	31%	12%
Germany	2006	43%	9%	3%	34%	11%
Germany	2007	43%	9%	3%	34%	11%
Germany	2008	45%	9%	3%	32%	11%
Germany	2009	43%	8%	3%	36%	10%
Germany	2010	39%	8%	3%	39%	10%
Germany	2011	37%	9%	3%	40%	10%
Germany	2012	31%	10%	3%	47%	9%

Germany	2013	32%	6%	2%	50%	10%
Germany	2014	25%	7%	2%	58%	9%
Germany	2015	23%	7%	2%	59%	8%
Italy	2012	6%	64%	16%	15%	0%
Italy	2013	5%	65%	15%	15%	0%
Italy	2014	5%	65%	17%	13%	0%
Italy	2015	5%	63%	19%	13%	0%
Latvia	2004	35%	52%	4%	7%	1%
Latvia	2005	28%	47%	7%	18%	1%
Latvia	2006	29%	49%	5%	17%	1%
Latvia	2007	40%	33%	3%	23%	1%
Latvia	2008	44%	37%	1%	18%	0%
Latvia	2009	39%	39%	1%	22%	0%
Latvia	2010	39%	31%	1%	30%	0%
Latvia	2011	25%	41%	1%	34%	0%
Latvia	2012	20%	41%	1%	38%	0%
Latvia	2013	16%	44%	1%	38%	2%
Latvia	2014	14%	47%	1%	38%	0%
Latvia	2015	19%	46%	2%	33%	0%
Netherlands	2010	2%	23%	14%	53%	9%
Netherlands	2011	1%	23%	11%	54%	11%
Netherlands	2012	1%	24%	11%	53%	11%
Netherlands	2013	1%	24%	13%	55%	7%
Netherlands	2014	1%	24%	13%	53%	10%
Netherlands	2015	1%	25%	14%	53%	7%
Poland	2003	4%	59%	35%	0%	2%
Poland	2004	4%	61%	34%	1%	0%
Poland	2005	3%	64%	32%	1%	0%
Poland	2006	2%	62%	35%	1%	0%
Poland	2007	2%	60%	37%	1%	0%
Poland	2008	2%	75%	23%	1%	0%
Poland	2009	2%	66%	31%	1%	0%
Poland	2010	4%	58%	37%	0%	0%
Poland	2011	5%	64%	31%	0%	0%
Poland	2012	6%	57%	37%	0%	0%
Poland	2013	5%	51%	43%	0%	0%
Poland	2014	7%	10%	82%	0%	0%
Poland	2015	7%	10%	82%	0%	0%
Romania	2007	0%	100%	0%	0%	0%





Romania	2008	23%	74%	0%	2%	0%
Romania	2009	15%	75%	5%	6%	0%
Romania	2010	11%	74%	9%	7%	0%
Romania	2011	10%	78%	4%	8%	0%
Romania	2012	8%	80%	5%	8%	0%
Romania	2013	9%	73%	16%	3%	1%
Romania	2014	4%	71%	22%	3%	0%
Romania	2015	5%	73%	15%	7%	0%
Slovakia	2012	12%	74%	1%	12%	0%
Slovakia	2013	19%	70%	1%	10%	0%
Slovakia	2014	16%	71%	1%	12%	0%
Slovakia	2015	15%	65%	2%	18%	0%
Spain	2000	13%	56%	20%	2%	9%
Spain	2001	13%	55%	19%	2%	11%
Spain	2002	15%	53%	15%	3%	14%
Spain	2003	15%	53%	14%	5%	13%
Spain	2004	17%	51%	19%	1%	12%
Spain	2005	14%	52%	21%	2%	11%
Spain	2006	16%	50%	22%	2%	10%
Spain	2007	16%	52%	16%	7%	9%
Spain	2008	20%	55%	9%	6%	10%
Spain	2009	16%	58%	11%	6%	9%
Spain	2010	17%	55%	11%	8%	10%
Spain	2011	13%	60%	10%	7%	10%
Spain	2012	14%	57%	10%	10%	10%
Spain	2013	12%	59%	9%	11%	9%
Spain	2014	12%	59%	10%	11%	8%
Spain	2015	13%	53%	9%	17%	8%
Sweden	2000	26%	18%	0%	57%	0%
Sweden	2001	23%	26%	11%	38%	3%
Sweden	2002	18%	37%	7%	36%	2%
Sweden	2003	13%	34%	7%	45%	1%
Sweden	2004	10%	30%	7%	51%	1%
Sweden	2005	9%	23%	8%	59%	1%
Sweden	2006	2%	21%	7%	69%	1%
Sweden	2007	3%	19%	7%	71%	1%
Sweden	2008	3%	21%	5%	70%	1%
Sweden	2009	2%	16%	6%	76%	0%
Sweden	2010	2%	13%	12%	72%	0%

Sweden	2011	2%	16%	9%	73%	0%
Sweden	2012	2%	15%	9%	74%	0%
Sweden	2013	1%	13%	8%	78%	0%
Sweden	2014	1%	10%	8%	81%	0%
Sweden	2015	2%	10%	8%	81%	0%
United Kingdom	2000	6%	19%	56%	16%	4%
United Kingdom	2001	5%	19%	54%	18%	4%
United Kingdom	2002	5%	23%	47%	19%	6%
United Kingdom	2003	5%	22%	43%	22%	8%
United Kingdom	2004	4%	20%	39%	26%	10%
United Kingdom	2005	4%	19%	38%	28%	11%
United Kingdom	2006	5%	19%	36%	28%	12%
United Kingdom	2007	6%	22%	29%	32%	12%
United Kingdom	2008	5%	24%	25%	31%	15%
United Kingdom	2009	5%	23%	24%	32%	15%
United Kingdom	2010	5%	21%	22%	35%	17%
United Kingdom	2011	5%	23%	18%	33%	22%
United Kingdom	2012	4%	23%	17%	34%	22%
United Kingdom	2013	4%	23%	16%	34%	22%
United Kingdom	2014	4%	25%	16%	32%	23%

Source : Eurostat, UK Office for National Statistics, Own Research

Asset performance

Equity markets

The year of 2015 brought mostly positive returns to the equity markets of the countries included in this research report with the Latvian market leading the way





with an exceptional return of +46%. Exceptional positive returns could likewise be witnessed in Denmark (+39%), Slovakia (+32%) Belgium (+26%) and Estonia (+24%). On the contrary, distinct negative performances could be observed in Bulgaria (-28%), Poland (-17%), and to a lesser extent in Spain (-6%) and the United Kingdom (-2%). Compared with 2014, especially the markets in Estonia (from -20% to 24%) and Latvia (from -11% to 46%) experienced major positive turnarounds.

In real terms, the negative performances of 2015 in Bulgaria, Poland and Spain could only slightly be alleviated due to deflationary trends in these countries. In general, the influence of inflation on real returns was very limited with rates being at historically lows. As seen above, only Belgium showed distinct inflation at 1.5% which did still lead to a real return of +24% based on the strong performance of the Belgian equity market.

Table 6 shows the performance of the equity markets in the long run, from 2000 to 2015 for most countries included. This 16-year span covers two down (2001-2003, 2007-2008) and two up cycles (2003-2006, 2010-2015). Overall, most countries had positive annual average performances in nominal terms with Denmark (+12%) and Slovakia (+9%) leading the way. The only negative performance could be noted for Bulgaria (-9%) over a 10-year span while the Italian market showed zero growth over the 16-year period. Unsurprisingly, the Italian equity market lost in real terms (-2%) and, furthermore, the Latvian market had a negative annual average return from 2005 to 2015 when taking inflation into account. All other countries were able to at least maintain the value of equity investments in real terms with Denmark (+10%) and Slovakia (+5%) even showing strong results.

Table GR 5 - Historical Returns on Equity Markets, yearly average

		Nominal Return	Real Return
Belgium	(2000-2015)	4.1%	2.0%
Bulgaria	(2006-2015)	-8.7%	-10.5%
Denmark	(2000-2015)	11.8%	9.8%
Estonia	(2003-2015)	6.9%	3.8%
Europe	(2000-2015)	3.0%	0.7%
France	(2000-2015)	2.3%	0.5%
Germany	(2000-2015)	3.0%	1.4%
Italy	(2000-2015)	-0.1%	-2.2%
Latvia	(2005-2015)	2.4%	-0.5%
Netherlands	(2000-2015)	3.1%	1.0%
Poland	(2000-2015)	3.4%	0.6%
Romania	(2006-2015)	2.6%	0.0%
Slovakia	(2000-2015)	9.3%	5.4%
Spain	(2000-2015)	3.3%	0.9%
Sweden	(2000-2015)	4.7%	3.1%
United Kingdom	(2000-2015)	3.3%	1.1%

Source: MSCI Indices (Gross Returns), OMX Baltic Riga (Total Returns), Slovakia SAX, Eurostat, Own Research

All the used indices are total return (value) indices except for Latvia and Slovakia, which are price indices (dividends not included)

When looking at the cumulated results at EU level, as well as in the individual countries where we developed this analysis (see French, German, Spanish and UK country cases), broad stock market indices performed much better than the better known and narrower large cap or “blue chip” indices (Stoxx Europe 50, FTSE 100, DAX 30, IBEX 35, CAC 40).

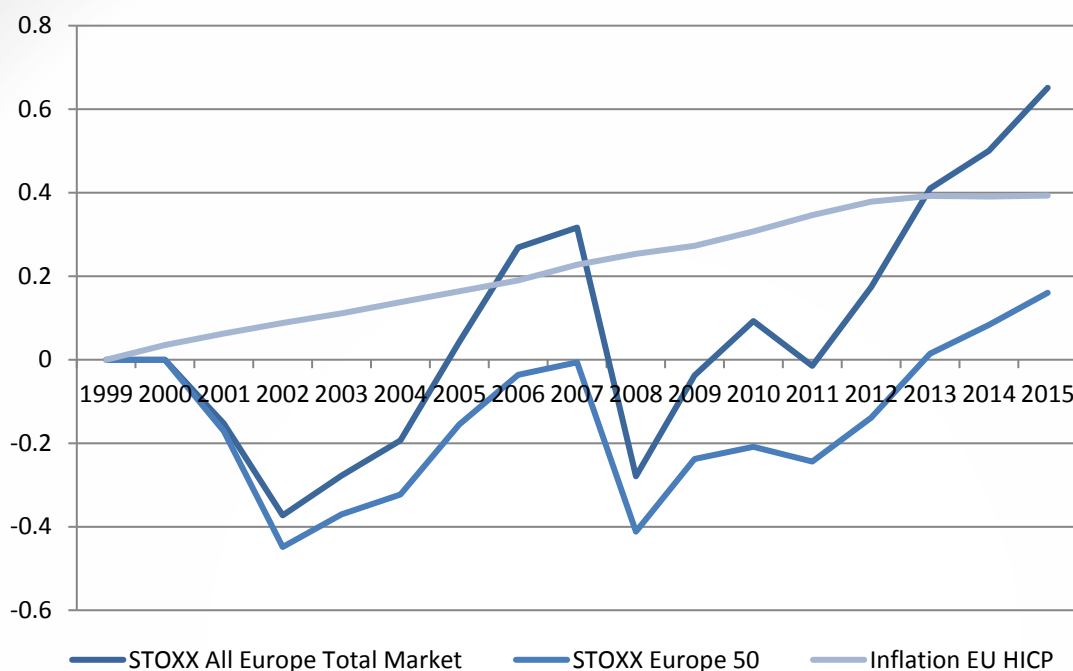
Graph GR I shows a comparison of the broad STOXX All Europe Total Market index which includes 1,408 European stocks (as of 18 August 2016)²⁵ and the narrower Stoxx Europe 50. At EU level, the difference at the end of our 16-year period is an astonishing +49% for the wider stock market index. And whereas the performance of the narrow index (+16%) was almost doubled by the inflation over the last 16 years (+35%), the broader European stock market showed a strong performance (+65%) with positive real returns.

²⁵ <https://www.stoxx.com/index-details?symbol=TE1P>. There was no data available for the 2001 performance, the performance of the narrower MSCI Europe GR index (includes 442 stocks) for that year was taken into account instead.





Graph GR I - Cumulated Performance of Wide Index (STOXX All Europe Total Market) vs Narrow Index (STOXX 50) in Europe



* Inflation used is HICP (2015 = 100), European Union 28. Monthly data index

Government Bond markets

After strong double-digit returns on the European government bond markets in 2014, the returns in 2015 cooled down considerably albeit staying positive overall. While the government bond markets of Belgium, France, Germany, the Netherlands and the United Kingdom performed similarly in between 0.3% - 0.5%, the Italian government bond market showed a robust return of about 4.8%, followed by the Spanish market with 1.6%.

Even in real terms and despite the moderate growth, the French, German and the British government bond market had positive returns due to the low inflation environment. The Belgian government bond market, however, lost in real terms (-1.1%), as did the Dutch one to a lesser extent (-0.2%). The strong Italian performance hardly changed in real terms with an inflation rate around 0% while the Spanish performance even slightly grew in a deflationary environment.

It is important to note that the decrease in interest rates has a positive impact on outstanding assets of pension funds, but it reduces the capability to offer a good remuneration for new investment flows.

In the long run, from 2000 to 2015, the seven countries for which we have data on government bonds performed quite similar with average annual returns ranging from 5.1% (in Germany) to 6.0% (in Italy). Likewise, all seven markets had positive returns once inflation is taken into account. Between the best performer, Italy (+3.9%), and the worst performers, the Netherlands and Spain (+3.3% each), the return differences go even further down in real terms.

While equity markets usually perform better in the long run, each of the government bond markets under review outperformed the corresponding equity markets from Table GR 6 in the period from 2000 to 2015.

Table GR 6 - Historical Returns on Government Bond Markets 2000-2015, yearly average

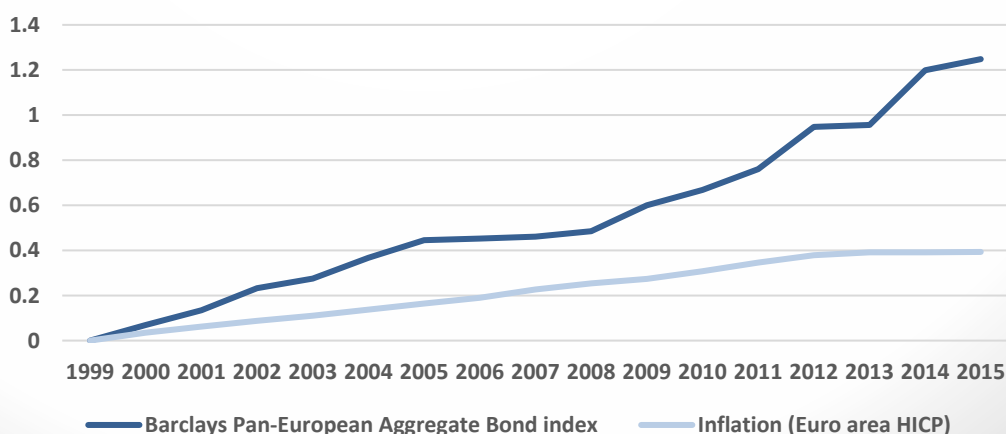
	Belgium	France	Germany	Italy	Netherlands	Spain	UK
Nominal return	5,70%	5,40%	5,10%	6,00%	5,30%	5,70%	5,70%
Real Return	3,70%	3,70%	3,60%	3,90%	3,30%	3,30%	3,60%

Source: Barclays; Eurostat, Own Research

Over the last 16 years, European bonds as a whole (including corporate bonds) enjoyed a very positive real return (significantly higher than equities). This is due to the continuous fall of bond interest rates over the period. It is difficult to foresee a continuation of this past trend given the very low level reached today.

When deducting the European inflation at the end of the period from the performance of European bonds (we use the Barclays Pan-European TR index as proxy, which includes both Government and Corporate bonds) we see in graph 5 below that this period has indeed been particularly favourable to bonds compared to equities.

Graph GR II - Cumulated performance of Euro area bond index





Portfolio Manager / Advisor Competence

The initial Better Finance study highlighted that in almost all categories of investment funds, a majority of funds under-performed their benchmarks. Investment funds play an important role in today's asset allocation of pension funds, thus it is interesting to compare investment fund performances to benchmarks.

We computed the returns of actively managed equity funds and bond funds with a European investment focus in 2015, over a 5-year period (2011-2015) and over a 10-year period (2006-2015). We compared those returns to aforementioned European stock and bond indexes, namely the Stoxx Europe 50 and the Barclays Pan-European Aggregate index. We found that 69% of the equity funds out-performed the European index in 2015 but that this number goes significantly down in the long run, from 63% over five years to 47% over 10 years. One has to keep in mind that our benchmark is the narrow equity index which performed considerably worse than the broad index.

Only 18% of European bond funds with a focus of investments in Europe out-performed their benchmark in 2015. The percentages over three years are vastly improved (41%) while over ten years, only one-fifth (21%) of the actively managed European bond funds out-performed the benchmark.

Table GR 7 - Beating the benchmark – European equity funds with European focus of investment*

Benchmark	1-year (2015)	5-year (2011-2015)	10-year (2006-2015)
STOXX Europe 50	69%	63%	47%

Source : Lipper FMI, Stoxx, Own Research

** Actively managed funds; only funds existing during the whole period have been used*

Table GR 8 - Beating the benchmark – European bond funds with European focus of investment*

Benchmark	1-year (2015)	5-year (2011-2015)	10-year (2006-2015)
Barclays Pan-European Aggregate TR	18%	41%	21%

Source : Lipper FMI, Barclays, Own Research

** Actively managed funds; only funds existing during the whole period have been used*

A recent study²⁶ found similar results in the case of UK personal pension funds operated by 35 providers over a 30 year period (1980-2009). Big providers perform better than their prospectus benchmarks but they underperform treasury bills over the period of a fund's lifespan. Similarly, specialisation of portfolio managers in the investment universe proves to deliver superior average annual returns but does not show superior long-term performances. More generally, they found that the short-term performances based on arithmetic annual averages are not relevant indicators of the long-term performance calculated as geometric compound returns similar to the methodology used in the present study. The authors also showed that younger funds perform better than the older ones, which are under lower competitive pressure given the cost of leaving a fund to join a better performing one.

Investment charges

Findings of the initial study by Better Finance on the opacity and weight of charges did not change dramatically in the subsequent research reports. Charges are often very complex and far from being harmonised for different pension providers. Consequently, this makes it difficult for consumers to understand and entirely capture the magnitude of charges on their pension product. Generally speaking, charges are heavier on personal pension products than on occupational pension funds, as employers are in better position to negotiate with competing providers than individuals are.

To tackle this complexity, some pension providers - for example, some auto-enrolment schemes in the United Kingdom - set up fixed costs per member, but this penalises low paid workers. A report of the Office of Fair Trading (2013) highlighted the lack of transparency and comparability in terms of fees charged to members of UK pension funds: various fees are added to the Annual Management Charges (AMC) on the basis of which pension fund providers usually promote their services. The dispersion of charges has also been found to be very significant, depending amongst others, on the type (personal plans are more heavily charged than occupational ones) and the size of the funds.

Following the OFT study, the Department for Work and Pensions issued a regulation which took effect on 6 April 2015. The default schemes used by employers to meet their automatic enrolment duties are subject to a 0.75% cap on AMCs. The cap applies to most charges, excluding transaction costs. Moreover, an audit was conducted on schemes being "at risk of being poor value for money". It found that about one third of surveyed schemes had AMCs superior to 1% and that a significant number of savers would have to pay exit fees superior to 10% in case they wanted to switch to a better performing fund.

²⁶ Anastasia Petraki and Anna Zalewska (April 2014), "With whom and in what is it better to save? Personal pensions in the UK", working paper of the Centre for Market and Public Organisation, University of Bristol.





While not necessarily as advanced as in the United Kingdom, the introduction of transparent, limited and comparable charges are subject of debate in several of the investigated countries.

Taxation

The general model applied to pension products is usually deferred taxation: contributions are deducted from the taxable income and pensions are taxed within the framework of income tax or, usually, at a more favourable rate. Some countries are currently in the middle of a transitional phase comprising proportionate deferred taxation which will lead to an outright deferred taxation in the future. The reverse rule is applied in Poland: contributions are paid from the taxable income while pensions are tax-free (the only exception from the TEE regime are IKZEs – individual pension savings accounts). In Bulgaria and for the funded pensions in Slovakia, there are even regimes with no taxation at all if certain limits are taken into account.

In general, the accumulated capital can be withdrawn by the saver, at least partially, as a lump sum, which is often not taxable. Our calculation of returns net of taxation has been based on the most favourable case, i.e. assuming that the saver withdraws the maximum lump sum possible.

Savings products used as retirement preparation but which are not strictly pension products might benefit from a favourable tax treatment. This is the case of life insurance in France but successive increases of the rate of “social contributions” on the nominal income tend to diminish the returns of the investment.

Table GR 9 - Overview of Main Taxation Rules Applied in the Country Reports

Belgium	<ul style="list-style-type: none"> - Contributions are tax deductible up to prescribed limits; - No taxation in the capital accumulation phase; - Pillar II: Taxation in pay-out phase depending on origin of contribution, local taxes to be added; - Pillar III: Taxation in pay-out phase at the age of 60, local taxes to be added.
Bulgaria	<ul style="list-style-type: none"> - Annual contributions of up to 10% of annual taxable income is tax free; - Investment income and pension payments are tax-free.
Denmark	<ul style="list-style-type: none"> - Contributions are usually tax deductible (exception lump sum contributions); - Interest, dividends , earnings and losses are taxed at 15.3% in the capital accumulation phase; - Taxation at the personal income rate in the pay-out phase (lump sum pay-outs are tax free).

Estonia	<ul style="list-style-type: none"> - Funded pensions are taxed according to the EET regime with some specifications (deductions) concerning the payouts; - Supplementary pensions are taxed according to the EET regime.
France	<ul style="list-style-type: none"> - Complex taxation regimes; - Contributions to some DC pension plans (PERCO and PERP) are income tax deductible but no deductibility from social levies. No tax deductibility for life insurance contracts; - Taxation in the retirement phase (sometimes with tax reductions).
Germany	<ul style="list-style-type: none"> - At the moment: transitional phase to the point of deferred taxation; - Contributions are tax deductible for sponsored retirement products up to prescribed limits; - No taxation in the capital accumulation phase; - Taxation at the personal income rate in the pay-out phase for sponsored retirement products.
Italy	<ul style="list-style-type: none"> - Contributions are tax deductible up to prescribed limits; - Accruals are taxed at 20% (12.5% on income derived from public bonds) in the capital accumulation phase; - Taxation in the pay-out phase varies from 9-15%.
Latvia	<ul style="list-style-type: none"> - Pillar II – State Funded Pensions are not subject to taxation in the contribution and capital accumulation phase. Pension benefits are subject to personal income tax while there is also a non-taxable minimum; - Pillar III – Voluntary private pension are generally taxed as Pillar II, however there are deduction limits in the contribution phase.
Poland	<ul style="list-style-type: none"> - Contributions to Employees Pension Programs (PPE) and Individual Retirement Accounts (IKE) have to be made from taxed income, contributions to Individual Retirement Savings Accounts (IKZE) are tax deductible up to prescribed limits; - None of the supplementary pension plans (PPE, IKE and IKZE) are subject to taxation in the accumulation phase (no capital gains taxes apply); - PPE and IKE are not taxed in the retirement phase, IKZE are subject to a reduced flat-rate income tax of 10%.
Romania	<ul style="list-style-type: none"> - For funded pensions, contributions and investment income are tax exempted while benefits above a certain limit are subject to the personal income tax; - For voluntary private pensions, contributions are tax deductible up to a deduction limit, investment income is tax exempted and





benefits are subject to the personal income tax.

Slovakia	<ul style="list-style-type: none"> - Funded pensions are usually not taxed (EEE regime); - Supplementary pensions follow the EET regime with several exceptions and specifications.
Spain	<ul style="list-style-type: none"> - Contributions are tax deductible up to prescribed limits; - No taxation in the capital accumulation phase; - Pay-outs are taxed differently depending whether they take the form of personal income or the form of a lump sum payment.
Sweden	<ul style="list-style-type: none"> - Contributions to occupational pensions are taxed while contributions to private pension can be partly deducted ; - Investment return of occupational pensions is not taxed and private pensions are subject to income tax; - Payouts are generally subject to income tax.
The Netherlands	<ul style="list-style-type: none"> - Contributions paid into pension funds are tax deductible; - No taxation on returns; - Taxation in the pay-out phase at the personal income tax rate.
United Kingdom	<ul style="list-style-type: none"> - Tax relief and allowances on contributions; - No taxation in the capital accumulation phase; - Pay-outs are taxed as income; there are three marginal rates in the UK at the moment.

Conclusion

Table GR 10 - Yearly Real Returns of Private Pension Products

Belgium	Pension Funds (IORP [1]), 2000-2014: 1.37% "Assurance Groupe" (Branch 21), 2002-2013: 2.02% Pension Savings Funds, 2000-2014: 1.46% Life Insurance, Guaranteed, 2002-2013: 1.58%
Bulgaria	Universal pension funds, 2002-2015: 1.0% Professional Pension Funds, 2001-2015: 1.0% Voluntary pension funds, 2002-2015: -0.5%
Denmark	Pension funds, 2002-2014: 5.15%*
Estonia	Mandatory Pension Funds, 2002-2015: 0.18%* Supplementary Pension Funds, 2002-2015: 0.92%*
France	Life Insurance, Guaranteed, 2000-2015: 1.33% Life Insurance, Unit-linked, 2000-2015: -0.77% Corporate savings plans, 2000-2015: 0.7%*

Germany	Pensionskassen and Pension Funds, 2002-2014: 2.10% Riester Pension Insurance, 2005-2015: 1.60% Rürup Pension Insurance, 2005-2015: 1.60% Personal Pension Insurance, 2000-2015: 2.3%
Italy	Closed Pension Funds, 2000-2015: 0.61% Open Pension Funds, 2000-2015: -0.44% PIP With Profits, 2008-2015: 0.88% PIP Unit-Linked, 2008-2014: -0.01%
Latvia	State Funded Pension Funds, 2003-2015: -0.61%* Voluntary Private Pension, 2011-2015: 2.02%*
Poland	Employee Pension Funds, 2002-2015: 4.12%*
Romania	Pillar II Funded Pensions, 2008-2015: 5.37%* Voluntary Pension Funds, 2007-2015: 2.66%*
Slovakia	Pillar II Pension Funds, 2005-2015: -0.56%* Supplementary Pension Funds, 2009-2015: 0.20%*
Spain	Unit-Linked, 2000-2015: -0.11%*
Sweden	AP7 Occupational pension fund, default option 2000-2014: 1.27%* AP7 Occupational pension fund, own choice of other fund or funds 2000-2014: 1.33%*
The Netherlands	Pension Funds, 2000 - 2015: 2.56% Life Insurance, 2000 - 2015: -0.32%
United Kingdom	Pension Funds, 2000-2014, 2.50%
*Before tax	
<i>Source: Own Research, Better Finance Research</i>	
<i>Occupational pension funds as per the definition and scope of the EU "Institutions for Occupational Retirement Provision Directive" (IORP).</i>	

The update of the original study by Better Finance highlights an improvement of the real returns of pension savings over the period 2000-2015 as compared to 2002-2011, in the context of upwards equity markets and declining inflation rates. We also tried to extend calculations to the longer period of time that we are considering, from 2000 to 2015, when data were available.

In France, retirement provision through the widely used life insurance showed positive returns for guaranteed contracts and negative returns for unit-linked ones.

Italy and the United Kingdom are two opposite examples of policy options chosen by governments to tackle the imbalances of pension systems. In Italy, an ambitious reform was implemented by Minister Elsa Fornero under the Monti government in order to secure the public PAYG system, despite very unfavourable demographic





trends. As such, the poor returns of the personal pension plans will have a limited impact on the replacement rates of retirees' income.

By contrast, pensions in the UK are more heavily dependent on pre-funded schemes. The government has implemented "auto-enrolment" to extend the benefits of pension funds to most employees. Here, excessive charges borne by pension fund members have led public authorities to take measures in order to improve transparency and to limit the fees charged by pension providers.

Like in Italy, demographic trends in Germany are very unfavourable and the government ran several reforms to promote private pension savings. However, doubts about the Riester personal pensions have augmented in recent times and even led to voices in the government demanding to bolster the public pension in spite of positive real returns of 1.6% since 2005. One should mention that beyond the returns of investment, the unfavourable determination of the annuity for a given capital has been challenged in the public debate.

In Spain, the promotion of occupational and personal pension schemes has only recently been established. Personal pension provisions and pension funds are taxed according to the beneficial EET formula; however, pension disclosures to individuals are broadly inadequate. The 16-year period states zero returns in real terms.

Only a small minority of Poles participates in employee pension schemes and personal pension products because they have only recently been set up. Those who participated in employees' pension funds benefitted from a very substantial annual real rate of return of about 4%. However, the disclosure policy of pension providers is far from being satisfactory, especially as there is no guarantee: a market downturn would severely impact the wealth of pension fund participants, a risk that few of them may be aware of. Similar returns for pension funds could be witnessed in Denmark over the 12-year period from 2002 to 2013. In both cases, however, calculations could not take into account the effect of taxation.

Pension funds in the Netherlands were among the better performers at +3.3% over the long 16-year period, while insurance companies lost -0.6% in real terms over the same period.

The best results for funded pension schemes were recorded in Romania with a strong real return of +5.4% before taxation over an 8-year period. Albeit performing only half as strong as the funded ones, voluntary pensions did also clearly perform positively (+2.7%) over 9 years.

Funded pensions in Slovakia lost in real terms (-0.6%) over an 11-year period while supplementary pensions performed positive at +0.2% over 7 years.

In Bulgaria, universal and professional pension funds could record positive returns (+1.0%) helped through the very favourable EEE formula. Voluntary pension funds, however, recorded negative real returns (-0.5%).

In the Baltic States, supplementary pensions could register positive returns (Estonia 0.9% and Latvia 2.0%) before taxation, while funded pensions were close to zero in Estonia and lost in real terms.





Recommendations

1. Further improve and harmonise disclosure for all long-term and retirement savings products:
 - Extend PRIIPs ' KID principles to all retail long-term and pension investment products, including shares and bonds (thereby replacing the current ineffective "summary prospectus") and for pension savings products
 - Re-instate standardised disclosure of past performance compared to objective market benchmarks (as required for UCITS funds in the UCITS IV Directive): long term historical returns after inflation; after all charges to the investor; and after tax when possible
 - Disclosure of total fees and commissions charged to the end investor, both direct and indirect
 - Disclosure of funding status when relevant
 - Disclosure of transfer/exit possibilities and conditions and in plain language.
2. Quickly implement the European Commission's "Capital Markets Union" Action Plan of September 2015: for *"the European Supervisory Authorities (ESAs) to work on the transparency of long term retail and pension products and an analysis of the actual net performance and fees, as set out in Article 9 of the ESA Regulations"*.
3. The EU should go ahead with a simple and cost effective Pan-European Personal Pension Plan (PEPP) to, at least, protect the long-term purchasing power of the savings of EU citizens:
 - readily accessible, without need for advice (and no related fees) for the default option;
 - supervised by public bodies;
 - benefiting from an equivalent tax regime, comparable to national personal pension products.
4. Simplify, standardise and streamline the range of product offerings:
 - Restrict the use of non-UCITs funds (the 20 000 or so "AIFs") in all packaged long-term and pension products promoted to savers and individual investors.
 - Reduce the excessive number of UCITs on offer in the EU.

- ESAs to make full use of their product intervention powers in order to ban any toxic investment product targeted at individual investors.
 - ESAs to ensure EU individual investors have full access to low cost index ETFs.
5. Establish EU-wide transparent, competitive and standardised retail annuities markets; and grant more freedom to pension savers to choose between annuities and withdrawals (but after enforcing a minimum threshold for a guaranteed life time retirement income);
 6. Improve the governance of collective schemes: at least half of the schemes' supervisory bodies should be designated directly by the pension schemes' participants;
 7. Align the pricing of investment products with the interests of savers, and end biased advice at the point of sale and guarantee competent advice on long-term investments, including equities and bonds; more powers to supervisors to ban "retail" distribution of toxic investment products;
 8. Special treatment by prudential regulation of all long-term & pension products allowing for an effective asset allocation;
 9. Taxation to incentivise Pan-European long-term retirement savings and investments over consumption and short term savings; Pan-European products such as ELTIFs and PEPPs will not emerge significantly unless they get the most favourable tax treatment already granted to numerous other nationally sponsored long-term investment products. The FTT (financial transactions tax) should be reviewed in order to actually meet its stated goal: tax the transactions of financial institutions (the largest ones by far being the Forex ones, and then derivatives) instead of those from the real economy (end-investors in equities and corporate bonds, individual ones in particular). To this end, a FAT (Financial Activities Tax) may be more fit for purpose;
 10. Financial mathematics' (interest rates, annuities) and capital markets' (shares and bonds) basics to be part of school curricula; financial institutions to allow at least a part of their financial education efforts to be guided by independent bodies.





Pension Savings: The Real Return

2016 Edition

Country Case: Belgium

Introduction

The Belgian pension system is divided into three pillars:

- **Pillar I:** Pay-as-you-go pension system consisting of three regimes: one for employees in the private sector, one for the self-employed and one for civil servants. The legal age of retirement is 65 for both women and men. It used to be 60 for women until 1993, but was progressively increased to reach 65 in 2010. The Act of 10 August 2015 increases the retirement age imposed by law to the age of 66 by 2025 and to the age of 67 by 2030. In 2012, the replacement rate from the PAYG system for average earners was 62.1% but was much higher for low earners, at around 80.7%.
- **Pillar II:** Occupational pension plans are private and voluntary. This pillar exists for both employees and self-employed. Employees can subscribe to occupational pension plans provided either through their employer (company pension plans) or through their activity sector (sector pension plans). Conversely, the self-employed can decide for themselves to take part in a supplementary pension scheme.

An employer can set up a company pension plan for all its employees, for a group of employees or even for an individual employee. In the case of sector pension plans, collective bargaining agreements establish the terms and conditions of pension coverage. Employers must join sector pension plans, unless agreements allow them to opt out. Employers who decide to opt out have the obligation to implement another plan providing benefits at least equal to those offered by the sector.

Company and sector pension plans can be considered as “social pension plans” when they include a solidarity clause that provides additional coverage for periods of inactivity (e.g. unemployment, maternity leave, illness). Notably, social pension plans are becoming less and less prevalent, possibly as a result of the relatively high

charges associated with these plans in comparison to pension plans without a solidarity clause.

Company pension plans are traditionally dominant in pillar II in comparison to sector pension plans.

Pension schemes in pillar II can be managed by either an Institution for Occupational Retirement Provision (IORP) or by an insurance company. Occupational pension plans are predominantly managed by insurance companies.

The coverage of employees in pillar II increased with the effects of changes in the law in 2004, which encouraged the development of sector pension plans. The number of employees covered by an occupational pension plan has become increasingly important. In 2013, the growth of the pillar II continued, with 2.8 million Belgians covered by a pillar II pension scheme: 2.5 million employees were covered by a pension scheme through their employer or sector and almost 319,000 self-employed were covered by pillar II supplementary pensions²⁷.

In December 2015, the reform of supplementary pension Act was voted. This reform amended the Act of 28 April 2003 concerning supplementary pensions and entered into force as of 1 January 2016.

The amendments cover:

- The reform of the guaranteed minimum return on contributions,
- The alignment of the supplementary pension age and the legal pension age;
- The prohibition of beneficial anticipation measures.

These new measures will be developed hereafter in the document.

- **Pillar III:** There are also personal pension plans that are private and voluntary. These types of pension schemes are administrated by either licensed life insurance companies or by asset management companies. Compared to other EU member states, this pillar has been very pronounced in Belgium. The law of April 28, 2003, provides users of voluntary individual private pension products with tax deductions on

²⁷ Financial Services and Markets Authority (FSMA): Rapport bisannuel concernant les régimes de pension sectoriels – FSMA (April 2015); Rapport bisannuel concernant la pension complémentaire libre des indépendants – FSMA (April 2015)





contributions, though with a quite low ceiling limit. In 2005, a reform on the taxation of personal pension plans was implemented in order to encourage that kind of savings. From 2015, the tax rate of accrued benefits was lowered to 8%.

Pension Vehicles

Pillar II: Occupational pension schemes

Pillar II refers to occupational pension schemes that are designed to foster the replacement rate. Savings in these schemes are encouraged by tax benefits. Unlike pension pillar I, pillar II is based on the capitalisation principle: pension amounts result from capitalisation of the contributions paid by the employer and/or employee in the scheme or by the self-employed.

There are three types of occupational pension plans:

- Company pension schemes;
- Sector pension schemes;
- Supplementary pension schemes for the self-employed.

Management of occupational pension schemes

The management of occupational pension schemes can be entrusted to an Institution for Occupational Retirement Provision (IORP) or to an insurance company.

Institutions for Occupational Retirement Provision (IORP)

In 2014, 198 occupational pension schemes were managed by an IORP. After a significant increase between 2007 and 2013, the number of affiliates to an IORP remained quite steady in 2014 at 1,477,347. Affiliates to sector pension schemes managed by an IORP decreased slightly from 1,101,891 in 2013 to 1,088,565 in 2014.

In 2014, however, affiliates to sector pension plans through an IORP still represented the largest part in the number affiliates (72%) but only 17% of total reserves (€3.6 billion). Company pension schemes represented 73% of total reserves (€15.2 billion) with only 26% of affiliates. Three supplementary pension schemes for self-employed (€1.9 billion of reserves) were managed by IORP.

“Assurance Groupe” (Branch 21 and Branch 23 contracts)

Occupational pension schemes in pillar II are predominantly managed by insurance companies. Such pension schemes are called “Assurance Groupe” and can be divided into two different types of contracts:

- Branch 21 contracts offer guaranteed capital. All sector pension schemes and supplementary pension schemes for the self-employed are managed through this type of contract. Most company pension schemes are also managed through Branch 21 contracts rather than Branch 23 contracts.
- Branch 23 contracts are unit-linked contracts and are invested mainly in investment funds and equity markets. Returns depend on the composition of the portfolio. In pillar II, only company pension schemes are managed through Branch 23 contracts. In 2014, only €2.1 billion of reserves were managed through these contracts that represented 3.4% of the total reserves managed by “Assurance Groupe” (see Table BE 1).

The Financial Services and Markets Authority (FSMA) provided detailed information on IORP. Information on Branch 21 contract insurance groups was provided by “Assuralia” and on Branch 23 contract insurance groups by the National Bank of Belgium (BNB).



Table BE 1: Total reserves managed in pillar II in €billion²⁸

	IORP (1)	"Assurance Groupe": Branch 21 contracts (2)	"Assurance Groupe": Branch 23 contracts (3)	Total "Assurance Groupe"(2) +(3)	Total (1)+(2)+(3)
2004	11.7	29.9	na	na	41.58
2005	13.4	30.6	1.6	32.2	45.6
2006	14.3	33.5	1.7	35.2	49.5
2007	14.9	35.6	1.7	37.3	52.2
2008	11.1	38.0	1.4	39.4	50.5
2009	11.2	40.3	1.8	42.5	53.7
2010	13.9	42.8	1.8	44.6	58.5
2011	14.0	45.6	1.6	47.2	61.2
2012	16.4	48.2	1.7	49.9	66.3
2013	18.0	51.2	1.9	53.1	71.1
2014	20.7	54.5	2.1	57.6	78.3

Source: Assuralia, BNB, own research, FSMA

The FSMA provides detailed information on both sector pension schemes and supplementary pensions for the self-employed.

Description of the different types of occupational pension schemes

Sector pension schemes²⁹

Sector pension schemes are supplementary pension commitments established on the basis of a collective bargaining agreement and concluded by a joint committee or joint sub-committee. Inside the joint committee/sub-committee, a sectorial organiser responsible for the pension commitment is appointed.

Three quarter of sector pension plans are managed by insurance companies and mainly through Branch 21 contracts. In 2013, €1.51 billion of reserves were managed through these contracts which represented 2.9% of the total reserves managed in pillar II Branch 21 contracts.

²⁸ Table 12 represents reserves managed only in pillar II. Data does not include the insurance dedicated to managing directors that represented around €3.4 billion of assets under management in 2014.

²⁹ All data provided comes from only plans for which information is available. Data on company pension plans can be partially found (source Belgian FSMA).

However, around two thirds of sector pension scheme reserves (€2.5 billion) are managed by IORP, which represented 12% of the total reserves managed by IORP in 2014.

Table BE 2. Total reserves in sector pension schemes (€billion) ³⁰								
	2005	2007	2009	2010	2011	2012	2013	2014
IORP	0.42	1.43	1.48	1.62	2.04	2.47	2.74	2.50
"Assurance Groupe" (Branch 21)	0.14	0.67	0.81	0.93	1.05	1.28	1.51	na
Total	0.56	2.1	2.29	2.55	3.1	3.75	4.25	na

Source: FSMA

Occupational Pensions for the Self-Employed

In 2004, Pension Complémentaire Libre des Indépendants (PLCI) – Private Supplementary Pensions for the Self-employed – were integrated into the law on supplementary pensions. The purpose of PLCI is to save in order to obtain a supplementary and/or a survival pension at retirement.

Since 2004, the self-employed have the choice to contribute to a supplementary pension. Moreover, they can henceforth choose the pension provider, either an IORP or an insurance company. They can switch from one provider to another during the accumulation period. In 2013, the self-employed had the choice between 24 pension schemes (3 IORPs and 21 pension schemes managed through Branch 21 contracts).

Like employees, the self-employed can supplement their PLCI with several solidarity benefits, called social conventions. These conventions offer benefits such as the funding of the PLCI in the case of inactivity and compensation in the form of an annuity in the case of loss of income.

The self-employed can save up to 8.17% of their income, without exceeding a maximum amount indexed annually (€3,060.07 in 2016). These ceilings can be increased to 9.40% and €3,520.77 if a social convention is included.

³⁰ Data for 2006 and 2008 was not available. FSMA publishes reports on sector pensions every two years. Data for 2014 will be published in 2017.



**Table BE 3. Total reserves managed in PLPCI conventions (€billion)³¹**

	2006	2007	2008	2009	2010	2011	2012	2013	2014
IORP	na	na	na	1.63	1.66	1.39	1.57	1.60	1.70
“Assurance Groupe” (Branch 21)	na	na	na	2.40	2.82	3.71	4.08	4.61	na
Total	2.89	3.27	3.50	4.03	4.48	5.1	5.65	6.21	na

Source: FSMA, own calculations

Company pension schemes

Company pension schemes are the predominant type of scheme within pillar II. However, aggregated and public information on this type of scheme is not available.

From data in Table BE 1 and information on sector pensions and supplementary pensions for self-employed, we can estimate for the company pension schemes the amount of reserves managed by IORP and “Assurance Groupe” in pillar II.

Table BE 4. Total reserves managed in company pension schemes (€billion)

	2009	2010	2011	2012	2013	2014
IORP ⁽¹⁾	9.97	10.74	10.5	12.27	13.2	16.5
“Assurance Groupe”:Branch 21 contracts ⁽²⁾	37.09	39.05	40.83	37.45	45.10	na
“Assurance Groupe”: Branch 23 contracts ⁽³⁾	1.79	1.81	1.62	1.72	1.88	2.10
Total “Assurance Groupe”⁽²⁾⁺⁽³⁾	38.88	40.86	42.45	39.17	46.98	na
Total ⁽¹⁾⁺⁽²⁾⁺⁽³⁾	48.85	51.6	52.95	51.44	60.18	na

Source: “Assuralia”, BNB, own research, FSMA

Pillar III

Pillar III refers to private pension schemes that are contracted on an individual and voluntary basis. The Belgian market of personal pension schemes is divided into two types of products:

³¹ FSMA publishes reports self-employed pensions every two years. Data for 2014 will be published in 2017.

1. Pension savings products, which can take two different statuses:
 - A pension savings fund;
 - A pension savings insurance (through individual Branch 21 contracts).
2. Long-term savings products corresponding mainly to a combination of Branch 23 and Branch 21 contracts³².

At the end of September 2015, 1,745 millions of Belgians are covered by pension savings funds. When adding pension savings insurance and long-term savings products, between 60% and 65% of the active population is covered by a pillar III pension schemes³³.

Pension savings funds

The size of personal pension savings funds is close to the size of funds managed by IORP in pillar II. At the end of 2015, €16.91 billion of net assets were managed by pension savings funds. The Belgian market of pension savings funds has remained relatively concentrated since the launch of the first funds in 1987. The market has grown significantly in the past few years. Since November 2015, three new pension savings funds are available for subscription. These three new funds are mainly invested in other pension savings funds. 19 products were available for subscription at the end of 2015 and the net assets under management continued to grow significantly.

Table BE 5. Net assets under management in pension savings funds (€billion)

2003	7.42
2004	8.69
2005	10.32
2006	11.48
2007	11.78
2008	8.98
2009	11.12
2010	12.04
2011	11.16
2012	12.63
2013	14.35
2014	15.61
2015	16.91

Source: BeAMA

³² Indeed, the Belgian tax system provides tax incentives for investing in Branch 21 and Branch 23 life insurances as “épargne de long terme” (long-term savings).

³³ BeAma, Press Release, 18 December 2015.





Prudential rules/quantitative limits apply to the investments of pension savings funds:

- A maximum of 75% in equity;
- A maximum of 75% in bonds;
- A maximum of 10% in cash deposited in euros or any currency of a country of the European Economic Area;
- A maximum of 20% in foreign currency deposits.

In practice, the majority of funds are predominantly exposed to the equity market. Their return is entirely variable and depends on the returns of the underlying assets and on fees.

Pension savings insurance / Long-term savings products

Belgians can benefit from tax relief when they subscribe to insurance products that will allow them to get a supplementary pension at their retirement or a lump sum.

Belgians can save for their retirement through life insurance products within two different frameworks; a pension savings insurance (Branch 21 contracts) or a long-term savings product (Branch 21 contracts combined with Branch 23 contracts).

“Assuralia” provided information on the reserves managed through individual life insurance products in the framework of pillar III, either through pensions savings insurance (Branch 21 contracts) or long term savings products (Branch 21 and Branch 23 contracts combined).

Table BE 6. Total reserves in individual life insurance products (€billion) ³⁴										
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Branch 21	70.7	80.8	93.4	99.5	107.5	115.8	119.9	120.5	119.3	119.4
Branch 23	22.9	23.3	22.4	16.2	16.8	17.2	16.3	21.2	23.5	25.9
Total	93.6	104.1	115.8	115.7	124.3	133	136.2	141.7	142.8	145.3

Source: “Assuralia”

³⁴ This table indicates reserves managed through individual life-insurance contracts and it excludes reserves managed through “Assurance Groupe” contracts. For pillar II, employees can choose to redeem capital in a lump payment, but in practice few people choose annuities. Most employees redeem their product in lump sum.

In 2014, reserves managed within the framework of pillar III represented 19.2% of total individual life insurance reserves. However, historical data are not available and there is no available information on the breakdown between Branch 21 and Branch 23 contracts (as shown in the table below).

Table BE 7. Contributions and reserves for life-insurance products in pillar III in 2014 (€billion) ³⁵

	Contributions	Reserves	Pillar III reserves in % of total individual life insurance reserves
Pension savings insurance (Branch 21 contracts)	1.24	12.13	8.3%
Long-term savings products (Branch 21 and Branch 23 contracts combined)	1.02	15.72	10.8%
Total	2.26	27.85	19.2%

Source: "Assuralia"³⁶

Charges

Occupational pension schemes

Charges in IORPs

We were unable to find any data on IORP charges. The only available information was the following, provided by the FSMA for sector pension funds; operating expenses ranged from 0.01% to 1.86% of assets, with an average of 0.16% in 2013 (0.17% in 2011 and 0.2% in 2009)³⁷.

Company pension funds managed by IORPs are smaller than sector pension funds and they are, therefore, likely to be more costly. However, company pension funds are often part of a multinational group which often sets up an asset pooling across

³⁵ This table indicates reserves managed through individual life-insurance contracts and it excludes reserves managed through "Assurance Groupe" contracts.

³⁶ Assuralia website, proportion banks / Insurance in the third pillar :

http://www.assuralia.be/fileadmin/content/stats/03_Cijfers_per_tak/03_Pensioen/01_Kerncijfers/FR/10_3depijler_aandeel_banken_verzekeraars%2001.htm

³⁷ There is no more recent data available for 2014 and 2015, as FSMA provides this information every two years.





Europe or even across the globe. This generates economies of scale and increases the bargaining power which lowers costs.

Charges in “Assurance Groupe” (Branch 21 contracts)

The only historical information on administration and management costs as well as commissions on a yearly basis was for “Assurance Groupe” (Branch 21 contracts), provided by “Assuralia”.

Table BE 8. Charges in % of reserves in “Assurance Groupe” contracts

	Administrative & management costs (% of reserves)	Commissions (% of premiums)
2002	1.21	1.2
2003	0.98	1.3
2004	0.84	1.2
2005	0.93	1.4
2006	0.90	1.2
2007	0.80	1.4
2008	0.79	1.5
2009	0.76	1.3
2010	0.71	1.5
2011	0.71	1.5
2012	0.71	1.5
2013	0.69	1.5
2014	0.67	1.5

Source: “Assuralia”, own calculations

Moreover, many insurance companies apply entry costs. In the case of sector pension schemes, the level of entry fees varies considerably, ranging from 0.5% to 5% of the premium. In 2013, half of the schemes managed by insurance companies, levied charges lower than 2% of premiums. For 16% of schemes, the level of fees was between 2% and 1%. All the new opened schemes applied a level of fees lower than 1%. However, 13% of schemes applied charges above 5% of premiums³⁸.

Charges can be higher in Branch 23 Group Insurances (“Assurance Groupe”), as shown by the case study in annex, due to the addition of contract fees to the fees of the underlying “units” (typically investment funds).

³⁸ Source: FSMA, 2015.

Pillar III

Pension savings funds

Historical data on charges for pension savings funds is difficult to obtain and often opaque even for investors. Key Investor Information Documents (KID) must provide information on all charges related to the funds on a yearly basis, but for UCITS only, not for other investment funds.

Using the prospectus of the pension savings available on the Belgian market, the following average yearly charges were calculated:

- Entry fees: 2.5% of initial investment;
- Management fees: 0.94% of total assets under management;
- Total Expenses Ratio represented on average 1.29% of total assets under management;
- No exit fees.

The following table summarises the Total Expenses Ratio (TER) of 19 funds available for subscription on the Belgium market in 2015.



**Table BE 9. Total Expense Ratio in 2015 (% of total assets under management)**

Accent Pension Fund	1.31
Argenta Pensioenspaarfonds	1.34
Argenta Pensioenspaarfonds Defensive	1.35
Belfius Pension Fund Balanced Plus	1.63
Belfius Pension Fund High Equities Cap	1.32
Belfius Pension Fund Low Equities Cap	1.6
BNP Paribas B Pension Balanced	1.25
BNP Paribas B Pension Growth	1.26
BNP Paribas B Pension Stability F Cap	1.25
Hermes Pension funds	1.07
Interbeurs Hermes Pensioenfond	1.03
Metropolitan-Rentastro Growth	1.26
Pricos	1.25
Pricos Defensive	1.25
Record Top Pension Fund	1.32
Star Fund	1.17
Crelan pension funds Stability	1.30
Crelan pension funds Growth	1.30
Crelan pension funds Balanced	1.30
Total Expenses Ratio, Average (simple)	1.30

Source: own research

Pension savings insurance (Branch 21 contracts) / Long-term savings products (Branch 21 and Branch 23 contracts combined)

“Assuralia” provided historical data on administration and management costs as well as entry fees and other commissions paid for individual life insurance contracts.

Table BE 10. Administration and management costs and commissions for individual life insurance contracts

	Branch 21		Branch 23	
	Administrative & management costs (% of reserves)	Commissions (% of premiums)	Administrative & management costs (% of reserves)	Commissions (% of premiums)
2002	1.2	4.8	na	2.5
2003	1.8	3.7	na	3.0
2004	1.4	3.6	na	2.7
2005	0.8	3.3	0.4	2.0
2006	0.7	4.7	0.3	3.4
2007	0.7	4.6	0.3	4.2
2008	0.7	5.4	0.4	5.4
2009	0.6	5.8	0.3	5.6
2010	0.5	5.7	0.3	4.8
2011	0.5	6.0	0.3	4.6
2012	0.5	6.6	0.3	2.9
2013	0.6	8.8	0.3	4.8
2014	0.6	7.6	0.4	5.2

Source: "Assuralia", own calculations

For Branch 23, these data most likely do not include fees charged on the underlying units (funds); see attached case analysis.





Taxation and conditions to claim supplementary pensions

Occupational pension schemes

Employees pay two taxes on their benefits:

- A solidarity contribution varying up to a maximum of 2% of the benefits depending on the retiree's income.
- An INAMI ("Institut National d'Assurance Maladie-Invalidité") contribution of 3.55% of the benefits.

In addition, benefits from occupational pension schemes are taxed depending on how they are paid out:

- A lump sum payment;
- Periodic annuities;
- Life annuity issued from invested benefits.

Lump sum payment:

In the case of a lump sum payment, the taxation of the benefits depends on the beneficiary's age and on who paid the contributions to the schemes (employer or employee). Since July 2013, the rules detailed in Table BE 11 below are applied to taxation on benefits from occupational pension plans.

Table BE 11. Taxation of benefits from occupational pension schemes			
Benefits paid before the legal pension		Benefits paid at the same time as the legal pension	
Benefits from employee's contribution	Benefits from employer's contributions	Benefits from employee's contribution	Benefits from employer's contributions
10% for contributions made since 1993	60 years old: 20%	10% for contributions made since 1993	16.50%
16.5% for contributions made before 1993	61 years old: 18%	16.5% for contributions made before 1993	10% if the employee remains employed until 65 years old
+ local tax	+ local tax	+ local tax	+ local tax

Source: "Assuralia"³⁹

Before July 2013, benefits from employer's contributions were taxed at the flat rate of 16.5% whatever the beneficiary's age at the time of the payment of the benefits. Taxation rules of benefits from employer's contribution will certainly evolve in the future to be aligned with new measures enforced in the supplementary pensions Act reform and the increase in the retirement age imposed by law.

The local tax can vary from 0% to 10%, with an average of 7%.

Periodic annuities⁴⁰

Periodic annuities are considered to be an income and are thus taxed at the applicable progressive personal income tax rate.

³⁹ Assuralia: http://www.assuralia.be/index.php?id=279&L=1&tx_ttnews%5Btt_news%5D=1315

⁴⁰ For pillar II, employees can choose to redeem capital in a lump sum payment or in annuities. In practice, few people choose annuities and most employees redeem their product in a lump sum payment.





Converting the accumulated capital into a life annuity

An employee can convert the lump sum payment into a life annuity. In this case, the INAMI contribution and the solidarity contribution have to be paid according to the rules applied to the lump sum payment. Then the retiree has to pay a withholding tax of 15% on the annuity each year, which should be equal to 3% of the converted capital.

The supplementary pensions Act reform

Alignment of the supplementary pension age and the legal pension age

The reform of supplementary pension Act introduced an amendment on the alignment of the supplementary pension age and the legal pension age (respectively. 65 / 66 in 2025 / 67 in 2030).

As of 1 January 2016, supplementary pension benefits will be paid at the same time as the legal pension's effective start, either at the legal pension age or at a younger age in case of early retirement. Previously, lump sum payments or annuities from supplementary pension could be paid from the age of 60, if the plan allowed such early liquidation and it was not linked to the legal pension's effective start.

An exception applies for employees, who decide to postpone their effective retirement when having reached the legal pension age (normal or early). They have the possibility to claim for their supplementary pension scheme or to continue to be affiliated to the pension scheme until their effective retirement.

Most of existing supplementary pension plans managed by insurance companies includes specific conditions (administration costs, contractual returns...) agreed with employers depending on a contractual pension age, which is in general below the legal pension age. All existing plans have to cope with this new measure, without any obligation to redraft the age conditions. However, employers will have to discuss directly with the insurance companies to determine which terms and conditions will apply to additional years until the effective retirement.

The prohibition of beneficial anticipation measures

To compensate the loss employees may have when they end prematurely their career, many supplementary pension plans provide financial compensations. As of 1 January 2016, all these existing beneficial anticipation measures will be abolished. These existing "advance mechanisms" can still be applied for

affiliates who reach the age of 55 years on or before December 31, 2016. The removal of these rules may not lead a decrease of acquired reserves.

Pillar III

Personal pension savings products (fund or life insurance contracts)

Contributions invested in pension savings products (fund or insurance) are deductible from the income tax, subject to a rather low annual ceiling (€940 in 2016). Since 2012, tax relief is equal to 30% of the contributions, regardless of the income of the taxpayer. The tax relief of pension savings products is “stand-alone”. Taxpayers can receive tax relief for only one contract even if they make contributions to several products.

Since 1 January 2015, the final taxation on the accumulated capital was lowered from 10% to 8% and still depends on the age of the saver at the time of the subscription.

If the saver subscribes to the product before 55 years of age, the following rules apply:

- When the saver reaches the age of 60, 8% of the accumulated capital is levied (excluding participation to annual earnings). The taxation is based on a theoretical return of 4.75% from the fund, whatever the actual return of the fund is. For contributions made before 1993, the theoretical return rate of 6.25% is applied;
- If the saver quits the pension savings fund before the age of 60, the accumulated capital will be taxed under the personal income tax system. The saver can continue investing and enjoying tax relief until the age of 64. The accumulated capital is no longer taxed after the 60th birthday of the saver.

If the saver subscribes to the product at the age of 55 or after, the following rules apply:

- In order to benefit from the low final tax rate of 8% on the accumulated capital, the saver has to stay at least 10 years in the fund and at least five contributions must be made;





- If the saver quits the pension savings fund before the age of 60, the accumulated capital is taxed under the personal income tax system;
- If the saver quits the pension savings fund between the ages of 60 and 64, the accumulated capital will be taxed at the rate of 33% and the lump sum must be declared in the annual tax declaration where it shall again be taxed (this time at the marginal tax rate according to the income level of the saver).

Long-term savings products (life insurance contracts)

The maximum amount of tax relief based on contributions invested in long-term savings products depends on the level of the saver's yearly earnings, without exceeding the ceiling of €2,260 in 2016. However, the tax relief is determined jointly for long-term savings products and mortgage deductions. If a saver already receives a tax relief for a mortgage, it may be impossible to obtain a further tax relief for life insurance products under pillar III.

The same tax rules apply to pension savings products. However, the taxation on the accumulated capital is calculated on the real return of the product.

Pension Returns

Since 2004 and until 2015, all DC plans managed either by IORP or insurance companies through Branch 21 contracts were required to provide an annual minimum return of 3.75% on employees' contributions and 3.25% on employers' contributions.

To guarantee the sustainability and social character of the supplementary pensions, measures on the guaranteed return were implemented: the supplementary pensions Act reform was voted in December 2015 and entered into force as of 1 January 2016.

Starting from 2016, these guaranteed returns have been lowered with no distinction between employers and employees contributions. In order to ensure the sustainability of the guaranteed return, its level will be set each year according to an economic rule:

- The new guaranteed return must be within the range of 1.75% to 3.75%.

- The new guaranteed return would be 65% of the average of the rates of 10-year government bonds over 24 months, rounded to the nearest 25 basis points to prevent it from fluctuating too frequently⁴¹.

Occupational pension schemes

The returns of occupational pension schemes depend on how schemes are managed, either by an IORP or by an insurance company.

In 2014, among the 198 pension schemes managed by an IORP, 89 had a promise of returns (DB plans), 29 were DC plans and 80 were hybrid plans (Cash Balance, DC + rate). While newly opened schemes are always DC plans, the largest part of assets remaining are still managed in plans offering promises of returns.

In DB plans, the premium is fixed with the goal of financing target retirement replacement rates of between 60% and 75%, including state pension benefits.

The real returns after taxation of occupational pension plans were calculated under the following assumptions:

- Solidarity contributions corresponding to 2% of benefits and the INAMI contribution of 3.55% of benefits are levied;
- The benefits are paid as a lump sum payment;
- Only the employer paid contributions and hence benefits are taxed at the flat rate of 16.5%;
- In addition, an average local tax of 7.5% is levied on the final benefits.

Occupational pension schemes managed by IORPs

PensioPlus⁴², Belgium's occupational pension scheme association provides an average return of 4.4% in 2015. It provides the gross average weighted returns after charges of all occupational pension schemes managed by an IORP in Belgium.

⁴¹ The rate of 65% could be increased to 75% in 2018 and to 85% in 2020 according to the FSMA decision.

⁴² The Belgian Association of Pension Institutions (BAPI) changed its name in 2015 and became PensioPlus





Table BE 12. Returns of occupational pension plans managed by IORPs (2000-2015) (%)

	Nominal return before charges, inflation and tax	Nominal return after charges, before inflation and tax	Real return after charges and inflation and before tax
2000	0.9	<u>-0.1</u>	<u>-3.0</u>
2001	<u>-4.2</u>	<u>-5.1</u>	<u>-7.0</u>
2002	<u>-11.0</u>	<u>-12</u>	<u>-13.1</u>
2003	10.4	9.3	7.5
2004	9.9	8.9	6.9
2005	16.0	15.0	11.8
2006	10.3	9.3	7.0
2007	2.2	1.4	<u>-1.7</u>
2008	<u>-17.0</u>	<u>-18</u>	<u>-19.9</u>
2009	16.6	15.7	15.3
2010	10.3	9.5	5.9
2011	0.1	<u>-0.7</u>	<u>-3.8</u>
2012	12.9	12.1	9.8
2013	7.5	6.7	5.5
2014	12.7	11.9	12.3
2015	5.1	4.4	2.9

Sources: IPE, BAPI, own calculations

Table BE 13. Occupational pension plans managed by IORPs annual average return 2000-2015 (%)

Nominal return before charges, inflation and tax	4.72
Nominal return after charges, before inflation and tax	3.85
Real return after charges and inflation and before tax	1.84
Real return after charges, inflation and after tax	1.37

Sources: IPE, PensioPlus, own calculations

Over a 16-year period (2000-2015), occupational pension schemes managed by IORP experienced negative nominal returns before charges three times: in 2001, 2002 and 2008. Over the period 2000-2015, the annual average return after charges, inflation and tax is positive at 1.37%⁴³. Such return could be considered as low, but returns calculated on a longer period of time would be higher. However, taking more risk also implies the acceptance of higher volatility, which may explain the rather low return of the Belgian IORPs over a 16 year period starting in 2000. At the end of 2014, FSMA reported the average asset allocation of IORP as follows: 41% in equities, 45% in fixed income securities, 8% in real estate, 1% loans, 4% in cash and 1% in other asset classes. The proportion of equities increased compared to 2012 (39%) and represented a significant proportion of assets when compared to other countries.

In the case of DB plans, as long as prudential caution is respected, the benefit of the employee is not immediately impacted. On average IORPs have a funding ratio of 120%⁴⁴ in 2014 that enables them to cope with the volatility linked to their asset allocation.

*Occupational pension schemes managed by insurance companies (Branch 21 contracts)*⁴⁵

“Assuralia” provides returns net of charges in percentage of the total reserves.

⁴³ To calculate the return after taxation, the following assumptions have been made: the employee claim his supplementary pension funds at the same time as the legal pension and remained employed until the legal age (65 years old). Both employee and employer contributions will be taxed at the flat rate of 10%.

⁴⁴ Assets compared to accrued benefits.

⁴⁵ “Assuralia” does not provide information on collective Branch 23 contracts (“Assurance Groupe”).





Table BE 14. Returns of occupational pension managed by insurance companies (2002-2014) (%)

	Nominal return before charges, inflation and tax	Nominal return after charges, before inflation and tax	Real return after charges and inflation and before tax
2002	5.4	4.1	2.5
2003	6.3	5.3	3.7
2004	6.3	5.4	3.4
2005	6.8	5.8	3.2
2006	6.7	5.7	3.3
2007	6.6	5.7	3.8
2008	2	1.2	<u>-3.2</u>
2009	5.4	4.6	4.6
2010	5.3	4.5	2.2
2011	4	3.3	<u>-0.1</u>
2012	5.4	4.6	1.9
2013	5.4	4.7	3.5
2014	5.5	4.8	5.2

Sources: "Assuralia", own calculations

Table BE 15. Occupational pension managed by insurance companies annual average return (2002-2014) (%)

Nominal return before charges, inflation and tax	5.47
Nominal return after charges, before inflation and tax	4.59
Real return after charges and inflation and before tax	2.59
Real return after charges and inflation and tax	2.02

Sources: "Assuralia", own calculations

Over a 13-year period (2002-2014), Branch 21 "Assurance Groupe" occupational pension plans experienced positive nominal returns before charges. The annual average return over the period is significantly lowered by inflation and taxation. However, it remains positive at 2.02%⁴⁶. It is not comparable, however, to the

⁴⁶ To calculate the return after taxation, the following assumptions have been made: the employee claim his supplementary pension funds at the same time as the legal pension and remained employed until the legal age (65 years old). Both employee and employer contributions will be taxed at the flat rate of 10%.

performance of occupational funds as we could not find “Assurance Groupe” return data for 2000 and 2001.

Also, this is not true for Branch 23 “Assurance Groupe” occupational pension plans which seem to have suffered negative real returns over the last 15 years⁴⁷.

Table BE 16. Occupational pension plans managed by IORPs vs. occupational pension managed by insurance companies (2002-2014)

	IORPs	Insurance companies
Nominal return before charges, inflation and tax	5.70	5.47
Nominal return after charges, before inflation and tax	4.85	4.59
Real return after charges and inflation and before tax	2.84	2.59
Real return after charges and inflation and tax	2.00	2.02

Sources: “Assuralia”, IPE, PensioPlus, own calculations

Pillar III

Pension savings funds

The Belgian Asset Management Association (BeAMA) provides quarterly data on the average annual returns of pension savings funds. The most recent data provided by BeAMA is the average return of pension savings funds on an annual basis at the end of 2015.

Table BE 17. Average returns of pension savings funds on annual basis at the end of 2015 (%)

Over 1 year	Over 3 years	Over 10 years	Since the launch of first pension savings funds (1987-2015)
8.2	8.9	3.6	7.1

Source: BeAMA⁴⁸

These average returns were calculated based on the average returns of all funds available on the market, after expenses but before inflation and taxation.

Annual returns are also available in the prospectus of each pension savings fund provided by the asset management company that commercialises the fund. Annual returns are generally displayed over a 10-year period. In general, there is no information available on returns before 2002 in the funds’ prospectuses. The

⁴⁷ See Annex: Case study of a Branch 23 “Assurance Groupe” occupational pension plan.

⁴⁸ Source BeAMA, Press release, 22 April 2016 : « Chiffres secteur OPC 4ème trimestre 2015 ».





following table displays the average return of all funds available for subscription on the Belgian market from 2000 to 2015.

Concerning charges, as historical data for TER is not available, we assume that TER expressed as a percentage of total assets under management observed in 2014 stay the same over the considered period (2000-2014).

Table BE 18. Returns on pension savings funds after expenses, inflation and taxation (%)

	Nominal return before charges, before inflation, before tax	Nominal return after charges before inflation, before tax	Real return after charges, after inflation, before tax	Annual average real return after charges after inflation and tax (2000-2015)
2000	<u>-2.8</u>	<u>-4</u>	<u>-6.8</u>	1.5
2001	<u>-3.3</u>	<u>-4.5</u>	<u>-6.4</u>	
2002	<u>-13.4</u>	<u>-14.5</u>	<u>-15.6</u>	
2003	16	14.6	12.7	
2004	21.3	19.8	17.6	
2005	18.7	17.2	14	
2006	11	9.6	7.3	
2007	3.8	2.5	<u>-0.6</u>	
2008	<u>-24.7</u>	<u>-25.7</u>	<u>-27.6</u>	
2009	19.7	18.2	17.8	
2010	8.3	7	3.4	
2011	<u>-4.1</u>	<u>-5.3</u>	<u>-8.2</u>	
2012	12.8	11.4	9.1	
2013	12.8	11.2	9.9	
2014	8.6	7.3	7.7	
2015	9.6	8.2	6.6	
Annual average return (2000- 2015)	5.1	3.8	1.8	

Source: BeAMa, own calculations

Pension savings funds within pillar III experienced negative nominal returns from 2000 to 2002, as well as in 2008 and 2011. Unlike occupational pension schemes, these pension savings funds are not obliged to pay a guaranteed return to retirees. They delivered higher nominal returns over the 16 year period (2000-2015).

Moreover, benefits are taxed at a flat rate of 10%⁴⁹, considering an annual return of 4.75% during the accumulation phase, whatever the effective return of the pension savings funds. The annual average real return after taxation was less affected by the taxation than occupational pension schemes and remained positive during the period at about 1.5%.

Individual life-insurance contracts

Table BE 19. Returns of Branch 21 contracts (%)⁵⁰

	Nominal return before charges, before inflation, before tax	Nominal return after charges before inflation, before tax	Real return after charges, after inflation, before tax
2002	4.01	2.75	1.13
2003	5.61	3.75	2.22
2004	6.26	4.75	2.80
2005	6.30	5.40	2.83
2006	5.91	5.10	2.74
2007	5.98	5.20	3.34
2008	0.76	0.10	<u>-4.21</u>
2009	4.92	4.30	4.30
2010	4.58	4.00	1.66
2011	3.04	2.50	<u>-0.87</u>
2012	4.98	4.40	1.75
2013	4.71	4.10	2.87
2014	5.79	5.20	5.62

Source: "Assuralia", own calculations

Table BE 20. Annual average return of individual Branch 21 contracts 2002-2014 (%)

Nominal return before charges, before inflation, before tax	4.82
Nominal return after charges before inflation, before tax	3.97
Real return after charges, after inflation, before tax	1.99
Real return after charges, tax and inflation	1.58

Sources: "Assuralia", own calculations

⁴⁹ We use a flat rate of 10%, as the implementation of the new flat rate of 8% will concern contracts subscribed from 2015.

⁵⁰ "Assuralia" provides information on the returns of life insurance before the year 2002 only on aggregated basis with no breakdown between Branch 21 and Branch 23.



**Table BE 21. Returns of individual Branch 23 contracts 2005-2014⁵¹**

	Nominal return before charges, before inflation, before tax	Nominal return after charges before inflation, before tax	Real return after charges, after inflation, before tax
2005	11.92	11.50	8.46
2006	7.46	7.10	4.90
2007	1.62	1.30	<u>-1.75</u>
2008	<u>-18.21</u>	-18.50	-20.64
2009	13.25	12.90	12.56
2010	7.46	7.10	3.58
2011	<u>-2.61</u>	-2.90	<u>-5.91</u>
2012	9.43	9.10	6.86
2013	5.91	5.60	4.35
2014	8.29	7.90	8.33

Sources: "Assuralia", own calculations⁵²

Table BE 22. Annual average return of individual Branch 23 contracts 2005-2014 (%)

Nominal return before charges, inflation and tax	4.05
Nominal return after charges, before inflation and tax	3.71
Real return after charges and inflation and before tax	1.63
Real return after charges, inflation and tax	1.32

Sources: "Assuralia", own calculations⁵³

Returns of individual life-insurance contracts provide an insight into returns of reserves invested in life-insurance contracts within pillar III. Pension savings insurances correspond to Branch 21 contracts with a guaranteed capital. Long-term savings products can combine Branch 21 and unit-linked Branch 23 contracts. In our calculations, we considered that benefits from Branch 21 contracts were taxed like pension savings schemes and a flat tax rate of 10%⁵⁴ was applied to the accrued benefits from Branch 23 contracts.

⁵¹ Data includes information for both individual and collective life insurance contracts.

⁵² Information before 2005 is not available.

⁵³ Information before 2005 is not available.

⁵⁴ We use a flat rate of 10%, as the implementation of the new flat rate of 8% will concern contracts subscribed from 2015.

Over the period 2002-2014, the nominal returns of Branch 21 contracts were positive. However, Branch 23 contracts experienced negative nominal returns in 2008 and 2011.

Taxation lowered the real returns, however, if the same taxation as for occupational pension schemes had been applied, then the returns would have been negative.

Conclusions

Belgians are encouraged to save for their retirement in private pension vehicles. In 2004, the implementation of the law on supplementary pensions defined the framework of pillar II for sector pension plans and supplementary pension schemes for self-employed. The number of employees covered by an occupational pension scheme keeps rising as well as the number of self-employed covered by a supplementary pension scheme.

Annual minimum guaranteed returns on employers and employees contributions defined in 2003 (respectively 3.75% and 3.25 %) were no longer suitable for insurance companies. These returns did not reflect the current market situation, given the low level of Belgium government bonds yields and market interest rates on investment grade bonds. Measures to guarantee the sustainability and social character of the supplementary pensions were enforced in January 2016:

- The guaranteed minimum return on contribution has been revised and has been set to 1.75%, the same level for both employee and employer contributions. This return will be revised in the future according to an economic formula taking into account the evolution of government bond yields.
- The supplementary pension age and the legal pension age have been aligned;
- Beneficial anticipation measures granted to employees when they claim their supplementary pension before the legal age have been abolished.

Over a 16 year period (2000-2015), the annual average real return of pension plans (pillar II and III) after charges, taxation and inflation ranged from 1.32% to 2.02% depending on products and schemes.





Funds managed by IORPs (pillar II) and personal pension savings funds (pillar III) had annual average returns of 1.37% and 1.50%. These funds offer returns linked to the performance of the underlying assets. Unlike insurance companies, asset management companies are less constrained in their asset allocation and can thus benefit from potential increases in markets.

Over the period 2002-2013, “Assurance Groupe” and individual life-insurance through Branch 21 contracts delivered an average annual real return of 2.02% and 1.32% respectively.

ANNEX: Case study of a Branch 23 - “Assurance Groupe” occupational pension plan

This corporate “Branch 23” (unit-linked) insurance pension plan offers three investment options: low, medium and high depending on the equity/bond asset allocation.

The “medium” investment option provides the returns of an investment fund that has the following benchmark:

- 50% equity (MSCI World equity index);
- 50% bonds (JPM Euro Bond Index).

Table BE 23. Real case of a Belgian occupational pension insurance

2000-2016* performance vs. capital markets benchmark

Capital markets (benchmark index**) performance

Nominal performance	100%
Real performance (before tax)	44%

Pension insurance performance (same benchmark**)

Nominal performance	33%
Real performance (before tax)	-4%

*To 30/06/2016

** 50 % Equity / 50 % bonds (MSCI World equity index and JPM Euro Govt Bond Index⁵⁵) invested on 31/12/1999

Sources: Better Finance, provider

As the table above shows:

- The real performance (before tax) of the pension fund is negative.
- The real performance of the pension fund is disconnected and much below that of the capital market benchmark which is positive: the performance of capital markets cannot be used as a proxy for pension savings performance, even if the capital market benchmark used is the one chosen by the asset manager.

What are the reasons for such a bad performance?

⁵⁵ « Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2015, J.P. Morgan Chase & Co. All rights reserved. » (J.P. Morgan).





The key explanation factor is charges (fees). Whereas the benchmark does not bear any fees, the pension fund does. It appears that this fund is a fund of funds. This means it bears two layers of fees: those of the fund itself plus those of the funds it invests in.

Better Finance also discovered that this fund of fund is not a UCITS fund, but an AIF (Alternative Investment Fund). Therefore, it is not required to publish a Key Information Document (KID) that must disclose the total annual charges of the fund of funds. Actually, Better Finance had to complain to the Belgian regulator to finally obtain the yearly charges on the fund of funds itself (0.50% per annum). We then had to search the disclosed underlying funds (biggest positions in the fund of funds portfolio) on the internet to find those funds' charges. It appeared that for the main equity funds, the weighted average annual charge in 2012 was 2.01% and 1.39% in 2015 (different funds used). In total the annual charge paid by the pension saver on the equity portion of this pension fund was therefore 2.51% of assets under management in 2012 and 1.89% in 2015, still more than nine times the annual charge on a world equity ETF index fund.

This expense rate is very high and more than explains the huge performance. Most of these expenses could have been saved by investing in an equity index exchange-traded fund (ETF) on the same benchmark (MSCI World) as the table below shows.

Table BE 24. Charges taken from funds over a year

This Belgian occupational pension fund (equity part): 1.89%

Average European equity fund: 1.75%

Average US equity fund: 0.70%

Exchange traded fund (world equities): 0.19%

Sources: Better Finance, Morningstar, Financial Times

Conclusions:

- Belgian "Assurance Groupe" pension funds should disclose full charges and the "inducements" they get from investing in underlying funds (commissions paid by those funds' management firms).
- They should not invest in high fee funds when it is clearly not the fund participants' interest, as in this case.

Pension Savings: The Real Return

2016 Edition

Country Case: Bulgaria

Introduction

The Bulgarian pension system rests on three pillars:

- Pillar I – Defined benefit, pay-as-you-go (PAYG) Social Security;
- Pillar II – Defined contribution, fully funded Supplementary Mandatory Pension Scheme (SMPS);
- Pillar III – Defined contribution, fully funded Supplementary Voluntary Pension Scheme (SVPS).

It is a result of a far-reaching pension reform undertaken in 1999-2000 to strengthen the fiscal sustainability of the PAYG public social security system inherited from the pre-1990 period and to transfer the longevity risk in part from the state to private pension providers. Privately managed pillars II and III were introduced and started collecting contributions in 2001 and 2002.

The publicly managed PAYG pillar I still plays a major role in the Bulgarian pension system, as pay-outs from Pillar II have not yet started en masse and pay-outs from pillar III are quite limited. From 2000 to 2015 participants born prior to 1960 continued contributing only to the public system, while those born after 1959 were required to split their mandatory pension insurance contributions between Pillars I and II. In 2015, for example, participants, born after 1959 contributed 12.8 % of insurable income to the PAYG public Social Security and 5 % to the SMPS. A major parametric pension reform was enacted in 2015, where:

- a. Pension eligibility age is now scheduled to increase gradually to 65 years of age for both women and men;
- b. Pension insurance contributions are to increase from 17.8 % of the insurable income in 2016 to 19.8 % as of 1.01.2018;
- c. Pension entitlement from the public PAYG system is scheduled to be stepped up gradually from 1.1 % of the average income for each year of contribution to 1.5 %;





- d. Fees and charges, collected by pension insurance companies, are scaled down for each year between 2016 and 2019.

In addition the pension regime was changed. Under the new regime the Supplementary Mandatory Pension Scheme became optional. As of 2015 participants can elect whether:

- a. to contribute their entire mandatory pension insurance to Pillar I only or
- b. split their contribution between Pillar I and Pillar II.

In the latter case they will be entitled to two pensions from both the public pension system and the SMPS. Their public pension, however, will be reduced commensurate to the lower pension insurance contribution they had made to the public system. This opens the possibility that their total pension income might be lower compared to the pension they would have been entitled to from Pillar I only. This will be the case if the pension from the SMPS is insufficient to compensate for the reduction of the public pension. Whether or not this is the case depends crucially on the return from the universal pension funds, comprising the largest part of SMPS.

Pension vehicles

The privately managed pension funds come in four varieties. Universal and professional pension funds fall under Pillar II (SMPS), while Pillar III (SVPS) consists of voluntary supplementary pension funds and voluntary professional pension funds.

Table BG 1. Privately managed pension funds in Bulgaria

	SMPS	SVPS
1. Universal pension funds	X	--
2. Professional pension funds	X	X
3. Voluntary pension funds	--	X

Pension funds are managed by specially licenced privately owned and operated pension companies. As of the end of 2015, a total of nine companies are licensed to manage pension funds. They are subject to various capital and management requirements. A peculiar requirement is for pension companies to include the terms “pension” or “retirement” in their name, or derivatives thereof. At the same

time, no entity without a license to manage pension funds can use any of those terms in their name.

Each pension company is allowed to manage one single fund of each type: universal, professional, voluntary and voluntary professional. As of end 2015, just one company offers all four pension fund types: universal, professional, voluntary and voluntary occupational, and the remaining eight companies offer three pension funds each (with the exception of the voluntary professional funds).

Thus the number of privately managed defined contribution pension funds offered in Bulgaria can be summarised as follows:

Table BG 2. Privately managed defined contribution pension funds in Bulgaria		
	SMPS	SVPS
1. Universal pension funds	9	
2. Professional pension funds	9	1
3. Voluntary pension funds		9

Universal pension funds

The universal pension funds are by far the most important pension vehicle in Bulgaria with over 3.5 million individual pension accounts and BGN 7.7 billion (€3.92 billion⁵⁶) in assets under management (as of end 2015). Participation in the universal funds was mandatory for employees born in 1960 or later until August 2015 and has been optional since. The universal pension funds are quasi-occupational in that participation in them is tied to the employment status of the insured and both the employee and the employer are required to make contributions⁵⁷. The only difference is that universal funds do not operate at a company or industry level but at the national level, hence their name “universal”. This was done because of the domination of small and medium size companies in Bulgaria with no experience or tradition in sponsoring pension schemes. The advantage of arranging occupational pension funds at the national level as

⁵⁶ For the conversion of the various currencies to euros, the report uses the 2014 annual average exchange rate "Euro foreign exchange reference rates" provided by the European Central Bank: <https://www.ecb.europa.eu/stats/exchange/eurofxref/html/index.en.html>

⁵⁷ The statutory contribution to Universal pension funds is set at 5 % of insurable income, split between the employer (2.8 %) and the employee (2.2 %).





universal is in their portability. Employees do not necessarily need to change their pension fund when changing jobs.

Contributions

Contributions to the universal funds are set by law at 5% of insurable income, which in 2015 was capped at BGN 2,600 (€1,329.36) per month. This ceiling remains in effect in 2016.

Minimum returns

Pension companies are obliged to manage assets in such a way as to achieve a minimum nominal return. The minimum nominal return is set quarterly by the regulator, the Financial Supervision Commission, on basis of the average return, achieved by all pension companies over a period of the preceding 24 months. The minimum return is equal to either 60% of the average for all pension companies or 300 bp (basis points) below the average, whichever is smaller.

In case a fund's actual performance is weaker than the minimum nominal return determined by the regulator, the pension company is obliged to top up individual pension accounts to the extent of the shortage. The source for this obligatory top-up is the pension companies' own reserves, which should range between 1% and 3% of assets under management.

Another source of funds could be reserves accumulated within the respective pension fund. These reserves are accumulated when the actual fund's performance exceeds the average industry performance for the respective period by either 40% or 300 bp, whichever is larger.

Reserves

Pension companies are mandated to maintain pension reserves to cover the actuarial longevity risk when lifetime pensions are offered. The regulator has decreed however, that these reserves must be set aside one year after the first lifetime pension from the respective fund is extended. Since typically such pensions are not yet being paid out of universal funds, pension companies have not made provisions for the longevity risk.

Distribution

Participants in universal pension funds become eligible to receive supplementary pensions under the same terms under which they qualify for a state pension,

namely reaching a certain age and length of service. However, universal pension plan participants can start drawing on their account five years prior to reaching full pension age, provided their accumulated assets are sufficient to ensure a lifetime pension of at least the state-mandated minimum pension.

In the case of a premature death of an insured member or retiree, the universal pension fund distributes the balance of the account to his or her heirs either as a lump sum or as a term annuity. Should there be no heirs the balance of the account is transferred to the universal fund's reserves.

Professional pension funds

Professional pension funds are restricted to only those employees that work under hard and hazardous conditions such as miners, air pilots and similar. People working under these conditions are entitled to an early retirement. The purpose of professional pension funds is limited to ensuring pensions for a prescribed length of time until those employees become eligible to draw pensions from the universal pension funds. With BGN 833 million (€425.8 million) in assets under management and 278,000 participants (as of end 2015), professional pension funds play a more limited role in the Bulgarian pension system.

Contributions

Professional pension funds are non-contributory. Only employers pay into the funds.

Minimum returns

The quarterly nominal returns are subject to the same floor – either 60% of the average return for the previous 24 months or 300 bp below the average return, whichever is smaller – as universal pension funds are.

Reserves

The same provisions as for universal pension funds apply.

Distribution

Employees, eligible for a pension from a professional fund, are normally promised a term pension covering the period starting from the date of their early retirement through to achieving the standard pension age. Term pensions for early retirement were first supposed to start being paid from 1 January, 2011. However, due to insufficient funds accumulated in the occupational pension funds, the start of





payments was postponed until 1 January 2015. This deadline slipped once more for the same reason: insufficient accumulation of assets. Currently professional pension funds transfer account balances of early retirees to the public National Social Security Institute, which then assumes the responsibility for pension payments.

Should a person who has been insured through a professional pension fund fail to meet the eligibility criteria for early retirement, he or she has a choice at the time of reaching the age of normal retirement to:

- either withdraw his or her balance from the professional pension fund as a lump sum, or
- transfer the balance to his or her account that is part of a universal pension fund.

Similar to inheritance rights for universal pension funds, the heirs of a deceased insured or retired person inherit the account balance and may choose to receive the entitlement as either a lump sum or as a term annuity. Contrary to the rule for universal pension funds, should a deceased insured or retiree leave no heirs, the remaining balance on the account is transferred to the state budget.

Voluntary pension funds

Voluntary pension funds form the core of pillar III of the Bulgarian pension system. Nine voluntary pension funds operating in Bulgaria manage 598,000 individual accounts with BGN 837 million (€428 million) in assets (as of end 2015). Any person 16 years of age or older may contribute to a voluntary pension fund. Contributions are either personal or made by a third party (such as an employer) on behalf of the insured.

Minimum returns

The performance of voluntary pension funds is not subject to a minimum return obligation.

Reserves

As a matter of legal obligation, where voluntary pension funds promise lifetime pensions, they are required to maintain pension reserves to cover the longevity risk. As a matter of practice, currently voluntary pension funds have accumulated such reserves only for the limited number of lifetime pension contracts currently extended.

Distributions

Participants in voluntary pension funds have a variety of choices in drawing on their accounts.

One option is for participants to withdraw funds accumulated through their own contributions at any time prior to reaching the pension age. This right does not apply to funds accumulated as a result of any employers' contributions.

Another option gives them the right to a lifetime pension upon meeting the age and length of service requirements for a public pension. However, participants may choose to draw a lifetime pension up to five years prior to meeting these eligibility criteria.

Lastly participants can choose between drawing the balance from their account as a lump sum, receiving a lifetime pension or a pension over a certain period of time.

The heirs of an insured or retired person who leaves a balance in his or her account at the time of death are entitled to the balance as either a lump sum or to payments over a specified term. Should there be no heirs the balance is transferred to the voluntary fund reserves.

Voluntary professional pension funds

With only one voluntary professional fund with 6,800 participants, this vehicle is a rather insignificant part of the Bulgarian pension system and will be dropped from the real return analysis. Only participants in professional pension plans can contribute to voluntary professional pension funds. Their employers may elect to make contributions on behalf of employees too.

To meet their future obligations, pension companies set aside technical reserves. The technical reserves need to be maintained at any moment in time and invested appropriately to ensure availability.

Participants acquire a right to a term pension from a voluntary professional fund upon reaching the age of 60 for both men and women. They have the choice to either draw a pension over a specified term or withdraw a lump sum.

The heirs of a deceased insured or retiree are entitled to receive the remaining balance on the account as either a lump sum or over a specified period of time.





Summary

The relative role various pension vehicles play in the defined contribution pillars of the Bulgarian pension system (as of end-2015) is summarised in the tables below:

Table BG 3. Number of accounts		
	SMPS	SVPS
1. Universal pension funds	3,504,316	
2. Occupational pension funds	278,062	6,802
3. Voluntary pension funds		597,683

Table BG 4. Assets under management (BGN million)		
	SMPS	SVPS
<u>1. Universal pension funds</u>	7,658,024	
<u>2. Professional pension funds</u>	832,851	10,057
<u>3. Voluntary pension funds</u>		837,050
Total	8,490,875	847,107
Grand total	9,337,982	

Table BG 5. Assets under management (€ million)		
	SMPS	SVPS
1. Universal pension funds	3,915,485	
2. Professional pension funds	425,830	5,142
3. Voluntary pension funds		427,977
Total	4,341,315	433,119
Grand total	4,774,434	

The insurance industry in Bulgaria is excluded from mandatory pension savings and investment. While buying a Life Insurance Policy enjoys the same tax advantage as investing in a voluntary pension funds (investment of up to 10 % of the annual income is tax free), Life insurance does not play any meaningful role in the pension system in Bulgaria.

Charges⁵⁸

Participants in pension funds are subject to fees and charges, defined and capped by law. Three types of fees and charges apply:

- front load (entry fee) on pension fund contributions;
- an annual investment management fee on account balances;
- administrative charges

The law caps those fees and charges as follows (2015):

Table BG 6. Legal caps to fees and charges		
Fees	SMPS	SVPS
Front load	5%	7%
Management fee	1%	10 % ⁵⁹
Transfer fee	BGN 20.00	BGN 20.00
Other administrative fees	No	As determined by pension company

Pension companies managing universal and professional funds are banned from charging any fees other than the ones listed. The front load fee applies to each contribution, while the management fee applies to the balance of the account. The transfer fee is charged when a participant desires to transfer his or her account to a different pension management company. Only one transfer of account is permitted per year.

Pension companies can typically collect higher fees and additional administrative fees for managing voluntary occupational pension funds. The peculiarity to be noted is that the investment management fee is charged not on the account balance but on the positive nominal investment return. Other administrative charges that pension companies managing voluntary funds can charge include:

- an account opening fee, capped at BGN 10.00 (€ 5.11);
- additional statement of account fee (participants have a right to one annual statement of account, which is free of charge);
- early withdrawal fee.

⁵⁸ Data on charges are collected from individual pension companies' Internal Rules and Regulations for managing pension funds. These documents are publicly accessible on the web page of each pension company.

⁵⁹ 10% of the positive nominal return to the fund / individual account.





In practice, the majority of pension companies managing universal and professional funds charge the maximum allowed 5% front load and 1% investment management fee. The largest pension company (by number of participants and assets under management), however, offers a discounted front end fee of 4.25% for long-term participants and an investment management fee of 0.9% for its universal fund. One other pension company charges a 4.5% front load fee. Again, the largest company offers a 3.25% front load fee for long term participants in professional funds and a 9% annual management fee on positive returns.

The front end fees charged by pension companies for voluntary pension funds vary more widely and are typically between 2.5% and 4.5%. The amount of the front end fee varies according to the amount of the contribution or the number of employees signed up to a voluntary pension fund by their employer. The majority of pension companies charge the maximum allowed 10% of returns in investment management fees. Four companies charge lower investment management fees: one charges 4.5%, the other charges 7% and the remaining two, including the largest company, charge 9% on positive returns.

Administrative charges are normally one-time and nominal. They are typically paid out of the pocket and do not affect the account balances and therefore, nominal and real returns.

As of 2016 the law mandates a reduction on fees and charges for the SMPS according to the following schedule⁶⁰:

Table BG 7. Pension funds fees and charges (2016-2019)				
	2016	2017	2018	2019
Front Load	4.50 %	4.25 %	4.00 %	3.75 %
Management fee	0.90 %	0.85 %	0.80 %	0.75 %

Taxation

Individual contributions to pension funds are typically free from income tax. An annual contribution to voluntary pension funds of up to 10% of annual taxable income is tax-free, while any additional contributions can be made from after-tax

⁶⁰ National Assembly, (2015), Social Insurance Code, State Gazette, No. 61, 11.08.2015 (In Bulgarian)

income. Investment income accrues tax-free to individual pension accounts. Pension payments are also free of tax.

Employers deduct contributions to pension funds of up to BGN 60 (€30.68) per employee per month from their annual revenue before taxes. Pension companies' services and revenues are free from VAT and tax respectively.

The tax regime of the pension companies and pension funds does not drive a wedge between nominal and real returns in Bulgaria.

Pension Returns

Pension returns can be calculated using one of two methods: money-weighted or time-weighted⁶¹. The actual results participants in pension funds obtain over time are best measured by the money-weighted rate of return method. It accounts for all cash inflows and outflows as well as the fees charged by pension fund management companies, including the front load (entry fee) for each contribution. The money-weighted rate of return does not measure the ability or the skill of the investment management teams, but it does give the most realistic outcome for the insured in the second and third pillars in the Bulgarian pension system, which are still largely in the accumulation phase and experience sizable cash inflows relative to total assets under management. In addition, the money-weighted rate of return is endorsed by the OECD and used to calculate pension fund returns on a comparable basis between countries⁶². While money-weighted returns reflect the return actually obtained by the pension fund's participant, time-weighted returns are indicative of the skill or luck of the pension fund's portfolio manager.

We report pension fund returns in Bulgaria over the 2002-2015 period using the money-weighted method and the returns over 2004-2015 using the time-weighted method. It should be noted that the Bulgarian Financial Supervision Commission officially publishes only time-weighted returns.

Money-weighted Returns

We start with reporting the annual money-weighted returns of pension funds in Bulgaria, breaking the gross nominal return into its constituent parts, namely: a)

⁶¹ Feibel, Bruce J., (2003), "Investment Performance Measurement", John Wiley & Sons, Inc., Hoboken, New Jersey, p. 53

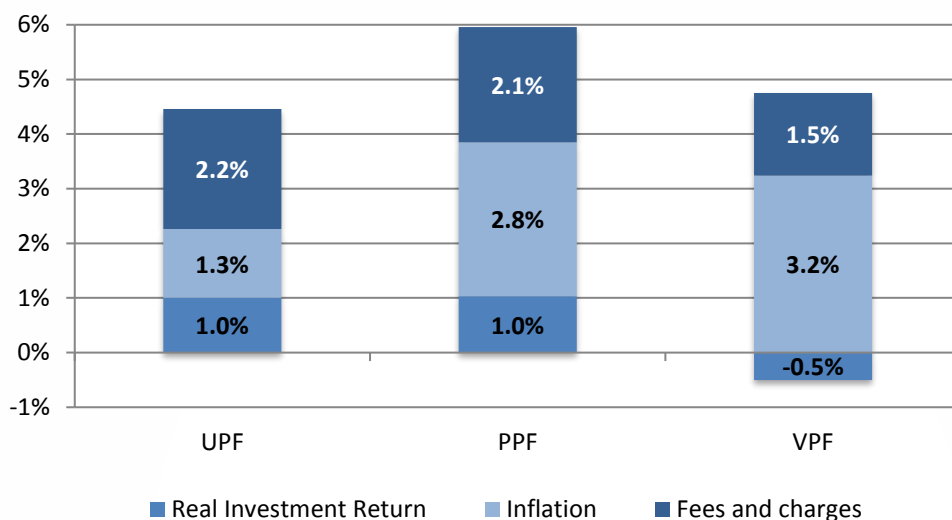
⁶² OECD, (2015), Pension Markets in Focus 2014, p. 18 (accessed at <http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2014.pdf>)



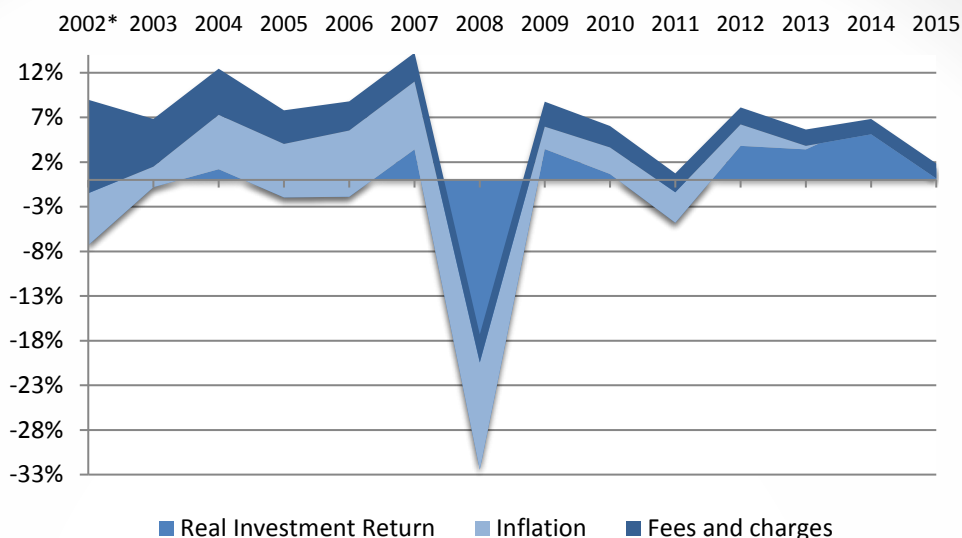


the real return; b) inflation and c) fees and charges. The returns are illustrated in Charts BG I and BG II and are reported in tables BG 8, BG 9 and BG 10.

Chart BG I - Breakdown of Nominal Returns by Type of Pension Fund (2002-2015)



As shown in Chart BG I nominal returns across all pension funds largely compensate for fees and charges and inflation. While participants in universal pension funds (UPF) and professional pension funds (PPF) received on average a positive real return of 1 % annually between 2002 and 2015, participants in voluntary pension funds (VPF) have been losing money in real terms at an average rate of -0.5 % on an annual basis.

Chart BG II - Annual Returns After Inflation and Fees

The breakdown of annual returns is illustrated on a year-on-year basis for the universal pension funds, the largest and most important pension vehicle in Bulgaria. It is clear that while prior to the 2008 crisis fees and inflation have been “eating” the bulk of the nominal returns (investors received slightly positive real returns only in 2004 and 2007), in the years following the crisis investors have enjoyed positive real returns more consistently. This is due to three factors: a) the bull market after 2011, b) a decelerating inflation (and outright deflation in 2014-2015) and c) the decreasing impact of front loads on returns as assets under management grow.

Annual data in Tables BG 8 – BG 10 below lead to the following conclusions:

1. The pension reform in Bulgaria coincided with the beginning of one market cycle in 2001-2002, experienced the global financial crisis in 2008 and is growing through the new cycle until 2015, when stock and bond markets are at or near record highs.
2. Overall, for the observed period (2002 –2015), the funds have largely generated positive gross nominal returns with the important exception of 2008.
3. The funds have been managed conservatively thus barely allowing investment returns to cover the inflation and expense ratios of the universal and professional pension schemes and failing to provide a positive real return in the voluntary scheme.





4. Both nominal and real pension fund returns started improving in 2012, but it is important to note that real returns have been helped by negative inflation rates in 2014 and 2015.

Table BG 8. Universal Pension Funds

Money-weighted Return	Gross Investment return (%)	Fees and charges**	Net Investment Return (%)	Inflation (HICP)	Real Investment Return
2001					
2002*	8.6%	10.5%	-1.9%	5.8%	-7.3%
2003	6.8%	5.4%	1.5%	2.3%	-0.8%
2004	12.5%	5.2%	7.4%	6.1%	1.2%
2005	7.7%	3.7%	3.9%	6.0%	-2.0%
2006	8.7%	3.3%	5.4%	7.4%	-1.9%
2007	14.5%	3.2%	11.3%	7.6%	3.4%
2008	-21.2%	3.2%	-24.3 %	12.0%	-32.4%
2009	8.8%	2.8%	6.0%	2.5%	3.5%
2010	6.1%	2.4%	3.7%	3.0%	0.6%
2011	0.6%	2.1 %	-1.6%	3.4%	-4.8%
2012	8.2%	1.9%	6.3%	2.4%	3.8%
2013	5.7%	1.8%	3.8%	0.4%	3.4%
2014	6.7%	1.7%	5.0%	-1.6%	6.7%
2015	1.9%	1.7%	0.2%	-1.1%	1.3%
Total Annualised[§]	4.5%	2.2 %	2.3%		1.0%

§ - AUM Weighted

**Universal Pension Funds were launched in April 2002*

***No official statistics for 2002 and prior to 2002 - estimation for these years*

Table BG 9. Professional Pension Funds

	Gross Investment return (%)	Fees and charges**	Net Investment return (%)	Inflation (HICP)	Real Investment Return
2001*	7.2%	7.8%	-0.6%	7.8%	-7.4%
2002	8.3%	3.9%	4.4%	5.8%	-1.3%
2003	8.9%	2.8%	6.1%	2.3%	3.7%
2004	12.6%	2.5%	10.1%	6.1%	3.8%
2005	8.4%	2.1%	6.3%	6.0%	0.3%
2006	9.6%	2.0%	7.6%	7.4%	0.2%
2007	14.9%	1.9%	13.0%	7.6%	5.0%
2008	-25.0%	2.1%	-27.0%	12.0%	-35.0%
2009	8.9%	2.0%	6.9%	2.5%	4.3%
2010	6.1%	1.8%	4.3%	3.0%	1.2%
2011	4.2%	1.8%	2.4%	3.4%	-1.0%
2012	10.2%	1.7%	8.5%	2.4%	5.9%
2013	7.8%	1.6%	6.2%	0.4%	5.8%
2014	7.4%	1.6%	5.8%	-1.6%	7.5%
2015	3.0%	1.6%	1.4%	-1.1%	2.5%
Total Annualised[§]	6.0%	2.1 %	3.9%		1. 0%

§ - AUM Weighted

*Professional Pension Funds were launched in June 2001

**No official statistics for 2002 and prior to 2002 - estimation for these years





Table BG 10. Voluntary Pension Funds

	Gross Investment return (%)	Fees and charges**	Net Investment return (%)	Inflation (HICP)	Real Investment Return
2001*					
2002	15.4%	4.5%	10.9%	5.8%	4.9%
2003	9.7%	2.6%	7.2%	2.3%	4.8%
2004	11.4%	2.4%	9.0%	6.1%	2.7%
2005	9.1%	2.1%	7.0%	6.0%	0.9%
2006	7.3%	1.8%	5.5%	7.4%	-1.8%
2007	16.0%	2.6%	13.4%	7.6%	5.4%
2008	-28.9%	0.7%	-29.6%	12.0%	-37.1%
2009	8.1%	1.3%	6.8%	2.5%	4.2%
2010	6.3%	1.6%	4.6%	3.0%	1.6%
2011	-0.6%	0.4%	-1.0%	3.4%	-4.3%
2012	8.6%	1.1%	7.4%	2.4%	4.9%
2013	6.7%	0.9%	5.8%	0.4%	5.6%
2014	6.8%	1.0%	5.8%	-1.6%	7.5%
2015	2.0%	0.6%	1.4%	-1.1	2.5%
Total Annualised[§]	4.3%	1.5%	2.7%		-0.5%

[§] - AUM Weighted

*Voluntary Pension Funds existed prior to 2002 but there are no official statistics available on the electronic site of the Financial Supervision Commission (FSC)

**No official statistics for 2002 and prior to 2002 - estimation for these years

Based on the four conclusions above, we observe that pension funds in Bulgaria are managed conservatively and as a result are generating mediocre investment results. For the total observed period the universal and professional pension funds have achieved a positive annual average real return of 1%. Investors in voluntary pension funds have lost on average 0.5% per annum. Total expense ratios remained above 2 % per annum for the 2002-2015 period for universal and professional funds and stood at 1.5 % for voluntary funds. The investment return needed to compensate for fees and charges is decreasing every year and this trend is expected to continue as funds accumulate assets and the overall ratios are driven more by annual management fees on assets and less by front end fees on contributions. Moreover, lower legal caps on fees charged by pension fund management companies introduced in 2015, are expected to further improve the

situation. Inflation for the observation period (2002-2015) was above 3.5% on an annual basis. However, a prolonged period of lower inflation rates was recorded since 2013 and is expected in the future.

While low but positive real pension returns in the case of universal and professional pension funds at least preserve the purchasing power of pension contributions over the period under study, in the case of universal pension funds this is grossly insufficient to bring about adequate pensions. As mentioned, the state pension for those who contribute to universal pension funds will be reduced compared to the pension they would have been entitled to had they not participated in an UPF. It turns out that in order for the future pension from the UPF to (barely) compensate for the reduction of the state pension, the real return that the insured received through the UPF needs to exceed the annual growth rate of the national average insurable income⁶³. In fact, over the 2002-2015 the average insurable income in Bulgaria grew by a hefty 3.8% in real terms, by far outpacing the average real return of the UPF, which stood at just 1%. Should these trends persist, those who remain insured in the universal pension funds will receive two pensions (a reduced state pension and a pension from an UPF), the sum of which will be less than the full state pension they would have been entitled to had they eschewed participation in second pillar of the pension system in Bulgaria altogether.

Time-weighted Returns

Time-weighted returns of Bulgarian pension funds are reported in tables BG 11 and BG 12 below. Time-weighted returns could be calculated for the 1 July 2004 – 31 December 2015 period, in order to compare with data on the performance of pension saving products of other countries in this report, given the fact that this is the methodology that was chosen for this report, as explained at the beginning of the book.

From 1 July 2004 onwards, Bulgarian pension funds started calculating the “pension fund share” price on a daily basis. This data is used to calculate time-weighted returns. Investment returns are reported net of fees.

Pension funds report negligible annualised real time-weighted returns for the 2004-2015 period with the largest funds – the universal pension funds - reporting 0.1 %

⁶³ Christoff, Lubomir (2016), “When Two Pensions are Less than One”, (In Bulgarian).

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2740262





annual average return, voluntary pension funds – 0.25 %, while the professional pension funds recorded a negative 0.3 %.

Table BG 11. Nominal Annualized Returns (net of fees)

	1 year	3 years	5 years	10 years	Since Inception
	2015	2013-2015	2011-2015	2006-2015	1.07.2004
Universal Pension Funds	1.4%	3.8%	3.6%	2.9%	3.8%
Professional Pension Funds	1.3%	3.9%	3.6%	2.4%	3.4%
Voluntary Pension Funds	2.2%	5.1%	4.6%	3.1%	4.0%

***Unit-based accounting was launched in July 2004. Since 1st July 2004 value of one Units calculated on a daily basis*

Table BG 12. Real Annualized Returns (net of fees)

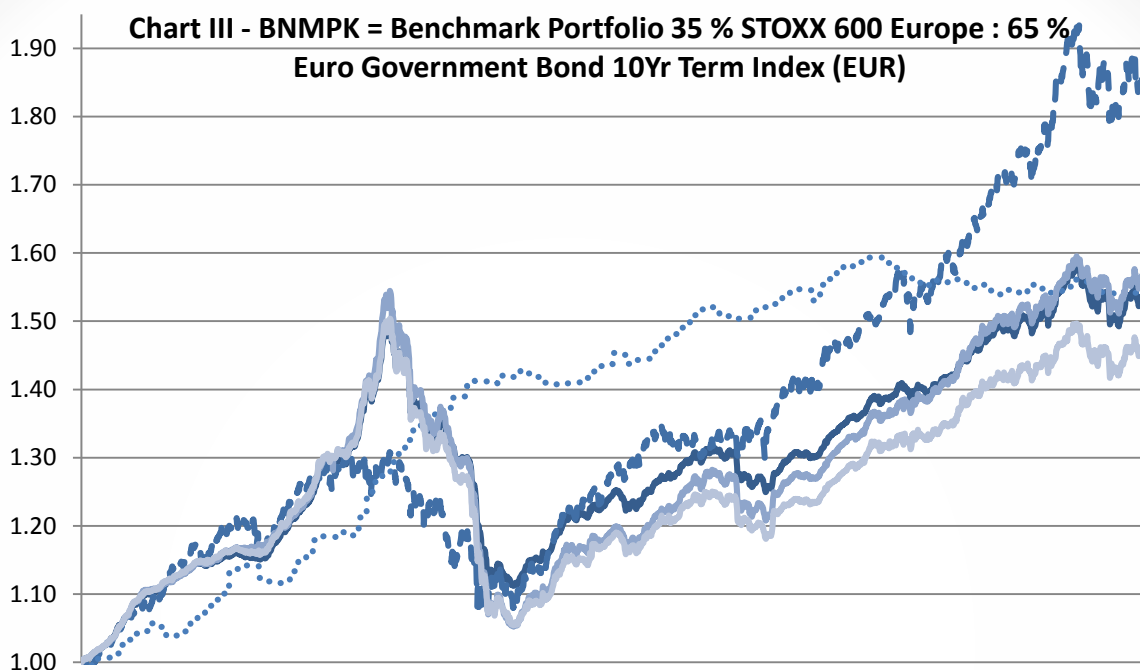
	1 year	3 years	5 years	10 years	Since Inception
	2015	2013-2015	2011-2015	2006-2015	1.07.2004
Universal Pension Funds	2.5%	2.7%	2.9%	-0.6%	0.1%
Occupational Pension Funds	2.4%	2.7%	2.9%	-1.1%	-0.3%
Voluntary Pension Funds	3.3%	3.9%	3.9%	-0.4%	0.25%
Inflation (HICP) CPI	-1.1%	1.1%	0.7%	3.5%	3.7%

***Unit-based accounting was launched in July 2004. Since 1st July 2004 value of one unit calculated on a daily basis*

As with the money-weighted returns, real returns calculated by the time-weighted method are positive over the last one-, three- and five-year periods but negative over a ten-year period. Since 1 July 2004, when pension funds started calculating unit share prices, universal and voluntary pension funds delivered small positive real annualised returns, while professional funds have reported annual losses.

Pension funds' performance is best assessed against a benchmark. Pension companies in Bulgaria, however, do not announce benchmarks against which they manage funds. To fill this gap we construct a crude benchmark based on a combination of 35 % of the STOXX Europe 600 index of large and medium sized companies to represent the equity portfolio and 65 % of the Euro Government Bond 10Yr Term Index. The combination is consistent with the legal investment

restrictions for universal pension funds and slightly more conservative for the remaining types of funds. The results are reported in Chart III.



Author's calculations based on following sources: 1. Financial Supervisory Commission, Unit values of pension funds, <http://www4.fsc.bg/units.asp> 2. STOXX Europe 600 Index EURSXXP, <http://quotes.wsj.com/index/XX/SXXP/historical-prices> 3. Euro Government Bond 10Yr Term Index (BCEX4T), https://index.barcap.com/Benchmark_Indices/Government/Term_Indices/Euro_Govt_10_yr_Term 4. National Statistical Institute, Consumer Price Index, 1995=100, <http://bit.ly/1vF95f7>

— UPF - - BNMPK CPI — VPF — PPF

The chart depicts the daily performance of the benchmark portfolio, the dashed BNMPK line, and the pension funds in the 1 July 2004 to 31 December 2015 period. The dotted line is the Bulgarian consumer price index.

The other lines depict the performance of the aggregate pension fund indexes - universal, professional and voluntary - as reported by the Financial Supervisory Commission.

As evidenced, the pension funds move very much in tandem. They followed the benchmark portfolio fairly closely from July 2004 through January 2007, after which period the Bulgarian pension funds outperformed until October 2008 but then significantly underperformed since October 2009 up to end December 2015. While





the benchmark portfolio broke even in real terms in October of 2013, by December 2015 universal and voluntary pension funds' share prices stood slightly above the prices of 1 July 2004 (in real terms), while professional funds did not succeed to break even by December 2015.

Pension funds' deviation from the benchmark can be accounted for by two main factors:

- the investment home bias⁶⁴ and
- an active management, which failed to adhere to a disciplined strategic investment policy as shown in the next section on asset allocation.

Asset Allocation

The asset allocation statistics, published by the Financial Supervisory Commission, are limited, since prior to 2008 the data does not show clear asset class allocation. After 2008, investments in "Mutual Funds" were still accounted for separately without clarification as to their primary investment focus. Table 47 shows the asset allocation of the three main pension schemes starting at the end of 2008. The strongly negative investment result for 2008 suggests that pension funds were allocated more aggressively towards equity markets within their regulatory limits in 2007 and early 2008 when the global financial crisis occurred. Since 2008, the asset allocation choice remains less conservative and is slowly tilting towards riskier positions with equity investments growing from under 10% of assets to over 15% of assets. Simultaneously bank deposits have been steadily decreasing from over 20% in 2008 to less than 10% at the end of December 2015. However, the exposure to government bond markets increased from 2009 until the end of December 2015 reaching almost 45% for the more conservatively managed mandatory funds and over 35% for the voluntary pension funds. Particularly in the 2013-2015 period the exposure of pension funds to government bonds increased, which could be interpreted as anticipation of another downturn in the valuation of riskier asset classes. Such choices in investment policy remain questionable in the future as pension funds in Bulgaria are largely in their accumulation phase and conservative strategies cannot fulfil the investment objectives and generate the necessary positive real returns to ensure an adequate retirement income. The asset allocation of all pension funds in Bulgaria, including the post-crisis period, and the decision to maintain less exposure to riskier asset classes shows that their investments did not fully participate in stock market recoveries that have occurred since 2009.

⁶⁴ The benchmark portfolio does not contain Bulgarian securities.

Furthermore, such an asset allocation predetermines expectations of inadequate investment returns in the medium and longer terms to cover for expenses and inflation.

Table BG 13. Asset allocation - Three main Bulgarian pension schemes

Universal Pension Funds	2008	2009	2010	2011	2012	2013	2014	2015
Cash & Cash Equivalents	27.1%	30.7%	26.9%	26.2%	20.6%	21.1%	12.1%	12.5%
Government Bonds	32.7%	23.0%	21.6%	30.9%	35.4%	35.0%	41.6%	44.8%
Corporate and Municipal Bonds	24.7%	23.7%	23.4%	21.9%	23.8%	19.6%	16.2%	12.4%
Equity & Mutual Funds	11.5%	18.7%	23.5%	16.1%	16.2%	20.7%	26.8%	27.3%
Real Estate	3.9%	3.9%	4.5%	4.8%	4.1%	3.6%	3.3%	3.0%
Professional Pension Funds	2008	2009	2010	2011	2012	2013	2014	2015
Cash & Cash Equivalents	26.4%	28.8%	27.4%	25.6%	22.8%	17.3%	11.1%	9.9%
Government Bonds	28.3%	21.0%	17.8%	27.4%	28.3%	33.5%	40.1%	44.0%
Corporate and Municipal Bonds	25.0%	24.0%	23.5%	20.9%	23.4%	20.2%	16.3%	12.4%
Equity & Mutual Funds	14.3%	20.3%	25.5%	19.1%	20.5%	24.5%	28.3%	29.6%
Real Estate	6.0%	5.9%	5.8%	7.0%	4.9%	4.6%	4.2%	4.0%
Voluntary Pension Funds	2008	2009	2010	2011	2012	2013	2014	2015
Cash & Cash Equivalents	20.7%	29.8%	19.8%	18.8%	16.0%	13.2%	9.1%	10.5%
Government Bonds	23.1%	13.3%	13.6%	23.1%	26.9%	29.7%	30.3%	35.6%
Corporate and Municipal Bonds	25.0%	25.7%	28.0%	24.9%	25.2%	20.7%	18.2%	13.8%
Equity & Mutual Funds	16.8%	20.1%	27.7%	22.1%	22.9%	28.0%	35.0%	33.5%
Real Estate	14.4%	11.1%	10.9%	11.1%	9.0%	8.4%	7.4%	6.6%

Source: Author's calculations, based on data published by the Financial Supervisory Commission
<http://www.fsc.bg/en/markets/social-insurance-market/statistics/statistics-and-analysis/2015/>

The asset allocation question has remained open for public debate for the past seven years and the most important issue is that the lack of profiling for different age groups among the insured is making the investment strategy unsuitable for





most participants. The investment strategies are too conservative for people in the early accumulation phase, while these strategies could easily translate into “more than necessary” risk for people near retirement. Pension funds in practice have been under heavy public pressure since 2008, when they delivered strongly negative investment results. Even though in theory they have to be managed with a very long-term horizon, their results are reviewed on a quarterly basis, which in effect drastically shortens the investment scope. Investment managers are focused on delivering even the smallest short-term positive nominal returns for fear that even the slightest negative returns could backfire on them as a whole. The effect of these strategies however has been largely negative, since returns from 2009 until December 2015 failed to fully recover losses from 2008 despite the surge in global capital markets.

Conclusion

With the PAYG pension pillar in Bulgaria under financial stress and the quasi-occupational universal pension funds being the default option for employees born after 1959, the defined contribution pillars are growing in importance to secure adequate pensions for future retirees. However, as the analysis of the real return of pension funds from 2002 to 2015 illustrates, with mediocre real returns for the universal and professional pension funds and negative real returns for the voluntary funds, the task of providing Bulgarians with an opportunity to achieve old age security is proving beyond reach. Considering that there will be (still unknown) fees and charges related to pension distributions, mediocre real returns of pension vehicles would mean that on average the insured will have to pay more in contributions during their working lives than they will ever be able to withdraw in retirement.

At least one reason for this result becomes obvious following the asset allocation analysis of pension funds. They are far too conservatively managed from the point of view of the younger worker. More generally, the fact that each pension company is only allowed to offer one portfolio to its clients irrespective of their individual time horizon and risk tolerance, leads to the observation that perhaps a majority of the insured in Bulgaria are invested in unsuitable portfolios.

Pension fund charges on Bulgarian pension funds are limited in number, capped by law and transparent. They have been too high a hurdle, however, for fund managers across all pension vehicles to overcome and deliver market long-term returns.

Moreover, the outcome for future retirees may be even bleaker than painted in this analysis. It has been noted that up to 2015 pension funds have not set aside reserves to cover the longevity risks. As years go by, it is not too much of a stretch of the imagination to envision pension reserves being taken out of the funds themselves, thus further reducing the results for retirees.

Furthermore, the short term minimum (nominal) return requirement, while being intended to protect the insured, may actually be backfiring as it creates a perverse incentive for pension fund managers to “fail collectively” rather than to take the risk of achieving better long term outcomes for their clients at the risk of a possible short term underperformance compared to their peers.

Bulgarians can choose whether to contribute to defined contribution pension funds but if they do, they don’t have a choice as to how their savings are to be managed. All clients of a single pension fund, be it universal, professional or voluntary, receive the same portfolio, which can only be suitable to some of them by accident. Under these circumstances and with the inadequacy of supplementary pensions from universal pension funds, which will reveal itself when these funds start distributions en masse in 2021-2022, a popular backlash against the pension system as a whole cannot be ruled out.





Pension Savings: The Real Return

2016 Edition

Country Case: Denmark

Introduction

The Danish pension system is similar to that of other European countries. It consists of four elements, which are the following:

- A basic state pension (“Folkepension”) – Pay-as-you-go;
- ATP, mandatory occupational pension, which is savings-based and provided by ATP;
- Occupational pension; Voluntary system based on agreements between the social partners. It is savings-based and provided by life insurance companies, lateral pension funds, banks and company pension funds;
- Private pensions; voluntary individual; Savings-based and provided by life insurance companies and banks.

The difference between the Danish pension system and other European economies is the weight that the above-mentioned elements have. In this respect, compared to other nations, the public pensions are more relevant than the occupational-related or the private one. However, at the beginning of the 2000s the Danish pension system has shifted from a purely public system to a partly private one. This change has become a pattern in recent years. This change shows that there has also existed a shift in the ideology that governs pension policies.

The order of the four elements involved in the overall pension savings system in Denmark shows their relative significance for a pensioner’s situation. This is due to the fact that pensions are top-up depending on how much time the person has lived in Denmark, their labour market affiliation, their previous earnings and their private savings.

Regarding the legal reforms that have affected the Danish pension system in recent times it is important to highlight two of them. The first one was introduced in the beginning of the 1990s. At that moment there were three pillars that weighted a tier each: basic old age pension, occupationally related supplementary pensions

and private pension savings. After this reform there was a clear shift towards a more privatized pension system.

The second and last reform was passed by the Danish parliament on September 2012. It consisted on a number of different economic reforms with the aim of targeting certain aspects of Danish legislation, mainly in pensions. The most relevant changes in this field were done in the “kapitalpension”. In the past Danish citizens could make payments into this kind of pension with deduction on payment, but from 2013 onward (due to the mentioned regulation) it is no longer possible. As this measures were taken into reality there was a new form of pension introduced, the “Aldersopsparing” (which will be explained in below sections of this country case).

In 2013 there was an incentive for contributors to pass from a “kapitalpension” to an “Aldersopsparing” pension. This incentive consisted on a reduction from 40% to 37.3% on the tax applied to the pension whenever it is withdrawn. This fact affected significantly the Danish banks revenue and liquidity, as well as the State’s finances.

The statutory retirement age in Denmark is 65. This will increase in stages to 67 between 2019 and 2022. Post 2022 onward the retirement age will be linked to life expectancy. This way the government tries to reduce its contribution to the pension system. The people who live in Denmark for few years are automatically involved in the public pension system. Moreover, most of the inhabitants also have a company pension or a collective pension as it is included in their work contract. In addition to these schemes it is also possible to set up a private pension plan.

As it has been previously described, the Danish pension system is a mix of mandatory and voluntary components.

The public pension schemes (“Folkepension”, literally old-age pension) consist on a pay-as-you-go scheme. Funds paid by Danish contributors are not saved or invested but used to pay current pension obligations. These kinds of contributions are automatically deducted from the inhabitant’s monthly salary. It is not uncommon to have collective schemes, which are determined by the key parties in the labour market as part of a collective agreement within the relevant industry.

The occupational pension scheme is integrated by the mandatory and the voluntary pension plans. The obligatory one, ATP, is a savings-based plan. Every worker (who works more than nine hours per week) contributes with a payment to ATP in





addition to the State pension. A third of these payments are made by the worker and two thirds by the employer. The amounts are automatically deducted from the monthly wage. Companies in the private sector often have an agreement with a pension fund which offers an additional health insurance policy, covering disability, critical illness and death. The pension will be paid out to the workers when they turn 65.

The second type of occupational pensions is the voluntary plans. They are based on agreements between social partners. They have similar features as the ATP ones and they are provided by life insurance companies, lateral pension funds and company pension funds.

The last kinds of pension plans are the individual schemes. As it will be explained afterwards in the text, the private pension plans can be set up with a pension fund or a bank. The payments as well as the instalments will be determined by the level of income of the contributor. There are some restrictions on the capital that can be put in these schemes but this is perfectly complementary with the public pension schemes.

TABLE DK 1 - Life insurance business and lateral pension funds*SEB Pensionsforsikring A/S - Annual Key Performance Indicators*

KPI	2011	2012	2013	2014	2015
Afkast før pensionsafkastskat (N1) (Return on investments before tax on pension returns (N1))	5.60	10.2	3.2	11.1	1.8
Afkast før pensionsafkastskat (N1E)(Return on investments before tax on pension returns (N1E))	2.80	2.10	0.50	0.40	0.50
Afkast før pensionsafkastskat (N1F)(Return on investments before tax on pension returns (N1F))	5.70	10.60	3.40	11.90	1.90
Bonusgrad (Ratio of collective bonus potential to provisions)	4.00	8.20	11.90	15.60	16.30
Bruttoerstatningsprocent (Loss ratio)	151.70	132.40	95.40	148.00	145.00
Bruttoomkostningsprocent (Expense ratio)	12.90	11.60	12.60	13.40	15.10
Combined ratio	164.70	144.80	124.20	167.00	158.80
Egenkapitalforrentning efter skat (Return on equity after tax)	9.90	16.60	10.60	9.00	7.50
Egenkapitalforrentning før skat (Return on equity before tax)	12.40	20.40	13.00	11.40	9.00
Ejer/egenkapitalgrad (Ratio of equity to provisions)	7.90	9.40	11.30	12.30	15.70
Forrentning af ansvarlig lånekapital før skat (Return on subordinated capital contribution before tax)	5.50	5.00	4.50	4.50	3.00
Forrentning af kundernes midler efter omkostninger før skat (Return on insurance provisions before tax)	4.20	9.30	2.40	10.70	0.80
Forrentning af medlemskonti før skat (Return on members accounts before tax)	0.00	0.00	0.00	0.00	0.00





Forrentning af særlige bonushensættelser af type A før skat (Return on type A bonus provisions before tax)	0.00	0.00	0.00	0.00	0.00
Forrentning af særlige bonushensættelser af type B før skat (Return on type B bonus provisions before tax)	0.00	0.00	0.00	0.00	0.00
Forsikringsrisikoresultat (Ratio of profit on risk elements to provisions)	0.24	0.16	0.14	0.10	0.07
Kundekapitalgrad (Ratio of policyholder's funds to provisions)	0.00	0.00	0.00	0.00	0.00
Omkostninger pr. forsikret (Expenses per policyholder)	1231.00	1228.00	1496.00	1423.00	1449.00
Omkostningsprocent af hensættelser (Ratio of expenses to provisions)	0.60	0.50	0.50	0.50	0.40
Omkostningsprocent af præmier (Expense ratio)	7.70	6.70	5.00	3.80	3.80
Omkostningsresultat (Ratio of cost account surplus to provisions)	0.07	0.09	-0.04	-0.03	-0.04
Operating ratio	104.90	123.20	137.30	116.00	114.30
Overdækningsgrad (Ratio of excess solvency to provisions)	2.50	3.60	5.20	5.20	5.70
Solvensdækning (Solvency ratio)	1.47	1.63	1.86	1.80	1.75

Source: Finanstilsynet (<https://www.finanstilsynet.dk/Tal-og-Fakta/Statistik/Noegletal>)

According to the 2015-2016 OECD Factbook⁶⁵, Danish households held 16.4% in currency and deposits; 1.6% in debt securities; 23.6% in equity; 7.3% in investment fund shares; 27.8% in life insurance and annuities; and 21.3% in pension funds in the reference period.

Company pension funds cover only around 2% of the savings based pension assets. Other occupational pension schemes in Denmark, based on agreements between the social partners, are schemes covering more than one employer, typically a branch of industry or a profession.

⁶⁵ http://www.oecd-ilibrary.org/economics/oecd-factbook-2015-2016_factbook-2015-en

Danish pension funds are very large by international standards. In most countries, pension funds cover one company only which is much more expensive. Large collective schemes have much lower costs for the beneficiaries. Danish pension funds can benefit from economies of scale, as they provide the same product to a number of people, and therefore gain from important cost savings. Another reason for the low costs at ATP is that ATP only offers a single pension product, without much availability of choice for the scheme members (which would entail higher costs to be deducted from the pension benefits)⁶⁶.

The self-employed, if they decide to join the ATP system, pay a fixed contribution equal to 270 DKK/month (€36.2)⁶⁷. The description of the ATP and its associated charges are clearly presented on the ATP website⁶⁸. Although the ATP is an independent fund managed by the social partners and the government, it is regarded as a private pension fund under OECD terminology. This makes sense, especially for the self-employed, since they decide whether to join this scheme or not⁶⁹.

The pay-out from the “Folkepension” is DKK 71,964/year (€9,653.4) and supplementary entitlements can increase this pay-out to DKK 147,096/year (€19,731.8). These supplementary entitlements start to reduce in value when other income exceeds DKK 67,500/year (€9,054.6) and fall to zero when other income exceeds DKK 305,700/year (€41,007.2). On average, the pay-out from the ATP scheme to a 65 year old person starting pay-out in 2015 will be around DKK 15,600/year (€2,094). Naturally, for a DC scheme, the actual pay-out is based on the sum of contributions, investment performance and the age of retirement. There are other existing legislation-based mandatory pension schemes, but these are no longer open to contributions or new members and hence not mentioned here.

The voluntary system is a combination of labour market related pensions and occupational pensions (“Arbejdsmarkedspensioner”). These schemes are organised either as collective agreements between social partners within a specific part of the labour market, or as agreements between the employer and the employees of a company. The occupational pension scheme is normally mandatory. It is a right for

⁶⁶ www.atp.dk

⁶⁷ The exchange rate used is 1€ = 7,45DKK

⁶⁸ Idem

⁶⁹ OECD Pensions at a Glance 2011: Retirement-Income Systems in OECD countries: Denmark, page 2
<http://www.oecd.org/denmark/47272339.pdf>





all employees of the company to become members of the scheme, but it is not possible to opt out of the scheme. Members may take their pension capital from one scheme to another within three years of changing jobs, however in practice very few do it in time.

Approximately 75% of Denmark's working population (2.9 million) contributes to an occupational pension scheme. Insurance companies or lateral pension funds manage these schemes, while employers only manage a minority. 90% of the population between 16 and 66 years contributed to the ATP (contributions are automatically deducted from the salary and/or from the public benefits the person may receive). Close to one million people used to contribute to private pension schemes other than occupational schemes⁷⁰, but this number dropped significantly following the closure of "Kapitalpension" in 2013 when only 571.000 paid into an individual pension scheme. Contribution rates for occupational schemes vary between 9% and 20% of salary. As with the ATP, the burden of contributions normally falls for 2/3 on the employer and 1/3 on the employee.

The new government that took over in June 2015 has announced changes in the pension system. The proposals are not yet known and it is not certain which changes will find a majority in Parliament. The idea has been criticised, as it could cause a problem for governments in the future, when these will not collect tax revenues from the pension pay-out phase.

Pension Vehicles

Denmark has four major types of private pensions:

- Life annuity ("Livrenter") with a guaranteed or market based pension payment for the total life period of the member;
- Annuity or instalment pension (Rate pension) with a guaranteed or a market based pension payment for an agreed number of years, typically ten years;
- Lump sum pension ("Kapitalpension") with one pay-out⁷¹;
- Lump sum pension ("Alderspension") with one pay-out.

⁷⁰ Figures from Torben M.Andersen, Torben Möger Pedersen, Cristina Lage, Peter Melchior, Lars Rohde "Basispension" October 2012, Penge- og Pensionspanelet.

⁷¹ Pay out from rate pension and "Kapitalpension" can be changed by the saver to a life annuity.

Every private pension product in Denmark is a defined contribution scheme. In this sense, each company is responsible for choosing the assets enabling them to achieve the obligations that they have with savers.

Until 1994 all pension companies offered a guaranteed annual basic return rate of 4.5%. This fact coerced corporations to invest in low risk products, as government and/or mortgage bonds. Since the mentioned year the Danish FSA has progressively decreased the guaranteed return. This means that the solvency of the schemes is protected, but not the real value of their pension savings.

In the last years there has been a reduction in interest rates, being close to zero for a long time. In this respect, it is obvious to think that looking for high returns companies must have started investing in market-based products. This fact means that portfolio managers have tended to invest in assets (such as shares) and, therefore, they have incremented the risk taken on the pension portfolios.

Life annuity

One of the four types of private pensions in Denmark is life annuity. This is an annuity deductible savings that can give you a monthly pay-out, that is, the quantity of money paid in instalments every month. Contrary to the pension products that are paid for a particular amount of years the life annuity is paid monthly until the recipient dies. In this respect, life time annuity is the only type of pension where you can unlimited time payments or run in payment results, for example every month⁷².

Every person with a permanent residence in Denmark can benefit from this product, regardless of age. There is the option of creating an annuity private scheme or to let your work administer the scheme.

The pension age is determined by the amount of years that the person has contributed, 60 being the minimum age if the contributor created the annuity before 1st May 2007.

Referring to tax deductions on payments it must be said that when the deposit is based on private lifetime annuity, it is possible to drag your payments from the personal income on tax returns. This deduction cannot be transferred to another person (not even with family links). Moreover, if someone creates a time-limited

⁷² Danske Bank: <https://www.danskebank.dk/PDF/Priser-vilkaar-faktaark/Pension/LIVSVARIG-LIVRENTE.pdf>





private annuity it is possible to withdraw the contributor's temporary annuity from the personal income.

Annuity or instalment pension

Another private pension is the so-called instalment pension. It is a number of payments that are made regularly over a period of time, usually ten years.

Instalment pensions are currently the most popular type of pension in Denmark. However, the Danish government has set as objective to increase savings in lifelong pensions. Due to this political interest, the government has established a restriction on the amount that can be put into instalment pensions each year. The total annual maximum will rise from 50,000DKK (6,711.4€) in 2016 to 50,900DKK (6,832.2€) in 2017. Because of the fixed maximum amount there is a risk that by paying several instalment pensions, the contributor will be exceeding the permissible total maximum amount.

Danish contributors run the risk of paying several instalment pensions when they make payments to other than the instalment pension with PFA, Danica or other occupational pension providers, as for example corporations in the banking system. If this is the case, the occupational pension providers will not know the total payments and, therefore, the contributor will be at risk of exceeding the annual maximum amount.

In the past companies would usually offer to adjust the instalment pension payment in relation to the amount the contributor paid in other private instalment pensions. This is however no longer possible, as the law states that instalment payments to pension plans through the employer have precedence over private payments.

If the total amount exceed the legal limit of 50,000DKK (6,711.4€), the contributor will have to pay additional taxes.

Lump sum pension ("Kapitalpension")

In this case the contributor receives a lump-sum payment. However, the participant can decide whether to use a big amount the first year of retirement or to stretch the money as long as possible. That is, the money can be returned in one payment the day the contributor retires or disbursed in several portions. Moreover, the amount can be also paid in the event of a critical illness.

The contributor can use that money for whatever he wants at the moment he wants.

There are special tax rules associated with individual pension products, and your options for deduction are different depending on whether you are employee, self-employed or otherwise.

The benefits of an endowment are the following:

- The contributor is free to get savings paid the day he reaches the pension age;
- The contributor decides when to use the money and for which purposes;
- The contributor chooses whether to be paid in one or more instalments;
- Savings protection give a guarantee that if the contributor die before retiring, his/her heirs will receive the monies due;
- The return on pension capital will be low taxed (15.3% annually in 2014)⁷³.

Payments to capital provide the income year 2013 no longer deduct from their taxable income. The payout is taxed at a rate of 40 % (37.3% from 2013 to 2015). Capital pensions located in both the insurance companies and banks.

Capital pensions can be paid five years before pension age. If the capital pension was created before 1 May 2007, it will usually be paid when the person reaches the age of 60. The pension can also be paid in case of permanent disability, life-threatening illness or death. Capital pension is payable within 15 years of the earned pension age.

The tax reform of 2012, when the deductibility of payments to capital fell, introduced the option of converting the capital pension and thus transforming it into a retirement savings. In the years 2013-2015 the pension customers only had to pay 37.35%. In subsequent years, the tax rate rose up to 40%.

Lump sum pension ("Alderspension")

This type of pension is quite a new one and consists on a payment that the contributor receives every month, as long as they live. The contributor can pay up to 28,900 DKK (3,879.2€) in retirement savings. They can select to pay all the

⁷³ DANICA: <https://www.danicapension.dk/da-dk/Medarbejdere-og-private/raadgivning/Udbetalingsmaader/Pages/kapitalpension.aspx>





money at once or split it into ongoing payments, for example monthly ones. This amount is put into their retirement savings and adjusted annually.

The right to full old-age pension is conditional on at least 40 years of permanent residence in Greenland, Denmark or Faroe Islands between the ages of 15 and 65. If the conditions for a full pension are not met, the person is entitled to a fractional pension.

The payment for this pension can be made as from the income year 2013 and may not exceed DKK 28,900 (3,879.2€). There is no tax deduction for payment. On payment of the pension at a retirement age neither have any tax or duty. Upon payment by the scheme before retirement, a fee of 20% is applied. Payments above the threshold of DKK 28,900 (3,879.2€) also trigger a fee of 20%.

Charges

The Danish market presents a great amount of pension products. However, in most cases the public information about them is inexistent or small. In this respect, the comparison between pension products is difficult due to the lack of data offered by providers. Therefore, it can be stated that disclosure on charges is very poor.

Providers usually calculate yearly costs for contributors as a percentage of assets, in Danish crowns. Nevertheless the calculations vary between the existing banks, insurance companies and pension funds. This fact created a restriction on information to users because it does not allow them to compare the different products and their features (performance in the past, charges).

Since the end of 2012 every company that offers pension's products is obliged to inform their clients about the annual costs from their pension scheme, both in DKK and as percentage of assets. This situation had changed due to the consumer's pressure on providers in order to disclosure of information.

The Danish Insurance Association opened in that same year a public web in order to assist consumers in this field. In this website certain information about pension products from insurance companies and lateral pension funds is provided. Using this tool and the information that is offered, the contributor is able to make comparisons among products for savings, insurance, service and advisory services, interest, returns and charges from all providers. However the design of the web page does not help the user's comprehension. The information is segregated into administration costs (in DKK), investment costs and the contribution to the owners

of the providing company and whether the scheme has a guarantee. The system does not give an overview of the costs, but a random search of different schemes displays yearly charges of between 0.6% and 1.4%.

Taxation

The Danish taxation scheme on contributions, assets and pay-outs is rationalized in the following table:

Table DK 2. Taxation on Pension Schemes				
Pension Vehicle	Life assurance contract	Unit-linked pension product	Personal pension	Personal pension
			“Rate pension”	“Alderspension”
Contributions	Tax deductible		Tax deductible	Non deductible
			Up to 50,000 DKK a year	Max contribution 28,900 DKK a year
Tax on the investment	Interest, dividends, earnings and losses are taxed at 15.3%			
Pay-out ^{74 75}	Taxed like personal income on average: 42% to 46%			Tax free

Source: Better Finance Research

As it can be seen in the table the contributions to life insurance contracts and unit-linked pension products are tax deductible. As has been mentioned above, the deductibility exemption ended in 2013 for the lump sum pension scheme ("kapitalpension") due to the governmental interest on passing to a new lump sum pension scheme ("Alderspension", age pension). In this last pension plan contributions are not tax deductible and, therefore, the pay-out is tax free. On the contrary, Pay-outs from personal pension schemes are taxed as income, with prevailing marginal rates between 32% and 49%. The pay outs from "Kapitalpension", now closing, were taxed at a flat rate of 40%.

All schemes are subject to a tax on pension returns (changes in market value) of 15.3%. Originally known as the "real interest duty", the base of the tax was

⁷⁴ Special tax on high pensions, i.e. more than 362,800 DKK (€48,666.72) in 2010 (limit will be adjusted).

⁷⁵ Pay out exceeding the limit is taxed at 6% in 2012. The tax will decrease 0.5% per year until it becomes zero by 2020.





expanded to include the return on assets (capital, interest and dividends), with tax rates varying by asset type. In 2001, the tax rate was harmonised to 15% across all pension assets and increased to 15.3% in 2012.

Pension Returns

The aggregate information for investment returns for pension savers is not available. Although life insurance companies, lateral pension funds, company pension schemes and banks are obliged to provide this information to their members, the aggregate form is not publicly accessible.

The information published by the Danish FSA, the national supervisor of financial undertakings (banks, mortgage, credit institutions, pension and insurance companies), is divided by business type: life insurance companies and lateral pension funds, pension fund companies, commercial and saving banks, and ATP.

As it is shown in the following table (return on consumer funds after expenses but before income tax in life insurance products), the key performance indicators of private pension funds of the National Danish supervisor provide an adequate overview of the evolution of the first category of pension plans over the last period of time.

The performance of the return on consumer funds after expenses has diminished in 2015 in every company that develops its activities in this field, being the reduction unequal among them.

Table DK 3 - Life insurance business and lateral pension funds

Return on investment before tax on pension returns - Annual Key Performance Indicators

Company	2011	2012	2013	2014	2015
AP Pension Livsforsikringsaktieselskab	16.20	9.5	-1.7	13.9	2
Arbejdstagernes Pensionskasse - SISA	1.70	9.90	7.90	9.90	3.80
Arkitekternes Pensionskasse	2.90	13.10	8.30	10.20	5.10
BANKPENSION Pensionskasse for finansansatte	-0.31	12.33	4.40	9.00	2.30
BP Livsforsikringsselskab A/S	0.00	1.08	1.39	3.60	
Danica Pension, Livsforsikringsaktieselskab	6.10	8.60	-0.10	12.70	0.70
Danske civil- og akademiingeniørers Pensionskasse	0.10	11.40	7.80	8.10	5.10
Finanssektorens Pensionskasse	4.30				
Forsikrings-Aktieselskabet ALKA Liv II	2.40	2.20	1.00	0.50	0.30

Forsikringsselskabet Alm. Brand Liv og Pension A/S	8.30	8.00	2.30	9.20	1.10
Forsikringsselskabet SEB Link A/S	-3.80	-2.10			
FunktionærPension, Pensionsforsikringsaktieselskab	16.10	15.00			
Industriens Pensionsforsikring A/S	4.00	11.60	-0.80	12.10	2.60
Juristernes og Økonomernes Pensionskasse	14.30	6.20	4.40	8.00	3.90
Livsforsikringsselskabet A/S	4.44	4.08	5.53		
Lægernes Pensionskasse	11.60	8.40	6.60	9.20	1.80
LÆRERNES PENSION. FORSIKRINGSAKTIESELSKAB	3.84	11.45	4.96	12.62	2.11
MP PENSION - PENSIONSKASSEN FOR MAGISTRE & PSYKOLOGER	3.80	12.70	8.30	10.20	4.40
Nordea Liv & Pension, livsforsikringsselskab A/S	6.50	9.10	0.35	13.87	0.00
Nykredit Livsforsikring A/S	2.90	4.40	3.60	0.90	- 0.30
PenSam Liv forsikringsaktieselskab	10.80	12.00	2.90	10.80	2.20
PensionDanmark Pensionsforsikringsaktieselskab	13.30	7.90	1.20	11.30	3.10
Pensionskassen for Apotekere og Farmaceuter	3.06	9.84	5.37	7.75	
Pensionskassen for Børne- og Ungdomspædagoger	4.72	8.06	1.68	10.42	1.73
Pensionskassen for Farmakonomer	3.61	9.10	5.38	9.74	2.28
Pensionskassen for Jordbrugsakademikere og Dyrlæger	3.30	12.70	8.90	10.50	4.70
Pensionskassen for Kontorpersonale	8.64	14.09	4.73		
Pensionskassen for Lægeseekretærer	9.14	13.88	4.52		
Pensionskassen for portører	8.90	12.70			
PENSIONSKASSEN FOR SOCIALRÅDGIVERE , SOCIALPÆDAGOGER OG KONTORPERSONALE	10.25	13.71	4.23	10.84	1.62
Pensionskassen for Sundhedsfaglige	9.12	13.98	4.52	10.80	1.62
Pensionskassen for Sygeplejersker og Lægeseekretærer	9.44	13.70	4.24	11.05	1.85
Pensionskassen for teknikum- og diplomingeniører	0.70	12.20	-0.40	19.00	0.40
Pensionskassen for trafikfunktionærer og amtsvejmænd m.fl.	9.30	12.30			
Pensionskassen PenSam	11.60	12.00	0.70	14.90	2.70





PFA Pension, forsikringsaktieselskab	10.70	10.18	-1.09	14.80	1.90
PFA Soraarneq, forsikringsaktieselskab	5.80	5.50	-2.50	17.40	0.30
PKA+Pension forsikringsselskab A/S	2.36	9.65	3.98	6.06	2.21
PMF-Pension, Forsikringsaktieselskab	22.80				
Sampension KP Livsforsikring A/S	18.70	11.40	-1.20	21.47	0.69
SEB Pensionsforsikring A/S	5.60	10.20	3.20	11.10	1.80
SHB Liv Forsikringsaktieselskab	41.61				
Skandia Link Livsforsikring A/S	1.90	6.80	-2.70	3.00	2.00
Skandia Livsforsikring A A/S	9.50	7.60	-1.80	14.80	0.05
Skandia Livsforsikring A/S	-1.50	7.30	0.50		
Topdanmark Link Livsforsikring A/S	-2.30	12.80			
Topdanmark Livsforsikring A/S	1.40	7.00	5.00	9.10	1.50
Topdanmark Livsforsikring II A/S	23.00	19.00			
Topdanmark Livsforsikring III A/S	3.70	2.70			
Topdanmark Livsforsikring V A/S	10.60	11.40			
XX - Livsforsikringsselskaber og tværgående pensionskasser	9.11	10.47	1.88	12.95	1.80

In the absence of an aggregated returns rate, for which we need to know the total asset size of the company's pension funds and life insurance contracts, it is better to look at the aggregated data from OECD.

The return on participants' funds after expenses and inflation but before tax can be found in Table DK 4. Unit-linked products are not covered by these aggregated data.

Table DK 4. Pension funds' real average net annual rate of investment returns, 2002 to 2014 (after inflation, before taxes) in %

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Avg 2002 -2014
-6.7	6.3	11.5	14.8	1.3	-3.3	5.1	1.2	7.1	12.1	5.4	-4.6	17	5.15

Source: OECD (2015)

In spite of these good results and the good performance of Danish equity markets in 2014, the OECD (2015) reports a real net rate of return on investments for pension funds from December 2013 to December 2014 of 16.7%. Contrary to the year before, where there was a negative growth of -4.6%, linked to the relatively low presence of shares in the asset allocation of Danish pension funds (e.g. under 20%, and a far cry from other EU countries such as Belgium, Finland, Poland and Austria who have double the percentage of shares in their asset composition), the Danish performance in this period is the highest among the OECD countries.

As it can be seen in the table above the data from year 2014 raises the average for the period significantly. Low yields of Danish sovereign funds (pension funds tend to be biased towards higher holdings of sovereign bonds from their home country) and a large weight (around 20%) of other assets (loans, land and buildings, unallocated insurance contracts, hedge funds, private equity funds, structured products, and other mutual funds - i.e. not invested in cash, bills and bonds, or shares) as well as other investments also contribute. It is interesting to note that cash and deposit holdings are extremely low, contrary to other countries such as Spain, Greece and Estonia, which tends to be a worse investment strategy in the long run.

Finally, as regards the ATP, the Danish supervisor Finanstilsynet has praised this scheme for having achieved, in the 10-year period from 2002 to 2011, an average market return, after tax and expenses, of 8.8%, which is 3.9% higher than the average for the Danish life insurance and pension companies. Finanstilsynet stated that the size of future pensions depends on creating a high, stable return year on year.

According to ATP, there are three factors explaining their impressive performance. Firstly, the use of bonds and interest rate swaps to hedge the interest rate risk of the pension obligations translated into a significantly positive return due to the decline in interest rates during the period. Secondly, due to the extensive use of risk diversification and, thirdly, the fact that the ATP portfolio largely consisted of Danish equities, also contributed to this performance. Shares held by ATP outperformed the average Danish stock market performance. The Danish stock market also outperformed shares of many leading markets during the decade. Additionally, as explained before, the very low management costs of the system certainly contributed to translating such good results into positive and significant net returns for private investors.





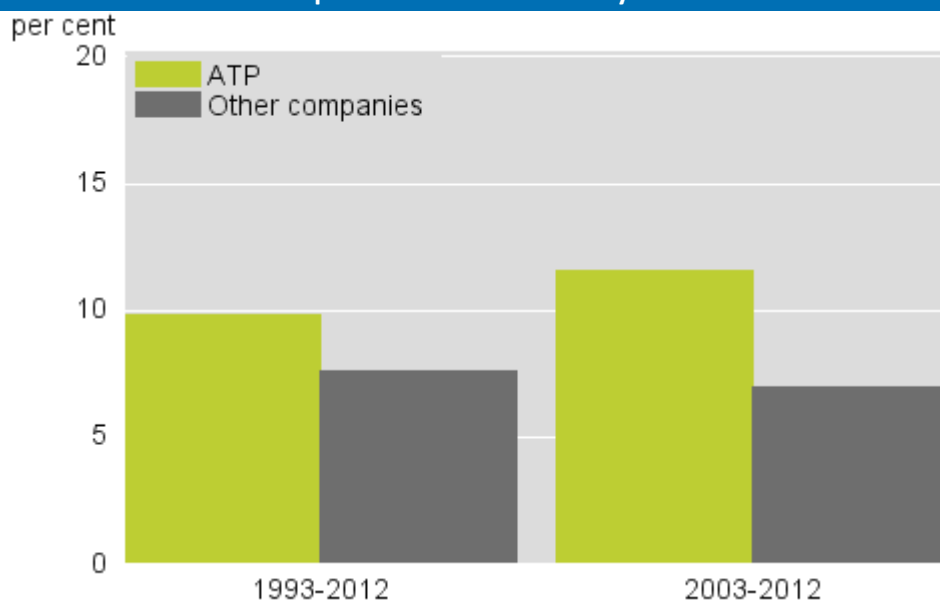
ATP itself claims that its singular investment strategy and cost structure enables them to outperform its local competitors (life insurance companies and lateral funds in Denmark). The contributions to ATP consist of two parts: the pensions of members account for 80% of contributions, while the remaining 20% is transferred to the bonus potential, i.e. ATP's unallocated reserves. This means that the total value creation for ATP's members comes from both sources: the guarantees and the bonus potential. Value creation from the bonus potential illustrates the return on the bonus potential and is driven primarily by the return on investment, and also by matters related to hedging. This 'Total value creation' (a weighted average between the two above mentioned components) was 5.2% in 2015⁷⁶.

ATP's average market return relative to the industry over 10- and 20-year horizons represents an additional 4.7% and 2.3% per year, respectively. In their 2015 Annual Report, ATP claims to have achieved 9% average annual returns over the last 20 years. However, ATP clarifies in its website that "using the FSA's return ratio, ATP had a negative return of 5.7 per cent in 2013. In 2012, the latest year for which the Danish FSA published return data for the entire industry, ATP's market return underperformed the overall industry of life insurance companies and industry-wide pension funds by 0.6 percentage points, while, in 2011, ATP's market return outperformed the industry by a full 17.1 percentage points."

ATP justifies this slight underperformance in 2012 by ATP's decision to maintain a moderate risk level in light of considerable financial market uncertainty. As for the substantial outperformance in 2011, the plummeting interest rates and ATP's strategy of fully hedging the interest rate risk of its pension liabilities justify it, among other factors.

⁷⁶ https://www.atp.dk/sites/default/files/eng_atp_koncernen_aarsregnskabsmeddelelse_2015.pdf

Graph DK I. ATP's returns relative to the returns of life-insurance companies and lateral pension over 10- and 20-year horizons



Source: www.atp.dk

Conclusion

As the CEO of the Danish Insurance Association, Per Bremer Rasmussen, states in the Danish pensions system publication “the overall Danish pension system – the interplay between the public pension, ATP (the Labour Market Supplementary Pension Scheme) and occupational pension schemes – has just been rated best in the world. And for good reason. The public pension and ATP ensure that all pensioners, regardless of labour market attachment, will have an adequate basic income. Occupational pension schemes ensure that a person’s income in retirement will not be markedly lower than the income earned during working life. The individual pension schemes cover any special retirement wishes. Furthermore, politicians have addressed the challenge of more elderly people by raising the retirement age”.

There is little information displayed by the pension providers (pension funds, insurance companies and banks) about the performance and charges of this kind of products. Due to this fact it is difficult for researchers (and consumers) to make an adequate comparison. As it is obvious it is important that consumers, when





considering the different possibilities for private pension savings, have access to detailed information about the investment policies, the costs and the tax regime in order to be able to choose a pension provider.

However, there have been improvements in this respect. The main ones being the web-based tools launched by the Danish Insurance Association, which represents a substantial improvement on the previous situation for occupational pensions provided by members of that organisation.

The Danish government has strengthened the pension's pot in the last years, protecting with it the real value of beneficiaries. The two great reforms (1990 and 2012) introduced in the pension system has caused the Danish scheme to shift from a purely public system to a partially private one. Moreover, the addition of the basic state pension ("Folkepension"), the ATP (mandatory occupational pension), the voluntary occupational pension and the private pension constitutes an adequate system.

Finally, the taxation of investment returns has a real impact on net investment returns to savers. As it has been shown in this article there exists a governmental interest in passing from the old lump-sum ("kapitalpension") to the new one ("Alderpension"). That is the reason why this last type of plans are tax deducted and, therefore, the pay-out is tax free while the other plans are taxed.

Pension Savings: The Real Return

2016 Edition

Country Case: Estonia

Introduction

Estonian⁷⁷ old-age pension system is based on the multi-pillar approach, which consist of three main pillars:

- Pillar I – State pension organized as a mandatory Pay-As-You-Go scheme;
- Pillar II – Funded pension organized as mandatory funded DC based scheme;
- Pillar III – Supplementary pension organized as a voluntary individual pension scheme.

The Estonian multi-pillar pension reform commenced in 1998 with the introduction of legislation that, as a first step, established the third voluntary pension pillar. The second or “mandatory” pension pillar, which funds individual private retirement accounts with worker contributions and government matching contributions, was legislated in 2001 and became operational on 1 July 2002.

⁷⁷ Inflation references HICP Annual average for this entire country case



**Table EST 1. Multi-pillar pension system in Estonia**

Pillar I State Pension	Pillar II Funded pension	Pillar III Supplementary pension
<ul style="list-style-type: none"> • Mandatory • PAYG • Financed by social tax • Benefits paid via State Pension Insurance Fund • Minimum pension + employment related • Publicly managed by Social Insurance Board (government entity) 	<ul style="list-style-type: none"> • Mandatory • Funded • DC • Basic benefit • Individual pension accounts • Privately managed pension funds 	<ul style="list-style-type: none"> • Voluntary • Funded • DC • Complementary benefit • Individual pension contracts • Two vehicles: <ol style="list-style-type: none"> 1. Privately managed pension funds 2. Pension insurance

Source: own elaboration, 2016

Pillar I – State Pensions

State pension (pillar I) should guarantee the minimum income necessary for subsistence. It is based on the PAYG principle of redistribution, i.e. the social tax paid by today's employees covers the pensions of today's pensioners.

Legislatively, the state pension is governed by the State Pension Insurance Act. The act is part of the pension system reform and came into force on 1 January 2002. Since then, the act has been amended more than 30 times.

The state pension is paid out of the social tax. Employers pay 33% of the salary of each employee for social tax, 13% of which is for health insurance and 20% (16% in case of participation in pillar II) is for the pensions of today's pensioners.

There are two kinds of state pension: the pensions that depend on the work contribution (the old-age pension, the pension for incapacity for work and the survivor's pension) and the national pension. A person is entitled to the state old-age pension, if his or her length of employment in Estonia is at least 15 years. If the period is shorter, they are not entitled to the old-age state pension and might fall under the national pension.

The old-age pension financed through pillar I is calculated as a sum of three components:

1. Basic amount;
2. Pensionable service period;
3. Insurance contributions.

The basic amount as a first component of state pension is aimed at achieving basic solidarity and achieving at least a minimum pension. The solidary state pension insurance is represented by the basic amount (base component) of a pension, which is equal to all, irrespective of the person's salary. The law also procures the minimum amount of the old-age pension (€ 140.81 in 2014 and 2015) irrespective of the paid social tax.

The pensionable service period component represents the part of state pension, which depends on the length of employment (i.e. years of employment and years deemed equal to employment, e.g. raising of children, compulsory military service, etc.) of the pensioner, which entitle him or her to the pension. Period of pensionable service is taken into account up until 31 December 1998. The monetary value of one year of employment in a monthly pension is € 4,964. This part of the state pension is deemed to diminish in future years (temporary component) as the third component (insurance contributions) will account for a larger portion on a total state pension amount.

The third component (insurance contributions) depends on how much social tax has been paid on the salary of the pensioner since 1 January 1999. The amount of the insurance component is calculated on the basis of the sum of annual factors of pension insurance. An annual factor shows the ratio of the social tax paid on the person's salary during the calendar year to the social tax paid on the average salary of the state. If social tax is paid on the average salary, the annual factor is 1.0% and its monetary value in a monthly pension is € 5,514, the same as pensionable service period component.

The relative importance of the insurance component increases with every year, which means that the state old-age pension depends more and more on the amount of social tax paid for each specific person or the amount of his or her salary during his or her entire life of employment, thus the pillar I limits the solidarity among individuals.

The solidarity part of the state pension insurance involves the redistribution mechanism of income from the persons with high salaries to the persons with low salaries. Firstly, the base component of a pension is equal to all, irrespective of the





person's salary. Secondly, the law also procures the minimum amount of the old-age pension – today it is € 140.81– irrespective of the paid social tax.

Statutory retirement age is 63 for men and women, however on 7 April 2010, the Estonian Parliament adopted the Act to amend the State Pension Insurance Act and the related acts, establishing the general pensionable age of 65 years. The transition period, starting from 2017 is provided for the people, who were born from 1954 to 1960. For those people, the retirement age will be gradually increasing by 3 month for every year of birth, and reaches the age 65 in 2026. The amendment shall come into effect on 1 January 2017.

The national pension (also called National Pension Rate – NPR) procures minimum pension to those persons who are not entitled to the pension depending on the work contribution, considering they have lived in Estonia for at least five years before applying for the pension. The amount of the national pension since 1 April 2016 is € 167.40. Generally, no additional benefits are provided via state pension scheme.

Indexation of state pensions is performed by the Social Insurance Board with the aim to adjust the level of state pensions so they correspond to the development of the cost of living and receipt of social tax (growth of the salary fund). Once a year (1 April of each year) pensions are multiplied by an index that is dependent for 20% on the changes in the consumer price index (cost of living) and 80% on the yearly increase in received social tax (labor market conditions). The indexation introduced in 2002 was up until 2008 based with equal weight (50%/50%) on increases in consumers' price index and social tax contributions. It was changed in 2007 to today's 20% and 80% respectively. According to the Pension Insurance Act, the Government of Estonia has to analyze the impact of the increase in pensions on financial and social sustainability, and every five years suggest any need of indexation changes to the parliament.

The average monthly old-age pension paid from pillar I in 2015 was € 365.6.

Pillar II – Funded Pensions

The funded pension and supplementary funded pension put a person in charge of his or her own future – the amount of his or her pension depends on how much he or she has put aside for retirement during their working life. The funded pension is legislated by the Funded Pensions Act, which came into force on 1 May 2004 and

replaced the Funded Pension Act effective since 1 October 2001. The funded pension pillar (pillar II) started its operation in July 2002.

The funded pension is based on accumulation of assets (savings) – a working person itself saves for his or her pension, paying 2% of the gross salary to the selected pension fund. In addition to the 2% that is paid by the individual, the state adds 4% out of the current social tax that is paid by the employee, and retains 29%. The state pension insurance component of a person, who has subscribed to the funded pension, is also respectively smaller (for the years when 16% was received for state pension instead of 20%).

The employer of a person who has subscribed to the funded pension shall withhold 2% of the person's salary and transfer it to the Tax and Customs Board. To that amount, the state shall add 4% out of social tax, retaining 29% of the social tax. Therefore, 6% of the person's income is transferred to the pension account of the person, while the person himself or herself has paid only 2%.

Subscription to the funded pension is mandatory for persons presently entering the labor market, i.e. persons born in 1983 or later. The funded pension was voluntary for those born between the years 1942 and 1983. Subscription was possible in seven years from 1 May 2001 until 31 October 2010. By submission of a subscription application, person assumes a binding obligation – a person who has once subscribed will never be able to give up the funded pension.

Each pillar II participant has his/her own individual pension account that stores records regarding contributions and accumulated savings. A pension account is a special type of securities account, in which there are only units of mandatory pension funds and data related to these units, as well as data about the unit-holder.

Pursuing the impact of financial crisis on the Estonian economy, temporary change of contributions has been adopted that lowered the amount of new contributions flowing into the mandatory pension funds. Through amendments to the Funded Pensions Act and the Social Tax Act (entered into force on 28 May 2009), temporary changes were adopted in connection with the contributions to pension pillar II for the years 2009 to 2017. Contributions to a funded pension were suspended in the period from 1 June 2009 to 31 December 2010. Those interested could have continued making contributions to funded pension themselves from 2010 based on an application. From 2011, the contributions continued in half-





volume, i.e. the state contributed 2% and the savers themselves 1%. Customary contributions to pillar II (2% + 4%) were restored in 2012. To those who voluntarily continued their contributions in 2010 and 2011, the state shall pay an additional 6% during 2014 - 2017. Those who did not submit applications for continuing the contributions in 2010 can submit an application in 2013, if desired, to pay an increased contribution of 3% during 2014–2017, to which the state shall add 6%. Those persons shall have the right to submit an application to increase their contribution from 2% to 3% (in this case the scheme 3% + 6% shall be applied). The prerequisite for the latter is at least 5% nominal economic growth of the Estonian economy. In case this prerequisite is not fulfilled, the state is entitled to postpone the increasing of the contribution rate.

Pillar III – Supplementary pensions

Supplementary funded pension or pillar III is a part of the Estonia pension system and is governed by the same act as pillar II, the Funded Pension Act. Supplementary pension has been introduced with the objective to help maintain the same standard of living and more flexibility in securing stream of income after one reaches the age of 55. State pension and pillar II pension are estimated to deliver replacement ratio of approximately 45%. Supplementary pension has been designed to help achieved a recommended level of 65% replacement ratio of individual's previous income in order to maintain the established standard of living.

Supplementary pension is based on a voluntary basis for all persons and on each person's voluntary decision to start saving either by contributing to a voluntary pension fund or by entering into a respective supplementary pension insurance contract with a life insurance company.

Amount of contributions is determined solely by the free choice of an individual and can be changed during the duration of accumulation phase. There is a possibility to discontinue contributions (as well as to finish the contract).

The supplementary funded pension contracts can be made with life insurers as pension insurance, or by acquiring pension fund units at fund managers. An individual can choose between three different pension products:

1. Pension insurance with guaranteed interest;
2. Pension insurance with investment risk (unit-linked);
3. Pension fund.

Pension Vehicles

Pillar II – Funded pensions

The only allowed pension vehicles by the Funded Pension Act for mandatory pillar II are the mandatory pension funds. Mandatory pension funds differ in their investment strategy and are divided into four groups according to the investment risk they carry:

1. Conservative funds,
2. Balanced funds,
3. Progressive funds,
4. Aggressive funds.

The structure of savers, assets under management and market share for the respective groups of the mandatory pension funds is presented in the table below.

Table EST 2. Mandatory Funded pension vehicles market share

Type of mandatory pension fund	Assets under management (mil. Eur)	Market share based on AuM (%)	Number of participants	Market share based on participants (%)
Conservative funds	196.76	7.54	44,832	6.99
Balanced funds	341.39	13.08	67,976	10.59
Progressive funds	1,802.28	69.07	397,058	61.85
Aggressive funds	268.89	10.31	132,086	20.57
TOTAL	2,609.32	100	641,952	100

Source: own calculations based on pensionikeskus.ee data, 2016 (as of 01.12.2015)

Asset allocation of mandatory pension funds is legislatively regulated, where the quantitative investment limits are imposed on four different types of mandatory pension funds:





- max. 75% equity (changed from 50% in 2009), of which only 50% may be directly invested in shares (up to 75% in the case of equity funds);
- max. 40% in real estate or real estate funds (changed from 10% in 2007);
- max. 50% in venture capital funds (changed from 30% in 2007);
- max. 30% outside the EEA or OECD area.

The above-mentioned four main types of mandatory pension funds that members can choose from, are distinguished by their equity exposure.

Conservative mandatory pension funds are obliged to invest 100% of their assets into bonds, money market instruments, deposits and investment funds whose assets may be invested in the above securities and deposits or other similar assets. Conservative mandatory pension funds are not allowed to invest in equities and immovables nor related investment funds. The conservative strategy focuses on bonds in view of the preservation of capital and moderate growth primarily on a shorter horizon.

Balanced mandatory pension funds proceed by investing in different types of assets with specific limitations:

- up to 25% of the assets of the funds can be invested in equities, equity funds and other instruments similar to equity;
- remaining part of the assets of the funds are invested in bonds, money market instruments, deposits, immovables and other assets.

Progressive mandatory pension funds invest in different types of assets, subjected to quantitative limits:

- up to 50% of the assets of the funds are invested in equities, equity funds and other instruments similar to equity;
- remaining part of the assets of the funds are invested in bonds, money market instruments, deposits, immovables and other assets.

Aggressive mandatory pension funds introduced in 2010 are allowed to invest the largest part of the assets into equities. The following quantitative limits on equities are used:

- up to 75% of the funds' market value may be invested in equity funds, equity and other instruments similar to equity;

- remaining part of the assets of the Fund are invested in bonds, money market instruments, deposits, immovables and other assets.

In Estonia, more than 600,000 people have joined pillar II funds, which is almost 96% of the economically active population. More than 70% of them have opted for pension funds with an active investment strategy pursuing more aggressive investment strategies tied with the significantly higher portion of equities in portfolio.

Even more interesting is the analysis of pension vehicles (preference of pension funds) based on the income level of participants. Wealthier and higher earnings individuals prefer conservative funds with less equity exposure. Lower income groups on the other hand tend to prefer riskier pension funds with more equity exposure and more market risk.

Comparing the pillar II market share development in 2015, more contribution inflows could be seen in Aggressive funds and less into Conservative and Balanced funds.

Pillar III – Supplementary pension

Under the regulation, two types of pension vehicles for supplementary pensions (pillar III) are allowed:

1. Voluntary pension funds;
2. Supplementary pension insurance contracts.

Considering the size of pillar III based on the coverage of economically active population, the Estonian pillar III amounts only to 16.71% of the economically active population.

There are no investment restrictions regarding asset classes for voluntary (supplementary) pension funds.



**Table EST 3. Supplementary Pension vehicles market share**

Supplementary pension vehicles	Assets under management / Reserves (in Eur)	Market share based on AuM / reserves (in %)	Number of participants / contracts	Market share based on participants (in %)
Voluntary pension funds	127,564,230	36.65	45,011	42.32
Supplementary pension insurance contract*	220,533,000	63.35	61,360	57.68
TOTAL	348,097,230	100	106,371	100

Source: own calculations based on pensionikeskus.ee data, 2016 (data as of 31 December 2015)

** no data available for 2015 (latest data for 2014)*

Charges

Pillar II – Funded pensions

Pension funds are offered by asset management companies, who are managed under the Investment Funds Act and as such, the funds are considered a typical UCITS funds with special regulation via the Funded Pension Act.

A saver, when contributing into the pension fund, receives the fund units, which represent the unit-holder's share in the fund's assets. Each pension fund can have only one class of units. The nominal value of a unit at the beginning of the fund operation is €0.64. The rights and obligations attached to a unit with respect to a unit-holder will enter into force upon issuing a unit and will terminate upon redeeming a unit. A unit is deemed issued upon registration thereof with the register and a unit is deemed redeemed upon cancellation thereof with the register. Ownership of a unit is proved by an entry in the register.

As the pension funds are considered typical UCITS funds, fees and charges typical for UCITS funds are applied to the pension funds with some legislative restrictions.

According to paragraph 151 of the Investment Funds Act, the following charges can be applied to the expense of a mandatory pension fund:

- management fee,

- exit fee (unit redemption fee),
- transactions costs

Considering the individual saver, additional charges are paid from the individual value of pension savings:

- unit redemption fee),
- entry fee (unit issuance fee, resp. contribution fee).

A comparison table of the most current charges applied by the mandatory pension funds asset management companies and individual fees paid by a saver is presented below.

Table EST 4. Mandatory Pension Funds' Fees

Fund / Charge type (year 2015)		Management Fee charged by management company	Redemption Fee paid by a saver
Conservative funds	Pension Fund LHV XS	0.98%	1.00%
	Pension Fund Danske Pension Interest	0.65%	1.00%
	SEB Conservative Pension Fund	0.95%	1.00%
	Swedbank Pension Fund K1	0.62%	1.00%
	Nordea Pension Fund C	0.85%	1.00%
	Pension Fund LHV S	0.98%	1.00%
Balanced funds	Pension Fund LHV M	1.31%	1.00%
	Pension Fund Danske Pension 25	1.35%	1.00%
	Swedbank Pension Fund K2	0.97%	1.00%
	Nordea Pension Fund B	1.42%	1.00%
	SEB Optimal Pension Fund	1.30%	1.00%
Progressive funds	Pension Fund Danske Pension 50	1.72%	1.00%
	Pension Fund LHV L	1.64%	1.00%
	Nordea Pension Fund A	1.51%	1.00%
	SEB Progressive Pension Fund	1.50%	1.00%
	Swedbank Pension Fund K3	1.03%	1.00%
Aggressive funds	Pension Fund LHV XL	1.64%	1.00%
	SEB Energetic Pension Fund	1.70%	1.00%
	Swedbank Pension Fund K4	1.03%	1.00%
	Nordea Pension Fund A Plus	1.60%	1.00%

Source: Own research based on the terms of pension funds, 2016





Comparing the development of charges, a general trend of decreasing fees could be seen in Estonia. Almost all funds have seen their management fee decrease in 2015 except for the fund managed by SEB.

In order to limit the overall charges applied to the pension funds, there has been a 3% cap on charges introduced on most of the funds. More volatile (aggressive) funds have higher cap on charges (up to 5% p.a.).

When considering the historical changes in charges, there is a significant transparency gap. Most of the asset managers do not disclose past charges and only recent charges applied to the pension funds are disclosed. Analyzing the Prospectuses, Terms as well as Monthly Reports of the pension funds, only Swedbank fully disclosed past charges effectively applied for managed mandatory pension funds. Other pension funds disclose only recent charges, respectively charges applied from a certain period. Using the data from available Prospectuses, Terms and Monthly Reports we were able to estimate the trend in charges using the simple averaging approach.

Table EST 5. Average fees in Estonian mandatory pension funds

Fee / Year	Management fee	Subscription fee	Redemption fee
2002	1.42%	1.50%	1.00%
2003	1.42%	1.50%	1.00%
2004	1.42%	1.50%	1.00%
2005	1.42%	1.50%	1.00%
2006	1.42%	1.50%	1.00%
2007	1.42%	1.50%	1.00%
2008	1.42%	1.50%	1.00%
2009	1.42%	1.50%	1.00%
2010	1.35%	0.00%	1.00%
2011	1.35%	0.00%	1.00%
2012	1.36%	0.00%	1.00%
2013	1.31%	0.00%	1.00%
2014	1.36%	0.00%	1.00%
2015	1.23%	0.00%	1.00%

Source: Own calculations based on data from pensions' Prospectuses, Terms and Monthly Reports, 2016

Management fees are applied on a periodical basis on the expense of the pension fund, which effectively decrease the value of pension fund unit. It should be noted that their effect during the saving cycle is therefore exponential, which should be

calculated using formulas for compound interest. Management fee is deducted from the fund's assets market value on a daily basis and will be paid for services provided during a preceding month. Depository fee is borne by the management company and is not directly charged on the expense of a mandatory pension fund.

Subscription as well as redemption fees are types of charges that are applied on a one-off basis, when a contribution to the fund is recorded, respectively when the saver sells the pension units to the issuer. The effect of these charges is limited to the transaction and therefore there is only cumulative effect that can be calculated as a simple summation. Subscription as well as redemption fees are also tied to the ability of savers to switch among the pension funds during the saving period. A fund can be replaced only with another fund of the mandatory funded pension. The choice of the pension fund can be changed in two ways:

1. Directing contributions to a new fund – the units of the current fund will be retained and will continue earning in the former fund. After choosing a new fund, your future contributions will be transferred to a new fund, i.e. units of different funds will appear side by side in your pension account.
2. Changing the pension fund units – the units of one pension fund will be replaced with the units of a new pension fund selected by you.

Since 1 January there no longer is a minimum to the number of units that can be switched from one fund to another (until 1 January 2011 the minimum requirement was 500 units). Since 1 August 2011, it is possible to transfer all or only a part (e.g. 25%, 50% or 75%) of the assets collected in the old pension fund to a new pension fund. Upon submitting an application for changing pension fund units, the saver's contributions are not automatically directed to a new fund. If a saver wishes to direct his/her contributions to a new fund and replace the collected units with the units of a new fund, savers are required to submit two applications:

1. Selection application, and
2. Unit exchange application.

Other charges refer to transfer costs and fees directly related to transactions made on the account of the fund and costs related to taking loans on the account of the fund (including costs related to repurchase agreements, reverse repurchase agreements and other securities-borrowing transactions). The other charges can be translated into standard terminology as trading and post-trading (clearing) costs,





except the charges associated with the depository services. However, information regarding these charges could not be obtained as they are neither disclosed nor visible to the general public. Other charges also include those related to individual services provided to savers based on specific requests and should be charged individually to the saver asking for such services. These services typically include applications to recall inherited pension fund units, applications to transfer inherited pension fund units into the pension account of the inheritor, applications for a lump sum payment from a pension fund, applications for a fund pension, applications to change a fund pension, etc.

Pillar III – Supplementary pensions

Supplementary pension is organized in two ways: insurance contract or supplementary pension fund. The way in which charges are disclosed to the client is significantly different for both.

For insurance contracts, no charges are disclosed publicly. The terms and conditions of insurance contracts cover the topic of charges. However, no charges are disclosed. In most cases, during the insurance contract validity, the insurer is entitled to change contract fees and risk payments unilaterally, with the obligation to inform the policyholder of the changes at least 30 days before such changes become effective. If the policyholder does not agree with the changes, he is entitled to terminate the contract.

The situation is different for a supplementary pension fund. All funds disclose most actual charges, which are presented in the table below.

Table EST 6 - Supplementary Pension Funds' Fees

LHV Supplementary Pension Fund	Management fee	1.00%
	Redemption fee	1.00%
	Entry fee	0.00%
	Depositary fee	N/A
Nordea Pension Fund Equity 100	Management fee	1.50%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	0.19%
Nordea Pensionifond Intress Pluss	Management fee	1.20%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	0.15%
SEB Active Pension Fund	Management fee	1.50%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	0.10%
SEB Balanced Pension Fund	Management fee	1.00%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	0.10%
Swedbank Pension Fund V1	Management fee	1.20%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	N/A
Swedbank Pension Fund V2	Management fee	1.30%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	N/A
Swedbank Pension Fund V3	Management fee	1.40%
	Redemption fee	1.00%
	Entry fee	1.00%
	Depositary fee	N/A
Voluntary Pension Fund Danske Pension 100 Pluss	Management fee	1.55%
	Redemption fee	1.00%
	Entry fee	0.00%
	Depositary fee	N/A
Voluntary Pension Fund Danske Pension Interest Pluss	Management fee	0.95%
	Redemption fee	1.00%
	Entry fee	0.00%
	Depositary fee	N/A

Source: Own research based on pension funds' documentations, 2016 (as of 31.12.2015)





Taxation

Pillar II – Funded pension

Estonia applies an EET taxation regime to pillar II with some specifications (deductions) to the taxation of the pay-out regime, where generally the “T” regime is applied.

Taxation of the fund

Income or profits from the fund are not subject to Estonian taxes at the fund level.

Taxation of unit-holders

Contributions to the fund usually consist of two parts:

1. 2% withheld from the wages and other remuneration of a resident natural person participating in the mandatory funded pension system. In certain cases, it is withheld from the remuneration paid to a member of the management or supervisory body of a legal person or from the business income of sole proprietors after deductions relating to the business and permitted in the Income Tax Act, but from an annual amount no more than fifteen times the sum of the minimum monthly wages for the taxable period. In certain cases, it can be withheld from the remuneration or fees paid to a natural person on the basis of a contract for services, authorisation agreement or another contract under the law of obligations entered into for the provision of services.
2. the amount added by the state, which equals 4% of the sum of the resident natural person’s wages and other remuneration.

The above-stated 2% withheld from wages and other remuneration is tax deductible, i.e. not subject to income tax. Specifications apply to the procedure of contributions in years 2014 to 2017.

Exchange of a fund’s unit for another unit of a mandatory pension fund and redemption of a unit to enter into an insurance contract for funded pension (pension contract) is not taxed. Insurance contract for funded pension (pension contract) and pension fund units are not treated as financial assets for the purposes of income taxation and taxation of income on these cannot be postponed.

During the payout phase, income tax is charged on payments made from the mandatory pension fund to the unit holder, the successor of the unit-holder and on payments made to the policyholder, an insured person and a beneficiary pursuant to a pension contract provided for in the Funded Pensions Act. Thus, if a unit-holder reaches the retirement age, mandatory funded pension payments will be taxed together with the state (NDC PAYG pillar) pension. Estonian income tax rate since 2008 is 21%.

Period of taxation for natural persons is a calendar year. In Estonia, annual basic exemption (non-taxable amount) per year is € 1,728.

A resident unit-holder, who receives a pension, may deduct from his or her taxable income, in addition to the basic exemption, the amount of a pension paid from a mandatory funded pension or a pension paid under a social security agreement. However, there is an upper limit set in a law. The amount exceeding the deductions is taxed with the income tax rate established by law.

Taxation of successors

Payments to a successor upon redemption of units are taxed with the income tax rate established by law. Transfer of units into a successor's pension account is not taxable.

Pillar III – Supplementary pensions

The effective Income Tax Act stipulates the EET regime (similar to pillar II) where:

- Resident natural persons have the right to subtract the amounts paid to acquire supplementary fund units from their taxable income. The amount to be deducted may amount to 15% of the income earned in the taxation period, but no more than €6,000;
- Income or profits from the fund are not subject to Estonian taxes at the fund level;
- Pay-outs from a supplementary pension fund are subject to income tax as follows:
 - I. 10% income tax if they are made under any of the following circumstances:
 - a) after the unit holder reaches the age of 55, but not before five years have passed following the acquisition of the units;





- b) in the event of the unit holder's full and permanent incapacity to work;
 - c) when the fund is liquidated.
- II. In all other cases pay-outs from the fund are subject to income tax valid at the time the pay-out is made.
- Pay-outs made by an insurance company to the policyholder from the assets saved in the fund as lifelong pension payments after the policyholder turns 55 years of age are exempt from income tax.

Pension Returns

Pillar II – Funded pensions

There are currently six pillar II private asset managers in Estonia. Scandinavian banks are playing leading roles not only in Estonia, but generally in all Baltic States. The two uncontested leaders (Swedbank and SEB) absorb between 60% & 70% of the market, with exceptionally strongest positions in Estonia. Scandinavia is also represented by DNB, Danske Bank and Nordea. However, the third place is occupied by a local bank in Estonia - LHV Bank.

The six asset managers offer 20 pension plans in Estonia (see table below). The number of pension plans generally corresponds to the population size (and, respectively, number of contributors). The pension plans (funds) are divided into four groups in accordance with the investment strategy they use:

1. conservative (not investing in stocks);
2. balanced or small equity funds;
3. active or medium equity funds; and
4. aggressive (investing in stocks mainly).

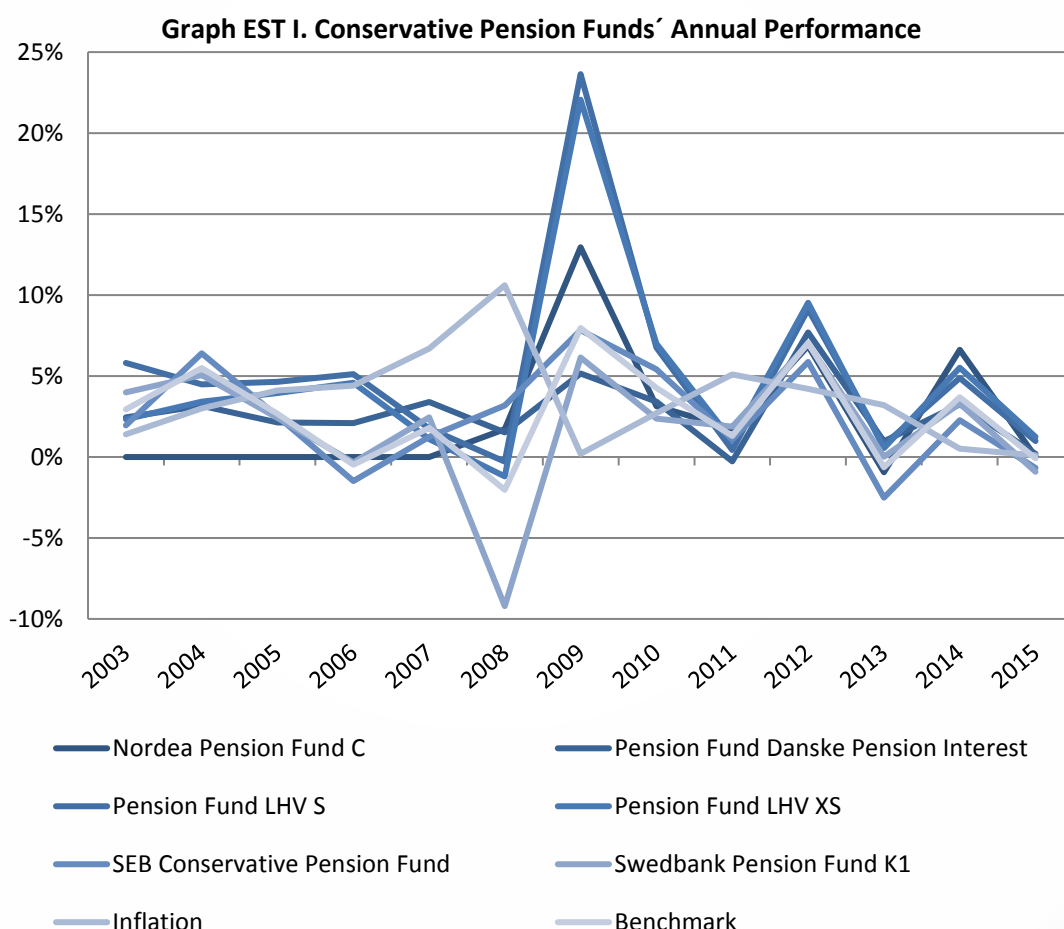
In Estonia the proportion of stocks in fund portfolios is set in increments of 25% for the four groups (0%; < 25%; 25–50%; 50–75%). The most aggressive funds were introduced only from the year 2009. Also, some players (namely Nordea) only entered the market as of the year 2008. Respective inception days of analyzed mandatory pension funds are presented in Table EST 7.

It should be noted that the performance (returns and respective volatility) is closely tied to the structure of the portfolio and the level of active asset management. Active asset management should be able to lower the overall volatility of the returns while maintaining at least the same level of return as for a passive asset

management approach. To which extent this is happening in Estonian mandatory pension funds can be seen in the below graphs presenting the returns (absolute and relative to the respective benchmarks).

All data presented on the pension funds' returns are presented in net values, i.e. after all fees charged to the fund portfolio. The graphs contain also inflation on an annual as well as cumulative basis.

Conservative mandatory pension funds' performance on an annual as well as cumulative basis compared to their respective benchmark (EPI-00 – black line) is presented in the graphs below.

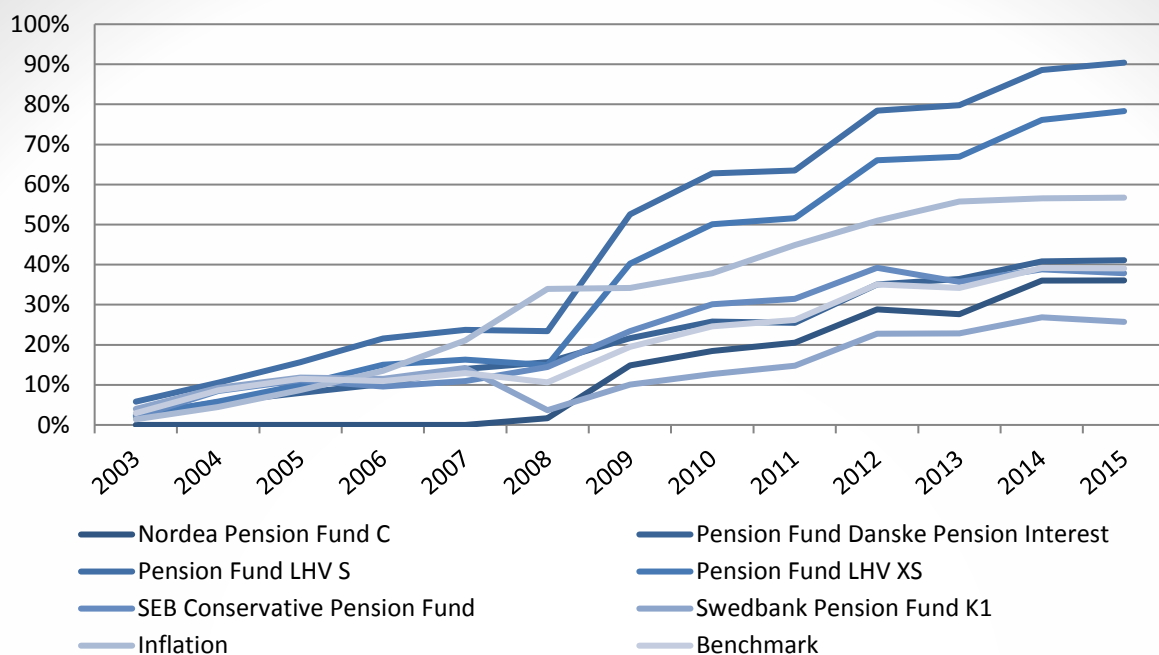


Source: Own calculations based on Pensionikeskus data, 2016





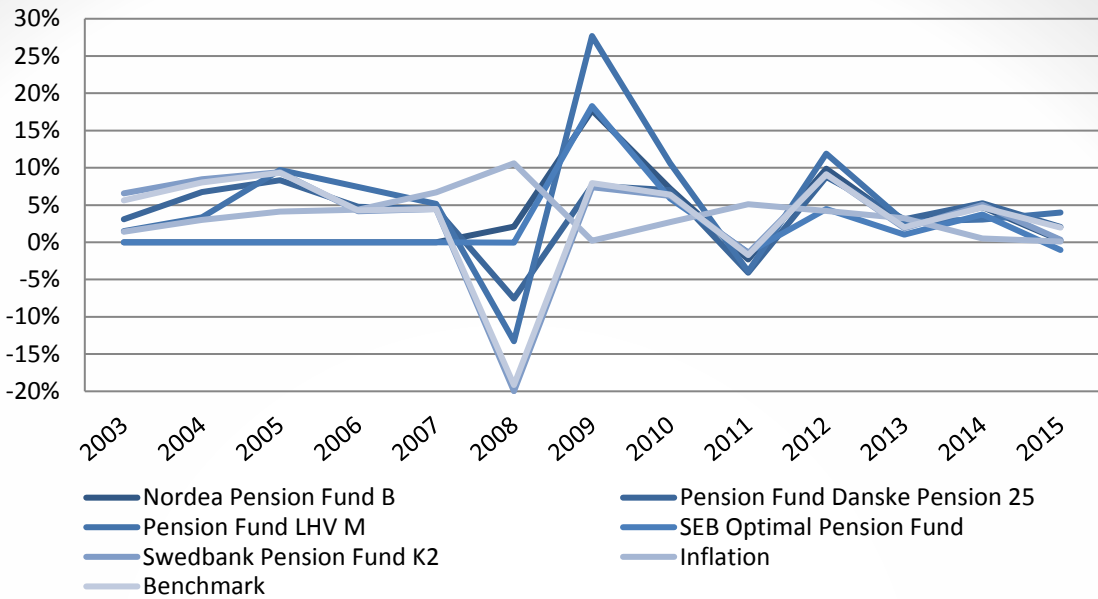
Graph EST II. Conservative Pension Funds' Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2016

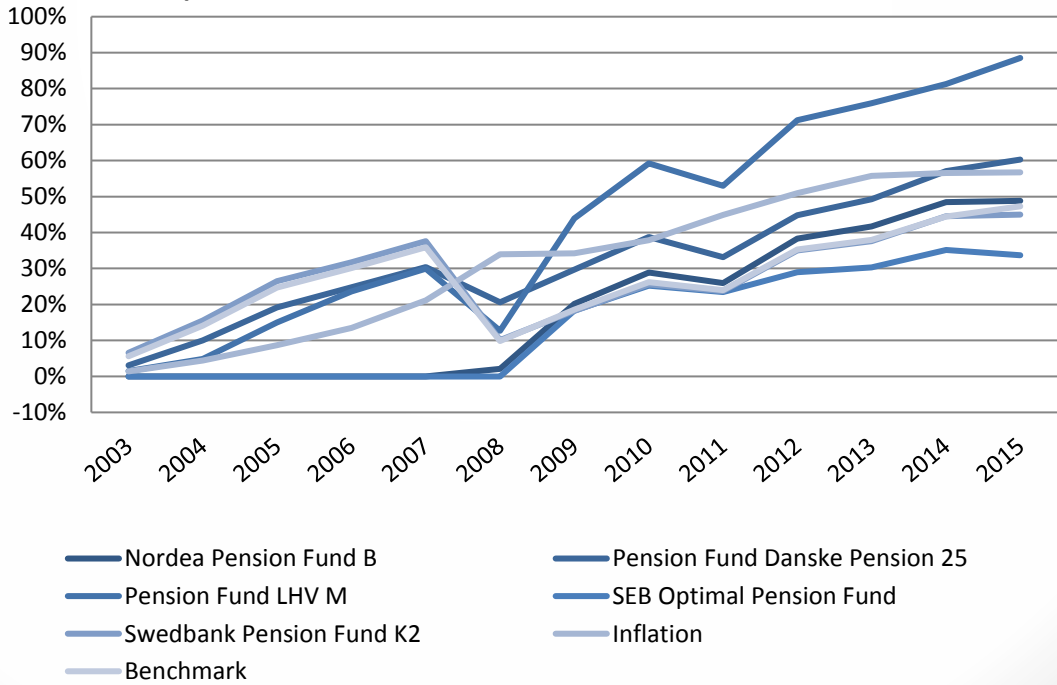
Balanced Mandatory Pension Fund's performance (annual and cumulative) comparing to the respective benchmark (EPI-25 – black line) is presented in graphs below.

Graph EST III. Balanced Pension Funds' Annual Performance



Source: Own calculations based on Pensionikeskus data, 2016

Graph EST IV. Balanced Pension Funds' Cumulative Performance



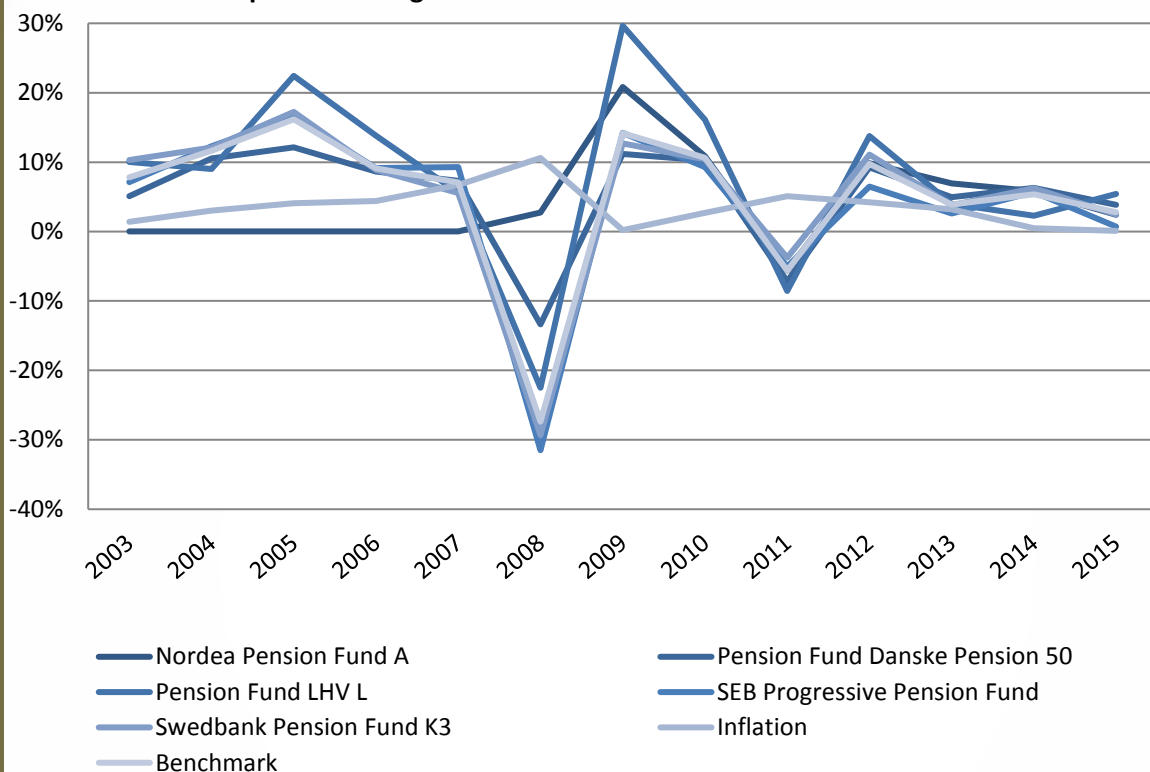
Source: Own calculations based on Pensionikeskus data, 2016





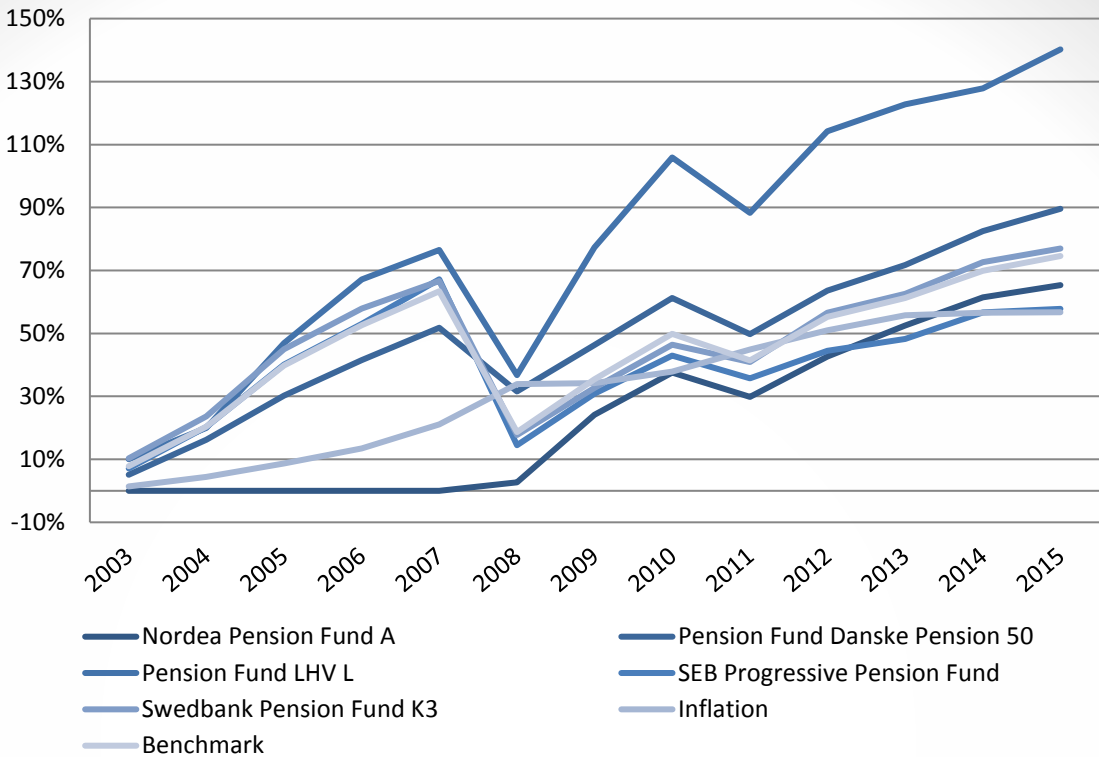
Progressive mandatory pension funds' performance on an annual as well as cumulative basis compared to their respective benchmark (EPI-50 – black line) is presented in the graphs below.

Graph EST V. Progressive Pension Funds' Annual Performance



Source: Own calculations based on Pensionikeskus data, 2016

Graph EST VI. Progressive Pension Funds' Cumulative Performance



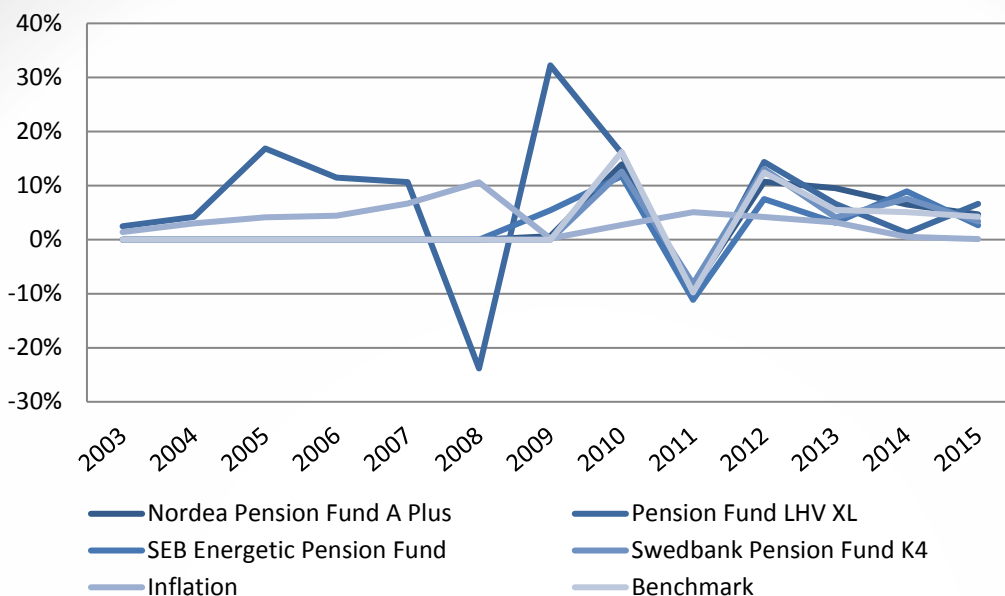
Source: Own calculations based on Pensionikeskus data, 2016

The last group of pension funds with the most volatile investment strategy and the highest share of equity investments (up to 75% of fund portfolio) are the aggressive pension funds. Aggressive mandatory pension funds' performance on an annual as well as cumulative basis compared to their respective benchmark (EPI-75 – black line) is presented in the graphs below.



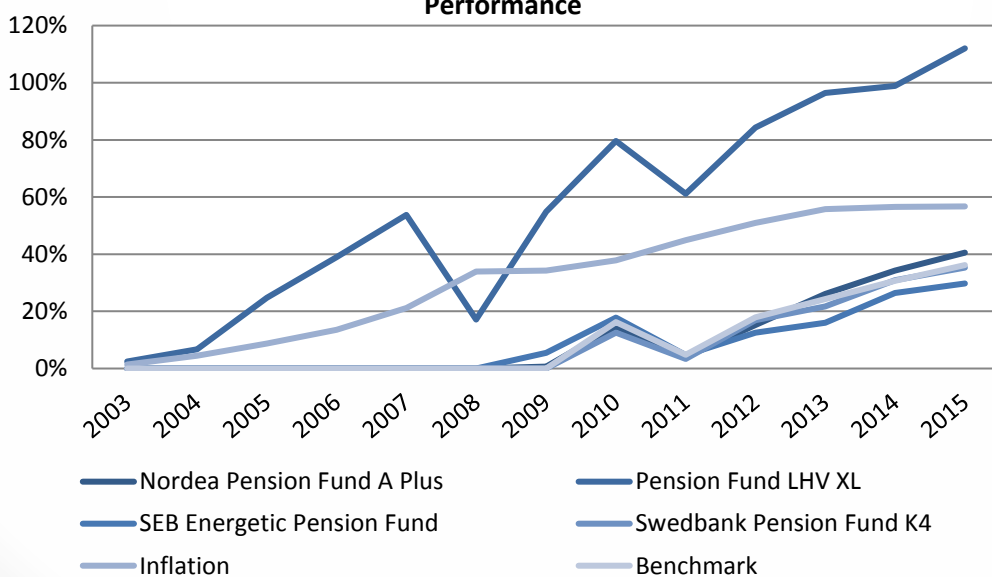


Graph EST VII. Aggressive Pension Funds' Annual Performance



Source: Own calculations based on Pensionikeskus data, 2016

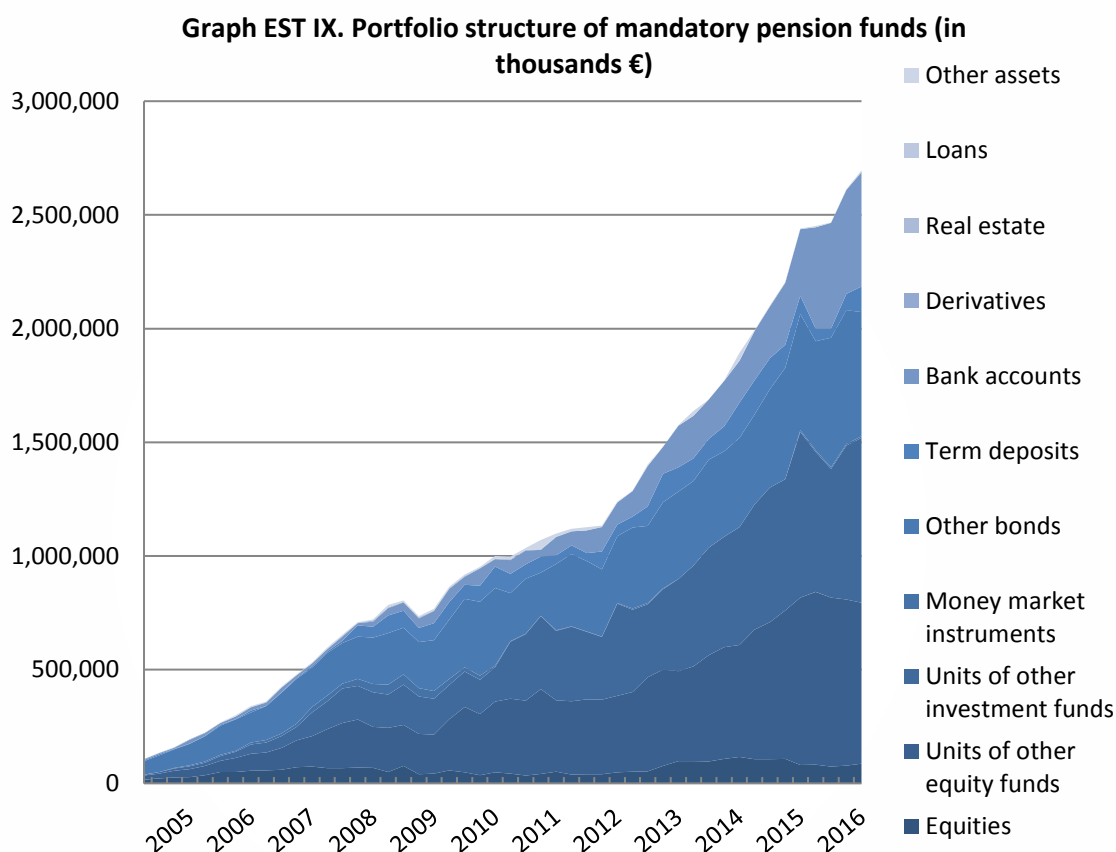
Graph EST VIII. Aggressive Pension Funds' Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2016

Analyzing the performance of pension funds, one can see that most of the pension funds have high correlation with their respective benchmarks. This suggests that most of the funds (excluding LHV funds) are passively managed.

Portfolio structure of all mandatory pension funds is presented in the graph below.



Source: https://www.fi.ee/koond/eng/invest_koond10.php (Own calculations), 2016

Analyzing the portfolio structure of mandatory pension funds in Estonia, one trend becomes apparent: replacement of direct investments into bonds and shares with the respective investment into structured products (UCITs) aimed at bond (equity) investments.

Nominal as well as real returns of mandatory pension funds in Estonia weighted by AuM are presented in a summary table below (EST 7).



**Table EST 7. Nominal and Real Returns of Mandatory Pension Funds in Estonia**

2002		1.26%			-2.34%	
2003		7.93%			6.54%	
2004		10.08%			7.05%	
2005		13.43%			9.31%	
2006	Nominal return after charges, before inflation and taxes	7.40%	4.04%	Real return after charges and inflation and before taxes	2.95%	0.18%
2007		6.25%			-0.48%	
2008		-23.42%			-34.06%	
2009		12.49%			12.25%	
2010		9.39%			6.64%	
2011		-4.43%			-9.51%	
2012		9.66%			5.44%	
2013		3.27%			0.02%	
2014		5.05%			4.57%	
2015		2.49%			2.39%	

Source: Own calculations based on Pensionikeskus data, 2016

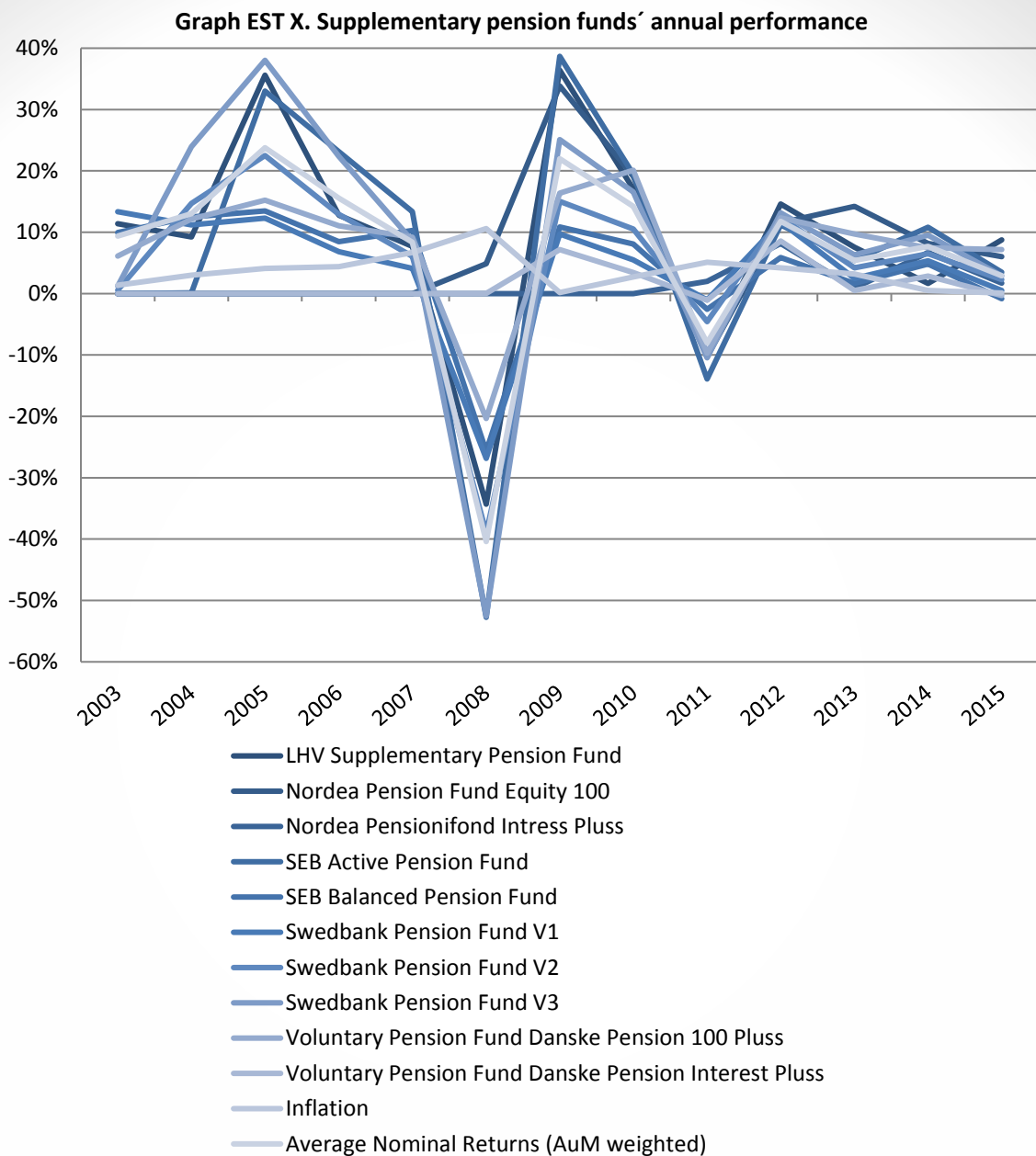
Considering the facts, that the taxation in Estonia's mandatory as well as supplementary pension scheme is applied to the pay-out phase only and the income of each individual is tested, calculating the after tax annual pension fund performance would lead to misleading results and only general assumptions of tax implications during the accumulation phase. Therefore, the after income tax performance calculations have not been performed in this study.

Pillar III – Supplementary pensions

When analyzing the performance of supplementary pension vehicles, only the funds should be considered. Insurance based vehicles do not disclose this information on a periodical basis, as the market risk is shifted onto the insurer.

Supplementary pension funds do differ in their strategy, mostly based on the volatility of their portfolios. In most cases and compared to mandatory pension funds, the investment strategies of supplementary pension funds' portfolio managers are far more aggressive. By large, the investment strategies do allow having up to 100% of assets allocated into equities and equity based structured products. Some asset management companies have reacted to this and started to also offer supplementary pension funds with conservative strategy.

The performance of supplementary pension funds on an annual as well as cumulative basis is presented in the graphs below

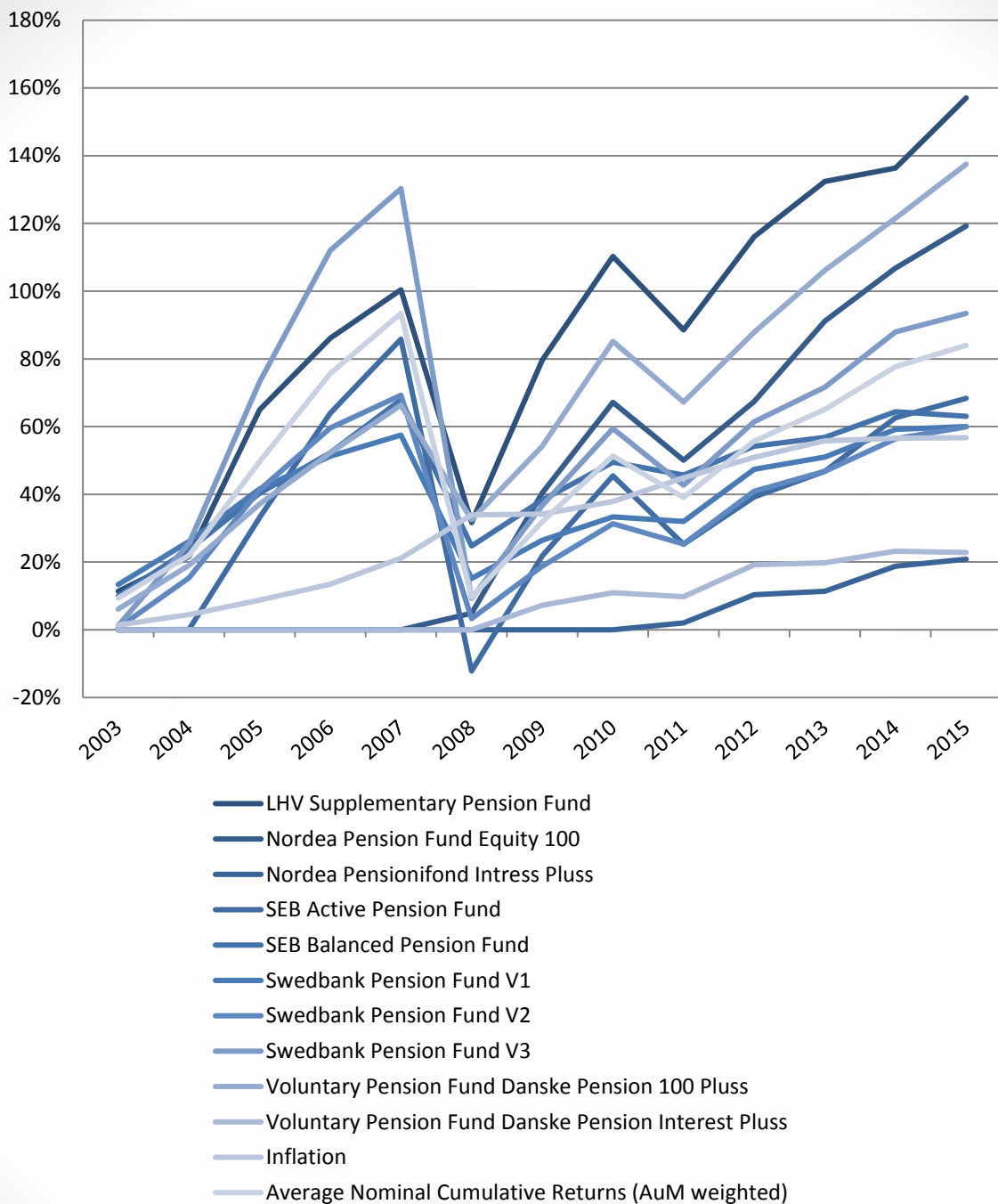


Source: Own calculations based on Pensionikeskus data, 2016





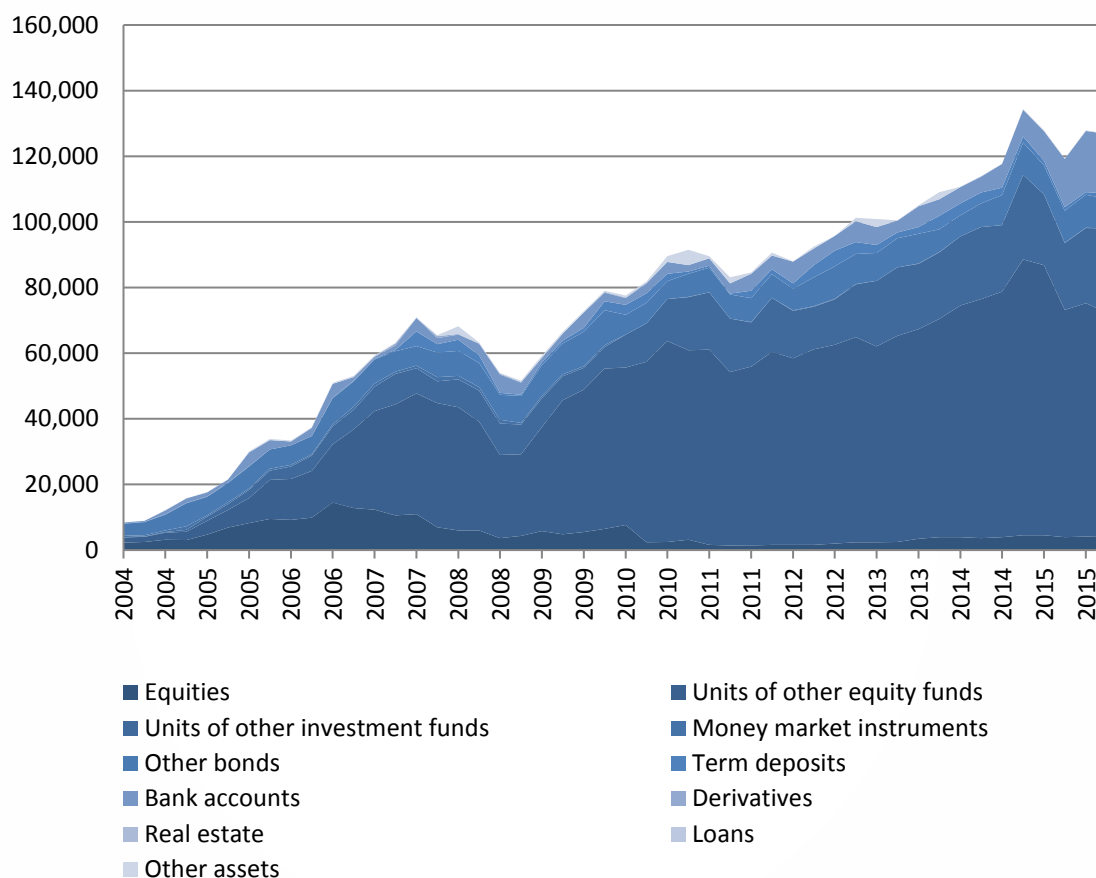
Graph EST XI. Supplementary pension funds' cumulative performance



Source: Own calculations based on Pensionikeskus data, 2016

The structure of supplementary pension funds' portfolios differ significantly and a larger proportion is invested in equity and/or equity based structured financial products (mainly equity based UCITs funds).

Graph EST XII. Supplementary pension funds' portfolio structure (in thousands €)



Source: https://www.fi.ee/koond/eng/invest_koond11.php (own calculations), 2016

Similar to the mandatory pension funds, portfolio structure of supplementary pension funds tends to change in favor of structured products (UCITs funds, ETFs), confirming the trends of investing via financial intermediaries.



**Table EST 8. Nominal and Real Returns of Supplementary Pension Funds in Estonia**

2002		8.19%			4.59%	
2003		10.22%			8.83%	
2004		13.03%			10.00%	
2005		23.72%			19.60%	
2006	Nominal return after charges, before inflation and taxes	15.80%	5.11%	Real return after charges and inflation and before taxes	11.35%	0.92%
2007		8.22%			1.49%	
2008		-40.40%			-51.04%	
2009		21.99%			21.75%	
2010		14.21%			11.46%	
2011		-7.47%			-12.55%	
2012		11.11%			6.89%	
2013		5.41%			2.16%	
2014		7.69%			7.21%	
2015		2.93%			2.83%	

Source: Own calculations based on Pensionikeskus data, 2016

Conclusions

Estonia, as an early pension system reformer, has introduced a typical multi-pillar pension system that combines state unfunded as well as mandatory and voluntary fully funded pillars. Different types of pension vehicles in pillar II as well pillar III allow savers to choose from a wide variety of investment strategies. Lower transparency in fee history results contrasts with the high transparency of performance disclosed on a daily basis. The exception are pillar III insurance contracts, where no information about performance or fees is publicly disclosed. This resulted in an inability to confront the nominal as well as real returns of insurance contracts with other options available to Estonian savers.

Performance volatility of most pension vehicles is relatively high, however Estonian savers tend to accept higher risk what is concerning their savings. Pillar III vehicles are a typical example of high volatile pension vehicles, however after the financial crisis, pension asset management companies started to offer also more conservative funds for pillar III savers.

Concerning the pension funds' portfolio structure, one trend is clear. Portfolio managers are steadily replacing direct investments into bonds and equities with the structured financial products. Thus the question of potential future returns

when using financial intermediaries should be raised. Most of the pension funds can be seen as passively managed, which raises the question of high fees.

Even if in most cases the net performance (adjusted for fees) is disclosed by pension funds, the overall level of fees is questionable. Comparing the level of fees, there is a significant risk undermining the ability to deliver above benchmark performance in future years.





Pension Savings: The Real Return

2016 Edition

Country Case: France

Introduction

In 2015, the value of financial assets held by French households increased by 4.8%. Bank deposits and life insurance contracts still represent the two largest blocks of financial savings products in portfolios held by French households. Total outstanding life insurance contracts grew by 3.3% in 2015 from €1,417 billion to €1,463 billion, whereas deferred annuity plans⁷⁸ grew by 4.7% from €186 billion to €195 billion, which is still a very small portion of the financial assets of households:

Table FR 1. Financial assets of French households at the end of 2015

	% of total financial savings	2015/2014
Currency and bank deposits	30.0%	3.6%
Investment funds	7.4%	13.3%
Life insurance	33.4%	3.3%
Pension funds	4.5%	4.7%
Direct investments (direct holdings of bonds and shares)	24.7%	6.1%
Total	100%	4.8%

Source: Banque de France, «National Financial Accounts»

Savings and investment products used for retirement

Life insurance contracts

From 2013 to 2015, mathematical provisions related to unit- linked contracts rose more than those of “contrats en euros” (capital guaranteed contracts) and their share in total mathematical provisions increased slightly from 16% to 18%. This

⁷⁸ Deferred annuity plans include personal pension products (PERP), pension products for the self-employed (“contrats Madelin”) or farmers, sectorial collective pension plans (“Préfon” for public employees, CRH for hospital employees), and company pension plans, with either defined benefits (“article 39”) or defined contributions (“Article 83” and PERCO).

increase is due to both capital gains and net inflows (contributions less benefits) in 2013 and 2014. Unit-linked contracts accounted for 30% of net inflows to life insurance in France in 2013, 33% in 2014 and 59% in 2015.

Table FR 2. Mathematical provisions (in € billion)					
	2013	2014	2014/2013	2015	2015/2014
Capital-guaranteed contracts	1,195	1,235	3.4%	1,269	2.7%
Unit-linked contracts	239	259	8.3%	281	8.5%
All contracts	1,433	1,494	4.2%	1,549	3.7%

Source: FFSA

The only recent innovation was the creation of a new type of life insurance contract, named “*Eurocroissance*”, a contract that does not guarantee the invested capital in case of withdrawal within eight years minimum of subscription. This new type of contract is supposed to incite savers to accept a higher risk in the short-term for a potentially better long-term return, for example by investing more on the equity market. By the end of 2015, 59 % of insurers had a *Eurocroissance* contract on offer. But they had signed only 123,000 contracts for € 1.7 billion of mathematical provisions, probably at least partly due to the ultra low interest rates, making it challenging to expect a decent return.

Deferred annuity plans

Personal pension plans (PERP⁷⁹)

Thanks to higher contributions and paid benefits⁸⁰ that remain low, mathematical reserves in PERP personal pension plans increased from €7.5 billion in 2011 to €8.8 billion in 2012 (+18.3%), €10.5 billion in 2013 (+19.2%), €12.3 billion in 2014 (+16.6%) and € 14.2 billion in 2015 (+15.8%). However, the share of the PERP as part of the overall savings of French households remains very small.

The number of subscribers increased only slightly in 2012 (2.18 million plans, +1.5%), in 2013 (2.22 million; +2%), in 2014 (2.28 million; +3%) and in 2015 (2.34 million; +2.5%).

⁷⁹ “*Plan d’épargne retraite populaire*”.

⁸⁰ The legal framework of the PERP was established in 2003.





“Contrats Madelin” subscribed by self-employed

Mathematical provisions related to “*contrats retraite Madelin*” increased by 10.3 % in 2015 to 31.2 billion⁸¹. There were 1.184 million outstanding contracts at the end of 2015 (+3.1%). The “*contrats Madelin*” are widely used by self-employed workers because the PAYG system is less generous (and contributions lower) than for employees.

“Contrats Madelin agricole”

Technical reserves of “*contrats Madelin agricole*” (plan for persons working in the agricultural sector) increased by 5% in 2015, from €4.8 billion to €5.0 billion. 316,000 farmers had an open contract at the end of 2015.

Individual deferred annuity plans

Préfon, a deferred annuity plan open to all current and former public employees and their spouses, had close to 393,531 participants at the end of 2014 (+1.55% from 2013). Its assets under management reached € 15 billion (market value) at the end of 2014⁸² from € 12.9 billion at the end of 2012.

Corem, a deferred annuity plan mainly subscribed by civil servants, had 397,034 participants at the end of 2015 (from 391,623 end of 2012). Its assets under management grew from € 7.6 billion at the end of 2012 to € 9.1 billion (market value) at the end of 2015⁸³.

CRH (“*Complémentaire Retraite des Hospitaliers*”), a deferred annuity plan open to all public employees from the health sector and to their spouses, has 358,000 participants. Its technical reserves amount to €3.01 billion⁸⁴. We could not find more precise public information.

Collective deferred annuities

In total, mathematical reserves grew by 4.3% from €104.5 billion to €109 billion from end of 2014 to end of 2015.

For insurance-regulated corporate defined contribution plans under “Article 83” of the French tax code (“*PER Entreprises*”): mathematical reserves stood at €52.3 billion at the end of 2015.

⁸¹ Source: <http://www.ffa-assurance.fr/file/846/download?token=xpWUUOPZ>

⁸² As of August 2016, *Préfon* had not released its 2015 results.

⁸³ Combined participants and assets of Corem and “R1”, a closed pension plan related to *Corem*.

⁸⁴ Source: *Guide d'information de la complémentaire retraite* du CGOS – no date.

Defined benefit plans (“Article 39” of the French tax code): mathematical reserves stood at €40.3 billion at the end of 2015.

Corporate long-term savings plans

The total assets of French defined contribution corporate savings plans (PEE⁸⁵ + PERCO) continued to grow in 2015 to 117.5 billion at the end of 2015 (+7 % over previous year). The number of members in those plans is stable (close to 11 million people) but the average contribution increased and the plans benefitted from favourable market trends.

The “Plan d’Epargne Retraite Collectif” (PERCO), which is exclusively dedicated to pension investments, is still less mature than other pension plans as it started in 2004. But it continues to grow rapidly. Assets under management amounted to €10.3 billion at the end of 2014 and 12.2 billion at the end of 2015 (+18%). 1,995,000 employees had a PERCO at the end of 2015 (an annual growth of +16%) and 191,000 companies propose this type of plan to their employees.

PERCO is quite similar to the US Corporate pension plans (“401k”) in its design. However, it is not invested in general purpose investment funds like UCITS, but only in specifically dedicated alternative investment funds (AIFs) called FCPEs.

Charges

Flows of financial savings of French households dramatically decreased in 2011 and 2012: in 2012 the net financial savings amounted to €27 billion against €157 billion in 2010. They recovered in 2013 (€82 billion), 2014 (€121 billion) and 2015 (€118 billion) but did not catch up with flows recorded before the financial crisis. Competition for attracting retail investment funds translated into performances of capital-guaranteed life-insurance contracts diminishing less than market interest rates.

Insurance companies slightly lowered subscription fees on life insurance contracts, to an estimated average entry costs of around 2.5% in 2015⁸⁶. However, High Net Worth Individuals can negotiate lower entry fees, or even avoid them, depending on the amount of their investment.

⁸⁵ PEE: « *Plan d’épargne entreprise* » is a corporate savings plan where savings are typically blocked for a minimum of five years.

⁸⁶ Average of 165 contracts available for sale (source: IODS).





The competitive pressure has also put constraints on annual management fees charged by insurance companies. However, unit-linked contracts cumulate the units' (investment funds) charges and those linked to the contract. Overall management fees for equity funds in France were 1.8% on assets in 2013⁸⁷. Unit-linked contract fees alone account for 0.95% in fees on average per annum on assets⁸⁸. Therefore, for unit-linked insurance contracts invested in equity funds, the total average fees are 2.75% (1.8+0.95) per annum.

These average fees are very high: assuming the equity funds performed on average like the French equity market did (see below), an investment made at the end of 1999 and held for 15 years has been charged with more than 40% in accumulated fees.

Taxation

For For PERPs, "*Madelin*" contracts and Public Employee schemes (*Préfon*, *Corem*, *CRH*), contributions are deductible from taxable income up to 10% of total professional income with a deduction ceiling (€30,038 in 2015). Annuities are taxable like pensions with a 10% fixed haircut. Since 1 April 2013, they are also subject to a 7.4% social contribution.

Since August 2012, the taxation of employers' contributions to corporate savings plans (PEE and PERCO) and defined contribution plans ("Article 83") increased from 8% to 20%.

Although there was no change of taxation specifically applying to life insurance in 2012, the general rise in taxation of savings also impacted life insurance. The law of 29 February 2012 increased the rate of "social contributions" from 13.5% to 15.5%. This new rate applies since 1 January 2012 to property income and financial capital gains, and from 1 July 2012 onward to interest, dividends and real estate capital gains. So, the minimum tax rate on life insurance income is now 23% (7.5% income tax +15.5% social contributions). This rate applies to any divestments of € 4,600 and above per annum for an individual, and € 9,200 for a couple. Below these thresholds, the minimum overall tax rate falls to 15.5%.

⁸⁷ Source: La lettre de l'Observatoire de l'épargne de l'AMF - n° 13 - Juin 2015

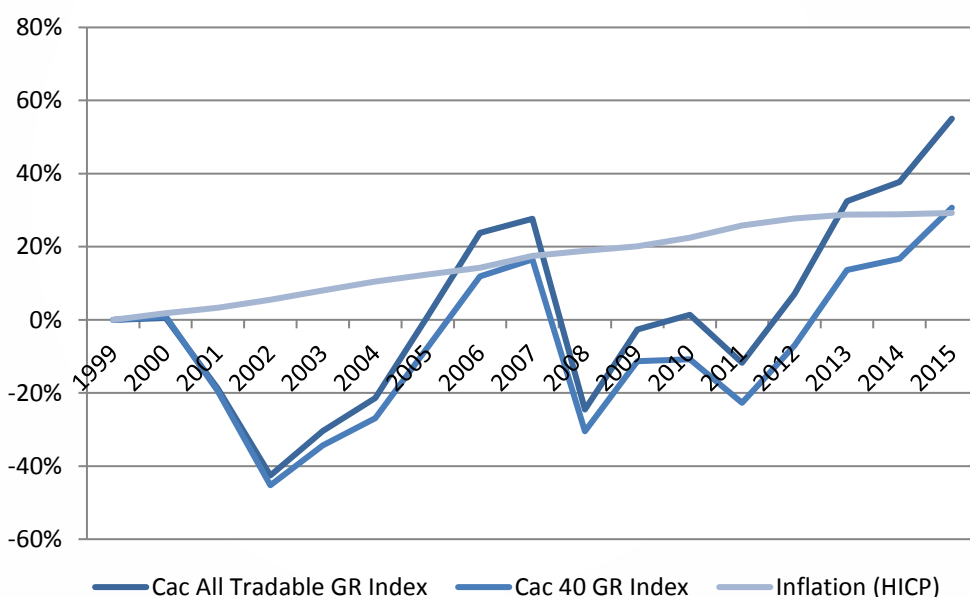
⁸⁸ Source: dossiers de l'épargne n°152, 2014

Pension and long term savings returns

Shares and bonds (direct investment in securities)

Over the last 16 years the French equity market (dividends reinvested) returned as a whole (all shares) + 55.1%, (+2.78% annual average) and the large capitalisations only (CAC 40 index, dividends reinvested as well) returned much less: +30.7% (+1.69% annual average, demonstrating the very strong over performance of small and mid-cap equities. Inflation over the same period was +29%. So, despite two sharp downturns (2000-2002 and 2007-2008), French equities delivered positive nominal and real returns over the whole period, but the real performance of the most liquid stocks is barely positive.

Graph FR I. French Equity market performance: broad market vs. big caps market - 16 years (2000-2015)

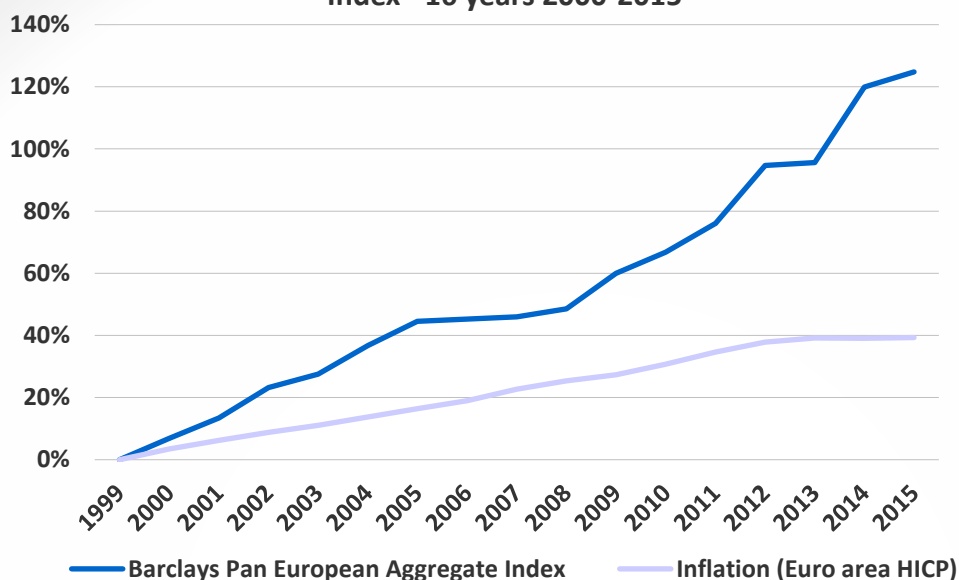


Sources: Euronext, Eurostat





Graph FR II. Cumulated Performance of Euro Area Bond Index - 16 years 2000-2015



Sources: Barclays Pan-European Total Returns & Eurostat HICP Europe 28 Monthly

Bond markets continued to perform positively in 2015, thanks to the quantitative easing policy of the European Central Bank. Overall capital markets delivered significantly positive returns⁸⁹ over the last sixteen years despite two major downturns in equity markets, but thanks also to the continuous decline of interest rates and its positive impact on the value of bonds.

Life insurance contracts – capital guaranteed

The real returns of guaranteed life insurance contracts declined only slightly in 2015 in real terms thanks to a very low inflation. Such returns (+1.5%) should be assessed from the perspective of long-term duration: the last data available from the wealth survey of INSEE indicates that outstanding life insurance contracts were open for 10 years on average and 32% were open for more than 12 years⁹⁰.

⁸⁹ Of course these market returns are without charges and without taxes. The closest retail investment products would be index funds using the same indices over the same period. As a reference, annual charges on the Lyxor CAC40 ETF index fund are 0,25%, and 0,25 % as well on the Vanguard Euro Government Bond Index Fund.

⁹⁰ Christophe Benne, Alain Peuillet, "L'assurance-vie en 2010: Une composante majeure du patrimoine des ménages", INSEE Première n° 1361, July 2011.

Over a 16-year period, real return after tax of guaranteed life-insurance contracts varied from a maximum performance of 3.1% in 2001 to a negative performance of -0.3% in 2011.

Table FR 3. The returns of French life insurance contracts – capital guaranteed (%)

	Disclosed return	Real return before tax	Real return after tax	Real return after tax*
2000	5.3	3.5	2.8	3.5
2001	5.3	3.8	3.1	3.8
2002	4.8	2.6	1.9	2.6
2003	4.5	2.1	1.5	2.1
2004	4.4	2	1.4	2
2005	4.2	2.4	1.6	2.4
2006	4.1	2.4	1.6	2.4
2007	4.1	1.3	0.5	1.3
2008	4	2.8	2	2.8
2009	3.6	2.6	1.8	2.6
2010	3.4	1.4	0.7	1.4
2011	3	0.3	-0.3	0.3
2012	2.9	1.4	0.7	1.4
2013	2.8	1.9	1.3	1.9
2014	2.5	2.4	1.8	2.4
2015	2.3	2	1.5	2

** for redemptions below € 4,600 per annum*

Source: FFA, Eurostat (ICPH index), IODS calculation (deduction of HICP price index variation from disclosed returns)

Contradictory Contradictory factors impacted real returns after tax again in 2015:

- Nominal returns decreased again. This reflects the historically low interest rates. Moreover, insurance companies did not record significant unrealised capital gains on their bond portfolio as the fall in long-term interest rates stopped in 2015. Capital gains or losses are not accounted for in the disclosed returns above.
- Inflation slowed down dramatically, from 2.7% in 2011 to 0.3% in 2015. Consequently, for a given nominal return, inflation did not reduce the real return to the same extent.





- In 2012, taxation increased by 200 basis points, as a result of the rise in social contributions from 13.5% to 15.5%.

Table FR 4. French nominal and effective tax rates on capital guaranteed life insurance returns (%)

	Inflation	Nominal tax rate	Effective* tax rate
2000	1.7	13.4	20.3
2001	1.4	13.4	18.6
2002	2.2	13.4	24.9
2003	2.4	13.4	29.2
2004	2.3	13.7	29.8
2005	1.8	18.5	32.4
2006	1.7	18.5	32
2007	2.8	18.5	60.1
2008	1.2	18.5	26.6
2009	1	19.6	27.7
2010	2	19.6	48.5
2011	2.7	21	201.4
2012	1.5	23	49.3
2013	0.8	23	33.1
2014	0.1	23	23.9
2015	0.3	23	26

Source: Eurostat (HICP index), IODS computation

** Effective tax rate = tax / real (net of inflation) income*

In the most favourable case, where savers do not redeem more than € 4,600 per annum (see Taxation section above), real returns after tax are better (+2.0% in 2015 and +29 % over the last 16 years).

These average returns also mask important differences depending on the distribution network and governance: for the contracts distributed by banks, the 2015 average nominal return was only 2.09%⁹¹, whereas the return of contracts subscribed by independent associations was 2.84%⁹². Considering that contracts distributed by banks represent 61% of the French with profit life insurance market

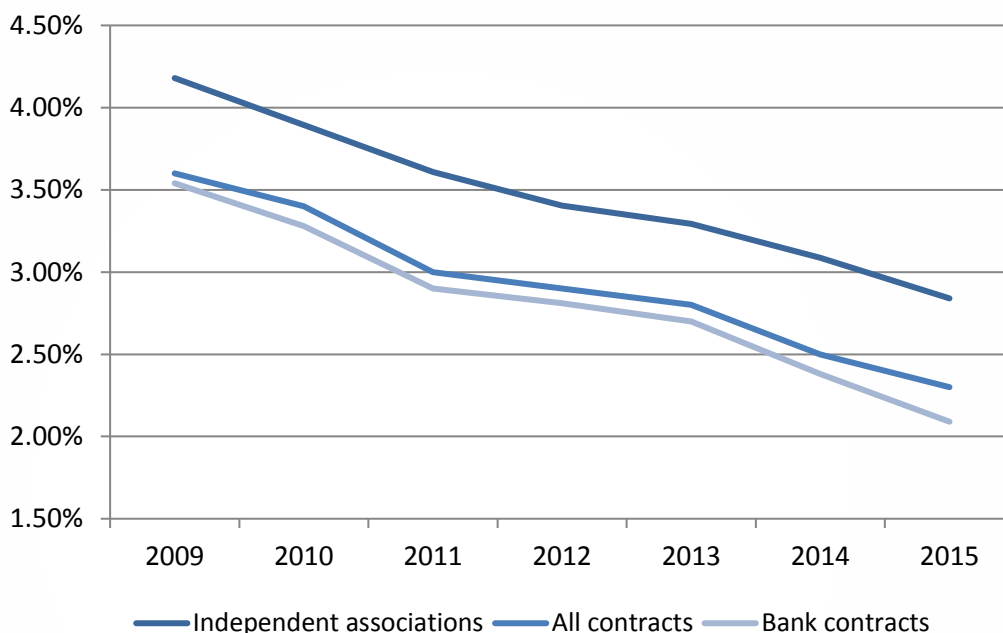
⁹¹ ACPR - Analyses et Synthèses nr. 70, July 2016.

http://acpr.banque-france.fr/fileadmin/user_upload/acp/publications/analyses-syntheses/201607_AS70_Taux-revalo_contrats-individuels.pdf

⁹² Sources: Faider, Facts & Figures. Independent associations representing life insurance contracts holders include AGIPI, AMAP, AMIREP, ANCRE, ASAC-FAPES and GAIPARE.

(€ 1299 billion at the end of 2015), this return gap of 0.75% in 2015 constitutes an opportunity cost of nearly € 6 billion for that year alone for savers getting their capital-guaranteed life insurance contracts from their bank instead of from independent savers' associations.

Graph FR III. Nominal returns - all contracts versus independent life insurance associations



Sources: FAIDER (French Federation of Independent pension savers associations), FFSA, ACPR

Life insurance contracts – unit-linked

Nominal returns were pushed upwards by the rise in stock prices from 2012 to 2015, against the background of declining inflation. Despite heavier taxation, real returns after taxes were above 7% in 2012 and 2013, +4.4% in 2014 and +2.9% in 2015.

Over a 16-year period of time, real returns after tax of unit-linked life-insurance contracts were very volatile. The worst performance was recorded in 2008 (-23.2%) and the best one in the following year (+13.2% in 2009).



**Table FR 5. The returns of French life insurance contracts – unit-linked (%)**

2000	<u>-2</u>	<u>-3.7</u>	<u>-3.7</u>
2001	<u>-9.5</u>	<u>-10.8</u>	<u>-10.8</u>
2002	<u>-15.2</u>	<u>-17</u>	<u>-17</u>
2003	8.4	5.9	5.9
2004	6.4	4.1	4.1
2005	14.4	12.4	12.4
2006	8.8	7	5.5
2007	1.5	<u>-1.3</u>	<u>-1.3</u>
2008	<u>-22.3</u>	<u>-23.2</u>	<u>-23.2</u>
2009	14.4	13.2	13.2
2010	5.2	3.1	2.6
2011	<u>-7</u>	<u>-9.4</u>	<u>-9.4</u>
2012	11	9.3	8
2013	8.2	7.3	5.4
2014	5.9	5.8	4.4
2015	4.1	3.8	2.9

Source: FFA, Eurostat (HICP index), own calculation (deduction of HICP price index variation from disclosed returns)

Life insurance contracts – 16 years returns (2000-2014)

In order to compute the real return of an investor, who would have subscribed to a life insurance contract at the end of 1999 and who would have withdrawn his funds 15 years later, one has to subtract the entry costs paid the year of subscription because these fees are not taken into account in the disclosed returns (annual fees on assets are already). We estimate that entry costs in 2000 represented 2.76% of the investment, to be deducted from the real returns that year.

A saver would thus get a return of +23.48%⁹³ for this 16 year period of investment on guaranteed contracts, and a negative one of -11.64 % on unit-linked contracts. On a yearly basis, the rates of returns would be +1.33% and -0.77% respectively. It is worth noting that, although unit-linked contracts are more risky for the subscribers, they did provide returns that were significantly lower than those of the riskless guaranteed contracts. Such an importantly lower – and negative - real performance over 16 years is primarily due to far higher fees (see the fees and charges section above), as capital markets as a whole (bonds and equities) provided

⁹³ +29.19 % with the most favourable tax treatment, see table 45 above

a positive real performance over the same period. But the performance of unit-linked contracts is very sensitive to the period of reference.

Table FR 6. Real returns of all life contracts 2000-2015
(based on the relative weight of both categories in the overall mathematical reserves)

	16-year return	Average yearly return
Capital guaranteed contracts	+23.48%	1.33%
Unit-linked contracts	-11.64%	-0.77%
All contracts (avg.)	16.94%	0.98%

PERP

A majority of PERPs are structured like ordinary life insurance contracts in the accumulation phase: a combination of capital guaranteed funds (“fonds en euros”) and “units” representing investment funds. A minority of PERPs are structured like deferred annuities, similar to the main pension savings products for public employees (see next section below).

It was again impossible to find global return data on PERPs. The insurance industry body (FFSA) publishes the average return of ordinary capital guaranteed (“fonds en euros”) and unit-linked life insurance contracts, but not that of PERPs. Based on the disclosed nominal returns of PERPs accounting for 78% of total PERP assets at the end of 2015⁹⁴, the weighted average nominal return of the capital guaranteed PERPs (“fonds en euros”) was 2.22% in 2015, significantly down from the 2014 level of 2.54%, and slightly lower than the return of ordinary capital guaranteed life insurance contracts. In addition, this does not take entry fees into account, which are probably at least as high as for life insurance (2.76% average in 2000 for those). Like for ordinary life insurance contracts, capital guaranteed PERPs sold by banks (62% market share) had lower returns (2.09%) than the overall average in 2015 as in 2014 (2.45%). By contrast, PERPs from mutual insurers enjoyed higher returns than the overall average (2.92% in 2015 and 3.09% in 2014).

Deferred annuity plans for public employees (Préfon, Corem, CRH)

One difficulty in assessing real returns of deferred annuity plans is that up to 2010, it was not mandatory for those plans to disclose investment returns, Préfon being one example. Following the action by Better Finance’s French member

⁹⁴ Source: ACPR - Analyses et synthèses nr. 69 – July 2016.

http://acpr.banque-france.fr/fileadmin/user_upload/acp/publications/analyses-syntheses/201607_AS69_taux_revalo_contrats_collectifs_modif.pdf





organisations, a 2010 Law⁹⁵ made this a legal requirement from 2011 onward. However, since then Préfon only discloses an accounting return (taking into account only realised gains on sales of assets besides interest and dividend income) and does not disclose an economic return (taking into account the annual evolution of the market value of all assets in the portfolio).

Préfon

Préfon Préfon published an accounting return (net of fees) on its investment portfolio for 2014 of 4.13 % versus 6.16% in 2013. However, as mentioned above, the accounting return does not take into account the changes in the market value of assets. 2015 figures were not released at the time of print (August 2016). In addition, most of the investment return is currently set aside in order to replenish reserves. In 2010, the French Supervisor (ACPR) decided this was still not sufficient and forced Préfon's insurers to contribute € 290 million of their own funds as of 31 December 2013) to help Préfon balance its assets and liabilities⁹⁶. End of 2014, this contribution from the insurers climbed to € 750 million⁹⁷. In addition, the value of the participants' accumulated savings is communicated individually to them only since 2012, and unfortunately with more than one-year delay (we would like this essential information to be released much sooner), and just as an "estimate"⁹⁸. It is therefore impossible to compute a real rate of return individually and for all participants with the data currently made available by the Plan.

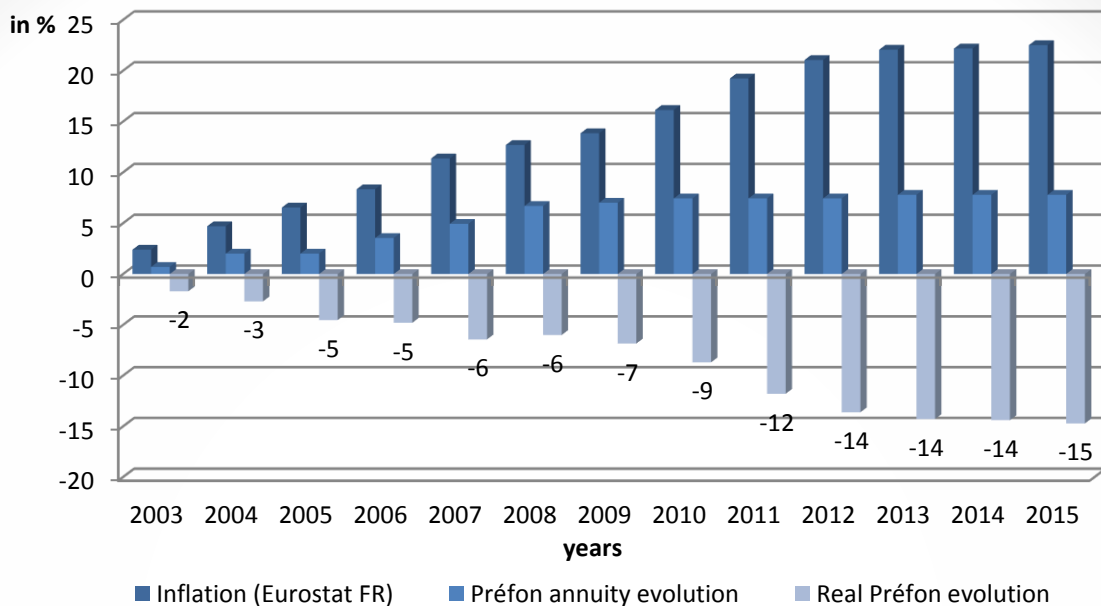
⁹⁵ Law n° 2010-737 of 1 July 2010 - art. 35 (V), which modified Article L441-3 of the French Insurance Code.

⁹⁶ "Les Echos" 27 December 2010. This information was not disclosed by Préfon to the participants.

⁹⁷ Source : Rapport de gestion Préfon Retraite 2015

⁹⁸ Besides, this "transfer value" does not include the 5% transfer fee Préfon charges to any transfer occurring within the first 10 years of the contract.

Graph FR IV. Préfon annuities real value, compounded evolution in %



© ARCAF 2016

Another difficulty for deferred annuity products is to translate the impact of investment returns and other factors such as the capital conversion rate into annuities, the discount rate and the evolution of annuities paid on the actual long-term return for the pension saver. One proxy return indicator is the one computed and published by the French association of pension fund participants ARCAF. It has been collecting the annual rate of pension rights and annuities increases before tax for several years (see Graph FR IV). Since the end of 2002, Préfon participants have lost 15% of the real value of their pensions (before tax⁹⁹). The publicized objective of Préfon to match inflation has not been fulfilled since 2002, and given the amount of the provisions that insurers had to contribute from their own funds since 2010, it is unfortunately unlikely that Préfon will reduce this loss of the real value of pensions any time soon. This key performance information is not disclosed to new participants¹⁰⁰.

⁹⁹ Savings into Préfon (like into PERPs and into Corem) are income tax deductible, but the annuities are taxable. Both savings and annuities bear social levies ("prélèvements sociaux").

¹⁰⁰ ARCAF <http://www.EpargneRetraite.org> 2016.





This return indicator however does not include the discount rate embedded in the conversion ratio of annuities to accumulated savings. But this discount rate varies from one year to the other and is not disclosed.

It is difficult to compute the evolution of the *Préfon* annuities paid after tax, since they are taxed at the marginal income tax rate on pensions and salaries, and since contributions have been deducted from the taxable income for income tax purposes (but not for social levies).

Corem

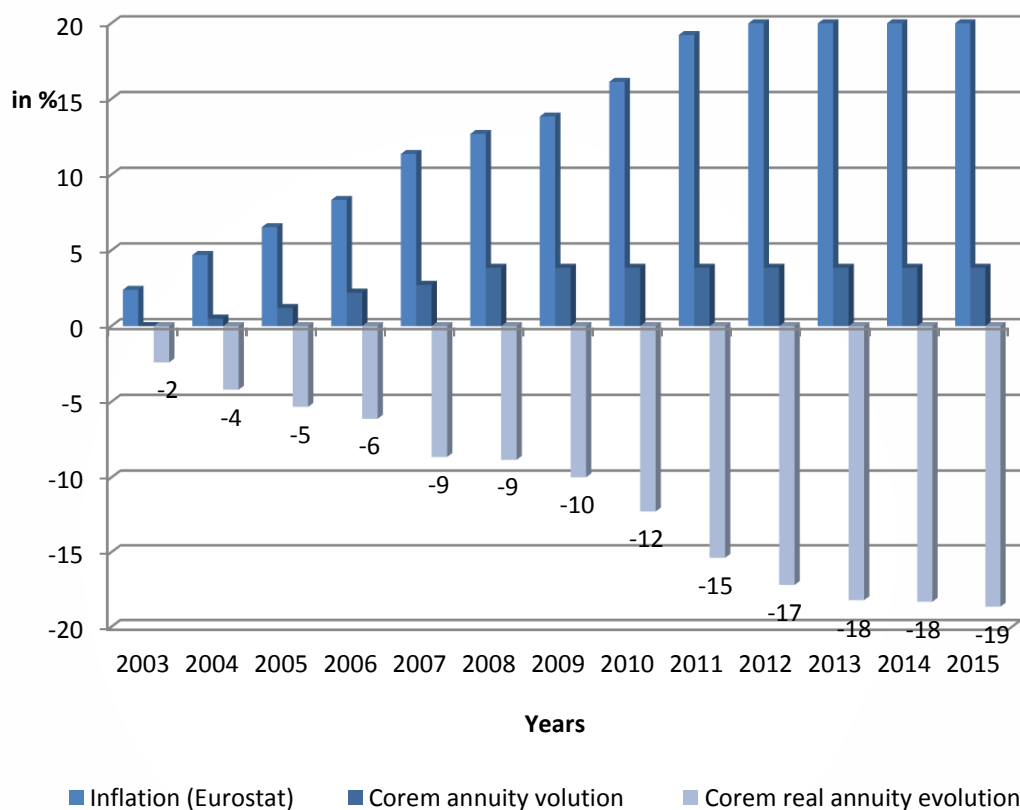
Corem publishes the annual accounting return on its investments, but does not specify if these are gross or net of fees. The accounting return for 2015 was +4.27% slightly down from +4.41 % in 2014. However, this accounting return does not take into account the changes in the market value of assets. In addition and more importantly, all the investment return of the *Corem* assets is set aside in order to replenish reserves. It is therefore impossible to compute a collective real rate of return.

The deferred annuity mechanisms of *Corem* are similar to those of *Préfon*, with the same difficulties in estimating the real return for the pension saver. Therefore, we also use the proxy return indicator here, as computed by ARCAF. The *Corem* is in deficit; the main – undisclosed – tool of its recovery plan in place since 2002 is not to increase the nominal value of annuities served. As a result, the annuities served by CREF have lost 16% of their real value before tax (purchasing power) over the last 13 years (see Graph FR V). These figures are before tax. This key performance information is not disclosed to new participants. In November 2014, the Plan announced new measures to try to reduce its reserve gap by further reducing the returns for participants (62 years of age to get full annuities instead of 60, and lowering of the minimum guaranteed return on pension contributions from 2.3% to 1.5% from 2015 on). The situation however is still very difficult as its reserve gap (difference between its assets and the present value of its pension liabilities) reached €2.9 billion at the end of 2014 as measured using French common prudential rules¹⁰¹. End of 2015, *Corem* obtained from the French Government to use a minimum discount rate of 1.50 % (instead of 0.59 % according to the previous rule) to compute the present value of its liabilities, helping it to reduce its reserve

¹⁰¹ Until 2017, *Corem*'s recovery plan allows it to exceptionally use a discount rate of 3% to compute the present value of its pension liabilities instead of the regulatory 0.78% at the end of 2014. Using the 3% discount rate, *Corem* assets cover 106 % of its liabilities at the end of 2015.

gap to € 1.4 billion at the end of 2015. This exception seems dangerous with regard to the current level of long-term interest rates in France, which are much lower (0.14% for 10 year French Government bonds as of 24 August 2016).

Graph FR V. Corem annuities real value, compounded evolution in %



Source: ARCAF 2014

Overall, Better Finance estimates the loss of purchasing power over the last twelve years (2002-2015) of participants to French Public Employee Pension Schemes at minus 16,2% (-1.2% per annum), based on the relative asset portfolio size of Préfon and of Corem.

CRH

CRH does not disclose any annual report and financial data publicly. Even its pre-contractual publications do not disclose past performance. Because of an on-going





restructuring that started in 2008, the real returns of this plan are probably low and below inflation.

Defined contribution corporate plans

Table FR 7. French corporate savings plans - Average 16 years returns before tax 2000-2015

Fund ("FCPE") category	Equity	Bond	Money market	Diversified	All funds
16Y Nominal return	22.00%	66.00%	29.20%	45.10%	44.80%
Yearly average	1.30%	3.20%	1.60%	2.40%	2.30%
16Y Real return	-6.50%	28.80%	-0.10%	12.10%	12.00%
Yearly average	-0.40%	1.60%	0.00%	0.70%	0.70%

Source: AFG/Europerformance

We combine information provided by "Europerformance" on the performance of each category of funds with data from AFG on their relative weight in total outstanding¹⁰² to estimate the overall returns of corporate savings.

Real returns of corporate DC plans over a 16-year period, from the end of 1999 to the end of 2015, were positive: the yearly average real performance before tax of the aggregate of all funds was +0.7%, which makes French DC plans the second best performing pension saving product after life insurance capital guaranteed contracts, and way ahead of life insurance unit-linked contracts.

The overall returns before tax are influenced predominantly by the heavy weight and slightly negative return of money market funds (33% of assets; -0.1% per year), and the still negative real return of DC equity funds (despite a +10.6% real return in 2015 alone). Equity funds, which account for about 18% of total outstanding assets (excluding company stock), heavily underperformed equity markets over the last 16 years: +18,5 to 20,4 % % nominal¹⁰³ versus +55% for French equities for example; see graph 14 above). Also DC Bond funds (around 16% of assets) showed a +66% nominal return over the period versus + 125% for the European bond market (see graph 15).

¹⁰² Data published by AFG relate to "FCPE L214-39". These funds are diversified funds which do not invest in the own shares of the concerned company ("company stock"). There is another category of corporate savings funds, the "FCPE L214-40" dedicated funds which can invest without limit in the own shares of the concerned company but there are no data available on the returns of these "FCPE L214-40" funds. The "FCPE L214-39" assets represented 61% of all FCPE assets at the end of 2015.

¹⁰³ 18.5% for multi-employer French equity FCPEs and +20.4% for single employer ones; source: AFG

Like for unit-linked insurance contracts, the primary factor for this underperformance of DC equity and bond funds could be the level of fees charged.¹⁰⁴ Unlike the US corporate DC pension plans (“401k”), the French ones do not invest in general purpose mutual funds, but in alternative investment funds (AIFs) called FCPEs, specially dedicated to these plans. Consequently, French savers are faced with an additional offering of investment funds (about 2500 FCPEs in addition to the about 3500 UCITs funds already domiciled in France), and the average size of these AIFs is quite small. Another factor is that equity FCPEs are not 100% invested in equities.

A limitation of such a calculation is that performance indices provided by “Europerformance” only relate to diversified funds inside the corporate savings plans. They do not take into account the part of corporate long term savings, which is invested in shares of the concerned company (company stock), accounting for 39 % (€ 46 billion end of 2015) of all corporate savings plans.

Also – same rule whenever possible for the whole research report – the computed returns relate to a one-time investment end of 1999 and kept up to end of 2015. Typically, many pension savers will tend to invest regularly every year or every month. With the help of the French trade association AFG, we computed the yearly returns from 2000 to 2015 for the same amount invested every year over the 16 years. This provides a higher annualised return of 0.9% instead of 0.7%. Also, this return is less volatile with time of course, as it is spread over many years instead of only one.

Finally, after tax returns of French corporate long term savings plans are difficult to compute globally, but they can often be higher than before tax ones, as their taxation is the most favourable of all long term and pension savings products in France: redemptions are exempt from income tax and are only subject to “social” levies of 15.5% of net gains. Also, most of these savings come from non-taxable profit sharing income contributed by employees (“*intéressement*” and *participation*”) and employers’ matching contributions.

¹⁰⁴ The average management fees represented between 1.6 and 2% of managed assets for European equity FCPEs on average in 2013/2014 according to the « Observatoire de l’épargne de l’AMF » (Nr. 14, July 2015) but it is difficult to know if this includes fees on underlying funds in the case of FCPE funds of funds.





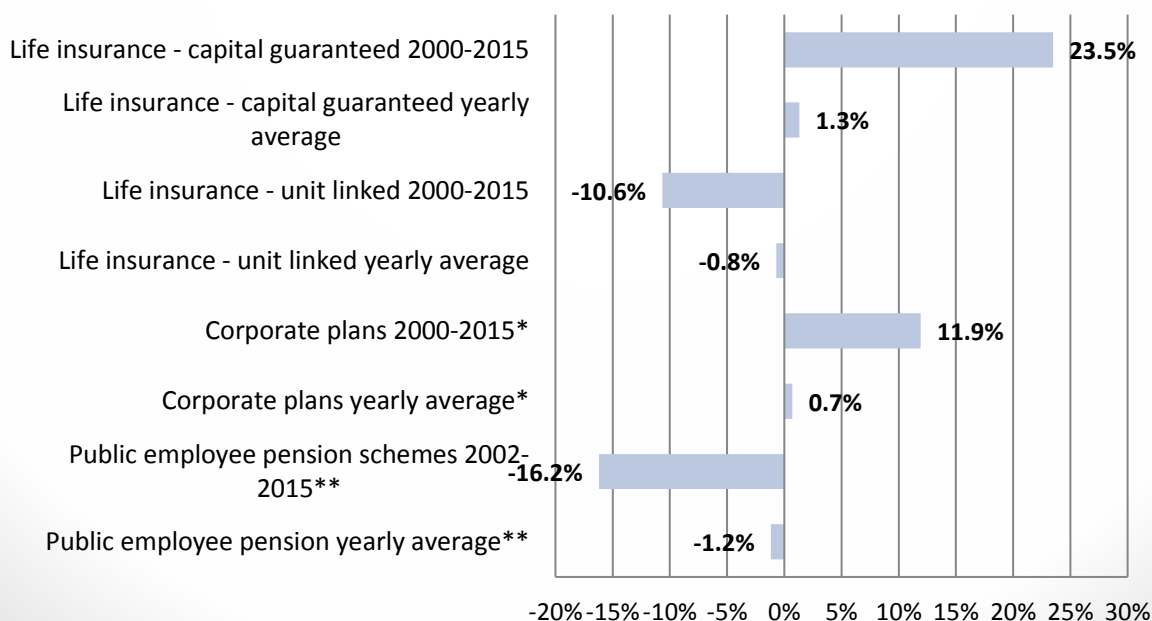
Conclusions

After a year of negative real returns before tax in 2011, subsequent years were more favourable to pension savers. Against the background of bullish stock markets and lower inflation, unit-linked life insurance contracts showed a positive real performance every year for the last four years. However, their 16-year performance is still negative. The real performance of capital-guaranteed life insurance contracts ("contrats en euros") increased every year from 2011 to 2014, and was still +2.0% in 2015, despite the general and continued decrease of interest rates.

The performance of capital-guaranteed contracts is obviously reduced when taxation is taken into account. Taxation of savings increased by 200 basis points in 2012, as "social contributions" rose from 13.5% to 15.5%.

Over a 16 year period, from the end of 1999 to the end of 2015, capital-guaranteed life-insurance contracts show an average positive yearly after tax performance of +1.3% in real terms and the unit-linked contracts a negative yearly return of -0.8%. Corporate DC plans delivered +0.7% on an annual basis before tax. After-tax return would typically be higher due to a favourable tax treatment.

Graph FR VI. French Pension Savings Real Returns, 2000-2015



*Before Tax ** Purchasing Power of Pensions Before Tax

Pension Savings: The Real Return

2016 Edition

Country Case: Germany

Introduction

The German pension system can be divided into three pillars:

- Pillar I: Statutory pension insurance
- Pillar II: Occupational pension plans
- Pillar III: Personal pension plans

In 2007, the German government raised the statutory retirement age from 65 to 67. In 2012, a transitional phase to attain the retirement age of 67 was started, which involves a gradual increase of the retirement age until 2029.

The statutory pension insurance, structured as a PAYG scheme that goes back more than 110 years, is the largest social security scheme in Germany. It covers approximately 52 million people and almost 90% of Germany's employees are entitled to benefits from the statutory pension insurance.¹⁰⁵ In 2016, all persons subject to social security charges contribute 18.7% of their gross income to the scheme, with contributions divided equally between employer and employee.¹⁰⁶ In 2012, the German public spending on old-age benefits was amongst the highest in OECD countries. At 57.2% for average earners entering the labour market in 2012, the net replacement rate from all mandatory sources of retirement was considerably lower than for comparable countries. One of the worst demographic shifts in Europe – increasing life expectancy while fewer children are being born – is

¹⁰⁵ "Deutsche Rentenversicherung", 2013.

¹⁰⁶ All social security contributions are usually (and historically) divided equally. There might be exceptions, e.g. in the case of "Minijobs". The variable contribution cap ("Beitragsbemessungsgrenze") for 2016: €74,400 for the old "Bundesländer" ("Beitragsbemessungsgrenze West") and €64,800 for the new "Bundesländer" ("Beitragsbemessungsgrenze Ost").





forcing younger generations to assure an adequate retirement income through private savings.¹⁰⁷

Since 2002, the German government ran several reforms to promote private pension savings through subsidies and tax incentives, as well as social contribution savings in the case of occupational pension plans. In 2002, company pension plans (pillar II) that have traditionally been provided on a voluntary basis by employers were transformed into an employee's right to have a part of their earnings paid into a company pension plan under a deferred compensation arrangement. The same year, the "Riester" reform was introduced to boost personal pension savings and in 2005 the "Rürup" pension was introduced to further complement personal pension plans.

Pension Vehicles

Private pensions are divided into occupational pension plans and personal pension plans.

Occupational pension schemes

For a long time, occupational pension plans have typically been provided by employers on a voluntary basis. Since January 2002, employees have the right to occupational pensions through deferred compensation, which means that future salary or special payments, such as vocational benefits or salary increases, for up to 4% of a variable contribution cap¹⁰⁸ can be converted to entitlements to a pension, if not regulated differently by a labour agreement. While employers have to comply with the demand for occupational pensions and execute them, they have the free choice when it comes to structuring the retirement provision. There are five types of occupational retirement schemes that can be divided into two sub-pillars: one direct pension promise, the "Direktzusage" (book reserves), and four external types of occupational pension schemes, the "Unterstützungskasse" (support funds), the "Direktversicherung" (direct insurance), the "Pensionskasse" and the "Pensionsfonds" (pension funds)¹⁰⁹.

Two or more types of occupational pension plans can also be combined, while employers have to at least offer a direct insurance, so that employees may benefit

¹⁰⁷ OECD, 2013a.

¹⁰⁸ "Beitragsbemessungsgrenze"; there are differences between "West" and "Ost" due to the difference of the general level of salaries, but the variable contribution gap is always 4%.

¹⁰⁹ BVI, 2014.

from tax advantages and social security contribution savings. There is no legal obligation for the employer to participate financially in the occupational pension plan. When there is a binding labour agreement, occupational pensions are generally organised for whole industrial sectors and there is no employee's right to demand divergent occupational pension provision. Many collective agreements also oblige employers to participate financially in occupational pensions and withdraw the employer's right to choose the retirement scheme. Indeed, employer-funded pensions present the largest share of occupational pensions, though an increasing number of deferred compensation arrangements can be found. If the occupational pension is structured as a deferred compensation and contributions are thus exempted from taxation and social security contributions, this will in return lower claims from the statutory pension insurance.

In order to strengthen occupational pensions and to counteract the fact that the number of active workers continually shrinks compared with the number of pensioners in a Pensionskasse or pension fund, the German government proposed the creation of industry-wide pension plans on a defined contribution basis. The abandonment of traditional guarantees was however quickly rejected by the pension industry. Amendments were quickly brought up by the German government in early 2015, and have been scrutinised and discussed with pension representative groups ever since, for instance regarding guarantees in the case of insolvency.

Book reserves ("Direktzusage")

Book reserves are pension provisions that the employer realises on the company's balance sheet in order to pay an occupational pension once the employee reaches the retirement age. It is also possible to transfer these provisions to a trust under a Contractual Trust Arrangement (CTA). Book reserves are subject to deferred taxation. The legislator obliges to protect claims from book reserves through the "Pensions-Sicherungs-Verein" (PSVaG) in the case of an employer's insolvency. Reserves transferred to a trust are protected from creditors in the case of insolvency through legal independency. Book reserves are usually designed as pure benefits given by employers, though deferred compensation is generally possible too. If an employee leaves the company, there is no possibility to continue the retirement provision through private funding, though by then deferred benefits are maintained. Book reserves are the most widely utilised type of occupational pension plans and are well-suited for small companies due to their simplicity.





Support funds (“Unterstützungskasse”)

Support funds, one of the oldest forms of occupational pension schemes, are institutions funded by one or several companies to provide retirement provisions for employees. The latter have no direct legal claim to benefits from support funds but only from their employers. Support funds invest the deposited money to pay a company pension at a later date. If there is not enough money in the support fund to meet retirement commitments, employers have to compensate the difference. In the absence of BaFin supervision, the PSVaG protects employee’s benefits in the case of an employer’s insolvency. Support funds are subject to deferred taxation.

Direct insurance (“Direktversicherung”)

These types of occupational pensions are life insurance contracts that an employer concludes with an insurance company for its employees. Contributions can either be entirely paid by the employer or by the employee in the form of deferred compensation or be split between both parties. Only employees or surviving dependents have claims to benefits from direct insurances. The insurance contracts can be continued with personal contributions if the employee leaves the company. If an employee solely contributes to a direct insurance through deferred compensation, exemptions from taxation and social security contributions can be granted¹¹⁰ or, alternatively, the employee can make use of the “Riester” support.

“Pensionskasse”

“Pensionskassen” are institutions, formed by one or several companies, which take the form of special life insurance companies. Contributions are paid by employers but employees can also participate and benefit from tax exemptions and social security contribution exemptions up to a contribution cap. It is likewise possible to make use of the “Riester” support if employee’s contributions are made from individually taxed income. Benefits from “Pensionskassen” are subject to deferred taxation. “Pensionskassen”, legal entities that continue to pay benefits even in the case of an employer’s insolvency, are supervised by the German Federal Financial Supervisory Authority (“Bundesanstalt für Finanzdienstleistungsaufsicht”; BaFin). In contrast with direct insurances, employees become direct insurees and often even members of the “Pensionskasse”. Retirement provisions through “Pensionskassen” can be maintained with personal provisions if employees leave the company.

¹¹⁰ For direct insurance, Pensionskasse and pension funds: 4% of the contribution cap “Beitragsbemessungsgrenze” (BBVG-RV West) + €1,800 are tax exempted; 4% of the BBVG-RV West are exempted from social security contributions.

Usually, “Pensionskassen” offer classic life annuity contracts that may invest a maximum of 35% of the capital in equity. The new Pensionskassen, in place since 2006, must act like life-insurers. Older “Pensionskassen” are allowed to implement a higher guaranteed interest rate and may even change the current mortality tables.

Pension funds (“Pensionsfonds”)

Pension funds, introduced on 1 January 2002, as a new type of occupational retirement scheme, are legal entities that grant employees a legal right to pension benefits. They can invest employees’ contributions more freely than direct insurances and “Pensionskassen”. Since their risk is higher, they are supervised by the German Federal Financial Supervisory Authority (BaFin) and protected by the PSVaG in case of insolvency. Employees can contribute to pension funds through deferred compensation while benefitting from tax exemptions and social security contributions exemptions up to a contribution cap. It is likewise possible to profit from the “Riester” support if contributions are made from individually taxed income. Vested retirement provisions through pension funds can be maintained with personal provisions if employees leave the company. Retirement payments can be fulfilled as lifelong annuities but there is also the possibility to have a lump sum pay-out at the beginning of the retirement phase. In contrast to “Pensionskassen” and direct insurances, pension funds are not subject to quantitative investment rules.

Overall, the growth of entitlements to occupational pension plans was mainly effected from 2001 to 2005. Since then, the percentage of employees with such entitlements has hardly changed. However, in recent years, entitlements have particularly grown for “Pensionskassen”. Pension funds, that have been available as occupational pension plans since 2002, also showed a dynamic increase, although implications are considerably smaller than for the more established funds. It should be noted that an individual can have several entitlements and surveys of the German Federal Ministry of Labour and Social Affairs have shown that individuals are often poorly informed about their occupational pension provisions.



**Table DE 1. Entitlements to active occupational pensions (pop. in millions)***

	2001	2003	2005	2007	2009	2011	2013
Book reserves and support funds	3.86	4.05	4.72	4.54	4.5	4.6	4.63
Direct insurance	4.21	4.16	4.08	4.18	4.34	4.72	4.92
Pension funds	na	0.09	0.12	0.32	0.34	0.38	0.45
Pensionskassen	1.39	3.24	4.08	4.45	4.51	4.63	4.79
Total	9.46	11.54	13	13.49	13.69	14.33	14.79

Source: "Bundesministerium für Arbeit und Soziales", 2015

**Details on entitlements are usually published only once per legislative period in the "Alterssicherungsbericht"*

The "Riester" support is rarely used within the framework of occupational pension schemes. It is registered in only 1-2% of the cases¹¹¹.

Personal pension plans

Over the last few years, German governments have undertaken significant communication efforts to advertise personal provisions for old age to supplement the statutory pension insurance. Since 2002, "Riester" pension savings are encouraged by the government through two different channels: subsidies and taxation reliefs. In 2005, the "Rürup" pension was introduced specifically to support the self-employed through tax exemptions. More recently, however, the federal government has addressed the idea of strengthening the statutory pension insurance and to reform the private pension sector as critics of e.g. the Riester pensions grow louder. This, in return, has prompted the OECD to emphasize the importance of a funded pension insurance system.

"Riester" pensions

"Riester" products are formally certified personal pension plans with the objective of building up a funded retirement pension supplement. Subscribers to a "Riester" product receive subsidies from the German state whose amount depends on personally invested contributions. Subsidies are at their maximum if the total contributions to a "Riester" product (that is, personally invested contributions plus subsidies) reach at least 4% of the individual's previous year's income. The subsidies add up to €154 per adult plus €300 for each child born since 2008 respectively and €185 for those born before 2008. The minimum contribution is €60 per year with accordingly fewer subsidies. Subscribers that are younger than

¹¹¹ "Bundesministerium für Arbeit und Soziales", 2012.

25 years of age receive a bonus of €200 at the moment of subscription to a “Riester” product. Though little used (see above), the “Riester” support by the German state is also applicable to occupational pension plans for the following three types: “Pensionskassen”, pension funds and direct insurances. “Riester” products are subject to deferred taxation¹¹².

“Riester” pension benefits can be paid out starting at the age of 62, or at the age of 60 for contracts concluded before 2012. The subscriber obtains the right to convert the invested capital into a life annuity or a programmed withdrawal where up to 30% of the accumulated savings can be paid out as a lump sum, a right that can also be bequeathed. Furthermore, one fifth of the accumulated savings is reserved for life annuities starting at the age of 85.

The following types of investments are eligible as “Riester” products:

“*Banksparkplan*” (bank savings plan): These contracts are typical long-term bank savings plans with fixed and variable interest rates.

- “*Banksparkplan*” (bank savings plan): These contracts are typical long-term bank savings plans with fixed and variable interest rates.
- “*Rentenversicherung*” (pension insurance): These “Riester” plans, offered by insurance companies, exist in two forms: there are typical pension insurance contracts consisting of guaranteed annuities and a participation in profits. Additionally, there are also hybrid contracts where a fraction of the retirement savings is invested into investment funds. They consist of a guaranteed part and a unit-linked part that depends on the performance of investment funds.
- “*Fondssparkplan*” (investment fund savings plan): Savings are unit-linked, invested into investment funds chosen by the subscriber from a pool of funds proposed by a financial intermediary. The intermediary has to at least guarantee that the invested money plus the state’s subsidies are available at the moment of retirement. In the case of premature withdrawals, a loss of capital is possible.
- “*Wohn-Riester/Eigenheimrente*”: These contracts take the form of real estate savings agreements¹¹³.

¹¹² “Bundesministerium für Arbeit und Soziales”, 2014.

¹¹³ GDV, 2014.





At the end of 2015, about 16.5 million “Riester” contracts had been subscribed to. After steady increases in early periods, considerably fewer contracts have been subscribed to annually since 2012. Suggested explanations include the financial crisis along with less favourable media coverage of “Riester” products that has reinforced general doubts¹¹⁴ concerning funded retirement savings. It should be noted that an individual can subscribe to several “Riester” contracts at the same time, so a direct inference of the number of individuals possessing a “Riester” contract is not possible. However, state subsidies (allocations and income tax returns) are only possible up to 4% of the individual gross income (maximum €2,100 per year). In fact, a small number of non-subsidised Riester contracts exist. This is independent from the fact that many Riester policy holders “forget” to ask for state subsidies, and that others do not get the complete allocations. About two-thirds of the “Riester” contracts take the form of pension insurance contracts making it by far the most important type of “Riester” investment despite a subscription decline in 2015. Only the number of investment fund savings plans and building savings agreements increased in the course of that year.

¹¹⁴ Evidence of this can be found in the article by Kornelia Hagen and Axel Kleinlein “Ten Years of Riester Pension Schemes: No Reason to celebrate”, DIW Economic Bulletin, Volume 2, No. 2, Berlin 2012, p. 3-13.

Table DE 2. Number of “Riester” contracts (in thousand)

	Pension insurance	Bank savings plan	Investment fund savings plan	Building savings agreements	Total
2001	1,4	na	na	na	1,4
2002	3,081	150	174	na	3,405
2003	3,534	197	241	na	3,972
2004	3,807	213	316	na	4,336
2005	4,797	260	574	na	5,631
2006	6,562	351	1,231	na	8,144
2007	8,454	480	1,922	na	10,856
2008	9,285	554	2,386	22	12,247
2009	9,906	633	2,629	197	13,365
2010	10,485	703	2,815	460	14,464
2011	10,988	750	2,953	724	15,416
2012	11,059	781	2,989	953	15,781
2013	11,013	805	3,027	1,154	15,999
2014	11,033	814	3,071	1,377	16,296
2015	10,989	804	3,125	1,564	16,482

Source: Bundesministerium für Arbeit und Soziales (Accessed on 22.06.16):

http://www.bmas.de/SharedDocs/Downloads/DE/Thema-Rente/riesterrente-l-2016.pdf?__blob=publicationFile&v=2

“Rürup” Pensions

Introduced in 2005, the “Rürup” pension (or “Basisrente”) is a relatively new form of pension insurance and, next to occupational pension plans and “Riester” pension plans, the third kind of private pension that is supported by the German state through tax exemptions. The “Rürup” pension actually has similar characteristics to the statutory pension insurance. Contributions are utilised for monthly life annuities starting with the retirement phase at the age of 62, or at the age of 60 for contracts concluded before 2012. The benefits are personal thus non-transferable and cannot be bequeathed, lent, disposed or capitalised. There is no possibility to pay out lump sums. Contributions are exempted from taxation up to a deduction cap. “Rürup” pensions that were particularly designed for self-employed persons and freelancers, who could not benefit from state supported pension savings till 2005, are beneficial for high revenues because of the high tax exempted savings amount. “Rürup” pension plans take the form of pension insurance contracts that are, in contrast with the “Riester” ones, irredeemable, and where invested money cannot be regained before the retirement phase. It is also possible to subscribe to





“Rürup” contracts that invest into investment funds through savings plans. Such contracts can be designed with or without capital guarantees¹¹⁵.

At the end of June 2012, about 1.6 million “Rürup” contracts have been subscribed to. After a dynamic increase since their introduction in 2005, growth has slowed down in the first half-year of 2012 similar to the development observable for “Riester” contracts¹¹⁶.

Table DE 3. Number of “Rürup” contracts (in thousand)*

	2005	2006	2007	2008	2009	2010	2011	I/2012	II/2012
Number of contracts	153	327	602	855	1,092	1,228	1,488	1,530	1,552

Source: “Bundesministerium für Arbeit und Soziales”, 2012.

*Details on “Rürup” contracts are usually published only once per legislative period in the “Alterssicherungsbericht”

Life insurance and pension insurance contracts

Retirement provision in Germany is also carried out through classic pension insurance products or life insurance products, possibly ones that are unit-linked. However, if not certified in the framework of the “Riester” pension, the “Rürup” pension or as an occupational pension plan, these contracts do not benefit from allowable deductions or subsidies. The classic pension insurance however does play an important role in personal retirement provisions with about 23.1 million contracts¹¹⁷ concluded at the end of 2013, whilst at the end of 2001, about 11.4 million contracts were concluded¹¹⁸.

Charges

Information on charges for private pension products are rather hard to obtain and often non-transparent for individuals, which complicates the decision making process.

¹¹⁵ “Deutsche Rentenversicherung”, 2013.

¹¹⁶ “Bundesministerium für Arbeit und Soziales”, 2012.

¹¹⁷ Contracts have a very diverse nature. They usually start paying out at the moment of retirement though there are also contracts that pay immediately after conclusion (“Sofortrente”). It is possible to redeem both via lump sums and annuities. As of 2015, there were 91 million life insurance contracts subscribed to with €852 billion AUM.

¹¹⁸ GDV, 2015.

In the case of book reserves and support funds, an employer has to meet the retirement commitments agreed upon. There is also neither a direct legal relationship between employees and support funds nor an employee's claim for benefits from support funds. Consequently, charges will not be discussed within this scope for book reserves and support funds.

One of the main advantages of occupational pension schemes is that charges are usually lower than for personal pension plans because they are spread over larger groups. Employers often receive quantity discounts or customised rates with lower administrative charges. This is especially the case if rates are defined for whole industry sectors. For instance, commissions for occupational pension schemes in the chemical industry, building industry, metal and electrical industry and printing industry are about 1.6% of premiums while "Riester" contracts reach about 4%.

In general, occupational pension plans are designed for employees with preferably long affiliations to the company since the charges on initial contributions can be high.

The following operating expenses (administrative costs) for both "Pensionskassen" and pension funds are expressed as a percentage of the funds' total assets.

**Table DE 4. Operating expenses as a % of total assets for
"Pensionskassen" and pension funds**

	Administrative charges
2002	0.251
2003	0.758
2004	1.004
2005	0.615
2006	0.439
2007	0.323
2008	0.279
2009	0.266
2010	0.247
2011	0.219
2012	0.211
2013	0.208
2014	0.195

Source: OECD Global Pension Statistic





Table DE 5 details information on charges for all types of life insurance contracts:

Table DE 5. Life insurance expense ratios		
	Acquisition charges (as % of total premiums for new policies)	Administrative charges (as % of mean capital investments)
2000	5.6	0.40
2001	5.5	0.39
2002	5.4	0.38
2003	5.0	0.37
2004	4.5	0.35
2005	5.6	0.35
2006	4.9	0.33
2007	5.2	0.31
2008	4.9	0.30
2009	5.2	0.29
2010	5.1	0.27
2011	5.0	0.25
2012	5.0	0.25
2013	5.1	0.24
2014	5.0	0.23
2015	4.9	0.22

Source: GDV, 2015

Charges for “Riester” products are often the topic of negative media coverage in Germany. It is frequently stated that the charges consume almost all of the state’s subsidies. Especially challenging for individuals is the complicated cost structure and the lack of transparency of “Riester” contracts. For instance, there are internal costs like acquisition costs, distribution costs and administrative costs that are derived from differing and sometimes ambiguous determination bases, as well as external costs if parts are invested into investment funds. This opacity has created a curious situation where even providers with favourable charges are unable to properly set themselves apart from the expensive ones. Calculations in the early 2000s by the German government estimated the total charges to be 10% of the yearly savings premium; this has become the standard for “Riester” charges calculations ever since¹¹⁹. The German legislator only dictates that acquisition and distribution charges of “Riester” products have to be spread over five years so the initial cost burden is slightly alleviated. Own research shows that estimations of

¹¹⁹ Rürup-Kommission, 2003.

total charges of, on average, 10% to 12% of the yearly savings premium can be assumed. However, one can observe an enormous cost span reaching from 2.5% to 20% for insurance contracts¹²⁰.

With regard to “Rürup” contracts and their short history, information is even harder to obtain. There is no transparency regarding the cost structure (there is no obligation by law for detailed disclosures; current improvements only aim at “Riester” contracts). The total charges for “Rürup” pensions expressed as percentages of the yearly savings premium are estimated by practitioners to be a little lower than for “Riester” pensions. In contrast to “Riester” products, there is no obligation to spread the initial acquisition and distribution charges over a defined period¹²¹.

Other personal retirement provisions, such as pension insurance contracts and life insurance contracts, are often stated to have slightly lower total charges than “Riester” products.

The German legislator is currently discussing the implementation of a regulation that would oblige “Riester” providers to disclose binding and comparable cost figures, such as the reduction in yield ratio.

Taxation

A reorganisation of retirement savings taxation has been instructed by a Federal Constitutional Court decision from 2002. This revision came into effect in 2005 whereupon taxation is based on a model that divides the different forms of retirement savings according to three groups.

The statutory pension insurance and the “Rürup” pension belong to the first group. Funded pension schemes like occupational pensions and the “Riester” pension belong to the second group. The third group covers the standard pension insurance or life insurance products due to their likewise existent function as investment products.

Contributions to products from the third group always have to be paid from taxed income. The products from the first two groups are subject to deferred taxation. Contributions up to a deduction cap are exempted from taxation and generally subject to tax in its entirety during the pay-out phase.

¹²⁰ Rürup-Kommission, 2003.

¹²¹ Gasche, Bucher-Koenen, Haupt, Angstmann 2013.





While products from the second group have already been partially subject to deferred taxation before 2005, this has not been the case for products from the first group. A transitional phase towards complete deferred taxation started in 2005 and since then, every year, higher amounts of contributions can be deducted from taxation and consequently the amount of retirement pay-outs subject to taxation rises. In 2025, pension savings for up to €20,000 for individual insurees and €40,000 for spouses will be exempted from initial taxation. 60% of the maximal amount was tax deductible in 2005 which means the percentage rises 2% each year until the maximum is attained in 2025. The 50%-contribution by employers is already tax exempted, so in 2015, 30% of an employee's total contributions to retirement savings were tax exempted.

The percentage of retirement pay-outs subject to taxation was 50% in 2005. Since then, for each year following, the percentage of retirement pay-outs subject to taxation for new retirees rises at a rate of 2% which means that in 2020, new retirees will pay taxes on 80% of their retirement pay-outs. From 2020 onwards, the rate will rise at 1% annually and consequently retirees from 2040 onwards will have to pay full taxes on their retirement pay-outs¹²². The year 2016 actually marks the first time that about 160,000 retirees become subject to income tax due to an exceedance of the tax exemption limit (pension allowance), currently set at €8,652.

Occupational pensions schemes

For occupational pension plans in 2013, and for commitments starting from 2005 on, the following taxation rules apply for the individual types of occupational pension schemes:

Book reserves and support funds

Book reserve and support fund contributions, through deferred compensation, are fully tax exempted while up to 4% of a variable contribution cap is exempted from social security contributions. Benefits are taxed as income at the personal rate.

Direct insurances, "Pensionskassen" and pension funds

Direct insurances, "Pensionskassen" and pension funds are treated identically according to taxation legislation. In 2016, contributions through deferred compensation were tax exempted up to €4,776 (4% of the 2016 contribution cap

¹²² "Deutsche Rentenversicherung", 2013.

+€1,800) and exempted from social security contributions up to €2,976 (4% of the 2016 contribution cap)¹²³. Investment income is tax exempted while benefits are subject to taxation¹²⁴.

Personal pension plans

“Riester” pensions

Since 2008, total contributions to a “Riester” product of at most €2,100 are exempted from initial taxation even if this amount is more than 4% of the previous year’s income. During the savings accumulation period, investment income is likewise tax exempted. In case the tax relief surpasses the state’s subsidies, this is reviewed by fiscal authorities within the framework of the income tax statement. If so, individuals benefit from tax exemption for the difference between the subsidies and the maximum amount of tax exemption. Benefits from “Riester” pensions are taxed in the retirement phase but are exempt from social security contributions.

“Rürup” pensions

Contributions to “Rürup” pensions will be exempted from taxation for up to €20,000 per adult in the year of 2025. As of 2005, 60% of this ceiling was exempt from taxation and during the transitional phase, the percentage will rise at a rate of 2% each year.

Table DE 6. Tax exemptions for “Rürup” contributions							
Year of contribution	2005	...	2015	...	2020	...	2025
Tax deductible	60%	...	80%	...	90%	...	100%

Source: “Bundesfinanzministerium”

Benefits from “Rürup” pensions are taxed in the retirement phase at the personal rate. In 2005, 50% of the benefits were subject to deferred taxation. Until the year 2020, the taxable part of each year will increase by 2%. From then on, the proportion will increase by 1% each year until finally, from the year 2040 on, benefits will be fully taxed¹²⁵.

¹²³ If the limits have not already been reached by employers’ contributions.

¹²⁴ “Bundesministerium für Arbeit und Soziales“, 2013.

¹²⁵ “Bundesfinanzministerium“, 2014.





Table DE 7. Taxation of “Rürup” benefits

Year of benefit	2005	...	2015	...	2020	...	2040
Tax deductible	50%	...	70%	...	80%	...	100%

Source: “Bundesfinanzministerium”

Life insurance and pension insurance contracts

Other retirement savings products that are not particularly promoted by the German state are taxed as follows for contracts subscribed to since 2005: contributions are no longer tax deductible as special expenses and have to be paid as taxed income. Furthermore, one has to differentiate on the basis of whether the insurance benefit is carried out as a one-time lump sum payment or if a lifetime annuity payment is granted. For standard pension insurance contracts and life insurance contracts, benefits are taxed on the corresponding earnings (the difference between contributions and total pay-outs) in the retirement phase. If the contract runs at least 12 years and the insuree is older than 62 years, only 50% of this amount is subject to taxation when a lump sum pay-out is chosen. If these conditions are not met, all earnings are taxed and are subject to the flat rate tax of 25% (and not the individual tax rate). In the case of life annuities, even further tax reliefs are possible depending on the age of the first retirement pay-out. If the retiree is 62, 21% of the earnings are subject to taxation, at the age of 65, 18% and at the age of 67, 17%. Once defined, the percentage does not change and the earnings are taxed at the personal tax rate. These taxation rules are applicable for classic insurance contracts as well as unit-linked ones.

German capital markets returns

Like we have done for certain major EU capital markets in this Report, we will look at the returns of the German stock markets to judge how well capital markets performed over the period we are considering.

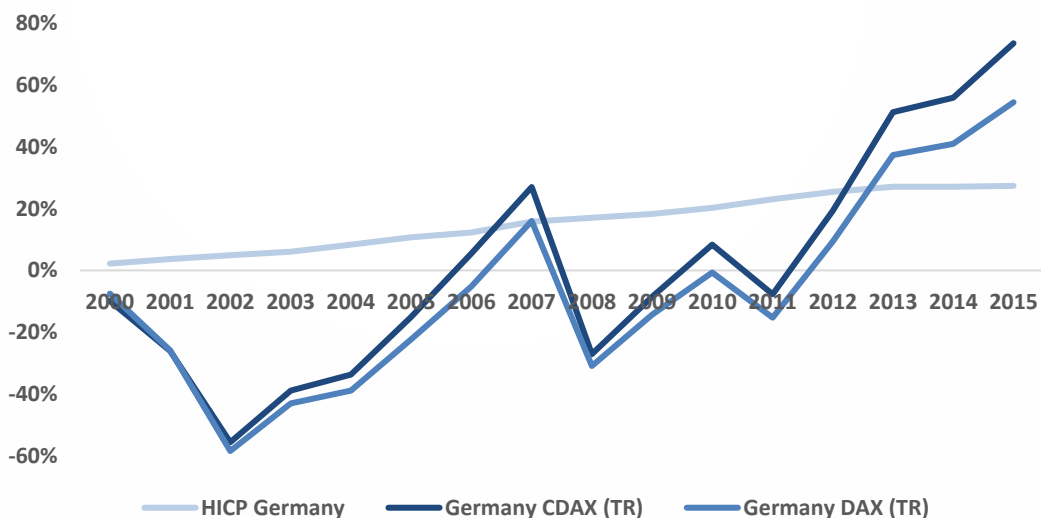
To this end, we based ourselves on the most widely used indexes for German stocks: the DAX (Deutscher Aktienindex), covering 30 major companies trading on the Frankfurt Stock Exchanges as a blue chip stock market index, and the CDAX, containing all German equities listed on the Frankfurt Stock Exchange in the General Standard and Prime Standard (432 companies at the end of 2015) as a “broad” index. Data for both indices are presented as total returns in order to

properly compare the overall performance with that of other pension savings products.

It is not surprising to observe that, like for the rest of the countries in this report for which we made a similar analysis, the performance of the “broad” index is superior to the performance of the “narrow” index, with a cumulative difference of about 19% over a 16-year time span. Both indices manage to outperform inflation as well (not impressively though) and this over performance mainly took place during the last three years. The outperformance for the whole period from 2000 to 2015 can partly be explained by the fact that German inflation has traditionally been very low and quasi stalled during the last two years.

Comparing the annualised real performances of both indices (1.4% for the DAX and 2.1% for the CDAX) with the after tax performance of state sponsored packaged products is hardly possible since the periods for which we have data available are different. Moreover, the portfolios of these products include bonds (which in this concrete period from 2000 to 2015 performed better than stocks, contrary to what tends to happen on the long run) and foreign stocks.

Graph DE I. Cumulated German equity market performance: broad market (CDAX) vs. big caps (DAX): 2000 - 2015





Pension Returns

There is no information on the return of book reserves and support funds. These are individual commitments to employees that will not increase or decrease depending on asset performances. The commitments are protected by the PSVaG, hence employees could estimate the exact amount they can expect in the retirement phase.

In general, there are no taxes on dividends, income or capital gains, to take into account during the accumulation phase of the real return calculations. However, the calculations are considerably complicated by the fact that EET and TEE taxation formulas¹²⁶ (or intermixtures) can still be found. This should be kept in mind when interpreting real return results.

Occupational pension schemes

"Pensionskassen" and pension funds

The following table shows real return calculations for pillar II aggregate "Pensionskassen" as well as pension funds.

¹²⁶ In Germany due to the long-term contracts of "Direktversicherungen" EET and TEE taxation formulas still exist simultaneously. We understand EET as "nachgelagerte Besteuerung" (in German terminology) and TEE as "vorgelagerte Besteuerung"

Table DE 8. “Pensionskassen” and pension funds' average annual rate of investment returns (in %)

	Nominal return* before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax
2002	2.81	2.55	1.33
2003	4.58	3.79	2.76
2004	4.94	3.89	1.55
2005	5.07	4.43	2.28
2006	4.78	4.32	2.88
2007	4.28	3.94	0.82
2008	1.65	1.37	0.26
2009	4.86	4.59	3.76
2010	5.12	4.86	2.90
2011	3.07	2.84	0.53
2012	4.82	4.6	2.55
2013	4.28	4.06	2.73
2014	4.61	4.41	4.41
Annual average	4.22	3.82	2.21

* Nominal return after investment management costs

Source: OECD, 2013b; OECD Global Pension Statistic; Eurostat; Own Research.

To estimate the impact of taxation on the real return of “Pensionskassen” and pension funds, the average income tax rate for retirees has been determined using customised data from the Federal Statistical Office of Germany (“Destatis”). This average income tax rate for retirees is estimated to be about 5.44%. Furthermore, at the end of 2014, 68% of the pay-outs were subject to deferred taxation.

Table DE 9. The real return of “Pensionskassen” and pension funds

Real return after charges, inflation, tax (13-year average, in %) / 2002-2014

Pensionskassen and pension funds

2.09

Source: Destatis; Own Research





German pension funds and “Pensionskassen” are predominantly offered as defined benefit plans, so employees bear minor risks when investment assets perform poorly¹²⁷.

Personal pension plans

Information on the performance of personal pension plans is hard to obtain and there are considerable controversies surrounding the proper estimation method, notably for “Riester” insurance contracts.

Calculations for real returns on personal pension plans are only executed for insurance contract types since information on returns and charges is not consistently available for other types of personal pension plans. Nonetheless, this provides an important insight into the most important part of promoted personal pension plans since about two-thirds of all “Riester” pensions are designed as pension insurance contracts, as are all “Rürup” pensions.

The following real return calculations are based on the average return rate for new insurance policies calculated by “Assekurata”¹²⁸. The return rate is composed of a guaranteed interest part and a surplus sharing part. One has to keep in mind that the calculations made by “Assekurata” are based on voluntary participations. For instance, in 2013, 76 providers were asked to participate with seven providers not responding. This may lead to a bias based on voluntariness.

Though already introduced in 2002, data on investment return rates has only been available since 2005 for “Riester” pensions, just like for “Rürup” pensions which were introduced that year. Return rates for classic pension insurances are available for a 16-year period. For our estimations, we assumed that acquisition charges are spread over five years for all insurance contract types. Consequently, the charge burden in the first five years is considerably worse.

¹²⁷ OECD, 2013b.

¹²⁸ “ASSEKURATA Assekuranz Rating-Agentur GmbH” (www.assekurata.de) is a private company specialised in the quality assessment of insurance companies from a customer's perspective providing rating and analysis services. For instance, ASSEKURATA is the only rating agency incorporating policy holder's opinions on their insurers gathered from customer surveys directly into their verdicts. ASSEKURATA, as a licensed European rating agency, is supervised by the European Securities and Markets Authority (ESMA).

“Riester” pension

Table DE 10. “Riester” pension insurances’ average annual rate of investment returns (in %)

	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax
2005	4.24	2.82	0.61
2006	4.18	2.78	1.36
2007	4.18	2.80	-0.29
2008	4.36	2.99	1.87
2009	4.27	2.91	1.89
2010	4.19	3.91	2.17
2011	4.05	3.79	1.46
2012	3.92	3.66	1.63
2013	3.56	3.31	1.99
2014	3.35	3.11	3.11
2015	3.11	2.88	2.68
Annual average	3.95	3.18	1.68

Source: Assekurata; Eurostat; GDV; Own Research

One has to note though that for “Riester” products, subsidies that are not included in these calculations can play an important role in determining their performance. This is especially the case for low earners or for families with many children. Average and high earners benefit significantly from tax exemptions.





“Rürup” pension

Table DE 11. “Rürup” pension’s average annual rate of investment returns (in %)

	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax
2005	4.31	2.89	0.67
2006	4.2	2.80	1.38
2007	4.21	2.83	-0.26
2008	4.37	3.00	1.88
2009	4.27	2.91	1.89
2010	4.21	3.93	2.19
2011	4.07	3.81	1.48
2012	3.9	3.64	1.61
2013	3.57	3.32	2.00
2014	3.36	3.12	3.12
2015	3.13	2.90	2.70
Annual average	3.96	3.20	1.69

Source: Assekurata; Eurostat; GDV; Own Research

As discussed above, the contributions to “Rürup” pensions are, in contrast to “Riester” pensions¹²⁹, not guaranteed and cannot be recalled or capitalised, which can lead to the following difficulty: “Rürup” pensions were especially introduced for self-employed people and freelancers whose incomes may vary considerably from year to year, in particular in times of crises. If contributions can no longer be maintained, and with contracts that are concluded “until death”, ongoing administrative charges can gradually diminish invested retirement savings. Hence, consumer advice centres¹³⁰ usually only advise “Rürup” pensions if consumers are professionally established and if the payments of contributions are secured in the long run¹³¹.

Personal pension insurance

Again, the average income tax rate for retirees was used to calculate real returns after tax. The classic pension insurance is not subject to deferred taxation so one

¹²⁹ Contributions (gross premiums) and state subsidies for all kinds of “Riester” contracts are guaranteed.

¹³⁰ Such as, for instance, Verbraucherzentrale Hamburg e. V.

¹³¹ Gasche, Bucher-Koenen, Haupt, Angstmann 2013.

has to be careful with the interpretation of its return. Since contributions have to be paid from taxed income, classic pension insurances are generally less favourable than “Riester” or “Rürup” pensions with regard to the tax burden. However, the complexity of taxation in all three stages (contribution phase, accumulation phase¹³² and pay-out phase) could not be taken into account within this study and consequently only taxation in the capital accumulation phase and in the pay-out phase is included in real return calculations. This is an important estimation drawback that the government-supported “Riester” and “Rürup” pensions have to face compared to the classic pension insurances. For last-mentioned, we also assumed the following characteristics: the choice of a lump sum pay-out, by retiree who is older than 62 with a contract that ran at least 12 years.

¹³² It can be considered that the contribution and the accumulation phase in reality are the same since the beneficiary is contributing normally for the whole duration of his professional career, but for the purpose of our study we are considering money-weighted returns and therefore we distinguish between the moment when the contribution is made, the period of the investment and finally the moment when the investment is redeemed.



**Table DE 12. Pension insurances' average annual rate of investment returns (in %)**

	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax
2000	7.15	5.63	3.36
2001	7.10	5.59	4.13
2002	6.12	4.63	3.39
2003	4.84	3.38	2.26
2004	4.43	3.00	0.78
2005	4.31	3.94	1.71
2006	4.24	3.90	2.46
2007	4.25	3.93	0.80
2008	4.39	4.08	2.94
2009	4.28	3.98	2.95
2010	4.20	3.92	2.18
2011	4.07	3.81	1.48
2012	3.91	3.65	1.62
2013	3.61	3.36	2.03
2014	3.40	3.16	3.16
2015	3.16	2.93	2.73
Annual average	4.59	3.93	2.37

Source: Assekurata; Eurostat; GDV; Own Research.

Table DE 13. The real return of "Riester" and "Rürup" pensions

	Real return after charges, inflation, tax (11-year average, in %)
	2005-2015
"Riester" pension insurance	1.57
"Rürup" pension	1.59

Source: Destatis; Own Research

Table DE 14. The real return of personal pension insurances

	Real return after charges, inflation, tax (16-year average, in %)
	2000-2015
Personal pension insurance	2.29

Source: Destatis; Own Research

There is no information available on the return of life insurance contracts only in the context of occupational pension schemes.¹³³

Conclusions

The performance of “Pensionskassen” and pension funds in real terms has been positive over the period from 2002-2014 with about 2.1% after taxation. Even the difficult years of 2007, 2008 and 2011 still produced slightly positive real returns.

The real return of personal insurances has also been positive, about 1.6% for “Riester” and “Rürup” pensions over an 11-year span, and 2.3% for classic pension insurances over a 16-year span. The only year with negative performances was in 2007 for “Riester” and “Rürup” pensions, with real returns of about -0.3%.

Yet there is a continuous decline of nominal returns observable in recent years coinciding with a continuous lowering of the guaranteed interest part (from 2.25% in 2011 to 1.25% in 2015). At the same time, investment risk generally rises with providers pushing for unit linked contracts. The legislator consequently decided to reform the general framework of personal pension schemes again before long, e.g. with the implementation of binding and comparable cost figures for “Riester”. The opacity of charges is a particularly controversial subject in Germany where further regulation (e.g. caps on charges) might lower consumers’ cost burden and eventually increase real returns. Furthermore, there have been discussions to deregulate the guaranteed interest part in 2016 which have been stalled for the time being. The guaranteed interest part will be further lowered in 2017 to 0.9% and it could be completely abolished in 2018 in the framework of a life insurance law revision.

¹³³ Our return figures are different to the figures published by the insurance industry in Germany, e.g. the guaranteed interest rate fixed by the supervisory authority (now at 1.25%, as mentioned above). This figure is always related to the premiums, and more concretely to the investment part of the gross premium. In life insurers’ advertisements, the return percentage figures that are published are always linked to the investment part of the premiums. From the consumer perspective, it should be noted that in these advertisements very often the insurers do not differentiate between the gross premium and the investment part of the premium (which is only about 60% to 90% of the gross premium). In doing so, the industry could be considered to be providing misleading information.





Pension Savings: The Real Return

2016 Edition

Country Case: Italy

Introduction

The pension macro context

Italy spends 15.8% of its GDP on State pensions, while the average OECD level is at about 7.9%¹³⁴. Pensions, therefore, represent a massive ratio of GDP in the country. Employment rates also compare unfavourably to other OECD countries, with 48.2% (34.2%) of the population aged 55-64 (60-64) working in 2014, while the average employment rate for OECD countries was 58.1% (47.5% for Italy)¹³⁵.

Given this context, the urgency to reform the pension system was clear. In 2011, the minister of Welfare and Social Policy under the Monti government, Elsa Fornero, put into place a huge pension reform (law n.214) to set the system back to equilibrium. Under the new system, pension eligibility is based on working years rather than age. Earlier retirement is possible but with penalties. Given the increase in retirement age, the expected replacement rate of currently active workers, who work a full-time career without interruption, is about 70% (OECD, Pension at a glance) and is still one of the highest in Europe; this compares well with previous replacement rates, although it was obtained through a substantial increase in the pension age. Within this context, with a substantial replacement rate obtained through high mandatory contribution (33%) and a high retirement age, the income drop at retirement is not worrisome like in other countries, such as in the UK. There, the mandatory contribution rate is set at 10% and, correspondingly, replacement rate, due to State pension, is about 30%. It is worth remembering that mandatory contributions are directed solely to the statutory and compulsory system.

Given this strong component of mandatory contributions, we would expect both complementary pensions and private savings to play a small role, which should, in

¹³⁴ *Source:* OECD, Pensions at glance 2015

¹³⁵ *Source:* OECD

turn, be driven by a foreseen reduction in income levels, such as during retirement. While the former savings in pension funds are tiny, private savings are still consistent. If all pension contributions and home ownership were transformed into an annuity, the corresponding stream of generated incomes at retirement would be very high.

In a broader view, all savings, and not only pension savings, should be accounted for to measure income adequacy at retirement, without forgetting that one of the main actors in this broader picture is home ownership.

The Italian Pension System

The Italian Pension System is composed of:

- I. a compulsory (now Notional Defined Contribution) pension system
- II. and a voluntary private and funded pension system, including the pension schemes at individual and collective levels.

In Italy, the first pillar, the State Pension, represents the main pension vehicle. Since the structural reform implemented by Minister Dini in 1995, the Italian pension system has been re-designed according to the Notional Defined Contribution system, in order to guarantee the stability of public finances.

Given the predominance of the public pension system in the country, it is not surprising that complementary pensions have little chance to take off. The possible effect of the crowding out of public pensions into the private pension has been studied extensively. However, consensus on the issue has been very low. If anything, displacement is very small or even negative (Rossi, 2009). However, it is anticipated that more demanding requirements in terms of age and contributions to benefit from the public pension could lead to an increased recourse to complementary pensions that would offer flexibility for the age of retirement.

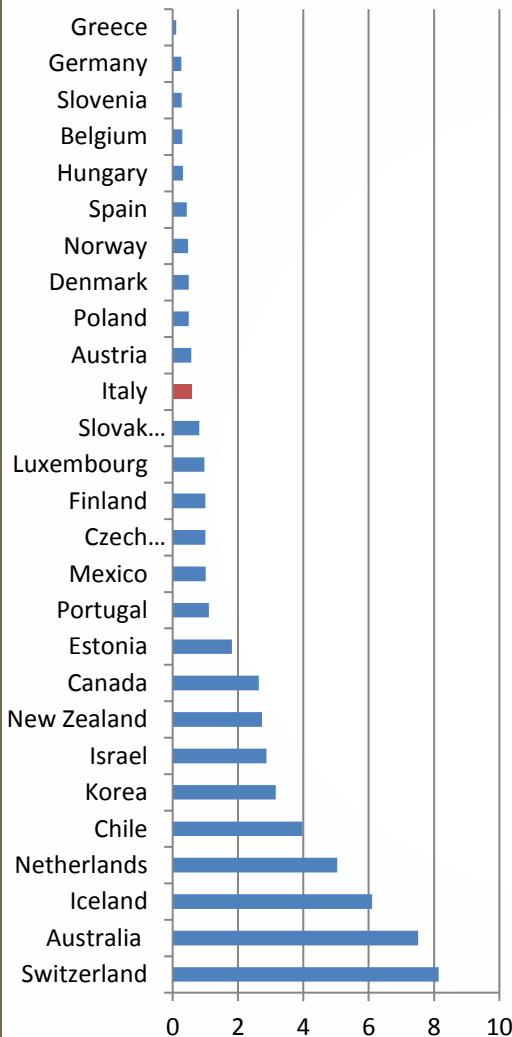
Below is a table of pension contributions into the public and private systems. If individuals are already covered by a strong public pension system (such as in Italy, where pension contributions are the highest), one can expect smaller private savings, mostly in the form of voluntary contributions to private pension funds. From the picture below, we can observe that there is indeed a negative correlation between mandatory pension contributions and voluntary private contributions. However, private savings should also be taken into consideration. Ultimately, all savings can be converted into additional income to increase pension income. Italy



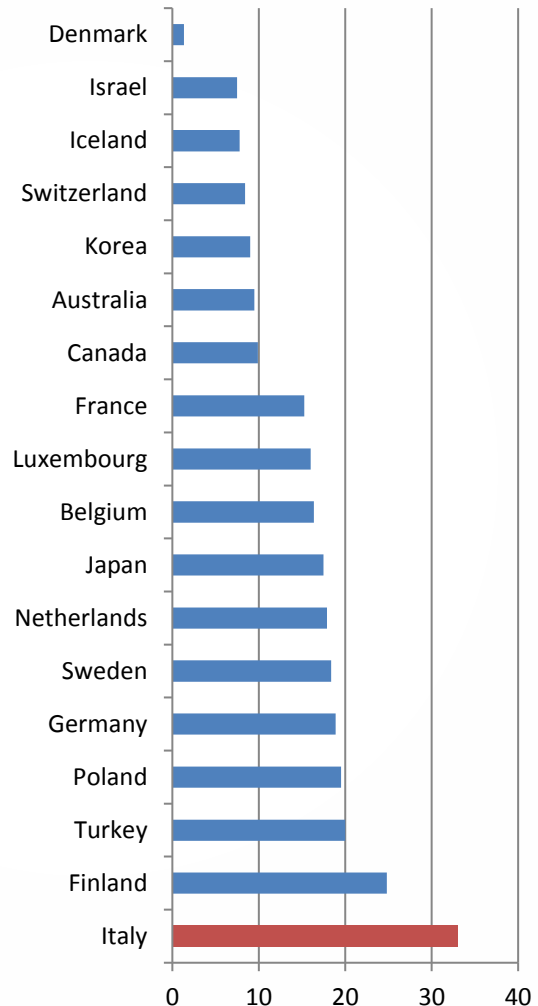


has traditionally been a country with high savings rates, which could be seen as contradictory given the high mandatory pension contributions. In 2008, the household gross savings rate was around 15%, it then declined to 9% in 2012, the lowest level ever experienced in the history. This dramatic decline suggests that the

Graph IT I: Contributions to pension funds (in % of GDP - 2014)



Graph IT II: Public pension contribution rate (% of gross earnings - 2014)



bad financial situation of the country, with stagnant growth, translated into fewer resources for households and, thus, a lower savings rate. However, since 2012 the savings rate rose and fluctuated between 10% and 12%.

Sticking to the percentage of total resources channelled to pension schemes, Italy stands as the most “prepared” country for retirement, with a percentage of

pension contributions equalling approximately 33% of gross earnings, which is the highest percentage of mandatory savings for retirement purposes in Europe. The public pension system is thus sustainable, even though the Italian Constitutional Court stated in April 2015 that the suppression of indexation of pensions on inflation included in the “Fornero law” was unconstitutional, a ruling that will add unforeseen costs to the first pillar estimated at €500 million.

The TFR, Severance Payment

Severance payment, which is paid upon work termination, represents a peculiar vehicle for pension asset accumulation, also known as *Trattamento di Fine Rapporto* (TFR). The TFR is computed on an annual basis and is equal to 6.91% of remuneration. It is mandatorily saved and returned upon termination of employment (such as retirement, the most common form).

The TFR rate of return was lowered to 1.5% in 2015, as a consequence of the zero inflation rate. The TFR can also partially be drawn (70%) before the end of the contract, but only under very special circumstances of need, which include health problems, first-house purchase and parental leave. Moreover, the stability law of 2015 enabled employees in the private sector to receive their severance payment in advance with a State guarantee on bank loans to companies. This innovation which was decided on an experimental basis from March 2015 to June 2018, will reduce the money available to employees at retirement.

The tax rate of pension benefits that come from TFR varies between 9% and 15%, depending on the length of enrolment in the pension fund.

The TFR represents a huge savings pot and its management underwent heavy changes from January 2007 onwards. Since then, each worker can opt to accumulate their TFR by joining a supplementary pension system. If a worker does not make any such decision, tacit consent applies for the TFR to be transferred to sector fund; funds are transferred to collective pension funds, if there are any for that specific sector.

This change represented a small cultural revolution in the Italian pension structure, where pensions had previously been provided by the public sector, with no active role by workers in choosing how much to invest. Workers have mandatorily contributed a conspicuous amount of their income, through the first pillar State system, with no involvement in where to invest their savings. With the TFR law, workers are now offered the possibility to join pension funds (Cannata and Settimo,





2007). The severance indemnity stock of workers who did not opt for pension funds, if belonging to companies with more than 50 employees, is transferred to INPS (National Institute for Social Security), which manages the severance payment according to the law. For those who work in firms with less than 50 employees and who did not opt for pension funds, their TFR remains in the firms they work in, acting, de facto, as a loan to the firm.

If employees decide to opt for the pension funds, they can choose among open pension funds, closed pension funds or PIPs (Individual Pension Plans). An important aspect of this is that, if opting for PIPs, workers can decide the amount they contribute, a new element in the Italian framework, with no discretion in terms of pension contributions.

Current Pension System

The current pension system is based on a Notional Defined Contribution system while it was in the past a generous Defined Benefit system. The Italian pension system has been reformed intensively. The year 1995 has been taken as the threshold for moving from defined benefit towards a defined contribution system, due to one of the most important laws that restructured the pension system, the Dini reform (law 335/1995). Indeed, all workers entering the market after 1995 have been accruing their pension entitlement according to a defined contribution method, while, before 1995, pension entitlements were computed according to an earning related system.

The three pillars of the Italian pension system can be wrapped up as follows:

- The first (state and mandatory) pillar is made up of two tiers. The zero tier consists of a social pension ensuring a minimum level of income for the elderly. The first tier covers employed people, and in the case of current new generations consists of a notional defined contribution system, as explained above.
- The second pillar is made up of supplementary occupational schemes. These can be closed occupational pension funds (managed by social partners) and open pension funds relative to collective affiliations (managed by financial institutions) (Guardiancich, 2010). The TFR is also part of the second pillar. TFR is a deferred indemnity. Each year the employer has to put aside (by law) part of the worker's salary which will be returned to the employee upon termination of the employment contract.

- Finally, the third pillar is made up of voluntary contributions to pension schemes, Individual Pension Plans (PIP), as well as by contributions to open funds for individual affiliations.

Pension Vehicles

Complementary pension funds

Complementary pension funds were introduced in 1993 and they are composed of contractual funds, open funds and individual pension plans provided by life insurance companies.

At the end of 2015, the total stock of pension funds amounted to € 140 billion, a rise by 7.1% over the previous year.

In Italy, the percentage of Private Pension funds out of total GDP is rather small, one of the main reasons being that the first pillar dimension makes it very difficult for private funds to take-off. 33% of contributions from gross income are compulsorily put into first pillar pension contribution, which leaves little space for personal pension fund development.

Individual pension funds can represent the main vehicle for the pension accumulation, albeit when the State pension contributions are high, it comes natural to expect that private pension funds will not have a predominant role in shaping retirement savings. This is likely to be the case of Italy.

At the end of 2015, the total workers enrolled into personal pension amounted to 7.2 million (COVIP, annual report 2015). As in previous years but at a slower pace, PIPs subscriptions contributed to the increase in membership. Until 2014, the number of new members into pension plans was not increasing fast and was driven by insurance companies and banks.

In 2015, the number of closed funds members also increased sharply following the implementation of three automatic enrolment programmes: Preverdi in the construction industry, Fondapi for SMEs employees and Cooperlavoro in the cooperative sector. However, it should be noted that these programmes increased only marginally assets managed by the pension industry, as automaticity only applied to employers contributions, not to employees' ones. It is worth noting that about 200,000 individuals have very little stock stored into complementary pensions, around € 100.





The vast majority of members of the complementary pension funds are employed in the private sector (about € 4 million).

Table IT 1. Number of subscribers in Complementary Pension Funds
(in thousands)

	2013	2014	2015
Closed Pension Funds	1,951	1,944	2,419
Open Pension funds	985	1,053	1,15
Pre-existing Closed Pension Funds	655	654	645
New PIP	2,134	2,454	2,596
Old PIP	505	505	431
Total	6,204	6,585	7,227

Source: Covip, annual reports 2013, 2014, 2015

The main features of complementary pensions are:

1. Voluntary membership
2. Funded
3. Managed by banks, financial Institutions, insurance companies
4. Supervisory authority: COVIP (Commissione di Vigilanza sui fondi Pensione)

Looking at the portfolio composition of the complementary pension system as a whole, “safe” assets constitute the majority. Treasury bonds are still the main investment. However, the relative weight of corporate bonds tends to increase. 66.5% of the pension funds aggregated portfolio was invested in Italy at the end of 2015.

Table IT 2. Asset allocation of pension funds (end of 2015, in %)

Treasury bonds	49.1
Corporate bonds	13.5
Equities	16.7
Mutual funds	12.8
Real estate	2.3
Alternatives	0.8
Cash	4.9
Total	100.0

Source: Covip

The Law no. 703 that regulates asset allocation for pension funds has been approved at the end of 2014. It allows more flexibility, moving from a quantitative approach to a principle-based one. However, short selling remains prohibited and funds should allocate a minimum of 70% to listed products.

Below we describe the different types of complementary forms of pensions.

Contractual funds or Closed funds (Investment portfolio at end of 2015: € 43 billion)

Contractual funds are also called closed funds as only certain groups of people can join. As an example, among employees, subscription is reserved to those whose contracts are regulated by a collective agreement. As for self-employed, contractual agreements are usually provided by professional associations; and only their members can subscribe.

They are defined contribution schemes and the contribution amount is established by the fund's bylaws (Paci et al, 2010).

All complementary pension funds are independent legal entities, with their own capital. The governance is based on the principle of equal representation among employers and employees.

The Board of Directors is responsible for the investment strategies and chooses the investment manager, as well as the depositary bank and the designated entity dealing with administration.

The fund must report at least on an annual basis. Given the long-term characteristic of funds, manager's mandate is usually five years or even longer for certain types of assets.

At the end of 2015, assets managed by contractual funds amounted to € 42.5 billion (*source: COVIP annual report, 2015*).

Since 1 January 2015, employees in the construction sector are automatically affiliated to Preverdi, a pension fund set up in the framework of a collective labour agreement. Preverdi is funded by employers' contributions of € 8 to € 20 per month. Employees may also contribute voluntary but in 2015, 92% of contributions originated from employers. Workers in the cooperative sector benefit from similar "auto-enrolment" to the pension fund Cooperlavoro and employees in small and middle size enterprises to Fondapi.





Open funds (Investment portfolio at end of 2015: € 15 billion)

In contrast to closed funds, membership is not restricted to certain groups. Also, the fund is not a legal entity. They can be established for collective or individual members or both.

Like contractual funds, open funds are defined contribution funds.

Alike closed funds, a depositary bank is required and administration costs can be outsourced.

At the end of 2015, assets managed by open funds amounted € 15.4 billion.

PIP, individual pension funds (Investment portfolio at end of 2015: € 20 billion)

They are subscribed to on an individual basis only, as insurance contracts in the legal framework of complementary pension funds.

Within PIPs policies, two types of insurance contracts are offered: with-profits or unit-links. A combination of the two is possible to get a more flexible risk-profile.

The with-profits policies guarantee a minimum interest rate (guaranteed and consolidated in the company's accounts) which is added to a quota related to the financial performance. The Unit Linked policies do not have a guarantee. Their performance depends on the value of the unit where contributions are invested.

Public employees

Public employees deserve a special mentioning, as the law introducing pension funds excluded them. Up to now, coverage of public employees is limited. Contractual pension funds are only possible for school personnel (Espero) and the National Health and regional or local authorities (Perseo and Sirio).

All these forms of pension funds are supervised by Commissione di Vigilanza sui Fondi Pensione (Commission of Vigilance on Individual Pension funds - COVIP).

The legislation putting into place pension funds dates back to 1993. Before the law implementation, pre-existing pension funds already existed. Pre-existing pension funds are the most numerous and they benefit of a more favourable treatment than the new ones. As they were created before the 1993 law, they were semi-

autonomous in their management, and they still benefit from this treatment. They can collect money directly from subscribers without intermediaries.

Life Insurance (Total mathematical provisions at end of 2014: € 515 billion)

Despite being a potential great channel for savings and replacement of traditional pension channel, the life insurance market in Italy is larger than the private pension market but smaller than in other European countries. Jappelli and Pistaferri (2008) show that a reform of tax breaks, which could have increased dramatically the demand for life insurance, had actually no effect. Another recent paper by Bottazzi et al. (2009) finds that households have responded to the cut in pension benefits mostly by increasing real estate wealth, particularly households that are able to estimate more accurately future social security benefits. On the other hand, they do not observe an increase in the propensity to purchase private pension funds and life insurance after the reform.

Charges

COVIP calculates a synthetic indicator of cost for a member who contributes € 2,500 every year with a theoretical annual return of 4%. The calculation methodology of the indicator has recently been revised by COVIP in order to eliminate distortions between the categories of funds. Since 2014, the tax rates on investment revenues depend on the assets included in their portfolio (see below). In compliance with a decision of March 2015, the cost indicator is now calculated gross (no longer net) of the tax paid by pension funds on their revenues.

The cost indicator increased in 2015 as compared to 2014 but this is, at least partly, due to a change in methodology: while costs were calculated net of taxes on investment until year 2014, the new calculation is gross in order to facilitate comparisons between funds.

There is a huge variation in pension funds costs. In closed pension funds, the indicator cost is about 1% for two years of participation, while it drops to 0.3% after 35 years of participation. With respect to PIP, it drops from 3.6% to 1.5%. It has to be reminded that small differences in the cost will reflect into effects of consistent magnitude. Ceteris paribus, PIP (open funds) will have a final return 23% (17%) lower than that corresponding to closed pension funds.





The cost indicator decreases with the time of membership with initial fix costs being progressively amortised.

There are wide differences within each category of funds, depending on the distribution channels of the products and the fees paid to distributors. Scale economies translate into lower costs for closed funds while no such impact can be observed on new PIP and open funds, according to a review of individual figures by COVIP.

Table IT 3. Average costs at the end of 2015 (in %)*

	2 years	5 years	10 years	35 years
Closed Funds	1.1	0.5	0.4	0.3
<i>Min</i>	<i>0.5</i>	<i>0.2</i>	<i>0.1</i>	<i>0.1</i>
<i>Max</i>	<i>3.0</i>	<i>1.5</i>	<i>0.9</i>	<i>0.6</i>
Open Funds	2.3	1.5	1.3	1.2
<i>Min</i>	<i>0.6</i>	<i>0.3</i>	<i>0.2</i>	<i>0.1</i>
<i>Max</i>	<i>4.5</i>	<i>2.8</i>	<i>2.1</i>	<i>1.7</i>
PIP (new)	3.8	2.6	2.2	1.8
<i>Min</i>	<i>1.0</i>	<i>0.9</i>	<i>0.6</i>	<i>0.4</i>
<i>Max</i>	<i>6.5</i>	<i>4.9</i>	<i>4.1</i>	<i>3.5</i>

Source: COVIP Relazione annuale; 2015

* Simple arithmetic averages within each category. Costs differ depending on the number of contribution years.

Taxation

The regime of taxation chosen by Italy is essentially an ETT (exemption, taxation, taxation), corresponding to the following three stages: contribution, accumulation and payment.

In stage 1, contributions paid benefit from a favourable tax treatment. Contributions can be deducted from the taxable income up to € 5,164.57 per year (The computation includes employer's contributions).

Stage 2, accruals are taxed. 11.5% of tax was applied on the accrued income paid by the insurer or by the pension fund until 2014. From 1 January 2015, the rate has increased to 20%. However, tax payable on income derived from public bonds is limited to 12.5%. The difference in taxation rates of bonds and shares is an incentive to change the asset allocation towards the former, a trend that will probably lower the returns of pension products in the future.

In order to avoid double taxation, benefits are taxed only corresponding to the shares not taxed during the accumulation phase. Hence, contributions that have not been deducted and thus already taxed will not be taxed again.

Stage 3, corresponding to benefits is taxed. Benefits taxation varies from 9 to 15% according to the duration of membership.

Pension Returns

In Table IT 4 we illustrate returns broken down by type of activities. Returns are calculated net of taxes paid by the pension funds on investment revenues.

Returns of all categories of funds fell sharply in 2015 as a consequence of historically low interest rates paid on bonds. Better returns were recorded by funds predominantly invested in equity.



**Table IT 4. Nominal returns net of charges and taxes on investment revenues by type of funds**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Closed Funds	7.5	3.8	2.1	-6.3	8.5	3	0.1	8.2	5.4	7.3	2.7
Guaranteed	-	-		3.1	4.6	0.2	-0.5	7.7	3.0	4.6	1.9
Bonds Only	2.1	2.6	2.2	1.6	2.9	0.4	1.7	3.0	1.3	1.2	0.5
Bonds Mixed	6.9	2.7	2.1	-3.9	8.1	3.6	1.1	8.1	5.0	8.1	2.4
Balanced	7.9	5.6	2.4	-9.4	10.4	3.6	-0.6	9.2	6.8	8.5	3.3
Equity	14.9	8.2	1.3	-24.5	16.1	6.2	-3	11.4	12.8	9.8	5.0
Open Pension Funds	11.5	2.4	-0.4	-14	11.3	4.2	-2.4	9.1	8.1	7.5	3.0
Guaranteed	2.9	1	1.9	1.9	4.8	0.7	-0.3	6.6	2.0	4.3	0.9
Pure Bonds	3.3	-0.2	1.6	4.9	4	1	1	6.4	0.8	6.9	1.0
Mixed	6.4	1	0.3	-2.2	6.7	2.6	0.4	8.0	3.6	8.0	2.2
Balanced	11.4	2.4	-0.3	-14.1	12.5	4.7	-2.3	10.0	8.3	8.7	3.8
Equity	16.2	3.7	-1.6	-27.6	17.7	7.2	-5.3	10.8	16.0	8.7	4.3
PIP new											
With Profits-Separate management				3.1	3.1	3.2	3.2	3.2	3.2	2.9	2.5
Unit linked				-21.9	14.5	4.7	-5.2	7.9	10.9	6.8	3.2
<i>Bonds</i>				2.4	3.7	0.6	0.8	4.9	-0.3	3.3	0.6
<i>Balanced</i>				-8.3	7.8	2.5	-3.5	6.4	5.8	8.2	1.8
<i>Stocks</i>				-32.4	20.6	6.7	-7.9	9.6	17.2	7.1	4.4

Source: COVIP annual reports

Closed funds

Table IT 5 estimates the total net returns for closed pension funds.

Line (2) records the nominal returns after charges and taxes on investment revenues calculated by COVIP (see table 4)

Line (1) reflects nominal returns before charges. It adds to line (2) the synthetic cost indicator for a 35-year subscriber, as reported by COVIP. Until 2014, the cost indicator was calculated net of taxes on investment revenues ("imposta sostitutiva") but the latter was not disclosed in COVIP statistics. Hence, we added 11.5% to the cost indicator of the positive nominal return before charges (11.5%

was the tax rate on investment returns until 2014). In 2015, the cost indicator was calculated gross of these taxes; hence a correction is no longer needed.

Line (3) is equal to line (2) minus the Inflation Rate (as CPI index variation in percentage). Line (4) is the net return, equal to line (3), once 15% of the return has been taken out the pension benefit is taxed at 15%, calculated on the difference between capital and premiums paid. The tax can be reduced for each year after the 15th by 0.3%, for a maximum of 6 percentage points of reduction in taxation of the benefit.

Between the end of 1999 and the end of 2015, the annual real return of closed funds after deduction of inflation, charges and taxes was 0.61%.



**Table IT 5. Closed pension funds' average annual rate of investment returns (in %)**

	Nominal return	Nominal Return, after charges	Real Return, net of inflation and charges, before taxes on benefits	Real Return net of inflation, charges and taxes on benefits
2000	3.9	3.6	1.0	
2001	-0.4	-0.6	-2.9	
2002	-3.2	-3.4	-5.9	
2003	5.3	5.0	2.1	
2004	4.9	4.6	2.2	
2005	7.8	7.5	5.2	
2006	4.1	3.8	1.6	
2007	2.3	2.1	0.1	
2008	-6.2	-6.3	-9.5	
2009	8.8	8.5	7.6	
2010	3.2	3.0	1.4	
2011	0.3	0.1	-2.7	
2012	8.5	8.2	4.7	
2013	5.7	5.4	4.0	
2014	7.6	7.3	7.1	
2015	3.0	2.7	2.7	
Annual average	3.4	3.1	1.1	0.61

Source: Own calculations based on COVIP, Eurostat

Open funds

We now proceed to calculate the returns for Opens Funds, using the same methodology as for closed funds.

Between the end of 1999 and the end of 2015, the real return of open funds after deduction of inflation, charges and taxes has been negative (-0.44% per year on average).

Table IT 6. Open pension funds' average annual rate of investment returns (in %)

	Nominal return	Nominal Return, after charges	Real Return, net of inflation and charges, before taxes	Real Return, net of inflation, charges and taxes
2000	4.2	3.0	0.4	
2001	-4.7	-5.6	-7.8	
2002	-12.3	-13.1	-15.4	
2003	6.9	5.7	2.8	
2004	5.5	4.3	2.0	
2005	12.9	11.5	9.1	
2006	3.6	2.4	0.2	
2007	0.7	-0.4	-2.4	
2008	-13.2	-14.0	-16.9	
2009	12.7	11.3	10.4	
2010	5.4	4.2	2.6	
2011	-1.3	-2.4	-5.2	
2012	10.4	9.1	5.6	
2013	9.4	8.1	6.7	
2014	8.8	7.5	7.3	
2015	4.2	3.0	3.0	
Annual Average	3.0	1.9	-0.2	-0.44

Source: Own calculations based on COVIP, Eurostat

Individual Pension Plans

Individual Pension Plans have the highest costs on the pension product market in Italy. The charges applied to PIPs were 1.8% for long term subscribers in 2015.

The performance of the PIPs differs according to types. With-Profits policies have a comparable performance as closed funds while Unit-Linked PIPs have a negative average performance on the market comparable to open funds. However, performances are very volatile and this could be associated with the relative short timeframe considered, and which, in fact, corresponds to the financial crisis years. Moreover, given the shorter time frame, the high variability might lead to misleading conclusions. In 2015, the returns of unit-linked PIPs slowed down as compared to 2014 but they remained slightly superior to those of with-profit PIPs.



**Table IT 7. PIP With Profits: Average annual rate of investment returns (in %)**

	Nominal return	Nominal Return, after charges	Real Return, net of inflation and charges, before taxes	Real Return net of inflation, charges and taxes
2008	4.7	3.1	-0.4	
2009	4.7	3.1	2.3	
2010	4.8	3.2	1.6	
2011	4.8	3.2	0.3	
2012	4.8	3.2	-0.1	
2013	4.8	3.2	1.9	
2014	4.5	2.9	2.7	
2015	4.3	2.5	2.5	
Annual average	4.7	3.0	1.3	0.88

Source: Own calculations based on COVIP, Eurostat

Table IT 8. PIP Unit Linked: Average annual rate of investment returns (in %)

	Nominal return	Nominal Return, after charges	Real Return, net of inflation and charges, before taxes	Real Return net of inflation, charges and taxes
2008	-20.7	-21.9	-24.5	
2009	16.2	14.5	13.6	
2010	6.3	4.7	3.1	
2011	-3.8	-5.2	-7.9	
2012	9.5	7.9	4.5	
2013	12.6	10.9	9.5	
2014	8.4	6.8	6.6	
2015	5.1	3.2	3.2	
Annual average	3.6	2.0	0.3	-0.01

Source: Own calculations based on COVIP, Eurostat

Conclusions

The Italian Pension System has a strong State connotation, which is likely to displace Complementary Pension Funds. Currently, 7.2 million individuals are enrolled into pension funds. The mandatory contribution rate amounts to 33%. As

the system is pre-funded, the contributions to the pension system will translate one to one to the future pension incomes. It is, thus, plausible under this scenario that the development of the second and third pillar is taking a long time to take off. First experiences of automatic enrolment implemented by labour agreements in 2015 did not fundamentally change this framework, as employers' contributions were still low and few employees voluntary contributed to the new schemes.

The Pension Funds can be of three types. Closed Occupational Pension Funds (managed by Social Partners), Open Funds (Managed by Financial Institutions) and Individual Pension Plans (PIP), split into With-profits policies and Unit-Linked Policies.

We calculated the return rate associated to open Funds, Closed funds and PIP. The average fund has exhibited a huge variability over the years considered. We calculated an estimate of a net return rate over 2000-2015 year range on closed and open funds and PIPs.

With-profit PIPs showed the highest returns (an average of + 0.88%) but the history (since 2008) is shorter than for closed and open funds. Unit-linked PIPs performance was slightly negative. Since 2000, closed funds recorded a positive average return (0.61%), while open funds recorded a negative one of -0.44%.

Compared to 2014, the investment performance of all categories of funds deteriorated.





Pension Savings: The Real Return

2016 Edition

Country Case: Latvia

Introduction

Latvia¹³⁶ is currently operating a multi-pillar pension system created on a three pension pillars. The reform followed World Bank recommendations on creating a pension system with unfunded PAYG and funded pension pillars. Since 2001, Latvian multi-pillar pension system includes:

- Pillar I (state compulsory unfunded PAYG pension scheme),
- Pillar II (mandatory state funded pension scheme) which is financed by part of the social insurance contributions diverted from Pillar I;
- Pillar III (voluntary private pension scheme).

The introduction of the multi-pillar pension system has aimed its overall functionality on a different approach to each pension pillar operation, but with the overall objective of ensuring an adequate pension for individuals under the demographic risks of an aging society, as well as the pension system's overall future financial stability.

The reform of the Latvian pensions system started in 1995, when it was decided to implement the three pillar pension system. Firstly, the shift from the old Soviet-styled PAYG pension system to the notional defined contribution pension scheme (NDC PAYG pillar I) was carried out. The new law on state pensions was adopted by the Parliament in November 1995 and came into force on 1 January 1996. The state mandatory-funded pension scheme (pillar II) started operating in July 2001. The private pension funds (pillar III) are operating since 1998.¹³⁷

¹³⁶ Inflation references HICP Annual average for this entire country case

¹³⁷ Groduma, M. 2002. Social insurance in Latvia: Seeking balance between financial stability and equity. In: European regional meeting "New and revised approaches to social protection in Europe". Budapest, 13 - 15 November 2002. [Online] Available:

<http://www.issa.int/html/pdf/budapest02/2groduma.pdf>

The Latvian pension system, from the point of view of individuals, therefore combines two aspects: personal interest in building wealth (based on a level of contributions and the length of the saving period) and intergenerational solidarity.

The Latvian NDC PAYG based pension pillar I has been effectively introduced by a partial reform in January 1996 and represents a mandatory scheme for all economically active persons, who make social insurance contributions calculated from a monthly salary (income). Paid contributions are used for the payment of old age pensions to the existing generation of pensioners. Pillar I is organized as a NDC scheme, where notional value of career contributions is recorded on each contributor's personal account. Prior to the pension take-up, the pension capital recorded on individual NDC account is recalculated in accordance with the laws and regulations at the time when the individual accesses his/her pension.

Pension pillar II is in fact a state-organized 1bis pillar, meaning that part of individually paid social contributions are channeled to pillar II and recorded on individual pension accounts. Monthly contributions are invested into individually chosen investment plans (pension funds) managed by private pension fund management company. Pillar II was launched in July 2001 and completed the multi-pillar based pension reform in Latvia.

Pension pillar III (or voluntary private pension scheme) was launched in July 1998 and is organized as a private voluntary pension scheme. It accumulates individual contributions, as well as employer contributions made on the behalf of individual employee, to the selected voluntary pension fund.





Table LV1. Multi-pillar pension system in Latvia

Pillar I State Pension	Pillar II State Funded pension	Pillar III Voluntary private pension
Mandatory NDC PAYG Financed by social insurance contributions Benefits paid via State Social Insurance Agency Publicly managed	Mandatory Funded DC Financed by social insurance contributions Individual pension accounts Privately (and publicly) managed pension funds	Voluntary Funded DC Privately managed two types of pension plans: 1. open (individual) 2. closed (quasi occupational)

Source: own elaboration, 2016

Pillar I – State Pension Insurance

State old-age pension (Pillar I) should guarantee the minimum income necessary for subsistence. It is based on the NDC PAYG principle of redistribution, i.e. the social tax paid by today's employees covers the pensions of today's pensioners, however the NDC systems records the amount of paid contributions for each individual.

The state old-age pension is paid out of the social insurance contributions. Total level of social insurance contributions is 34.09% of gross salary for employees (employers contributes 23.59% and employees 10.5%; self-employed persons pay 27.52%). Of the total contribution in 2015, 15% funded the pillar I NDC pension and 5% was redirected to the individual's account under pillar II. The remaining portion of contributions financed social security, such as disability pension, sickness and maternity benefits, work injury benefits, parent's benefits, and unemployment benefits.

Statutory retirement age in Latvia in 2015 is 62 years and 6 months for both men and women. However, the law stipulates a gradual increase of the retirement age by three months every year until the general retirement age of 65 years is reached in 2025. Early pension is possible in Latvia, if two conditions are met: 1. age 60 and three months (gradually rising by three months a year until it reaching age 65 in 2025) and 2. at least 30 years of coverage.

Old-age pension is based on the insured's contributions, annual capital growth adjusted according to changes in the earnings index, and average life expectancy. Old age pension is calculated by taking into account two parameters:

1. K – the accumulated life-time notional pension capital, which is the accrued amount of paid contributions since the introduction of the NDC system on 1 January 1996 until the pension granting month; however during the transition period to a full NDC system, the following two aspects are also taken into account:
 - a) average insurance contribution wage from 1996 until 1999 (inclusive);
 - b) insurance period until 1 January 1996;
2. G – cohort unisex life-expectancy at the time of retirement.

Annual old-age pension (P) is calculated as:

$$P = \frac{K}{G}$$

It can be said that the Latvian NDC PAYG pillar I has been shifted in a direction where 20% of all retirees receive a pension lower than € 213 (equal to 40% of the average net salary of the working population). However, considering the level of contributions for pension insurance (16% of salary), the average income replacement ratio of old-age pensions is rather low. The average income replacement ratios for old-age pension in Latvia are shown in the table below.





Table LV2. Latvian NDC PAYG pillar statistics

Indicator / Year	Average Old-age pensions	Average Gross Monthly Wages and Salaries	Gross Replacement Ratio	Average Net Monthly Wages and Salaries	Net Replacement Ratio
2001	€ 83	€ 227	36%	€ 164	50%
2002	€ 88	€ 246	36%	€ 177	50%
2003	€ 92	€ 274	33%	€ 196	47%
2004	€ 101	€ 300	34%	€ 214	47%
2005	€ 115	€ 350	33%	€ 250	46%
2006	€ 137	€ 430	32%	€ 308	44%
2007	€ 158	€ 566	28%	€ 407	39%
2008	€ 200	€ 682	29%	€ 498	40%
2009	€ 233	€ 655	35%	€ 486	48%
2010	€ 250	€ 633	40%	€ 450	56%
2011	€ 254	€ 660	38%	€ 470	54%
2012	€ 257	€ 685	37%	€ 488	53%
2013	€ 259	€ 716	36%	€ 516	50%
2014	€ 266	€ 765	35%	€ 560	48%
2015	€ 273	€ 818	33%	€ 603	45%

Source: Own calculations based on Central Statistical Bureau of Latvia (<http://data.csb.gov.lv>), 2016
http://data.csb.gov.lv/pxweb/en/Sociala/Sociala_ikgad_ienumumi/I0010_euro.px/?rxid=16744538-cfbc-4791-959d-41ac400179ee

A Minimum old-age pension mechanism has been introduced in Latvia. The minimum amount of the monthly old-age pension cannot be less than the state social security benefits (€ 64.03 monthly in 2015) with an applied coefficient tied to the years of service (insurance period):

- 1) persons with insurance period up to 20 years - 1.1;
- 2) persons with insurance period from 21 to 30 years - 1.3;
- 3) persons with insurance period from 31 to 40 years - 1.5;
- 4) persons with insurance period starting from 41 year - 1.7.

The minimum old-age pension is calculated using the basic state social security benefit multiplied by the respective coefficient that is tied to the number of service (working) years (see table below).

Table LV3. Minimum Old-age Pension in Latvia

Years of service (Insurance period)	Minimum old-age pension (in €)
Insurance length up to 20 years	70.43
Insurance length from 21 to 30 years	83.24
Insurance length starting from 31 to 40 years	96.05
Insurance length starting from 41 years	108.85

Source: own elaboration based on Ministry of Welfare data, 2016
<http://www.lm.gov.lv/text/2112>

Pillar II –State Funded Pensions

Pillar II of the pension scheme was launched on 1 July 2001. As of that date, a portion of every individual's social contributions are invested into the financial market and accumulated on their pillar II personal account. Everyone who is socially insured is entitled to be a participant of the pillar II scheme, as long as the person was not older than 50 years of age on 1 July 2001. Participation in the 2nd tier is compulsory for those who had not reached the age of 30 on 1 July 2001 (born after 1 July 1971).

Gradually all employees will participate in pillar II. Persons who were between the ages of 30 and 49 (born between 2 July 1951 and 1 July 1971) at the time where the scheme was launched, could and still can join the system voluntarily. Administration of pillar II contributions are made by the State Social Insurance Agency, which collects and redirects 20% old-age pension insurance contributions between the NDC and FDC pillar pension scheme individual accounts. According the Law on State Funded Pension, the State Social Insurance Agency also performs additional tasks connected to the pillar II administration.

The Ministry of Welfare, according the Law on State Funded Pension, performs the supervision of the funded pension scheme and has rights to request and receive an annual account from the State Social Insurance Agency regarding the operation of the funded pension scheme.

Total redistribution of old-age pension contributions between pillar I and pillar II of the pension scheme are shown in the table below.





Table LV4. Redistribution of the old-age pension contributions between pillar I and II

Years	Pillar I (NDC)	Pillar II (FDC)
2001- 2006	18%	2%
2007	16%	4%
2008	12%	8%
2009-2012	18%	2%
2013-2014	16%	4%
2015	15%	5%
2016	14%	6%

Source: <http://www.vsaa.lv/en/services/employees/funded-pension-scheme>, 2016

Contributions into pillar II were raised continually with adopted reforms, however during the financial crisis the contributions into pillar II were reduced to 2% with gradual growth since 2012. It should be mentioned that the largest part of contributions (8% of salary) had flown into the pension fund in 2008, right at the top and before the crash of financial markets. This has significantly influenced the performance of funds, which is analyzed in chapter “Pension Returns”. Investing is performed by a third party: licensed fund managers.

Upon retiring pillar II participants will be able to make a choice – either add the accumulated pension capital to pillar I and receive both pensions together, or to entrust the capital accumulated in pillar II to the insurance company of their choice and buy a single annuity.

Several changes have been made in the management of accumulated savings on personal accounts of pillar II participants. Until 1 January 2003 there was only one public fund manager for the funds of pillar II, the State Treasury, which invested the funds exclusively into the Latvian state bonds and into the deposits of the largest and safest Latvian banks. As of 1 January 2003 the private fund managers were involved, but today participants of pillar II are in the position to choose their fund manager themselves. The private fund managers offer to invest the pension capital also into corporate bonds, shares and foreign securities. Participants of the system are entitled to change their fund manager once a year and investment plans within the frame of one fund manager can be changed twice a year. Performance of private fund managers is supervised by the Finance and Capital Market Commission.

Pillar III – Voluntary private pensions

Voluntary private pension scheme, or pension pillar III, was launched in July 1998, and it gives the opportunity to create additional voluntary savings in addition to the state guaranteed 1st and the 2nd pension pillar. Contributions that individual and/or the employer regularly pay into the pension fund are invested in different securities, depending on the chosen investment strategy.

The Law on Private Pension Funds foresees that Latvian commercial banks, insurance companies and legal persons have the right to establish a private fund. The money is invested by private pension funds with the aim not only to maintain but also increase the value of savings over a long time period. There are generally two types of voluntary private pension funds in Latvia:

1. open pension funds (14 operational in Latvia in 2015)
2. closed pension funds (only one operating in Latvia in 2015).

Pension scheme participants can subscribe to a pension scheme by entering directly into a contract with an open pension fund or via their employer. Pension scheme participants could participate in a pension scheme through the intermediation of their employer if the employer has entered into a collective contract with an open or closed pension fund. Collective contract with a closed pension fund may be entered into only in such cases when the relevant employer is also one of the founders (stockholders) of the same closed pension fund. Legal relationships between employer and employees arising in connection with the implementation of a pension scheme, and the participation of employees therein, are regulated by the employment contract or collective work agreement. Acknowledging the fact that employers might enter into collective agreement with employees and establish the pension scheme, voluntary private pension funds might be recognized as a collective pension schemes.

Where an employer has entered into a collective participating contract with an open or closed pension fund and more than 100 employees have joined the pension fund, the employer and employees who participate in the pension scheme shall jointly establish a pension scheme committee with equal representation of the employer and employees.

According to the Law on Private Pension Funds, accumulated pension capital in private pension funds can be accessed by individuals when reaching the age of 55. In order to receive the pillar III accrued pension, an individual must submit an





application to the respective pension fund. Supervisory authority for all voluntary private pension funds in Latvia is the Financial and Capital Market Commission.

Pension Vehicles

Pillar II – State Funded Pensions

Pension funds are the only pension vehicles allowed by the Law of State Funded Pensions for state-funded pension scheme. The law states that a funded pension scheme is a state-organized set of measures for making contributions, administration of funds contributed and payments of pensions which - without increasing the total amount of contributions for old age pensions - provides an opportunity to acquire additional pension capital by investing part of the pensions' contributions in financial instruments, and other assets in accordance with the procedures specified in the Law.

Currently (as of 31 December 2015), 20 state-funded pension scheme's pension funds have been operational on the Pillar II market. There is no specific legal recognition of types of pension funds based on their investment strategy, nor any legal requirement to provide a specific investment strategy for pension funds. It is up to a pension fund manager to provide an in-demand type of pension funds in order to succeed on the market. However, every fund manager is required to develop a systematic set of provisions according to which the management of funds is performed and which are presented in a prospectus of the relevant pension fund and in a key information document for participants of the scheme. The prospectus of a pension fund and the key information document for participants are an integral part of the contract entered into between the Agency and the manager of pension funds. Pension fund prospectus must clearly define the risk-reward profile and indicate proposed investment strategy of the respective expected portfolio structure.

Although there is no legal recognition of types of pension funds, they can be divided into three types based on their risk/return profiles:

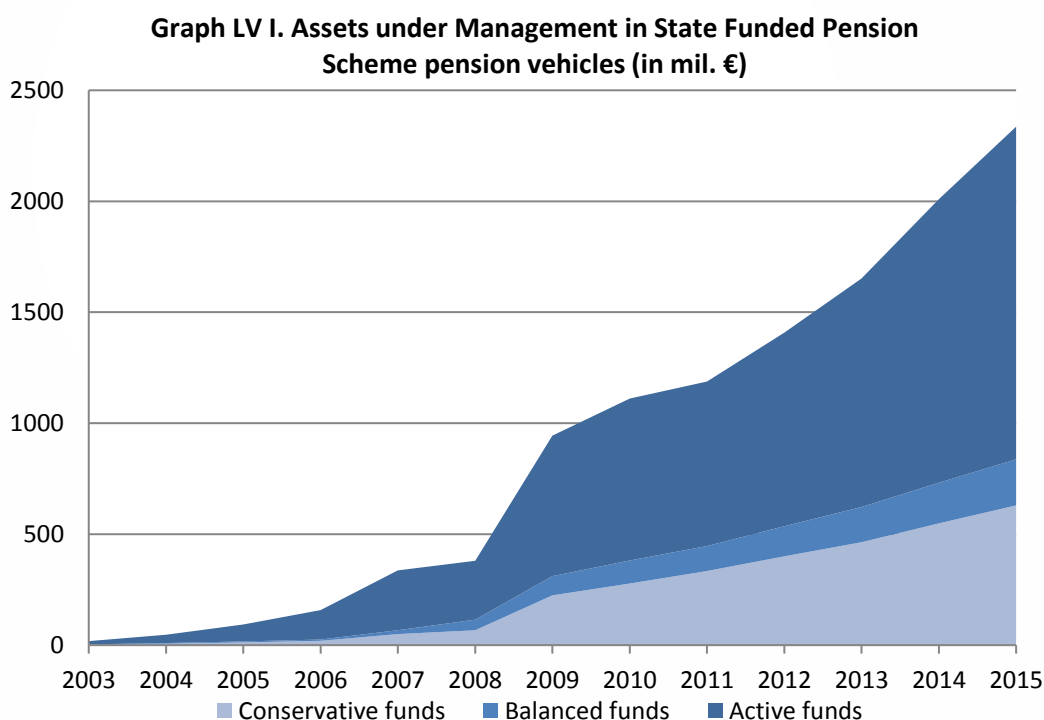
1. Conservative funds with no equity exposure and consisting of 100% of bonds and money market instruments;
2. Balanced funds with an equity share of up to 15% and a share of at least 50% made up of bonds and money market instruments
3. Active funds with an equity share (resp. investments in capital securities, alternative investment funds or such investment funds that may make

investments in capital securities or other financial instruments of equivalent risk) of up to 50% without limits on investments in bonds and money market instruments.

The legislation sets relatively strict quantitative investment limits for pension funds, trying to supplement the prudent principle.

Overall asset allocation in Latvia is fairly conservative despite the possibility of choosing a plan according to risk preference. The chart below presents the amount of Assets under Management for types of pension funds according to their investment strategy.

Contrary to many other CEE countries running mandatory pension systems, there is no requirement for pension funds to guarantee a certain minimum return. On the contrary, doing so is explicitly forbidden.



Source: own calculations (<http://www.manapensija.lv/en/2nd-pension-pillar/statistics/data>), 2016

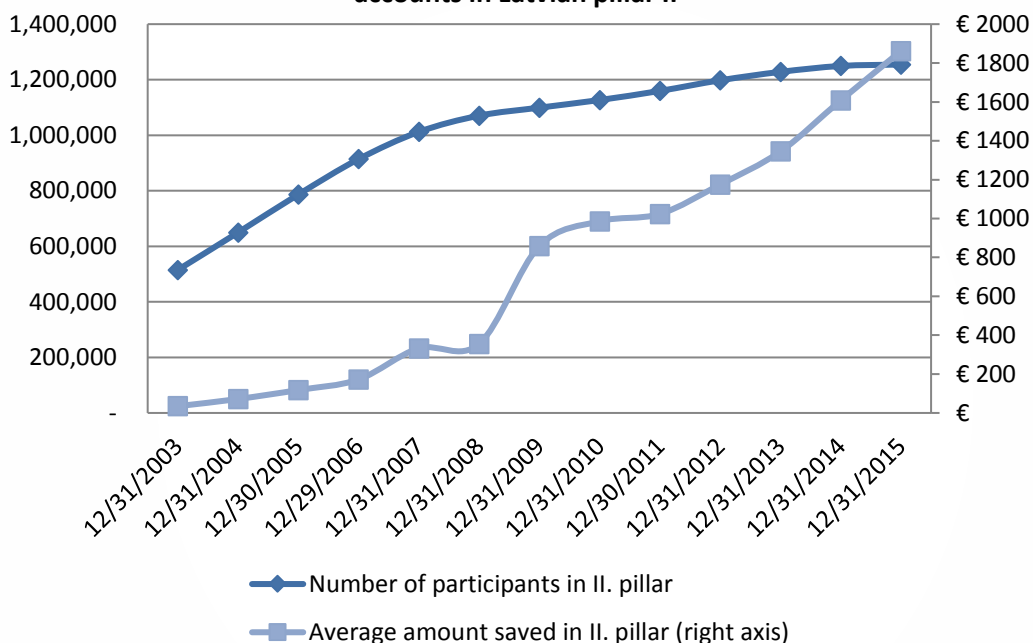




The preference of savers for investment strategies is rather stable.

As the State Funded Pension scheme is mandatory for all economically active individuals in Latvia, the number of savers, as well as the average amount of accumulated assets on individual accounts, is rising. The chart below indicates that the Pillar II market is starting to be saturated in terms of the number of participants.

Graph LV II. Number of participants and average size of individual accounts in Latvian pillar II



Source: own calculations (<http://www.manapensija.lv/en/2nd-pension-pillar/statistics/data>), 2016

Year 2015 can be seen as a culminating year for the number of participants. Further growth of pillar II savings will therefore be driven by the amount of contributions and pension funds' performance.

There are 20 pension funds operating on the market in 2015. It is a decrease of three pension funds, which merged with their peers in 2014. The list of 20 pillar II pension funds offered by seven financial institutions is presented in the table below.

Table LV 5. List of State Funded Pension Funds

Pension Fund Name	Investment style of the pension plan	Inception Day
Citadele Aktīvais pensiju plāns	Active	7.1.2003
* <i>Citadele pensiju plāns Blūzs</i>	<i>Ceased in 2014</i>	29.6.2006
* <i>Citadele pensiju plāns Džezs</i>	<i>Ceased in 2014</i>	15.6.2006
Citadele Universālais pensiju plāns	Conservative	7.1.2003
DNB Aktīvais ieguldījumu plāns	Active	21.2.2005
DNB Konservatīvais ieguldījumu plāns	Conservative	21.2.2005
DNB Sabalansētais ieguldījumu plāns	Balanced	21.2.2005
Finasta Konservatīvais ieguldījumu plāns	Conservative	7.1.2003
Finasta pensiju plāns "EKSTRA PLUS"	Active	8.8.2006
Finasta pensiju plāns "KOMFORTS"	Balanced	8.8.2006
Nordea aktīvais ieguldījumu plāns	Active	2.2.2009
Nordea konservatīvais ieguldījumu plāns	Conservative	2.2.2009
NORVIK IPS plāns "Daugava"	Conservative	7.1.2003
NORVIK IPS plāns "Gauja"	Active	14.10.2003
NORVIK IPS plāns "Venta"	Balanced	14.10.2003
SEB aktīvais plāns	Active	7.1.2003
SEB Eiropas plāns	Active	7.1.2003
* <i>SEB ieguldījumu plāns "Safari"</i>	<i>Ceased in 2014</i>	26.5.2003
SEB konservatīvais plāns	Conservative	26.5.2003
SEB Latvijas plāns	Conservative	7.1.2003
SEB sabalansētais plāns	Balanced	7.1.2003
Swedbank pensiju ieguldījumu plāns "Dinamika"	Active	7.1.2003
Swedbank pensiju ieguldījumu plāns "Stabilitāte"	Conservative	7.1.2003

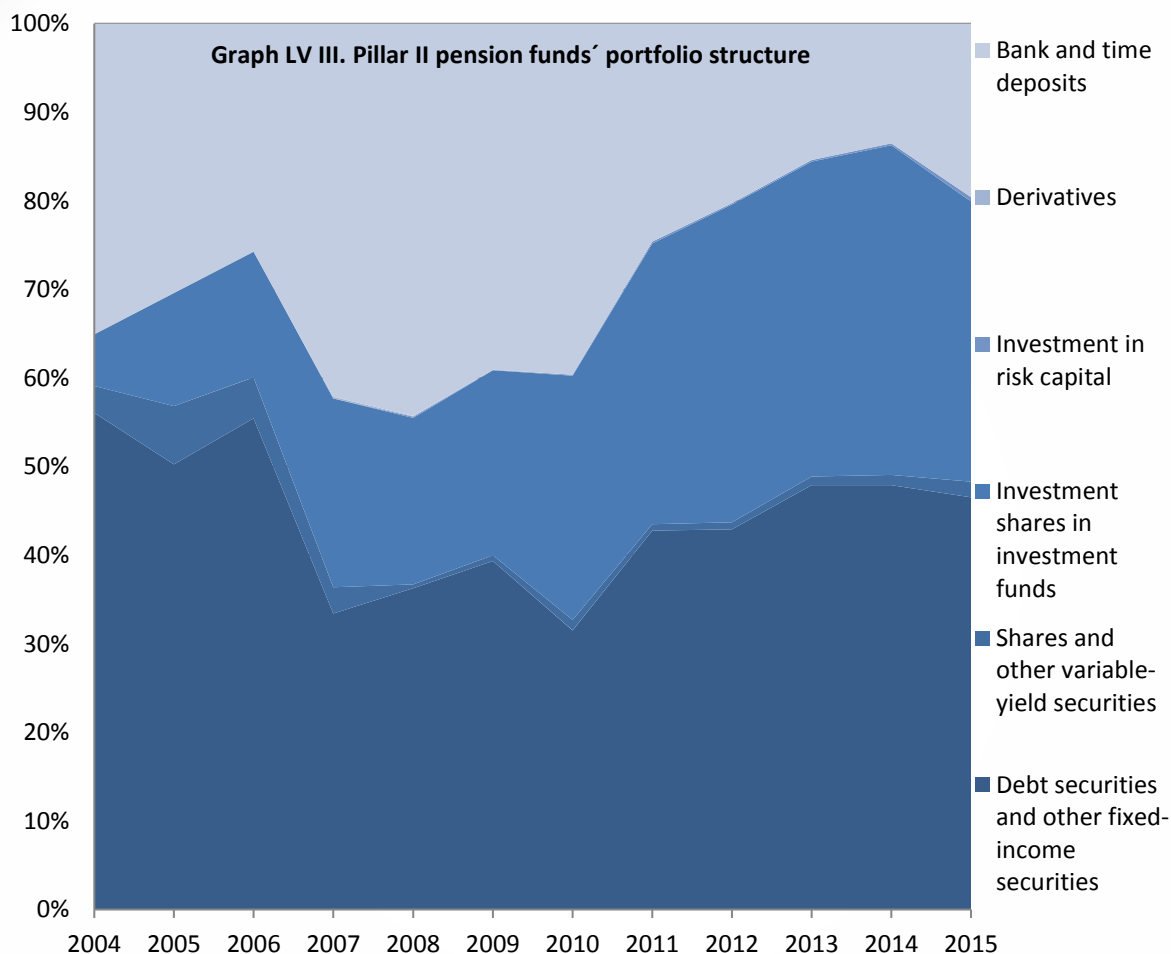
Source: <http://www.manapensija.lv/en/2nd-pension-pillar/statistics/>, 2016

* merged into other pension fund in 2014





Portfolio structure of pillar II pension funds (figure below) shows that a dominant investments remain the debt and other fixed income securities as well as investment funds (UCITS funds). Increased share of bank deposits in 2015 is a result of increased volatility on financial markets



*Source: Own elaboration based on Financial and Capital Market Commission data, 2016
(available at: <http://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/5196-management-of-state-funded-pension-scheme-assets-in-1st-quarter-of-2015.html>)*

Pillar III – Voluntary private pensions

There are two types of private pension funds that form part of the Latvian voluntary private pension pillar:

1. closed, for fund founder's (corporate) staff;
2. open, of which any individual may become a participant, either directly or through an employer.

This distinction between private pension funds is rather significant as closed private pension funds (only one operating in Latvia in 2015) could be recognized as typical occupational pension fund. However, open private pension funds are more personal ones.

The law on Private Pension Funds provides a wide range of possibilities to organize and manage private pension funds. The law prescribes the accumulation of pension benefits both in the specified contribution scheme and in the specified pay-out scheme, the types of private pension funds, the basis for activities thereof, the types of pension schemes, the rights and duties of pension scheme participants, the management of funds, the competence of holders of funds, as well as state supervision of such activities.

Pension vehicles (pension funds) can be created only by limited types of institutions (persons) in Latvia, namely:

1. employers who enter into a collective participating contract with a pension fund may be founders of a closed pension fund.
2. for an open pension fund, two types of institutions can establish a fund:
 - a) bank (licensed credit institution);
 - b) life insurance company.

These founders usually hire a management company that creates a different pension plan managed under one pension fund and manages the investment activities. Pension scheme assets can be managed only by the following commercial companies:

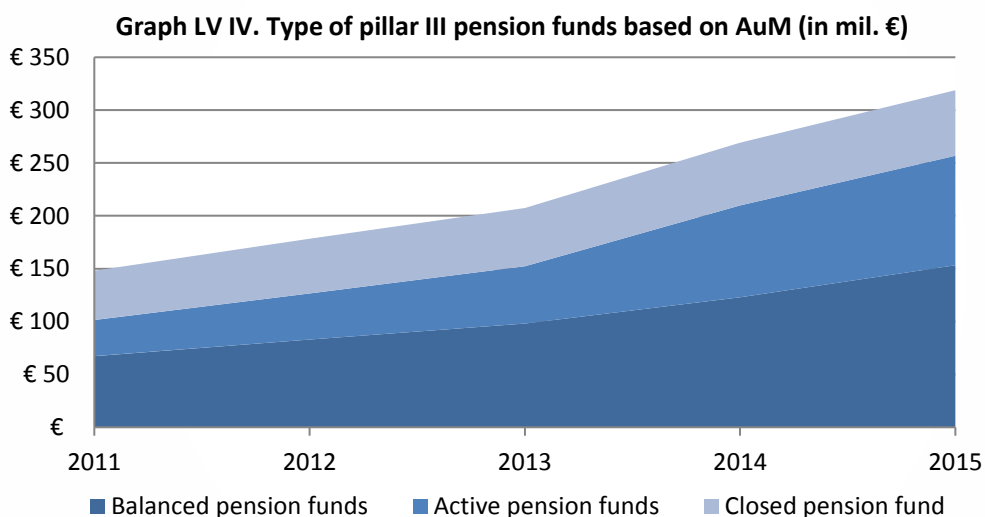
- a credit institution, which is entitled to provide investment services and non-core investment services in Latvia;
- an insurance stock company which is entitled to engage in life insurance in Latvia;





- an investment brokerage company which is entitled to provide investment services in Latvia;
- an investment management company which is entitled to provide management services in Latvia.

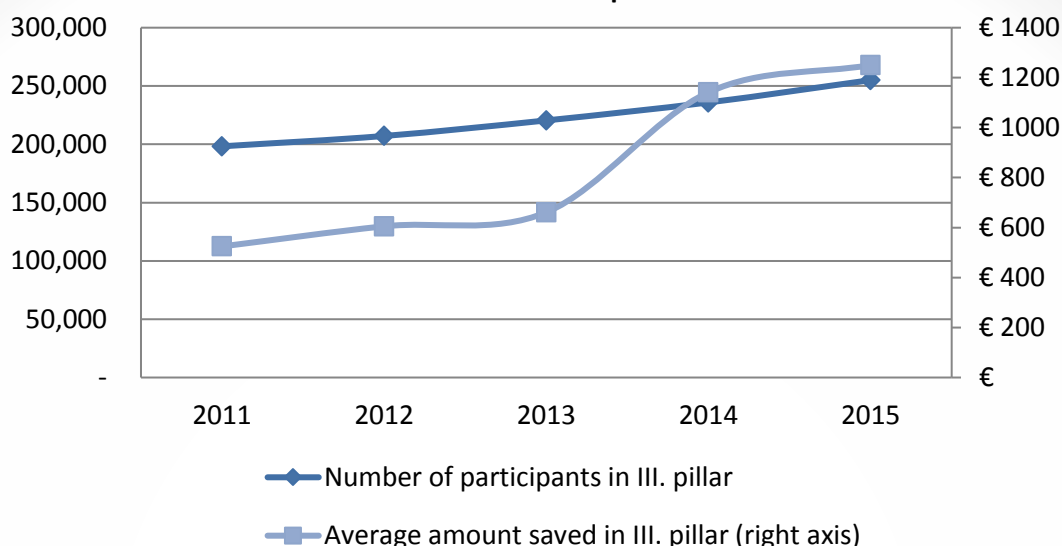
The level of transparency in providing publicly available data for private pension funds till the year 2011 is rather low; therefore, the analysis of the market and main pension vehicles has been performed with publicly available data starting from 31 December 2011. Currently (as of 31 December 2015), 14 open private pension funds and one closed private pension fund exist on the market. The structure of the pension vehicles according to the type of the fund and investment strategy offered is presented in the figure below.



Source: Own calculation based on Manapensija data (<http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/>), 2016

Number of participants as well as the average amount saved in pillar III saving accounts rises steadily. As of 31 December 2015, there has been more than 255 thousands pillar III saving accounts with an average amount of € 1,250 saved in them. The developments of these parameters are presented on the figure below.

Graph LV V. Number of participants and average size of individual accounts in Latvian pillar III



Source: Own calculation based on Manapensija data (<http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/>), 2016

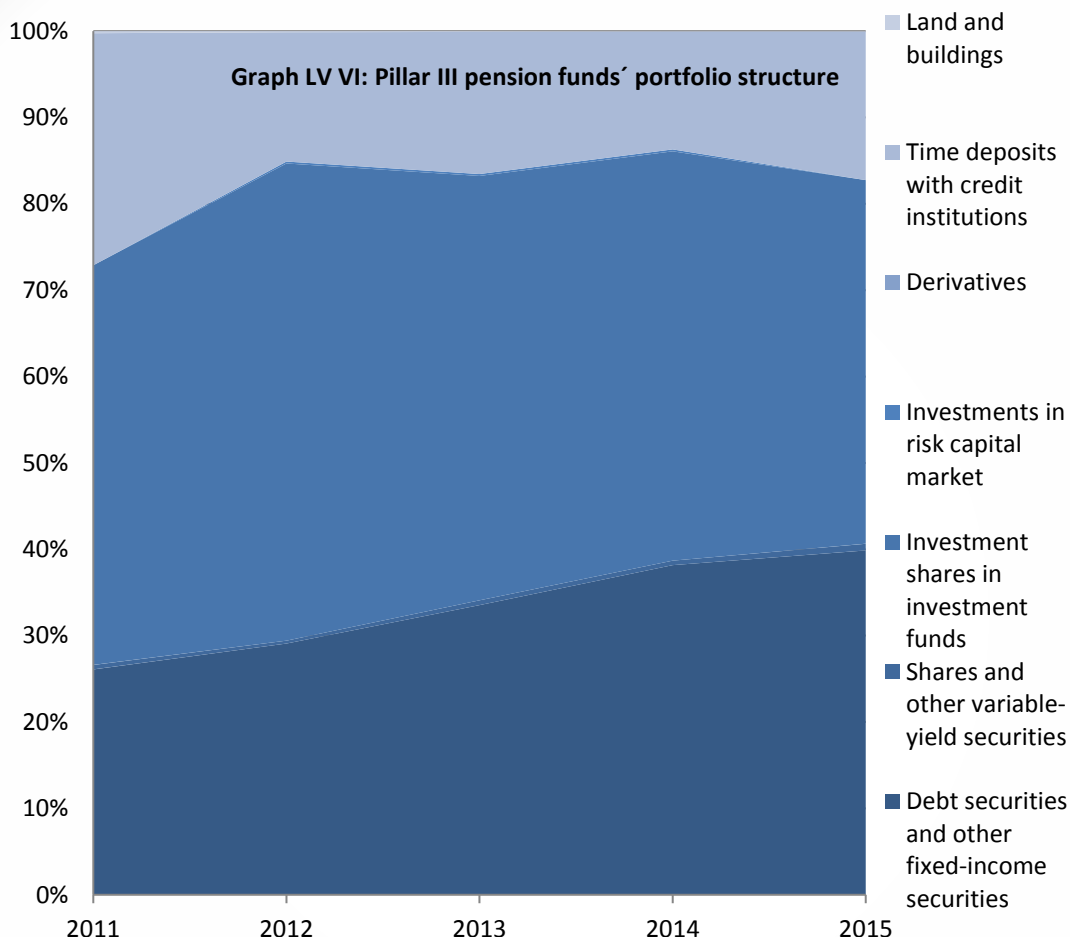
It should be noted that balanced pension funds have accounted for about 50% of market share based on AuM in 2015, where only four funds are offered. Active funds – for which the investment strategy allows more equity investments - are gaining market share (from 23% in 2011 to 32.5% in 2015). More than 13 pension funds were on the market in 2011. But the financial crisis (2011, 2012) led to a consolidation of the market especially among active pension funds, where the fund GE Money retreated from the market and several smaller funds of the same manager were merged into one in order to achieve higher management efficiency.

The only closed pension fund, which has only 5% of market share based on the number of participants, has on the other hand more than 20% of market share based on assets under management, which means that the closed pension fund has the highest level of accumulated assets per participant. However, considering the decreasing trend in market share, the number of participants is not increasing and the closed pension fund serves a relatively matured market (from the view of demand).





Portfolio structure of pillar III pension funds is presented in figure below. Portfolio structure remains rather stable, where the only investment with a rising trend in 2015 was bank deposits due to the increased volatility on financial markets.



Source: Own elaboration based on Financial and Capital Market Commission data, 2016 (available at: <http://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/5197-operation-of-private-pension-funds-in-1st-quarter-of-2015.html>)

Charges

Pillar II – State Funded Pensions

Latvia has adopted the cap on fees within pillar II, which forces that the maximum amount of payment for the management of investment plan, including the fixed and variable parts of payment, calculating for the last 12-month period, does not exceed:

1. 1.5% of the average value of the investment plan assets for the investment plans where the investment plan prospectuses do not provide for any investments in the shares of commercial companies, other capital securities and other equivalent securities;
2. 2% of the average value of investment plan assets of all other investment plans.

Fees that can be charged to pension funds by fund managers are by law recognized as having a fixed and variable part. The law stipulates that payment for the management of an investment plan shall include:

1. A fixed payment component, representing 1% of the average value of the investment plan assets per year, including payments to the manager of the funds, the custodian, as well as payments to third parties. This does not include expenses which have arisen upon performing transactions by selling the assets of the investment plan with repurchase.
2. A variable component of payment, including the remuneration for the manager of funds of the funded pension scheme to reward the performance of the investment plan. This amount depends on the returns of the pension plan.

The average level of fees charged to the pension funds are increasing both on a relative as well as absolute level, which might be detrimental to the long-term savings of Latvian savers. Generally, the fees applied to the pension funds in pillars I and III are among the highest. Several pillar II pension funds now apply performance based fees, where this additional fee is charged if the fund manager reaches a positive return.



**Table LV 6. Pillar II Pension Funds' Fees in 2014 and 2015**

Pension Fund Name	Investment strategy	2014	2015
Citadele Aktīvais pensiju plāns	Active	1.68%	2.00%
<i>Citadele pensiju plāns Blūzs</i>	<i>Active</i>	<i>1.25%</i>	<i>ceased</i>
<i>Citadele pensiju plāns Džezs</i>	<i>Active</i>	<i>1.68%</i>	<i>ceased</i>
Citadele Universālais pensiju plāns	Conservative	1.25%	1.50%
DNB Aktīvais ieguldījumu plāns	Active	1.68%	1% AuM + 1% performance
DNB Konservatīvais ieguldījumu plāns	Conservative	1.38%	1% AuM + 0.50% performance
DNB Sabalansētais ieguldījumu plāns	Balanced	1.48%	1% AuM + 1% performance
INVL Konservatīvais ieguldījumu plāns	Conservative	1.37%	1% AuM + 0.5% performance
INVL pensiju plāns "EKSTRA PLUS"	Active	1.68%	1% AuM + 1% performance
INVL pensiju plāns "KOMFORTS"	Balanced	1.64%	1% AuM + 1% performance
Nordea aktīvais ieguldījumu plāns	Active	1.68%	1.65%
Nordea konservatīvais ieguldījumu plāns	Conservative	1.28%	1.25%
NORVIK IPS plāns "Daugava"	Conservative	1.55%	1.50%
NORVIK IPS plāns "Gauja"	Active	1.61%	2.00%
NORVIK IPS plāns "Venta"	Balanced	1.55%	2.00%
SEB aktīvais plāns	Active	1.70%	2.00%
SEB Eiropas plāns	Active	1.70%	2.00%
<i>SEB ieguldījumu plāns "Safari"</i>	<i>Active</i>	<i>1.83%</i>	<i>ceased</i>
SEB konservatīvais plāns	Conservative	1.53%	1.50%
SEB Latvijas plāns	Conservative	1.15%	1.50%
SEB sabalansētais plāns	Balanced	1.50%	2.00%
Swedbank pensiju ieguldījumu plāns "Dinamika"	Active	1.70%	1% AuM + 1% performance
Swedbank pensiju ieguldījumu plāns "Stabilitāte"	Conservative	1.15%	0.9% AuM + 0.5% performance fee

Source: Own research based on the most recent terms of respective pension funds, 2016

Pillar III – Voluntary private pensions

Voluntary private pension funds have typically lower level of transparency when it comes to fee policy. In most cases, only current fees and charges are disclosed. Historical data is almost impossible to track via publicly accessible sources. However, the portal Manapensija (<http://www.manapensija.lv/en/>) has significantly improved the information on actual charges and fees applied by pillar III pension funds and their administrators in 2016.

Charges of voluntary private pension funds for the years 2014 and 2015 are presented in the table below. Administration cost, Fund Manager's Commission and Custodian bank's commission are based on the assets under management. Funds managed by Nordea and Swedbank uses mixed Administration costs, which are a combination of entry fee (fee on contributions paid) and ongoing charge (AuM based). CBL Funds uses also a performance fee, if the fund returns outperform the benchmark (12-month RIGIBID).

Table LV 7. Voluntary Private Pension Funds' Fees and Charges

Voluntary Private Pension Funds	Type of the Charges	Year 2014	Year 2015
CBL Aktīvais	Administration Cost	1.50%	1.50%
	Fund Manager's Commission	0.90%	0.90%
	Custodian bank's commission	0.20%	0.20%
	Performance fee		10% (RIGIBID)
CBL Aktīvais USD	Administration Cost	1.50%	1.50%
	Fund Manager's Commission	0.90%	0.90%
	Custodian bank's commission	0.20%	0.20%
	Performance fee		10% (RIGIBID)
CBL Sabalansētais	Administration Cost	1.50%	
	Fund Manager's commission	0.75%	





	Custodian bank's commission	0.20%	
	Performance fee		10% (RIGIBID)
INVL plāns "Dzintars - Konservatīvais"	Administration Cost	2.00%	2.00%
	Fund Manager's commission	0.70%	0.70%
	Custodian bank's commission	0.50%	0.50%
INVL plāns "Jūra - Aktīvais"	Administration Cost	1.00%	1.00%
	Fund Manager's commission	1.00%	1.00%
	Custodian bank's commission	0.50%	0.50%
INVL plāns "Saule - Sabalansētais"	Administration Cost	1.00%	1.00%
	Fund Manager's commission	1.00%	1.00%
	Custodian bank's commission	0.50%	0.50%
Nordea progresīvais pensiju plāns	Administration Cost	2% from each contribution + 1% per year from average assets	2% from each contribution + 0.75% per year from average assets
	Fund Manager's commission	1.60%	1.60%
	Custodian bank's commission	0.15%	0.15%
Nordea sabalansētais pensiju plāns	Administration Cost	1% from each payment + 1% per year from average assets	1% from each payment + 1% per year from average assets
	Fund Manager's commission	1.10%	1.10%

	Custodian bank's commission	0.15%	0.15%
"Pirmais Pensiju Plāns"	Administration Cost	1.50%	1.50%
	Fund Manager's commission	1.30%	1.30%
	Custodian bank's commission	0.20%	0.20%
"SEB Aktīvais" pensiju plāns	Administration Cost	1.50%	1.50%
	Fund Manager's commission	0.90%	0.90%
	Custodian bank's commission	0.20%	0.20%
"SEB - Sabalansētais" pensiju plāns	Administration Cost	1.50%	1.50%
	Fund Manager's commission	0.90%	0.90%
	Custodian bank's commission	0.20%	0.20%
Swedbank pensiju plāns Dinamika+(USD)	Administration Cost	2% from payments + 0.6% from assets per year	2% from payments + 0.6% from assets per year
	Fund Manager's commission	1.25%	1.25%
	Custodian bank's commission	0.20%	0.20%
Swedbank pensiju plāns Dinamika+100	Administration Cost	2% from payments + 1% from assets per year	2% from payments + 1% from assets per year
	Fund Manager's commission	1.60%	1.60%
	Custodian bank's commission	0.20%	0.20%





Swedbank pensiju plāns Dinamika+60	Administration Cost	2% from payments + 0.6% from assets per year	2% from payments + 0.6% from assets per year
	Fund Manager's commission	1.25%	1.25%
	Custodian bank's commission	0.20%	0.20%
Swedbank pensiju plāns Stabilitāte+25	Administration Cost	2% from payments + 0.6% from assets per year	2% from payments + 0.6% from assets per year
	Fund Manager's commission	0.90%	0.90%
	Custodian bank's commission	0.20%	0.20%

Source: Own research based on supplementary pension funds' Prospectuses and Terms, 2016

Comparing the charges applied to the voluntary private pension funds and to state-funded pension funds, the level of charges in pillar III pension funds are significantly higher. There are neither limitations nor caps on fees in the law. The legislative provisions only indicate that at least general information on maximum fees and charges applied, procedures for covering the expenses of the scheme, information regarding maximum payments to the management of the pension scheme and to the manager of funds, and the amount of remuneration to be paid out to the holder of funds, as well as the procedures by which pension scheme participants shall be informed regarding such pay-outs of the scheme, should be disclosed.

Taxation

Pillar II – State Funded Pensions

Latvia is applying an EET taxation regime for pillar II with some specifications (deductions) regarding the pay-out regime taxation, where generally the "T" regime is applied.

Taxation of contributions

Contributions paid to the state funded pension scheme are being made via the redirection of social insurance contributions. As such, these contributions are personal income tax deductible and therefore the contributions are not subject to additional personal taxation.

Taxation of the Fund

The Corporate Income Tax rate in Latvia is 15%, however income or profits of the fund (investment fund as a legal entity) are not subject to Latvian corporate income tax at the fund level. Latvia applies a general principle for all investment and savings based schemes and income taxation is levied on the final beneficiary and not on the investment vehicles.

Taxation of pension benefits

Latvia has one of the lowest levels of income redistribution among EU countries. Personal income tax rate was 2015 is 23% and the pension benefits paid from the NDC PAYG scheme (pillar I) and state-funded pension scheme (pillar II) are considered taxable income. As such, pension benefits are subject to personal income tax. Latvia applies a non-taxable minimum, which is recalculated and announced every year by Cabinet regulation.

Pillar III – Voluntary private pensions

Latvian tax legislation stipulates the use of the EET regime (similar to pillar II) also for voluntary private pension schemes, where the contribution by individuals is treated in a slightly different way. Payments made to private pension funds established in accordance with the Republic of Latvia Law on Private Pension Funds or to pension funds registered in another Member State of the European Union or the European Economic Area State, shall be deducted from the sum amount of annual taxable income, provided that such payments do not exceed 10 % of the person's annual taxable income. However, there is a limit on total income tax base deductible payments. The total of donations and gifts, payments into private pension funds, insurance premium payments and purchase costs of investment certificates of investment funds may not exceed 20% of the amount of the payer's taxable income.





Pension Returns

Pillar II – State Funded Pensions

Pension funds' performance is closely tied to the portfolio structure defined by an investment strategy (as well as investment restrictions and regulations) applied by a fund manager. Investment regulations differ, depending on whether pension plans are managed by the State Treasury or by private companies. The State Treasury is only allowed to invest in Latvian government securities, bank deposits, mortgage bonds and deposit certificates. Moreover, it can only invest in financial instruments denominated in the national currency. In contrast, private managers are allowed to invest in a much broader range of financial instruments. The main investment limits include the following:

- 35% for securities guaranteed by a state or international financial institution;
- 5% for securities issued or guaranteed by a local government;
- 10% for securities of a single issuer, except government securities; for deposits at one credit institution (investments in debt and capital securities of the same credit institution and derivative financial instruments may not exceed 15%); and for securities issued by one commercial company (or group of commercial companies);
- 20% for investments in non-listed securities;
- 5% for investments in a single fund (10% of the net assets of the investment fund).

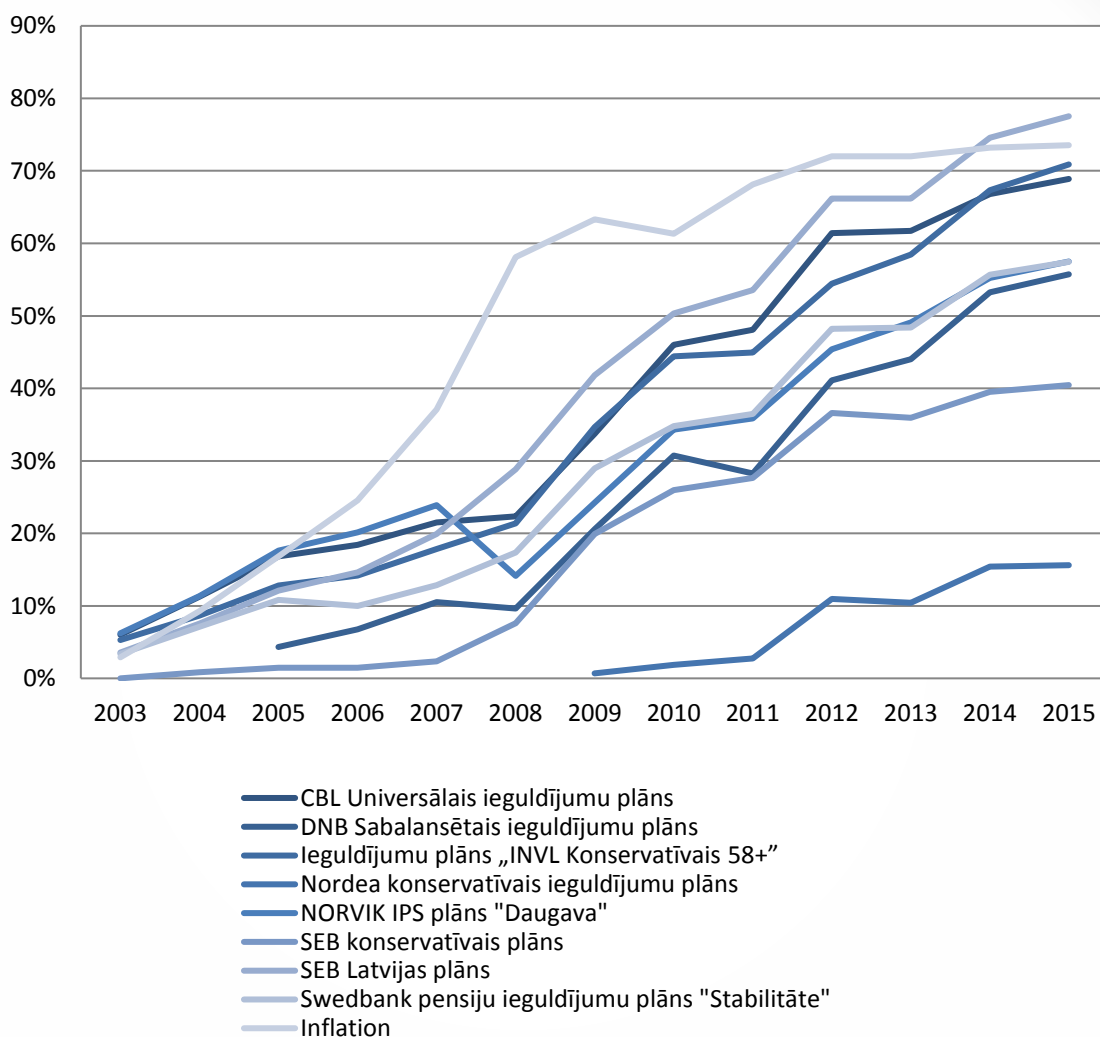
There is no maximum limit for international investments, as long as pension funds invest in securities listed on stock exchanges in the Baltics, other EU member states or the European Free Trade Area. However, the law stipulates a 70% currency matching rule. There is also a 10% limit for each non-matching currency. Investments in real estate, loans, and self-investment are not permitted.

All data presented on the pension funds' returns are presented in net values, i.e. after all fees charged to the fund portfolio. The graphs contain also inflation on an annual as well as cumulative basis.

Pension reform introduced pillar II in July 2001, however pension funds started their effective operation from January 2003, therefore only data for the period from 2003 to 2015 are presented.

Conservative mandatory pension funds' performance on a cumulative basis

Graph LV VII. Conservative Pension Funds' Cumulative Performance



compared to the inflation is presented below.

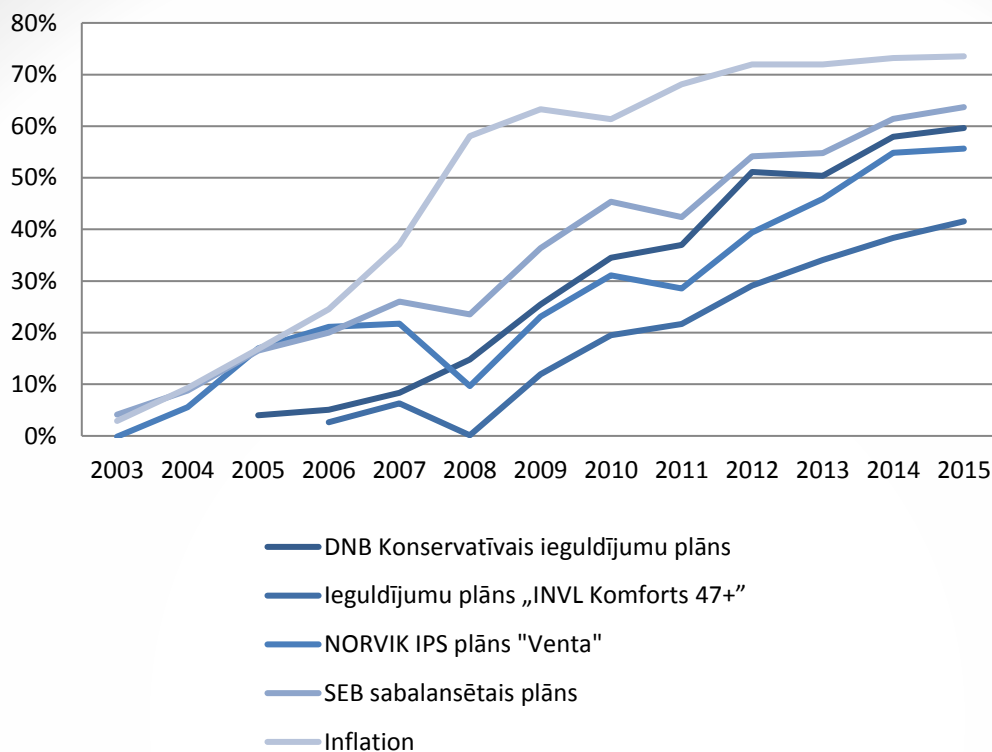
Source: Own calculations based on Manapensija data, 2016 (data as of 31 December of each year)

Balanced pension funds' cumulative performance comparing to the Latvian inflation is presented in graphs below.





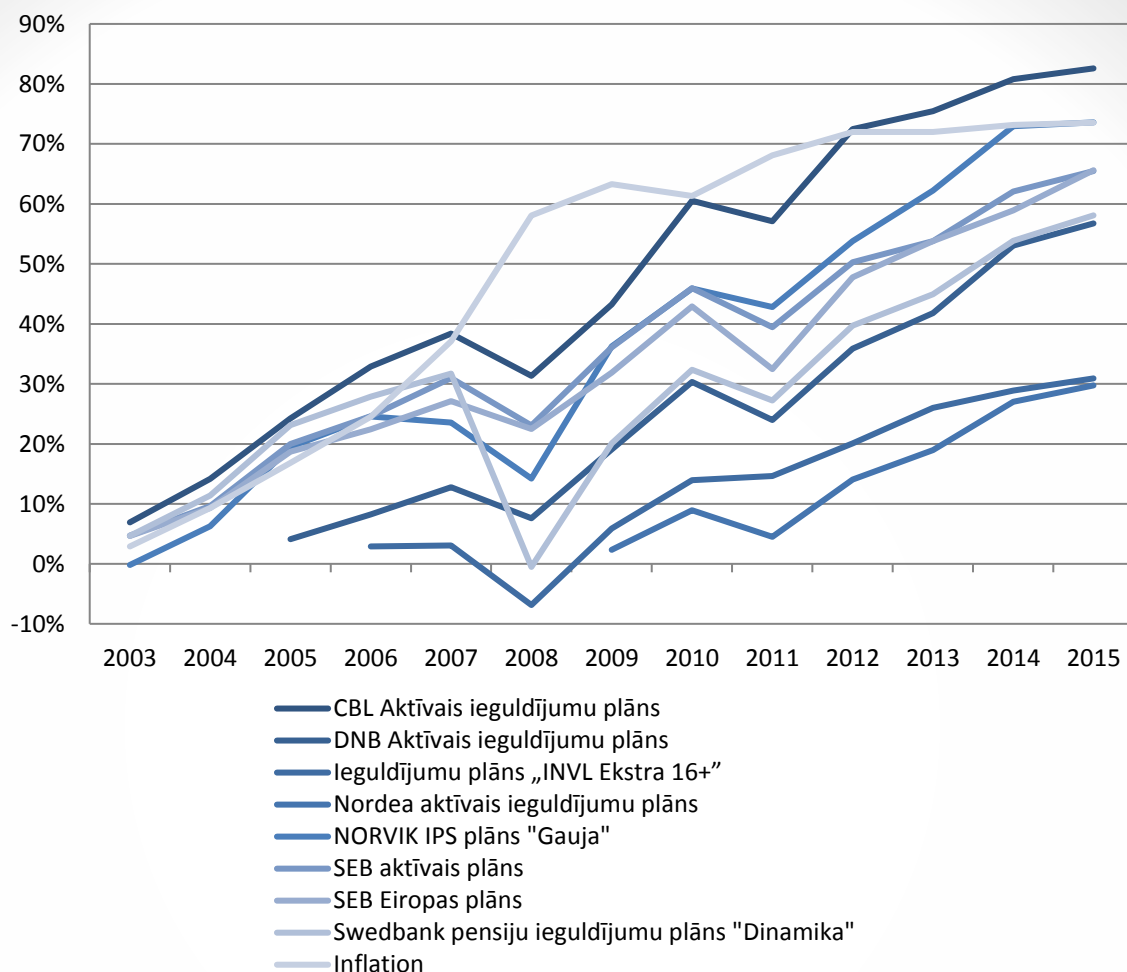
Graph LV VIII. Balanced Pension Funds' Cumulative Performance



Source: Own calculations based on Manapensija data, 2016

Active pension funds' performance on a cumulative basis compared to the inflation is presented in the graphs below.

Graph LV IX. Active Pension Funds' Cumulative Performance



Source: Own calculations based on Manapensija data, 2016

Nominal as well as real returns of state funded pension funds in Latvia weighted by AuM are presented in a summary table below.





Table LV 8 - Nominal and Real Returns of State Funded Pension Funds in Latvia

2003		4,78%		1,88%	
2004		5,79%		-0,41%	
2005		8,94%		2,04%	
2006		3,91%		-2,69%	
2007		3,51%		-6,59%	
2008	Nominal return after charges, before inflation and taxes	-9,93%	4,10%	-	-0,61%
2009		13,36%		25,23%	
2010		8,32%		10,06%	
2011		-2,05%		9,52%	
2012		8,92%		-6,25%	
2013		8,92%		6,62%	
2014		2,29%		2,29%	
2015		5,24%		4,54%	
2015		1,93%		1,73%	

Source: Own calculations based on Manapensija data, 2016

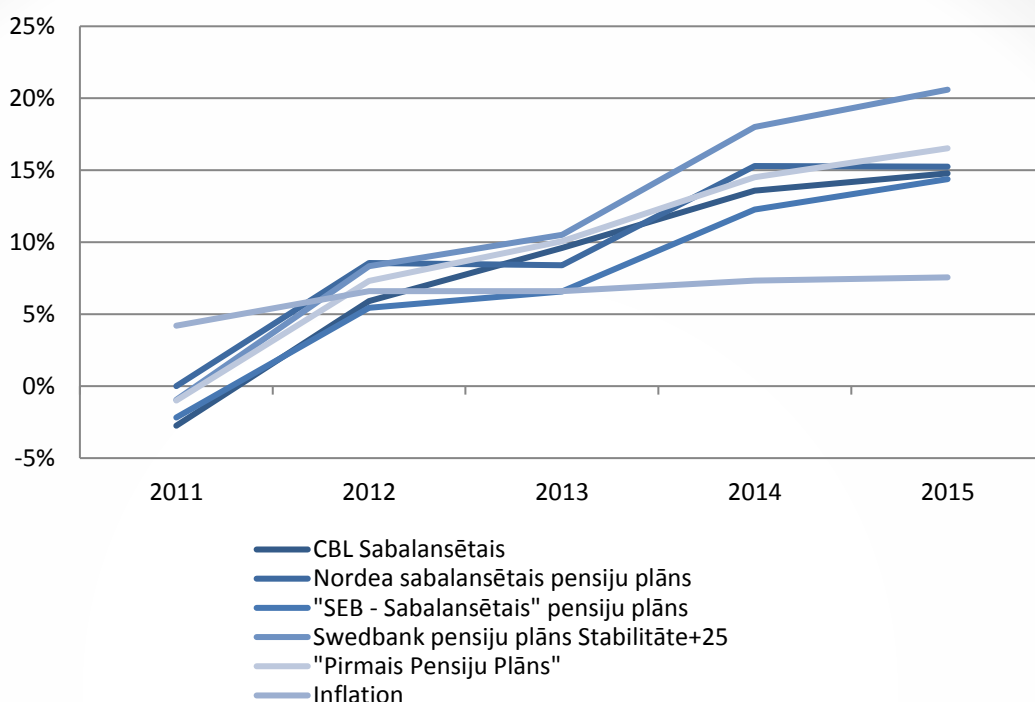
Pillar III – Voluntary private pensions

The analysis of voluntary pension funds' performance uses annual as well as cumulative approaches, peer comparison and inflation.

Investment rules for private pension funds are similar to those for state-funded schemes, but are more flexible. For example, investment in real estate is permitted (with a limit of 15%), the currency matching rule is only 30% and limits for some asset classes are higher. Considering the structure of voluntary pension funds' portfolios in Latvia, larger proportion is invested in structured financial products (mainly equity based UCITs funds) and direct investment in equities and bonds is decreasing.

Due to the lack of publicly available data before 2011, the performance of voluntary pension funds on an annual as well as cumulative basis starting from the year 2011 is presented in the charts below.

Graph LV X. Balanced voluntary open and closed pension funds' cumulative performance



Source: Own calculations based on Manapensija data, 2016

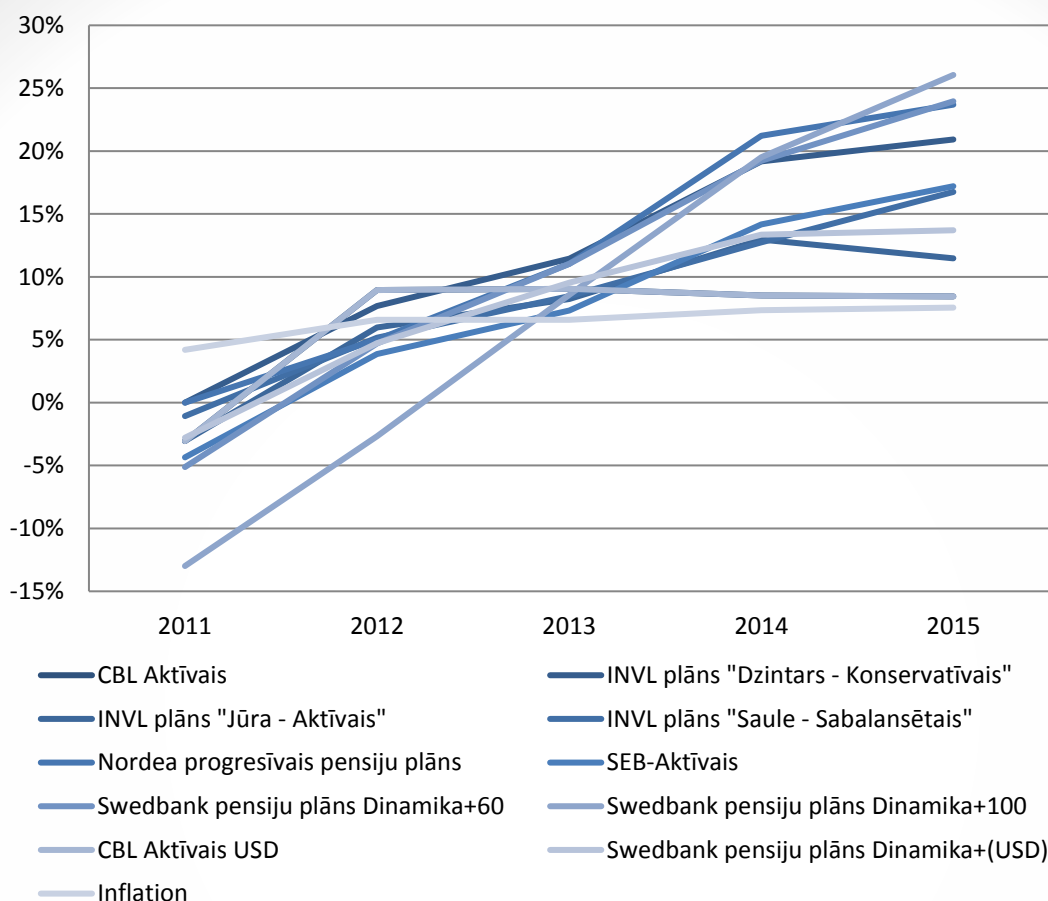
Contrary to balanced pillar II funds, balanced pillar III funds all provide positive real returns (outperform inflation). Balanced pillar III funds have more aggressive portfolio structure. However, short historical data do not allow drawing a comprehensive conclusion on this fact. There is backward pressure of charges, which might reverse the trend in future.

The performance of Latvian active voluntary private pension funds differs significantly and the dispersion of annual as well as cumulative returns is higher. Funds (CBL Rumba and Tvists) which significantly underperformed their peers in the past has been ceased at the end of the year 2014. Performance of analyzed voluntary private pension funds on a cumulative basis is presented in the charts below.





Graph LV XI. Active voluntary pension funds' cumulative performance



Source: Own calculations based on Manapensija data, 2016

Nominal as well as real returns of voluntary pension funds in Latvia weighted by AuM are presented in a summary table below.

Table LV 9 - Nominal and Real Returns of Voluntary pension funds in Latvia

2011	2012	2013	2014	2015
Nominal return after charges, before inflation and taxes				
-2.71%	8.75%	3.08%	5.51%	2.66%
3.54%				
Real return after charges and inflation and before taxes				
-6.91%	6.45%	3.08%	4.81%	2.46%
2.02%				

Source: Own calculations based on Manapensija data, 2016

Conclusions

Latvia has managed to build a sustainable pension system over the last decade with impressive growth in pillar II funds. Acceptance of voluntary pension savings in pillar III is still weak, but this trend has changed after the crisis. Pillar III pension funds will enjoy the highest inflow of new contributions in 2015 despite rather weak performance.

Latvian pillar II and pillar III funds managers enjoy relatively high fees charged to pension funds savers. Delivered performance on the other hand is negative and in most cases pillar II pension funds were not able to beat the inflation. One of the reasons is also relatively conservative risk/return profile of most funds. Pillar III vehicles in Latvia suffer not only from significantly high fees charged by fund managers, but also from low transparency.

Pension fund managers of both pillars started to prefer packaged investment products (investment funds) and limit their engagement in direct investments. Thus the question of potential future returns when using financial intermediaries multiplied by high fee policy in both schemes should be raised.





Pension Savings: The Real Return

2016 Edition

Country Case: Poland

Introduction

The old-age pension system in Poland was introduced in 1999 as a multi-tier solution consisting of three elements:

- Pillar I - a mandatory, PAYG system;
- Pillar II - a previously mandatory, now voluntary funded system; and
- Pillar III - voluntary, occupational and individual pension vehicles.

Table PL 1. Multi-pillar pension system in Poland

<u>Pillar I</u>	<u>Pillar II</u>	<u>Pillar III</u>
<ul style="list-style-type: none"> • Mandatory • PAYG • NDC • Basic benefit 	<ul style="list-style-type: none"> • Mandatory/Voluntary¹³⁸ • Funded • DC • Basic benefit 	<ul style="list-style-type: none"> • Voluntary • Funded • DC • Complementary benefit
<u>Publicly managed:</u>	<u>Privately managed:</u>	<u>Privately managed:</u>
<ul style="list-style-type: none"> • Social Insurance Institution (ZUS) 	<ul style="list-style-type: none"> • Open Pension Funds (OFEs) • Managed by Pension Societies (PTEs) 	<ul style="list-style-type: none"> • Pension savings managed by different financial institutions, depending on the product form organised by employer or individual

Source: own elaboration

¹³⁸ It was mandatory until the end of March 2014.

The first part of the system is contributory and is based on a Nonfinancial Defined Contribution (NDC) formula. The total pension contribution rate amounts to 19.52% of gross wage (pillar I + pillar II) and a premium is financed equally by employer and employee. 16.60 p.p. of the mentioned above pension contribution is transferred to pillar I (written down on individual accounts of the insured and sub-accounts) and 2.92 p.p. may be allocated (voluntarily) to an open pension fund (pillar II). If a person had not joined pillar II and had not decided to stay in an open pension fund in 2014¹³⁹, all contributions are transferred to the PAYG system (pillar I).

The first pillar is managed by the Social Insurance Institution (ZUS), which writes down the quota of contributions paid for every member on individual insurance accounts. The balance of the account (pension rights) is switched into pension benefits when an insured person retires. The statutory retirement age is 60 for women and 65 for men but it started to increase in 2013 (by one month every three months). The process will end when it reaches 67 for both men and women (in 2020 for men and in 2040 for women).

The pension amount from Pillar I depends solely on two components: 1) the insured person's total pension entitlement accumulated during his/her entire career (balance of NDC account), 2) the average life expectancy upon retirement.

Pillar II of the Polish pension system consists of open pension funds (otwarte fundusze emerytalne, OFE) managed by pension societies (powszechnie towarzystwa emerytalne, PTE). Until the end of March 2014, 2.8 p.p. of mandatory pension contributions went to pillar II and were invested in financial markets within limits laid down by pension law. Members of the system were allowed to choose just one fund out of 14 OFEs operating in the market. Since April 2014, participation in the open pension funds of pillar II is voluntary¹⁴⁰. The government decided to grab accumulated pension assets (almost 300 billion PLN or €71.7) to lower official public debt. The results were felt immediately, as changes included the transfer of OFEs' bond portfolios to the Social Insurance Institution (ZUS) at the

¹³⁹ Two years after the change that made OFE's voluntary, namely in 2016, the insured can again decide about his/her participation in Pillar II. In future "the transfer window" will open every four years.

¹⁴⁰ The law of 6 December 2013 introduced from 1st January 2014 and 1st April 2014.





beginning of 2014¹⁴¹. Now the withdrawal of the OFEs is expected due to the diminishing value of OFE's assets.

An insured person who enters the labour market has the right to choose whether to join an OFE or whether to remain solely in the PAYG system (NDC). When the insured chooses to contribute to the OFE (pillar II), 2.92% of his/hers gross salary will be transferred to the fund. In this case his/her money will be invested more aggressively, as the new pension law imposed a ban on the purchase of government bonds by OFE. If no decision is taken by the member, his/her total old-age pension contribution (19.52%) will automatically be transferred to the Social Insurance Institution (ZUS). This default option resulted in a huge decrease in OFEs' active participation.

Last but not least, recent regulations state that pension benefits from assets gathered in OFE are calculated in accordance with Defined Contribution (DC) rules and are paid by a Social Insurance Institution together with benefits from nonfinancial pillar (NDC system)¹⁴². Prior the retirement all the member's assets are transferred to the pillar I.

Polish open pension funds are frequently treated as typical private pension plans (OECD 2012) or even employer-arranged pension funds (Oxera 2013) when presented in global private pension funds statistics. Such an assessment is incorrect in the sense that neither the employer nor the employee can decide on the creation of the pension plan. Moreover, the law establishes that the contribution level and the pension benefits are paid by the public institution (ZUS). Thus, Polish OFEs have just been a mechanism of investing public pension system resources in financial markets (financial vehicles for the accumulation phase). Moreover, they were an important part of the public mandatory pension system.

Pillar III supplements the basic, mandatory pension system (pillar I and pillar II) and represents voluntary, additional pension savings. It consists of three different elements:

¹⁴¹ This operation resulted in a huge reduction of assets – at the end of 2013 the assets in OFEs amounted to PLN 299 billion (€71.5 billion) but after shifting PLN 153 billion (€36.6 billion) to ZUS dropped to ca. PLN 154 billion (€36.8 billion).

¹⁴² Money gathered on individual accounts in OFE will be systematically transferred to the Social Insurance Institution (ZUS) during 10 years before retirement. ZUS will pay all the benefits from the mandatory system (PAYG and funded components).

- employees (occupational) pension programmes (pracownicze programy emerytalne, PPE);
- individual retirement accounts (indywidualne konta emerytalne, IKE);
- individual retirement savings accounts (indywidualne konta zabezpieczenia emerytalnego, IKZE).

Pension programmes for employees (pracownicze programy emerytalne, PPE) are plans organised by employers for their employees. PPE settlement happens after an employer agrees with the representatives of the employees on the plan's operational conditions, signs the contract on asset management with a financial institution (or decides to manage assets himself) and registers a programme with the Financial Supervisory Commission (Komisja Nadzoru Finansowego, KNF). The basic contribution (up to 7% of the employee's salary) is financed by the employer but an employee has to pay personal income tax on this money. Participants to the programme can pay in additional contributions deducted from their net (after-tax) salaries. There is a yearly quota limit for additional contribution amounting to 4.5 times the average wage (PLN 18,247.50 - €4,011.05 - in 2016). PPE's returns are exempt from capital gains tax. Benefits are not taxable and can be paid as a lump sum or as a programmed withdrawal after the saver reaches 60 years.

Individual retirement accounts (indywidualne konta emerytalne, IKE) were introduced in 2004, offering people the possibility to save individually for retirement. They are offered by various financial institutions such as asset management companies, life insurers, brokerage houses, banks and pension societies. An individual can only gather money on one retirement account at the time but is free to change the form and the institution during the accumulation phase. Contributions are paid from the net salary with a ceiling of 3 times the average wage (PLN 12,165 - €2,829.07 - in 2016). Returns are exempt from capital gains tax and the benefits are not subject to taxation. When a saver reaches 60 years of age (or 55 years, if he/she is entitled by law to retire early), money is paid in the form of a lump sum or a programmed withdrawal.

Individual pension savings accounts (indywidualne konta zabezpieczenia emerytalnego, IKZE) are the most recent products within the voluntary pension sector. They started to operate in 2012 and are offered in the same forms as individual retirement accounts (IKE) but have other contribution ceilings and offer a different form of tax relief. Premiums paid to the account can be deducted from the income tax base. Contributions and returns are exempt from taxation but the benefits are subject to taxation at a reduced rate. Savings accumulated in IKZE are





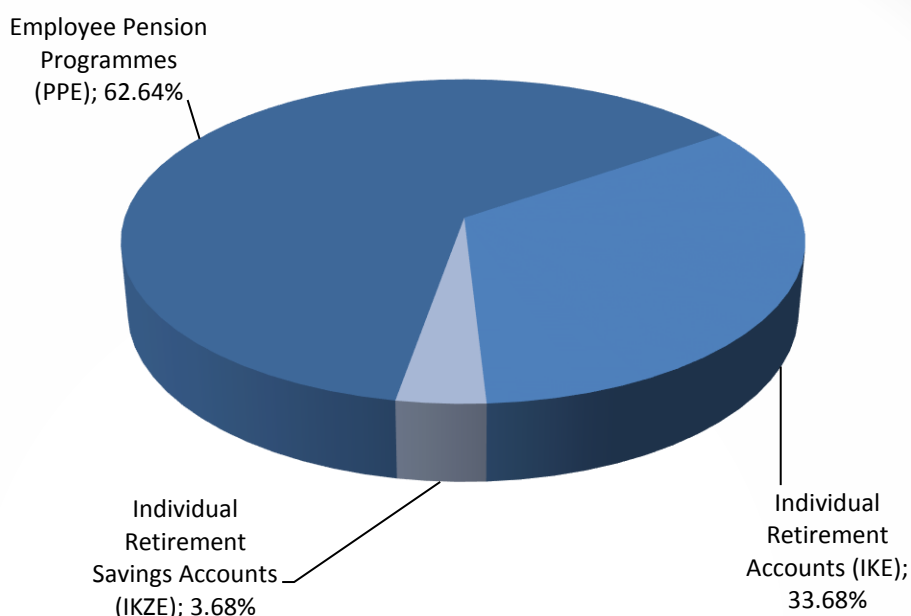
paid to the individual as a lump sum or via a programmed withdrawal after the saver reaches the age of 65. The limit for IKZE contributions is 120% of the average wage (PLN 4,866 - €1,132 in 2016).

Table PL 2. Architecture of voluntary pension system in Poland (pillar III) at the end of 2015

Name of the pension system element	Employee Pension Programmes (PPE)	Individual Retirement Accounts (IKE)	Individual Retirement Savings Accounts (IKZE)
Types of pension vehicles	· Unit-linked life insurance	· Unit-linked life insurance	· Unit-linked life insurance
	· Investment fund	· Investment fund	· Investment fund
Assets under management in PLN bbln (€ bln)	· Employee pension fund	· Account in the brokerage house	· Account in the brokerage house
		· Bank account	· Bank account
		· Voluntary pension fund	· Voluntary pension fund
	10.6	5.7	0.62
	(€ 2.47)	(€ 1.33)	(€ 0.14)

Source: own collaboration based on: Pracownicze programy emerytalne w 2015 roku, UKNF, Warszawa 2016, p. 3, http://www.knf.gov.pl/Images/RAPORT_PPE_2015_tcm75-47390.pdf; Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 3-4, http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf

**Graph PL I. Market share of Polish voluntary pension system elements
by assets under management as of 31 December 2015**



Source: own collaboration based on: Pracownicze programy emerytalne w 2015 roku, UKNF, Warszawa 2016, p. 3, http://www.knf.gov.pl/Images/RAPORT_PPE_2015_tcm75-47390.pdf; Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 3-4, http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf

Pension Vehicles

Employees' pension programmes

PPEs can be offered in four forms:

- a contract with an asset management company (investment fund),
- a contract with a life insurance company (group unit-linked insurance),
- an employee pension fund run by the employer,
- external management.

Employee pension programmes started to operate in 1999. The development of the market was very weak during the first five years of operation. Thereafter, due to changes in PPE law, many group life insurance contracts were transformed into PPEs at the end of 2004 and in 2005. In 2007 the number of programmes reached

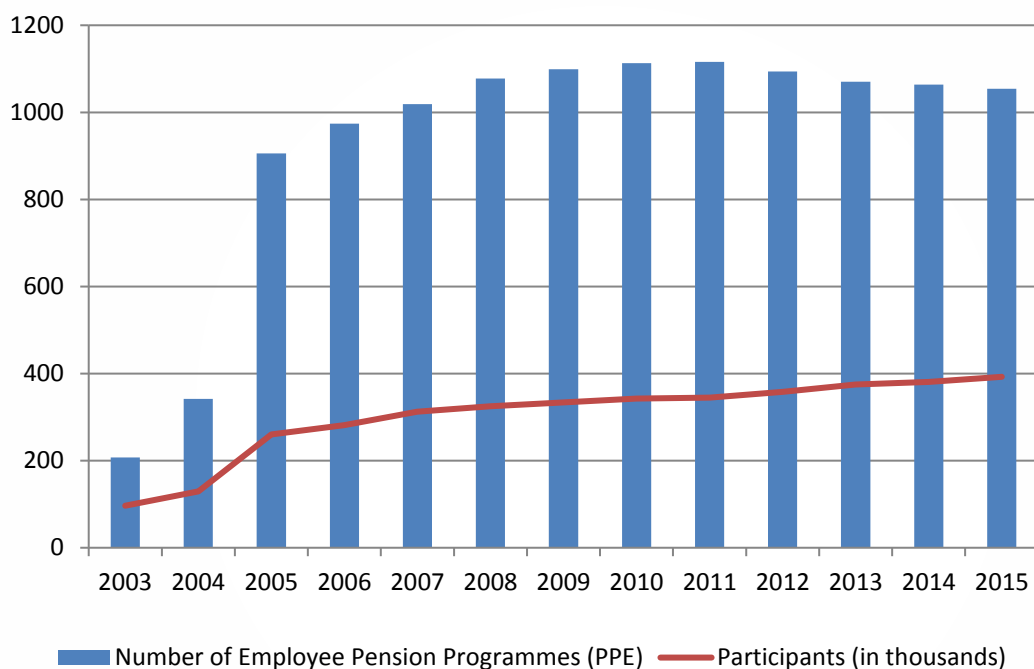




1000, with the size of the market remaining more or less the same since that year. About 1054 programmes were operating at the end of 2015 (see chart below).

PPEs cover 392,600 employees which represents only 2.41% of the working population in Poland.

Graph PL II. Number of Employee Pension Programmes and the number of PPE participants in 1999-2015



Source: Pracownicze programy emerytalne w 2015 roku, UKNF, Warszawa 2016, p. 6, http://www.knf.gov.pl/Images/RAPORT_PPE_2015_tcm75-47390.pdf; Rynek pracowniczych programów emerytalnych w 2005 r.; UKNUiFE, Warszawa 2006, p. 3, http://www.knf.gov.pl/Images/ppe2005_tcm75-4939.pdf

The most popular form of PPE is a group unit-link life insurance and an investment fund. These two forms represent more than 95% of PPEs (see table below). The proportion is lower when taking into consideration the number of participants (84%) and the level of assets (77.5% of total PPE's assets are invested in insurance funds and investment funds).

Table PL 3. Number and assets of Employee Pension Programmes (PPE) by form of the programme in 2015

	Number of PPE	Market share (as % of PPE number)	Market share (as % of participants)	Assets (PLN million)	Market share (as % of PPE assets)
Unit-linked life insurance	689	65.4%	30%	2,836.3	26.70%
Investment fund	332	31.5%	58.70%	5,991.4	56.40%
Employee Pension Fund	33	3.1%	11.30%	1,795.3	16.90%
Total	1,064			10,623	

Source: Pracownicze programy emerytalne w 2015 roku, UKNF, Warszawa 2016, p. 7-8,
http://www.knf.gov.pl/Images/RAPORT_PPE_2015_tcm75-47390.pdf

The average basic contribution paid in 2015 amounted to PLN 3,366 (€782.8). The average additional contribution financed by the employee amounted to PLN 1,204 (€280) on average. PPE assets amount to PLN 10.6 billion (€2.47 billion) and the average account balance equals PLN 27,464 (€6,387) in 2015. No data is available on the average percentage level of contributions paid to the programmes.

Individual Retirement Accounts (IKE)

According to Polish pension law (the Individual Pension Accounts Act of 20 April 2004), individual retirement accounts (Indywidualne Konta Emerytalne, IKE) can be in the form of:

- a unit-linked life insurance contract;
- an investment fund;
- an account in a brokerage house;
- a bank account (savings account); or
- a voluntary pension fund.

Pension accounts are offered by life insurance companies, investment companies (asset management companies), brokerage houses, banks and pension societies. The most recent pension vehicles are voluntary pension funds that were introduced in 2012 at a time of significant changes in the statutory old-age pension system.



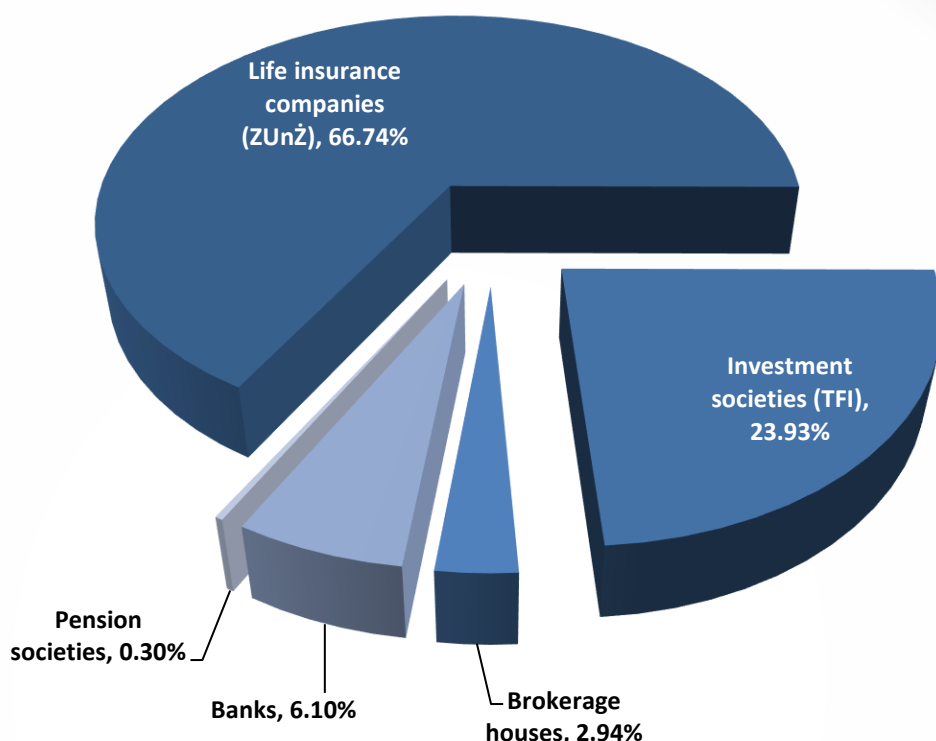


A voluntary pension fund is an entity established solely with the aim of gathering savings of IKE (or IKZE) holders. Pension assets are managed by a pension society (powszechnie towarzystwo emerytalne, PTE) that also manages one of the open pension funds (OFE under pillar II) in Poland. Assets of the funds are separated to guarantee the safety of the system, as well as due to stricter OFE investment regulations. Having participants in the mandatory funds (which have been made voluntary in April 2014), pension societies have far easier access to potential clients from the voluntary pension market. They are continuously recruiting new participants.

The constructions of IKE products usually do not vary significantly from the standard offer on financial markets. The difference relates to the tax treatment of capital gains (exclusion from capital gains tax) and contribution limits. Moreover, financial institution cannot charge any cancellation fee when an individual transfers money or resigns after a year from opening an account.

The most popular IKE products take the form of life insurance contracts (unit-linked life insurance) and investment funds. According to official data (KNF 2016), these two forms of plans represent 90.6% of all IKE accounts.

Graph PL III. Structure of IKE market by number of accounts and type of provider as of 31 December 2015



*Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 9,
http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf*

At the end of 2015, only 858,725 Polish citizens had an individual retirement account (IKE) which represents 5.3% of the working population. They gathered PLN 6.6 thousand (€1,534.9) on average on an account. IKE holders do not fully use the contribution limit. The average contribution paid from 2004 to 2015 remains permanently below the statutory limit (three times the average wage, see table below). The total amount of IKE assets amounted to PLN 5.7 billion (€1.33 billion) as of 31 December 2015.





Table PL 4. Number of Individual Retirement Accounts (IKE) by type of the product (2004-2015)

	Unit-linked life insurance	Investment fund	Account in the brokerage house	Bank account	Voluntary pension fund	Total
2004	110,728	50,899	6,279	7,57		175,476
2005	267,529	103,624	7,492	49,22		427,865
2006	634,577	144,322	8,156	53,208		840,263
2007	671,984	192,206	8,782	42,52		915,492
2008	633,665	173,776	9,985	36,406		853,832
2009	592,973	172,532	11,732	31,982		809,219
2010	579,09	168,664	14,564	30,148		792,466
2011	568,085	200,244	17,025	29,095		814,449
2012	557,595	188,102	20,079	47,037	479	813,292
2013	562,289	182,807	21,712	49,37	1,473	817,651
2014	573,515	174,515	22,884	51,625	1,946	824,485
2015	573,092	205,494	25,22	53,371	2,548	859,725

Sources: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 9,

http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf; Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2013 roku, UKNF, Warszawa 2014, p. 9; http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_12_2013_tcm75-37673.pdf;

Indywidualne konta emerytalne w 2011 roku, UKNF, Warszawa 2012, p. 9,

http://www.knf.gov.pl/Images/IKE_2011_tcm75-30322.pdf; Informacja o indywidualnych kontaktach emerytalnych sporządzona na podstawie danych liczbowych za 2006 r, UKNF, Warszawa 2007, p.

2, http://www.knf.gov.pl/Images/Oprac_IKE_2006_tcm75-7543.pdf; Rocznik Ubezpieczeń i Funduszy Emerytalnych 2004, UKNUiFE, Warszawa 2005,

http://www.knf.gov.pl/Images/Oprac_IKE_2006_tcm75-7543.pdf

Table PL 5. Limits on contributions and average contribution paid into IKE in 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Contribution limit	3,521	3,697	4,055	9,579	9,579	10,077	10,578	11,139	11,238	11,788
Average contribution paid	2,199	1,719	1,561	1,85	1,971	1,982	2,584	3,130	3,440	3,500

Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 6 & 12,

http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf; Indywidualne konta emerytalne w 2010 r., UKNF, Warszawa 2011, p. 11,

http://www.knf.gov.pl/Images/IKE_XII_2010_tcm75-26322.pdf

Individual Retirement Savings Accounts (IKZE)

Similar to individual retirement accounts, the group of IKZE products consists of:

- unit-linked life insurance,
- investment funds,
- bank accounts,
- accounts in brokerage houses,
- voluntary pension funds.

As this part of the pension system only has a two-year history (started in 2012), the number of participants is still at an unsatisfactory level. Only about 3.7% of the Polish working population (2015) is covered by this type of supplementary old-age provision.





Table PL 6. Number of Individual Retirement Savings Accounts (IKZE) by type of the product (2012-2015)

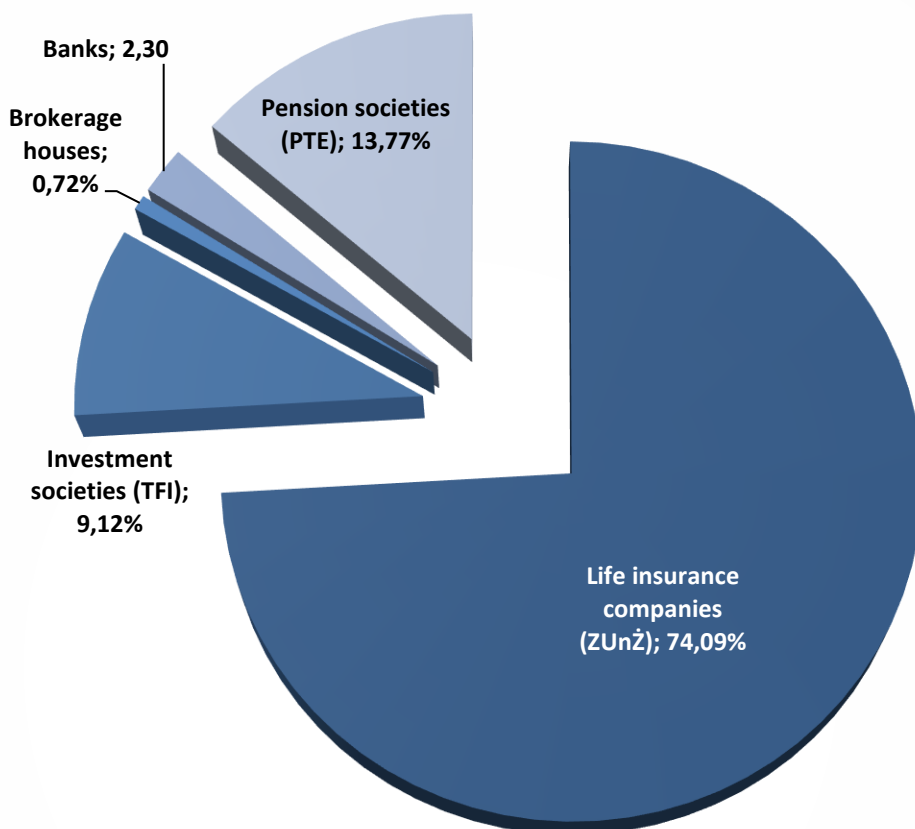
Type of the product	2012	2013	2014	2015
Unit-linked life insurance	363,399	388,699	418,935	442,735
Investment fund	5,202	9,565	17,51	54,471
Account in the brokerage house	559	1,012	2,797	4,325
Bank account	19	33	8,105	13,735
Voluntary pension fund	127,642	97,117	80,795	82,294
Total	496,821	496,426	528,142	597,56

Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 20, http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf; Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2013 roku, UKNF, Warszawa 2014, p. 20; http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_12_2013_tcm75-37673.pdf.

By the end of 2015, almost 600 thousand Poles have opened individual retirement savings accounts. As shown on Graph PL IV, the IKZE market is dominated by insurance companies that run more than 74% of the accounts. Investment companies (Towarzystwa Funduszy Inwestycyjnych, TFI), brokerage houses and banks do not show a lot of interest in providing this type of old-age pension provision, although some of them put IKZE in their offers.

The savings pot of IKZE is very small compared to other elements of the Polish supplementary pension system. At the end of 2015, financial institutions managed funds amounting to PLN 622 million (€144.64 million). It is worth noting that this capital was raised through contributions in just four years. The rapid growth of the IKZE market in terms of coverage and the value of assets is expected in the coming years. This growth could happen as a consequence of recent changes in IKZE taxation: a higher flat-rate contribution limit that can be deducted from the tax base and benefit payments subject to a reduced income tax rate.

Graph PL IV. Structure of IKZE market by number of accounts and type of provider as of 31 December 2015



*Source: Own elaboration based on: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 20,
http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf*





Table PL 7. Assets of IKZE (in thousands PLN)

Type of the product	2012	2013	2014	2015
Unit-linked life insurance	36,393	75,117	167,737	281,946
Investment fund	7,973	23,371	63,559	195,475
Account in the brokerage house	1,673	4,815	14,638	30,268
Bank account	40	98	11,624	35,081
Voluntary pension fund	6,803	15,805	37,792	79,198
Total	52,882	119,206	295,350	621,968

Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2015 roku, UKNF, Warszawa 2016, p. 21,
http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_122015_tcm75-47033.pdf;
 Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2013 roku, UKNF, Warszawa 2014, p. 21;
http://www.knf.gov.pl/Images/Oprac_IKE_IKZE_12_2013_tcm75-37673.pdf

Charges

The type and level of charges deducted from pension savings depends on the vehicle used and the type of programme. Lower fees are charged for group (collective) provision of an old-age pension organised by employers (PPE). Significant cost differences exist between various product types. Since no comprehensive data regarding the costs of Polish supplementary products is collected or officially published, the information provided below reflects the costs of selected (exemplary) pension products and plans functioning on the Polish market.

Employee Pension Programmes (PPE)

Data on PPE charges is hardly available. The Financial Supervisory Commission does not provide any official statistics on value or the percentage of deductions on assets of employee pension programmes. Some information can be found in the statutes of PPEs but they describe rather the types of cost charged than the level of deductions. Employers have to cover many administrative costs connected with PPE organisation (disclosure of information, collecting employees' declarations, transfer of contributions). The savings of participants are usually reduced by a management fee that varies from 0.5% p.a. to 4% p.a. of AuM and depend on the investment profile of funds chosen.

The lowest charges are applied to employee pension funds (Pracownicze Fundusze Emerytalne, PFE), which are set up by employers (in-house management of PPE)

and managed by employee pension societies. For this type of pension fund no up-front fee is deducted and a rather low management fee (0.5 - 1% p.a.) applies to assets gathered.

Individual Retirement Accounts (IKE) and Individual Retirement Savings Accounts (IKZE)

The type and level of charges depend on the type of product. There is a management fee for investment funds, for voluntary pension funds and for unit-linked insurance. In addition, for a unit-linked life insurance, a financial institution can charge an up-front fee, use different buy and sell prices for investment units (spread) and deduct other administrative fees from the pension savings accounts, such as conversion fees and fees for changes in premium allocation in case changes occur more frequently than stipulated in the terms of the contract. Charges that are not connected with asset management and the administration of savings accounts cannot be deducted from IKZE (i.e. life insurance companies cannot deduct the cost of insurance from the retirement account). The accumulation of pension savings through direct investments (accounts in brokerage houses) is subject to fees which depend on the type of transaction and the level of activity on financial markets (trading fees and charges). Banks do not charge any fees for the IKZEs they offer (with the exception of a cancellation fee).

All financial institutions offering individual retirement accounts (IKE) can charge a cancellation fee (also called a transfer fee) when a member decides to transfer savings to a programme offered by another financial entity during the first year of the contract. No cancellation fee can be deducted from the account when a saver resigns from the services of a given institution after 12 months and transfers money to another plan provider.

The tables below show the level of fees charged in selected individual retirement savings accounts (IKZE).





Table PL 8. Charges in IKZE offered by Life insurance companies (unit-linked life insurance contracts)

Institution	Name of fund	Management fee (as % of assets)	Up-front fee	Transfer fee
Aviva TUnŻ	Aktywnej Selekcji - Stabilny	2.25%	8% - first PLN 6,000, then 4%; 10% - first PLN 6,000, then 6% (with add. insurance)	50% of assets
	Aktywnej Selekcji - Zrównoważonego	3.25%		
	Aktywnej Selekcji Dynamiczny	4.00%		
ING Życie	ING Portfel Inwestycyjny Stabilny	2.00%	None	50% of assets
	ING Portfel Inwestycyjny Wzrostowy			
	ING Gotówkowy	0.00%		
	ING Obligacji	1.25%		
	ING Ochrony Kapitału	1.50%		
	ING Stabilnego Wzrostu	2.50%		
	ING Zrównoważony	3.00%		
	ING (L) Papierów Dłużnych Rynków Wschodzących (WL)	1.80%		
	ING (L) Globalny Dług Korporacyjnego			
	ING Akcji	3.50%		
	ING Selektywny			
	ING Środkowoeuropejski Sektorów Wzrostowych			
	ING (L) Globalny Spółek Dywidendowych	2.50%		
	ING (L) Spółek Dywidendowych USA			
	ING (L) Europejski Spółek Dywidendowych			
	ING (L) Nowej Azji			
	ING (L) Rynków Wschodzących			

	ING (L) Ameryki Łacińskiej			
	ING (L) Japonia			
Pramerica Życie TUiR	UFK Pramerica – Pioneer Akcji Polskich		None	20% of assets
	UFK Pramerica – Pioneer Stabilnego Wzrostu	2.5% - share funds		
	UFK Pramerica – Pioneer Obligacji	1.5% - stable growth funds;		
	UFK Pramerica – PKO Akcji	1% - bond funds		
	UFK Pramerica – PKO Stabilnego Wzrostu			
	UFK Pramerica – PKO Obligacji			
	UFK Pramerica – Arka BZ WBK Akcji			
	UFK Pramerica – Arka BZ WBK Stabilnego Wzrostu			
	UFK Pramerica – Arka BZ WBK Obligacji			
	UFK Pramerica – Legg Mason Akcji			
	UFK Pramerica – Legg Mason Senior			
	UFK Pramerica – Legg Mason Obligacji			
PZU Życie SA	Stabilnego Wzrostu	4.50%	4% - in first 3 years,	10% of assets, not less than PLN 50
			3% - yrs 4-5,	
			2% - yrs 6-10,	
			1% - yrs 11+	

Source: Ostrowska K., Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych, "Rzeczpospolita", 01.03.2012 r.





Table PL 9. Charges in IKZE offered by Investment Societies (investment funds)

Institution	Name of fund	Management fee (as % of assets)	Up-front fee	Transfer fee
KBC TFI	KBC Globalny Akcyjny	3.00%	none	none
	KBC Akcyjny	4.00%		
	KBC Aktywny	3.75%		
	KBC Globalny Stabilny	2.00%		
	KBC Stabilny	2.50%		
	KBC Papierów Dłużnych	1.35%		
	KBC Pieniężny	0.80%		
	KBC Akcji Małych i Średnich Spółek	2.30%		
Legg Mason TFI	LM Akcji	3.50%	none (a fee of PLN 400 for opening the account, not charged when opening the account directly at Legg Mason offices or online)	PLN 500
	LM Strateg			
	LM Senior	2.50%		
	LM Obligacji	1.50%		
	LM Pieniężny	0.80%		
Pioneer Pekao TFI	Pioneer FIO - subfundusz Pioneer Akcji - Aktywna Selekcja	3.60%	1.50-5.00 % +loyalty programme (20% reduction in fee in 0-4 years, 30% after 4 years, 50% after 6 years, no fee after 8 years)	PLN 100
	Pioneer FIO - subfundusz Pioneer Obligacji Plus	1.60%		
	Pioneer FIO - subfundusz Pioneer Lokacyjny	1.50%		

Source: own elaboration detailed information from: Ostrowska K., Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych, "Rzeczpospolita", 01.03.2012 r. and analizy.pl.

Table PL 10. Charges in IKZE offered by Pension Associations (voluntary pension funds)

Institution	Product	Management fee (as % of assets)	Up-front fee	Transfer fee
Allianz Polska PTE	Allianz Polska DFE	max. 2.5%	1.50%	PLN 200
Amplico PTE	MetLife DFE	max 2.5 %	1-2.5%, if the account balance lower than PLN 20,000	15% of assets, min. PLN 300
Generali PTE	Generali DFE	max. 2.6%	25% (min. PLN 200, max. PLN 400) in 1st year, 1.9% in the 2nd year; 1.8% in 3rd year; 1.6% in years 4-9; 0% years 10+	
Nordea PTE	Nordea DFE	1.95% + success fee 15%, if results above benchmark and positive	0-4%, depending on the quota of contribution 0-1% upfront-fee on money transferred from other institution	20% of assets, max. PLN 500
Pocztynion-Arka PTE	DFE Pocztynion Plus	max 2.5%	0-3%, depending on the quota of contribution	10% of assets, min. PLN 100
PTE PZU	DFE PZU	up to 2.99% + success fee max. 20% of the surplus above benchmark	3.4% in first 5 years, 2.9% - yrs 6-10, 2.4% - yrs 11-15, 1.0% - yrs 15+-	10% of assets, PLN 50 at least
ING PTE	Nationale Nederlanden DFE	Max. 2% (1,5% of the surplus above PLN 1 bln AUM) + success fee 15% of the surplus above 8% return	53.4% only from the first contribution (max PLN 80), next contributions: 0%	50% of assets
PKO BP Bankowy PTE	PKO DFE	max 3.5%	none	50% of assets
Pekao Pioneer PTE	Pekao DFE	max 2.6%	2.5% or 0% (if the total contribution amounts to more than PLN 10,000)	10% of assets, min. PLN 50

Source: www.analizy.pl, 2016.





Taxation

Employees' pension programmes (PPE)

Basic contributions financed by employers are subject to personal income tax, which is deducted from the employee's salary. Additional contributions paid by employer from net salary are treated the same way (contributions paid from after-tax wage). Returns and benefits are not taxed (TEE regime).

Individual Retirement Accounts (IKE)

Contribution is taxed as it is paid by a saver from his/her net income. An individual can pay up to three times the average wage annually (PLN 12,165 - €2,829.07 - in 2016). There is a tax relief in capital gains tax. Benefits are not taxable (TEE regime).

Individual Retirement Savings Accounts (IKZE)

Contributions to IKZE are deductible from the income tax base. In 2012 and 2013 there was an upper limit of contribution amounting to 4% of the person's annual salary in the previous year. Due to the most recent changes in the pension system the given limit was replaced with a flat-rate limit in 2014. Every individual can pay up to 120% of the average salary into an account (PLN 4,866 - €1,131.63 in 2016).

Returns are not subject to taxation but benefits are taxed with a reduced flat-rate income tax (10%). This part of the supplementary pension system is the only one that follows the EET tax regime.

Pension Returns

Asset allocation

Employee Pension Programmes (PPE)

Polish law does not impose any strict investment limits on voluntary pension savings accounts (IKE, IKZE, most forms of PPE) with exception of occupational pension programmes offered in the form of employees' pension fund (types of asset classes are prescribed by law). Every financial institution that offers IKE or IKZE provides information on investment policy in the statutes of the fund. Due to the fact that many existing plans offer PPE participants the possibility to invest in funds from a broad group of investment funds operating in the market (not only the funds dedicated exclusively to pension savings), it is impossible to indicate how the portfolios of the majority of PPEs look like .

The tables below present the investment portfolio of employees' pension funds which are the only types of occupational pension products with official and separate statistics on asset allocation.

Table PL 11. Portfolio of employees' pension funds (PFE) in years 2010-2015 (as % of assets)

	2010	2011	2012	2013	2014	2015
Shares	14.19%	14.90%	19.49%	29.86%	33.00%	34.09%
Gov. bonds	1.48%	2.14%	1.53%	2.01%	1.05%	2.27%
Investment funds units	24.30%	33.13%	37.53%	49.83%	61.64%	63.64%
Bank deposits	58.78%	48.90%	40.91%	17.91%	4.30%	0.00%
Other investments	1.25%	0.92%	0.54%	0.39%	0.01%	0.00%
Assets under management (in PLN mln)	1,542.60	1,559.00	18,73.28	2,038.54	1,749.60	1,797.08

Source: own collaboration based on: Biuletyn roczny. Rynek PPE 2015, KNF, Warszawa 2016; Biuletyn roczny. Rynek PPE 2014, KNF, Warszawa 2015; Biuletyn roczny. Rynek PPE 2013, KNF, Warszawa 2014; Biuletyn roczny. Rynek PPE 2012, KNF, Warszawa 2013; Biuletyn roczny. Rynek PPE 2011, KNF, Warszawa 2012; Biuletyn roczny. Rynek PPE 2010, KNF, Warszawa 2011

Individual Retirement Accounts (IKE) and Individual Retirement Savings Accounts (IKZE)

There are no available statistics that allow for the identification of the asset allocation within Individual Saving Accounts (IKE) and Individual Retirement Savings Accounts (IKZE) offered as insurance contracts, investment funds and accounts in brokerage houses. This is because an individual can buy units of many investment funds (or financial instruments) that are also offered as non-IKE and non-IKZE products. Since no separate statistics for pension and non-pension assets of a given fund are disclosed, it is impossible to indicate which funds create the portfolios of IKE and IKZE holders, nor what the rates of returns obtained by this group of savers are.

The only form of IKE and IKZE that is strictly separated from other funds and is dedicated solely to pension savings is a voluntary pension fund. These vehicles started in 2012. The table below shows the DFE's investment portfolios at the end of 2014.





Table PL 12. Portfolio of voluntary pension funds (DFE) offered as Individual Retirement Saving Accounts (IKZE) and Individual Retirement Accounts (IKE) in 2014, as % of DFE assets

	Allianz Polska DFE (D)	DFE Pekao	DFE Pocztyli on Plus	DFE PZU	ING DFE	MetLif e DFE	Nordea DFE(D)	PKO DFE
Shares	33.46	43.83	24.62	66.82	63.74	39.46	37.44	35.29
Gov. Bonds	32.43	40.45	67.55	13.94	0.00	40.26	35.32	53.04
Nongov. Bonds	21.81	2.86	0.00	2.40	12.35	0.00	10.44	0.00
Other	12.3	12.86	7.83	16.84	23.92	20.27	16.81	11.67
Assets under management (in PLN mln)	3.72	13.18	0.55	9.08	5.92	19.11	1.63	6.29
Market share (as % of total DFEs' assets)	6.25	22.16	0.92	15.27	9.95	32.13	2.74	10.57

Source: <http://www.analizy.pl>, 2015

Table PL 13. Portfolio of voluntary pension funds (DFE) offered as Individual Retirement Saving Accounts (IKZE) and Individual Retirement Accounts (IKE) in 2015, as % of DFE assets

	Allianz Polska DFE	DFE Pekao	DFE Pocztylion Plus	DFE PZU	Generali DFE	NN DFE	MetLife Amplico DFE	PKO DFE
Shares	35.12	52.9	26.26	73.26	37.44	57.45	61.24	35.84
Gov. Bonds	29.39	30.95	67.64	13.58	48.61	4.49	32.92	51.51
Nongov. Bonds	28.6	1.93	6.11	1.45	0	10.5	0	0
Other	6.9	14.21	0	11.7	13.95	27.57	5.84	12.65
Assets under management (in PLN mln)	5.6	28.5	0.8	14.8	0.1	15.2	24.2	16.8
Market share (as % of total DFEs' assets)	5.28	26.89	0.75	13.96	0.09	14.34	22.83	15.85

Source: <http://www.analizy.pl>, 2016.

Rates of return

The investment efficiency of supplementary pension products is almost impossible to assess due to lack of necessary data published by financial institutions. In Poland there is no obligation to disclose rates of return to pension accounts holders. Generally, owners of savings accounts are informed about contributions paid, the value of investment units and the balance of their accounts at the end of the reporting period. No data concerning the investment efficiency of supplementary pension products is submitted to the Financial Supervisory Commission or published in official statistics.

Due to the shortage of detailed statistics the assessment of the efficiency of pension product investments is possible only for the vehicles dedicated solely to PPE, IKE or IKZE, namely employee pension funds (PFE) and voluntary pension funds (DFE).

As the management fee is deducted from fund assets on a regular basis and the value of a fund unit is calculated based on net assets, the nominal rates of return indicated below take into account the levels of management costs. The only fee that has to be included when calculating after-charges returns is an upfront-fee deducted from contributions paid into accounts.

During the period of 2002-2015 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative results appeared only in the years 2008, 2011 and 2015 when equity markets dropped significantly. After-charges real returns observed in 11 of 14 years and the average return in the 14-year period is highly positive as well. These satisfactory results were obtained due to proper portfolio construction, high quality of management and low costs.





Table PL 14. Nominal and real after-charges returns of Employees Pension Funds in 2002-2015 (in %)

Employees pension fund	PFE NESTLÉ POLSKA	PFE SŁONECZNA JESIEŃ	PFE ORANGE POLSKA	PFE UNILEVER POLSKA	PFE "NOWY ŚWIAT"	PFE "DIAMENT"	Weighted nominal return after charges, before inflation	Inflation (HICP)	Weighted real return after charges and inflation
2002			11,35%		9,76%	-21,05%	7,88%	1,90%	5,98%
2003			10,28%		10,44%	8,71%	10,14%	0,70%	9,44%
2004	11,25%		12,30%	14,24%	13,64%		12,59%	3,60%	8,99%
2005	12,53%		14,82%	12,93%	13,81%		14,50%	2,20%	12,30%
2006	12,41%	10,60%	15,40%	13,41%	15,25%		14,99%	1,30%	13,69%
2007	5,10%	4,52%	6,10%	5,77%	6,23%		5,94%	2,60%	3,34%
2008	-10,10%	-11,33%	-13,54%	-6,34%	-13,86%		-13,14%	4,20%	-17,34%
2009	13,33%	14,83%	15,78%	12,74%	17,41%		15,85%	4,00%	11,85%
2010	9,98%	9,60%	10,33%	9,75%	10,52%		10,22%	2,70%	7,52%
2011	-5,05%	-3,10%	-4,75%	-3,59%	-5,20%		-4,51%	3,90%	-8,41%
2012	15,82%	13,60%	14,96%	15,01%	14,15%		14,57%	3,70%	10,87%
2013	5,19%	5,21%	3,45%	4,56%	5,71%		4,28%	0,80%	3,48%
2014	4,42%		3,91%	4,92%	2,56%		3,65%	0,10%	3,54%
2015	-1,31%		-2,87%	-1,02%	-1,39%		-2,42%	-0,70%	-1,74%
Annual average	5,84%	5,15%	6,60%	6,62%	6,25%	-7,36%	6,42%	2,20%	4,12%

Source : KNF, Eurostat

Voluntary pensions funds (DFE) have obtained extraordinary investment results from their start in 2012. The first years of their operation coincided with the time of the Polish financial market recovery and allowed the funds to maximise rates of return from the equity portfolios. The best DFE reported more than 50% nominal return in 2013. But such returns were impossible to reach the next year. In 2014 some of DFE even experienced slightly negative returns (see Table PL 16) that were not covered by returns in 2015 (Table PL 17).

Table PL 15. Nominal and real returns of voluntary pension funds (DFE) in 2013 (in %)

	Allianz Polska DFE	DFE Pekao	DFE Pocztylion Plus	DFE PZU	ING DFE	MetLife Amplico DFE	Nordea DFE	PKO DFE
Nominal return	7.8	16.3	6.9	32.8	59.1	56.7	25.4	16.9
Real return	6.94	15.38	6.05	31.75	57.84	55.46	24.4	15.97
Nominal after charges*	6.18	13.39	3.69	28.28	52.74	52.78	20.38	16.9
Real after- charges* return	5.34	12.49	2.87	27.27	51.52	51.57	19.43	15.97

*Returns after charges were calculated with an assumption that an individual pays one contribution of PLN 2.000 at the beginning of the year.

Source: own elaboration based on: www.analizy.pl, 2014; Harmonised index of consumer prices (HICP), Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_a&lang=en



**Table PL 16. Nominal and real returns of voluntary pension funds (DFE) in 2014 (in %)**

	Allianz Polska DFE	DFE Pekao	DFE Pocztynlion Plus	DFE PZU	ING DFE	MetLife DFE	Nordea DFE	PKO DFE
Nominal return	2.03	1.27	-2.22	3.64	-0.73	6.09	10.79	2.54
Real return	2.75	1.98	-1.53	4.37	-0.03	6.84	11.57	3.26
Nominal after charges	0.50	-1.26	-5.15	0.12	-4.70	3.44	6.36	2.54
Real after- charges return	1.21	-0.57	-4.48	0.82	-4.03	4.17	7.11	3.26

**Returns after charges were calculated with an assumption that an individual pays one contribution of PLN 2.000 at the beginning of the year.*

Source: own collaboration based on: www.analizy.pl, 2015; Harmonised index of consumer prices (HICP), Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en

Table PL 17. Nominal and real returns of voluntary pension funds (DFE) in 2015 (in %)

	Allianz Polska DFE	DFE Pekao	DFE Pocztynlion Plus	DFE PZU	NN DFE	MetLife DFE	Nordea DFE	PKO DFE
Nominal return	-0.33	3.26	2.56	9.07	16.21	-1.89	-3.71	-0.88
Real return	0.07	3.67	2.97	9.51	16.68	-1.50	-3.32	-0.48
Nominal after charges	-1.83	0.68	-0.52	5.36	11.56	-4.34	-7.56	-0.88
Real after- charges return	-1.43	1.08	-0.12	5.78	12.01	-3.96	-7.19	-0.48

**Returns after charges were calculated with an assumption that an individual pays one contribution of PLN 2.000 at the beginning of the year.*

Source: own collaboration based on: www.analizy.pl, 2016; Harmonised index of consumer prices (HICP), Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en

Conclusions

Starting in 1999, with individual supplementary elements introduced in 2004 and 2011, the Polish supplementary pension market is still in its early stage of operation. The coverage ratios show that only a tiny part of Poles decided to secure their future in old-age by purchasing individual pension products. This could be because of low financial awareness, insufficient level of wealth or just the lack of information and low transparency of pension products.

The official information concerning supplementary pension products in Poland is very limited. Financial institutions do not have any obligation to disclose rates of return, either nominal or real, nor after-charges. Published data includes the total number of programmes or accounts by types of financial institution and total assets invested in pension products. The Financial Supervisory Commission (KNF) collects additional detailed data about the market (the number of accounts and pension assets managed by every financial institution), but does not disclose the data even for research purposes.

Moreover, no comparable tables on charges, investment portfolios and rates of return are prepared or made accessible to the public on a regular basis. Certain product details have to be put in the fund statutes or in the terms of a contract, but they are hardly comparable between providers. The Polish supplementary pension market is highly opaque, especially in terms of costs and returns.

Among a wide variety of pension vehicles, there are only a few products with official statistics sufficient to assess their investment efficiency: employee pension funds (PFE) managed by employees' pension societies and voluntary pension funds (DFE) managed by pension societies (PTE). Other products are more complex and due to the fact that supplementary pension savings are reported together with non-pension pots it makes it impossible to analyse the portfolio allocations and rates of return for individual pension products separately.

After-charges returns in the "youngest" pension products offered as a form of voluntary pension fund (DFE) were extremely-high in 2013, both in nominal and real terms. The second series of products analysed, namely employee pensions funds (PFE) delivered significant profits as well. But other pension vehicles may turn out not to be so beneficial, especially when a wide variety of fees and charges are deducted from contributions paid to the accounts.





To sum up, the disclosure policy in supplementary pension products in Poland leaves a lot to be desired. Savers are entrusting their money to the institutions but they are not getting clear information on charges and investment returns. Keeping in mind the pure DC character of pension vehicles and lack of any guarantees, it puts a huge risk on savers. All this may lead to significant failures on the pension market in its very early stages of development.

Pension Savings: The Real Return

2016 Edition

Country Case: Romania

Introduction

The Romanian old-age pension system¹⁴³ is based on the World Bank's multi-pillar model, which consists of three main pillars:

- Pillar I – State pension organized as a mandatory Pay-As-You-Go scheme;
- Pillar II – Funded pension organized as a mandatory-funded defined contribution based scheme;
- Pillar III – Supplementary pension organised as a voluntary individual defined contribution pension scheme.

Romania's multi-pillar pension reform began in 2007, when Pillar III was added into the pension system (collecting the first contributions) and became voluntary for all persons earning any type of income. Pillar II was put into place in 2008 (collecting the first contributions) and became mandatory for all employees aged under 35.

¹⁴³ Inflation references HICP Annual average for this entire country case





Table RO 1. Pensions system in Romania

National House of Public Pensions	Private Pension System Supervisory Commission	
PILLAR I	PILLAR II	PILLAR III
State Pension	Funded pension	Voluntary pension
Law no.263/2010 on the unitary public pension system	Law no.411/2004 on the privately-managed pension funds, republished, including subsequent amendments and additions	Law no.204/2006 on the voluntary pensions, including subsequent amendments and additions
Mandatory	Mandatory	Voluntary
Publicly-managed	Privately managed pension funds	
PAYG	Funded	
DB (Defined Benefit scheme)	DC (Defined Contribution scheme)	
	Individual personal pension accounts	
The possibility of early and partially early retirement, contingent upon the fulfillment of the age conditions and the contribution stage provided by the law and the accumulated points.	Withdrawal from the system is only allowed through retirement.	The participant can, at any time, suspend or stop the contribution payment (they remain members in the system until retirement).
First pillar Quick facts	Second Pillar Quick facts	Third Pillar Quick facts
Pensioners (mil. Pers.): -total: 4.7 -age limit: 3.3 -early retirement: 0.1 -disability: 0.8 -survivor's: 0.5 Average pension for age limit: 900 RON (€ 203)	9 pension funds 9 administrators 4 custodian banks 4 auditors 9.6 billion RON net assets (€ 2.2 billion) 5.8 million members 55% coverage ratio (working age population 15 – 64 years) 1.58% of GDP.	11 pension funds 8 administrators 4 custodian banks 4 auditors 0.6 billion RON net assets (€ 0.14 billion) 0.3 million members 3% coverage ratio (working age population 15 – 64 years) 0.10% of GDP.

Source: Own elaboration based on http://www.csspp.ro/uploads/files/private-pensions-quarterly-review_mmo2.pdf 2016

Pillar I – State Pensions

The first pillar of the Romanian pension system is defined by benefits and funded on an ongoing basis, it is based on the PAYG principle of redistribution and is the main pension system.

The state is collecting the social contribution for pensions from the contributors and pays immediately the pensions to the current pensioners. It is based on solidarity between generations and gives the right to receive a pension when the retirement age is reached, following a full contribution period for which the duration is stipulated by law.

This compulsory system is closely connected to the economic activity and income of citizens. It is 99% financed from social security contributions made by both employers and also employees, while consuming the biggest part of social security budget.

Social security contributions are paid to the State's social security budget at a rate of 20.8% of payroll for employers and 10.5% of income (gross earnings) for employees. It should be noted that since 1 October 2014, the employer's contribution ratio has been reduced to 15.8%. This pillar is financed by contributions of economically active individuals. These contributions are directed to the National House of Public Pensions (CNPAS), which distributes the benefit to current pensioners (system beneficiaries).

The pensions are calculated according to an algorithm based on pension points, by comparing an individual's own salary to the average monthly salary.

According to Romania's legislature, starting on 1 January 2011, the standard retirement age is 63 years for women and 65 years for men. These levels will be gradually reached as follow:

- between January 2011 and January 2015, the standard pension age for women will go up from 59 to 60 and for men from 62 to 65;
- at the end of this period the pension age will only gradually increase for women from 60 to 63 years by 2030.

Early retirement

According to Law no. 263/2010 regarding the public pension schemes, valid since 1 January 2011, taking early pension is possible as of maximum five years before the





standard retirement age, provided the worker has at least eight or more contribution years. Early retirement does not take into consideration the following periods: the compulsory military service, the university study, disability or period of attending the military school. Those periods will be valid only for calculation of standard retirement age. The deduction made on the pension payment is a fixed one: minus 0.75% for each month (9% per year) of anticipation, what might bring a maximum deduction of 45% from the standard pension. The deduction is applied until the standard age limit is reached.

Partial early retirement

Partial early retirement is possible as of maximum five years before the standard pension age. This only applies to workers with less than eight years of contribution. There is only one instance allowing partial early retirement without deduction: for those persons who were residents for at least 30 years in extremely polluted areas. In that particular case the applicant of partial pre-pension may benefit of two years' reduction on the standard pensions age requirement without any deduction. The reduction of the standard age limit foreseen for pre-pension or anticipated pre-pension cannot be added to any other reduction foreseen by the law.

Disability pension

A disability pension is given to people who lost all or at least half of their work capacity, because of work accidents and professional sickness, schizophrenia, AIDS, etc. as well as normal sickness and accidents unlinked to the work places.

According to the law, there are three degrees of disability as follows:

- first degree - total loss of work capacity and self-care capacity;
- second degree - total loss of work capacity but having the capacity of self-care;
- third degree - losing at least half of the capacity to work: the person is capable of performing an activity for a maximum of half of the work time.

Pensioners suffering from the first degree of invalidity received, as part of their pension, an indemnity for a career as a fix revenue representing 80% of one pension point.

Pension for survivors

A pension is given to the orphans or to the surviving spouse if the deceased was a pensioner or the pension was granted to that person but not picked-up. Orphans

have the right to a successor pension until the age of 16, or until the age of 26 if they are continuing formal education (this successor pension is nullified in case of invalidity (disability) of any degree acquired in period mentioned above). The widowed spouse has the right to a successor pension, when reaching the standard age limit for pension, if they were married for at least 15 years. If the length of marriage is between 10 to 15 years, the pension of the widowed spouse is diminishing by 0.5% for each month, or by 6% for each year. The level of the successor pension is calculated by applying a percent on average annual point of pension realized by the deceased, as follows:

- for one successor – 50%;
- for two successors – 75%;
- for three or more – 100%.

Pillar II – Funded pensions

Romania's mandatory private pensions system Pillar II is based on the World Bank's multi-pillar model. It is a fully funded scheme, based on personal accounts and on the defined contribution (DC) philosophy with minimum return guarantees. Participant will receive at retirement at least the sum of contributions, less fees. Each fund has to comply, during the accumulation phase, with a minimum return mechanism that is set quarterly by national regulation and based on average market performance of all funds. Pillar II represents privately-managed mandatory pensions.

The start of pillar II operations in Romania is connected with three important dates:

- January to July 2007 (authorising the administrators),
- 17 September 2007 to 17 January 2008 (selection of pension fund by participants),
- 20 May 2008 (collecting the first contributions to pillar II).

The system is mandatory for all employees under 35 and is voluntary (optional) for employees aged 35-45. This system is not occupational.

Participation is mandatory for all individuals (employees as well as self-employed) paying social security contributions. Contribution collection is centralized by CNPAS (The National House of Pensions), which collects and directs the contributions towards the mandatory pension funds. Employers do not get involved in this system - they have to pay social security contributions just like before the





implementation of the system and they have to fill in and send (to CNPAS) nominal declarations regarding the paid contributions. Contributions to Pillar II are a part of the individual contribution of the insured person within the public pension system, and are redirected via CNPAS to personal pension accounts.

A participant to such a fund contributes during his active life and will get a pension when reaching the retirement age of 65 for men and 63 for women. The starting level of contribution was at 2% of the participant's total gross revenues and it goes up by 0.5 percentage points a year, to reach 6% of total gross revenues in 2017 as the gradual increase in contributions has been frozen in 2010. The contribution level is thus fixed, and the participant cannot save more in this system.

The contributions to a pension fund shall be recorded in individual personal pension accounts, which give the participants the ownership of the net assets, with the money to be invested by the managers, according to the specific legislation of the pension scheme. Participants can choose only one pension fund.

Mandatory pension funds are managed by their administrators - Pension Management Companies (PMCs). Each PMC can manage only one mandatory pension fund and not more. Mandatory pension funds are unitized and function similarly to investment funds. To enter and function within the pillar II market, any PMC must get several licenses from Romania's pension market regulatory and supervisory body.

The function of control, regulation, supervision and information about private pensions shall be carried out by the Supervision Commission of the Private Pension System, an independent administrative authority and legal entity under the control of the Romanian Parliament.

Withdrawal from the system is only allowed at the standard retirement age of participants in the private pension system.

Pillar III – Voluntary private pension

Romania's voluntary private pensions system - Pillar III - is based on the World Bank's multi-pillar model. It is also a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy. Pillar III represents privately-managed supplementary pensions.

The beginning of pillar III in Romania is connected with two important dates:

- October 2006 – May 2007 (Authorising the administrators),
- May 2007 (Collecting the first contributions to the pillar III).

Mandatory pension funds are managed by their administrators - Pension Management Companies (PMCs). Each PMC can manage only one mandatory pension fund and not more. Mandatory pension funds are unitized and function similarly to investment funds. To enter and function within the pillar II market, any PMC must get several licenses from Romania's pension market regulatory and supervisory body.

The function of control, regulation, supervision and information about private pensions shall be carried out by the Supervision Commission of the Private Pension System, an independent administrative authority and legal entity under the control of the Romanian Parliament.

Withdrawal from the system is only allowed at the standard retirement age of participants in the private pension system.

Pension Vehicles

Pillar II – Funded pensions

As indicated above, each PMC in Romania is allowed to manage only one mandatory pension fund. At the very beginning of the system, the total number of authorized administrators (funds) was 18 and at the end of choosing participants only 14. Currently, there are only seven PMCs and the same number of mandatory funds in the Romanian pillar II market. The two biggest mandatory pension funds, AZT and NN¹⁴⁴, have 52% (according to number of participants) or 59.73% (according to AuM) of the market.

Each PMC is authorized by ASF¹⁴⁵ (formerly CSSPP - Romania's pension market regulatory and supervisory body) and must get several licenses from ASF. One of the most important conditions imposed on PMC is to attract at least 50,000 participants. ASF withdraws the fund's authorization if the number of participants drops below 50,000 for a quarter.

¹⁴⁴ ING has changed its name to NN during the rebranding in 2015

¹⁴⁵ ASF - Autoritatea pentru Supraveghere Financiara since 2013, after a merger of 3 supervisory authorities for non-banking financial sector.





The pension fund is constituted by civil contract. Accounting is separated between the administrator and the administered mandatory pension fund. For this reason it cannot be declared bankrupt.

Structure of savers, assets under management and market share of respective mandatory pension fund (PMC) is presented in a table below.

Table RO 2. Pension Management Companies market share in Romania (Pillar II)

Mandatory Pension Fund (PMC)	Assets under management (in mil. €)	Market share based on AuM	Number of participants	Market share based on participants
FPAP ARIPI	458.75	8.41%	637,027	9.72%
FPAP ALICO	771.89	14.15%	915,524	13.96%
FPAP AZT VIITORUL TAU	1,196.67	21.93%	1,464,425	22.34%
FPAP BCR	336.8	6.17%	543,687	8.29%
FPAP BRD	1,71.51	3.14%	310,016	4.73%
FPAP NN	2,020.45	37.03%	1,881,460	28.70%
FPAP VITAL	500.62	9.17%	804,241	12.27%
TOTAL	4,266.80	100.00%	6,556,380	100.00%

Source: Own calculations based on <http://www.csspp.ro/evolutie-indicatori/> data, as of 31 December 2015

Mandatory pension funds' investment strategy is very strictly regulated. The law imposes percentage limits for different asset classes.

Mandatory pension funds can invest:

- up to 20% in monetary market instruments;
- up to 70% in State bonds of Romania, the EU or EEA;
- up to 30% in bonds and other transferable securities issued by the local public administrations in Romania, the EU or EEA, traded on a regulated market in RO, EU or EEA;

- up to 50% in securities traded on a regulated market in Romania, the EU or EEA;
- up to 15% in bonds issued by third-party states, traded on a regulated market in Romania, the EU or EEA;
- up to 10% in bonds and other transferable securities issued by the local public administration in third-party states, traded on a regulated market in Romania, the EU or EEA;
- up to 15% in bonds issued by the World Bank, the European Bank for Reconstruction and Development and the European Investment Bank, traded on a regulated market in Romania, the EU or EEA;
- up to 5% in bonds issued by Nongovernmental Foreign Bodies, traded on a regulated market in Romania, the EU or EEA;
- up to 5% in Undertakings for Collective Investment in Transferable Securities - UCITS, including ETF in RO, the EU or EEA;
- up to 3% in ETC's and equity securities issued by non UCITS set up as closed investment funds, traded on a regulated market in Romania, the EU or EEA;
- up to 10% in private equity - only for voluntary pension funds.

There is no explicitly defined general quantitative limit on equity investments.

Mandatory pension funds also have some quantitative restrictions:

- 10% of the total number of shares issued by one issuer;
- 10% of the preferential shares issued by one issuer;
- 25% of the equity securities issued by an UCITS, ETF, non UCITS closed investment fund or ETC;
- 10% of an issuer's bonds, with the exception of state bonds.

Mandatory pension funds can invest all their assets abroad. There are no explicit restrictions regarding investments made abroad.

Pension funds can have one of three possible risk profiles, which are calculated on a daily basis according to a formula established by ASF norms:

- low risk (risk level up to and including 10%),
- medium risk (risk level between 10%, exclusively, and 25%, inclusively),
- high risk (risk level between 25%, exclusively, and 50%, inclusively).





Pillar III – Voluntary private pensions

The Romanian pillar III allows each administrator (PMC, LIC or AMC) to manage as many voluntary pension funds as they wish. At the beginning there were only four providers and six voluntary pension funds. Currently, there are only eight providers and 10 voluntary pension funds on offer. Only two administrators¹⁴⁶ (NN¹⁴⁷ and AZT) currently exploit the opportunity to offer two voluntary pension funds.

NN and AZT, as providers, have absolutely dominant market share, however their dominance is decreasing. These two biggest administrators have 51.03% (according to number of participants) or 58.96% (according to AuM) of the market. Following these numbers NN and AZT are the biggest leaders not only on pillar II, but also on pillar III markets.

Each administrator in pillar III (PMC, LIC or AMC) is authorized by ASF and must get several licenses from ASF. ASF withdraws the fund's authorization if the number of participants remains under 100 for a quarter.

As is the case of pillar II mandatory pension funds, voluntary pension funds are also constituted by civil contract and authorized by ASF. Accounting is separated between the administrator and the administered voluntary pension fund, the reason why the funds cannot go bankrupt.

It has to be mentioned that investment rules in the voluntary system are the same as in the mandatory system (see quantitative and restriction limits for different asset classes in the text above), with slightly larger limits on private equity (5%) and commodities (5%).

The structure of savers, assets under management and market share of respective voluntary pension fund is presented in a table below.

¹⁴⁶ There was another administrator (BRD) who managed 2 pension funds, but decided to merge them, probably, because of low number of members.

¹⁴⁷ ING has changed its name to NN during the rebranding in 2015

Table RO 3. Voluntary pension funds market share in Romania (Pillar III)

Risk profile	Voluntary pension fund	Assets under management (in mil. €)	Market share based on AuM	Number of participants	Market share based on participants
High	FPF AZT VIVACE	14.73	5.31%	20,470	5.35%
	FPF NN ACTIV	31.36	11.31%	38,099	9.97%
	FPF AZT MODERATO	36.98	13.34%	36,822	9.63%
	FPF BCR PLUS	47.39	17.09%	112,847	29.52%
	FPF BRD MEDIO	14.36	5.18%	19,020	4.97%
Medium	FPF EUREKO CONFORT	ceased in 2015			
	FPF NN OPTIM	105.62	38.09%	125,983	32.95%
	FPF PENSA MEA	10	3.61%	10,095	2.64%
	FPF RAIFFEISEN ACUMULARE	12.69	4.58%	10,078	2.64%
	FPF STABIL	2.86	1.03%	5,097	1.33%
	FPF AEGON ESENTIAL	1.26	0.46%	3,807	1.00%
TOTAL		277.26	100.00%	382,318	100.00%

Source: Own calculations based on <http://www.csspp.ro/evolutie-indicatori/> data, as of 31 December 2015





Charges

Pillar II – Funded pensions

According to the Mandatory Pensions Law, administrators' income results from the administration of privately administrated pension funds in the shape of:

- administration fees;
- transfer penalties;
- tariffs for additional information services, provided at request.

The administration fee is established by:

- a. deducting an amount from the contributions paid, but no higher than 2.5%, on condition that the deduction is made before the conversion of contributions into units of fund (Management commission);
- b. deducting a percentage from the total net assets of a privately administrated pension fund, but no higher than 0.05% per month (up to 0.6% per year), established by the pension scheme's prospectus (Management fee).

The transfer penalty represents the amount paid by participants in the event a transfer to another administrator occurs no later than two years as from the subscription date to the previous private pension fund. The maximum ceiling of this penalty is established by Commission and set at up to 5% of assets (Norma CSSPP 12/2009 for pillar II and Norma 14/2006 for pillar III).

The fund also pays for the annual auditing fee (Fund auditing taxes), and the rest of the fund's expenses (custody, depositary, transaction/trading expenses) must be supported by the pension company (the administrator).

From the participant's point of view the commissions to be paid are the following:

- Management commission (up to 2.5% of contributions),
- Management fee (up to 0.05% monthly based on total gross assets in the pension fund),
- Transfer penalty (withheld from personal assets, in case of a transfer from one fund/PFC to another within the first two years– between 3.5% and 5%),
- Depositary commission (depositary fee),
- Transaction costs (trading fees),

- Bank commissions (banking fees),
- Fund auditing taxes (pension fund auditing fees).

The next table compares effective charges of mandatory pension funds in pillar II over time (calculated via total and net NAV on a monthly basis).

Table RO 4. Effective charges in mandatory pension funds (Pillar II)

Mandatory pension fund	2008	2009	2010	2011	2012	2013	2014	2015
ARIPI	1.20%	0.84%	0.72%	0.72%	0.60%	0.60%	0.60%	0.60%
ALICO	0.60%	0.72%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%
AZT VIITORUL TAU	0.60%	0.72%	0.72%	0.60%	0.60%	0.60%	0.60%	0.60%
BCR	1.68%	0.96%	0.72%	0.60%	0.60%	0.60%	0.60%	0.60%
BRD	2.04%	1.08%	0.84%	0.72%	0.72%	0.60%	0.60%	0.60%
NN	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%	0.60%
VITAL	0.00%	0.60%	0.84%	0.72%	0.60%	0.60%	0.60%	0.60%
EUREKO	0.36%	0.12%	0.84%	0.60%	0.60%	0.60%		
PENSIA VIVA	0.12%	0.60%	0.60%	0.60%	0.60%			
BANCPOST	8.04%							
KD	5.88%	0.60%						
OMNIFORTE	2.04%							
OTP	14.64 %	6.00%						
PRIMA PENSIE	8.88%	6.72%						
AVERAGE	3.36%	1.68%	0.72%	0.60%	0.60%	0.60%	0.60%	0.60%

Source: Own calculations based on <http://www.csspp.ro/evolutie-indicatori/> data, as of 31.12.2015

Pillar III – Voluntary private pensions

According to the Voluntary Pensions Law, the administrator shall charge a fee from participants and beneficiaries for the management of a pension fund.

- The levels of fees shall be established in the pension scheme prospectus and shall be the same for all participants and beneficiaries.
- Any change of the fees shall be notified to participants at least 6 months before it is applied.

The administrator's revenue will come from:

- management fees;





- transfer penalties;
- fees for services requested by participants.

The management fee consists of:

- a) a deduction of a percentage from contributions paid by participants; this percentage cannot be higher than 5% and the deduction has to be made before contributions are converted into fund units (Management commission);
- b) a deduction of a negotiated percentage from the net assets of the voluntary pension fund; this percentage cannot be higher than 0.2% per month and has to be mentioned in the pension scheme prospectus (Management fee).

A transfer penalty is applicable (paid by the participant) in the eventuality of a transfer to another fund within two years of having joined the previous fund; its upper limit is established by Commission norms.

Commissions to be paid by participants are:

- Management commission (up to 5% of contributions),
- Management fee (up to 0.2% monthly based on total gross assets in the pension fund),
- Transfer penalty (withheld from personal assets, in case of a transfer from one fund/PFC to another within the first two years– 5%),
- Depositary commission (depositary fee),
- Transaction costs (trading fees),
- Bank commissions (banking fees),
- Fund auditing taxes (pension fund auditing fees).

The next table compares effective charges of voluntary pension funds in pillar III over time (calculated via total and net NAV on monthly basis).

Table RO 5. Effective annual charges of voluntary pension funds (Pillar III)

Voluntary pension fund	2007	2008	2009	2010	2011	2012	2013	2014	2015
AZT VIVACE	1.05%	1.47%	2.83%	2.83%	2.52%	2.06%	2.00%	1.91%	1.84%
NN ACTIV	0.04%	1.64%	1.85%	2.38%	2.19%	2.34%	2.14%	2.09%	2.17%
AZT MODERATO	0.99%	1.83%	2.16%	1.86%	1.66%	1.41%	1.33%	1.28%	1.24%
BCR PLUS	5.61%	2.38%	2.28%	2.77%	2.44%	2.40%	2.23%	2.27%	2.16%
BRD MEDIO			0.85%	1.90%	1.56%	2.86%	2.18%	2.14%	2.20%
CONCORDIA MODERAT		0.00%	1.44%	1.44%	1.44%	1.44%			
EUREKO CONFORT			0.00%	0.00%	0.24%	0.12%	0.12%	0.12%	
NN OPTIM	0.09%	1.58%	1.68%	2.09%	1.97%	2.05%	1.99%	1.97%	2.00%
PENSIA MEA	3.22%	3.17%	2.85%	2.66%	2.66%	2.70%	2.66%	2.66%	2.64%
RAIFFEISEN ACUMULARE		0.15%	2.93%	2.40%	2.23%	2.15%	2.43%	2.26%	2.47%
STABIL			2.26%	1.61%	1.50%	1.65%	1.63%	3.16%	3.71%
AEGON ESENTIAL									1.87%
BRD PRIMO			0.84%	1.56%					
OTP STRATEG	n/a	n/a	0.32%	0.24%					
AVERAGE	4.72%	1.91%	2.12%	2.30%	2.09%	2.10%	1.99%	1.99%	2.01%

Source: Own calculations based on <http://www.csspp.ro/evolutie-indicatori/> data, 2016 (data as of 31.12.2015)

Taxation

Pillar II – Funded pensions

Romania applies an EET system for the taxation of future mandatory accounts. Employee contributions are tax-deductible and investment income on the level of the pension fund is tax-exempt. Pension benefits paid out during retirement will be subject to a personal income tax (16% tax rate) above a certain level (€240 in 2012) and mandatory health insurance contribution (5.5%) above a certain level (€ 180 in 2012).





Pillar III – Voluntary private pensions

An employee can contribute to the voluntary pension fund up to 15% of his gross income. The employer can contribute a share.

The amount of contribution to voluntary pension funds is fiscally deductible from each subscriber's gross monthly wage or any other assimilated revenue, if the total amount is not greater than the equivalent in lei of €400 in a fiscal year. The same situation is occurring for the employer side meaning that the employer can deduct the amount paid to the employee voluntary pension account up to € 400 annually.

The investment returns of the third pillar fund's assets are tax exempt until the moment of payments toward subscribers start.

The pension benefits paid from the pillar III are subject of personal income tax similar to pillar II benefits.

Pension Returns

Pillar II – Funded pensions

Seven asset managers offer seven mandatory pension funds in Romania. Performance analysis reveals similarity in their investment strategy, implying similarity in the pension funds' portfolio structure.

Table RO 6. Pillar II pension vehicles			
Risk Profile	Mandatory pension fund	Fund Inception Day	Fund closing date
High	FPAP ARIPI	May 2008	Opened
	FPAP ALICO	May 2008	Opened
	FPAP AZT VIITORUL TAU	May 2008	Opened
Medium	FPAP BCR	May 2008	Opened
	FPAP BRD	May 2008	Opened
	FPAP ING	May 2008	Opened
	FPAP VITAL	May 2008	Opened
No longer in operation	FPAP EUREKO	May 2008	Closed September 2014
	FPAP PENSIA VIVA	May 2008	Closed January 2013
	FPAP BANCPOST	May 2008	Closed May 2009
	FPAP KD	May 2008	Closed March 2010
	FPAP OMNIFORTE	May 2008	Closed June 2009
	FPAP OTP	May 2008	Closed January 2010
	FPAP PRIMA PENSIE	May 2008	Closed January 2010

Source: Own elaboration based on <http://www.csspp.ro/evolutie-indicatori/> data, 2015 b(as of 31.12.2015)

According to ASF portfolio structure database, all mandatory pension funds can invest into 16 asset classes:

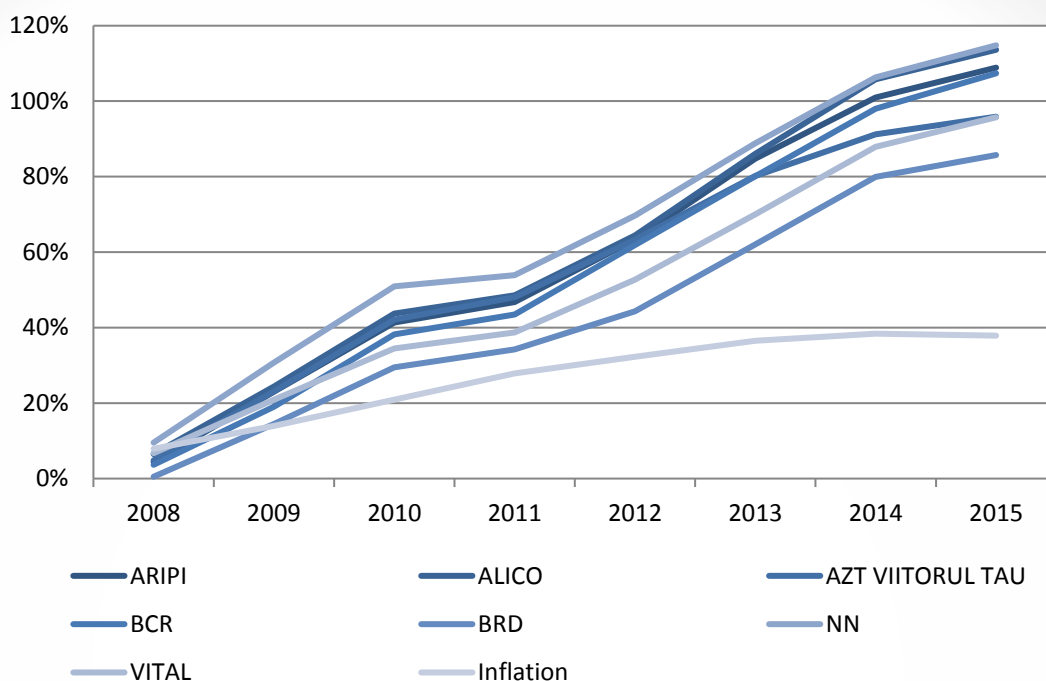




Table RO 7 Allowed asset classes for Pillar II pension funds	
Allowed asset classes for pillar II pension funds	Asset classes used for the purpose of the study
Bank deposits	Bank deposits
Government Securities / Municipal Bonds	Government Securities and Bonds
Government Securities	
Corporate Bonds	
Supranational Bonds	
Shares	Stocks
Undertakings for Collective Investment in Transferable Securities – UCITS	Collective Investments
Other Collective Investment Undertakings – non UCITS	
Commodities and Precious Metals	Commodities and Precious Metals
Commodities and Precious Metals Funds	
Instruments for hedging risk	Other
Private Equity	
Infrastructure	
Other financial instruments	
Amounts in settlement at the end of reporting date	
Instruments for hedging risk	
Source: Own elaboration, 2016	

For this study's purposes we extracted short portfolio structure – only six main asset classes (see methodology above). Romanian's mandatory pension funds invest mostly in government securities and bonds asset classes. The second most important asset class (from the portfolio structure point of view) is equities and the third are bank deposits. Three other classes have minimal impact on pension fund's performance results.

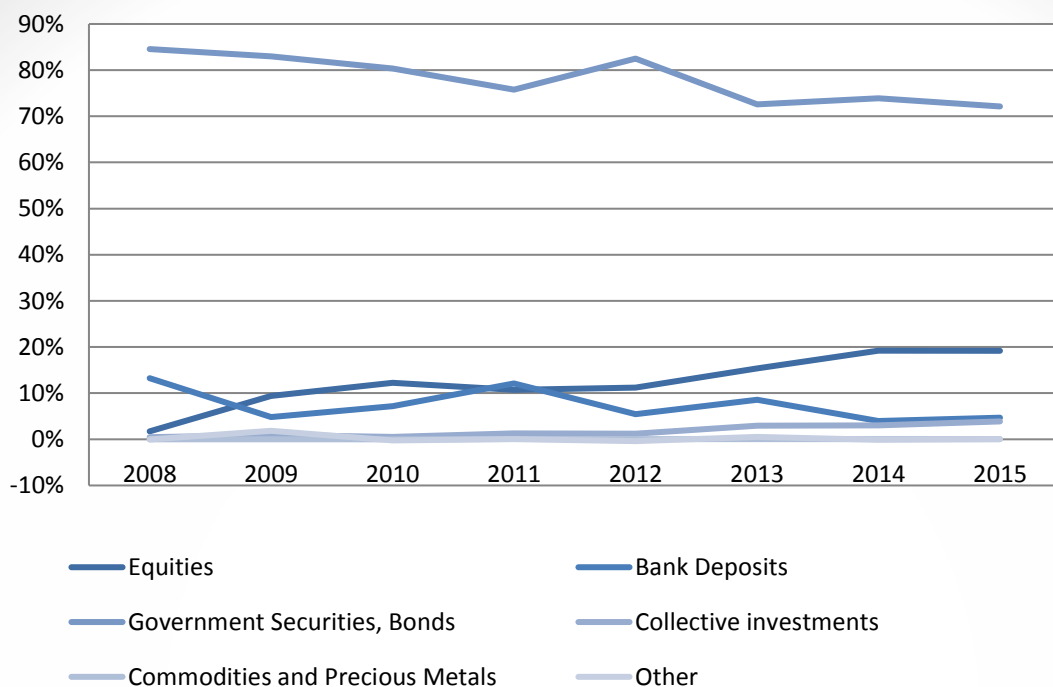
Mandatory Pension Funds' performance on an annual as well as cumulative basis compared to inflation (black line) is presented in the graph below.

Graph RO I. Mandatory Pension Funds – Cumulative Performance

Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31.12 each year)

The portfolio structure of the Romanian pillar II is presented in the graph below. According to this graph, currently about 74% of all investments in pillar II pension funds are bond investments and about 19% is invested in equities. There is a positive uptrend in percentage share of equity investments.



**Graph RO II. Portfolio structure of Pillar II mandatory pension funds**

Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31.12 each year)

Nominal as well as real returns of pillar II pension funds in Romania, weighted by AuM, are presented in a summary table below.

Table RO 8. Nominal and Real Returns of II. Pillar Pension Funds in Romania

2008	2009	2010	2011	2012	2013	2014	2015
Nominal return after charges, before inflation and taxes							
6.40%	17.57%	15.04%	3.22%	10.55%	11.48%	8.92%	3.69%
9.50%							
Real return after charges and inflation and before taxes							
-1.50%	11.97%	8.94%	-2.58%	7.15%	8.28%	7.52%	4.09%
5.37%							

Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31 December 2015)

Pillar III – Voluntary private pensions

The eight asset managers offer 10 voluntary pension funds in Romania. AZT and NN are the only providers which offer two voluntary pension funds. EUREKO has left the market and AEGON entered the market in 2015. Performance of all pension funds shows the same finding as with pillar II mandatory pension funds - there is similarity in voluntary pension funds' investment strategy. Performance results imply also a similarity of pension fund's portfolio structure.

Table RO 9. Pillar III pension vehicles

Risk Profile	Voluntary pension fund	Fund Inception Day	Fund closing date
High	FPF AZT VIVACE	May 2007	Open
	FPF NN ACTIV	May 2007	Open
Medium	FPF AZT MODERATO	May 2007	Open
	FPF BCR PLUS	May 2007	Open
	FPF BRD MEDIO	July 2009	Open
	FPF CONCORDIA MODERAT	September 2008	Closed February 2013
	FPF EUREKO CONFORT	February 2009	Closed in June 2015
	FPF NN OPTIM	May 2007	Open
	FPF PENSIA MEA	May 2007	Open
	FPF RAIFFEISEN ACUMULARE	July 2008	Open
	FPF STABIL	April 2009	Open
	FPF AEGON ESENTIAL	May 2015	Open
Low	FPF BRD PRIMO	July 2009	Closed December 2011
	FPF OTP STRATEG	December 2007	Closed December 2011

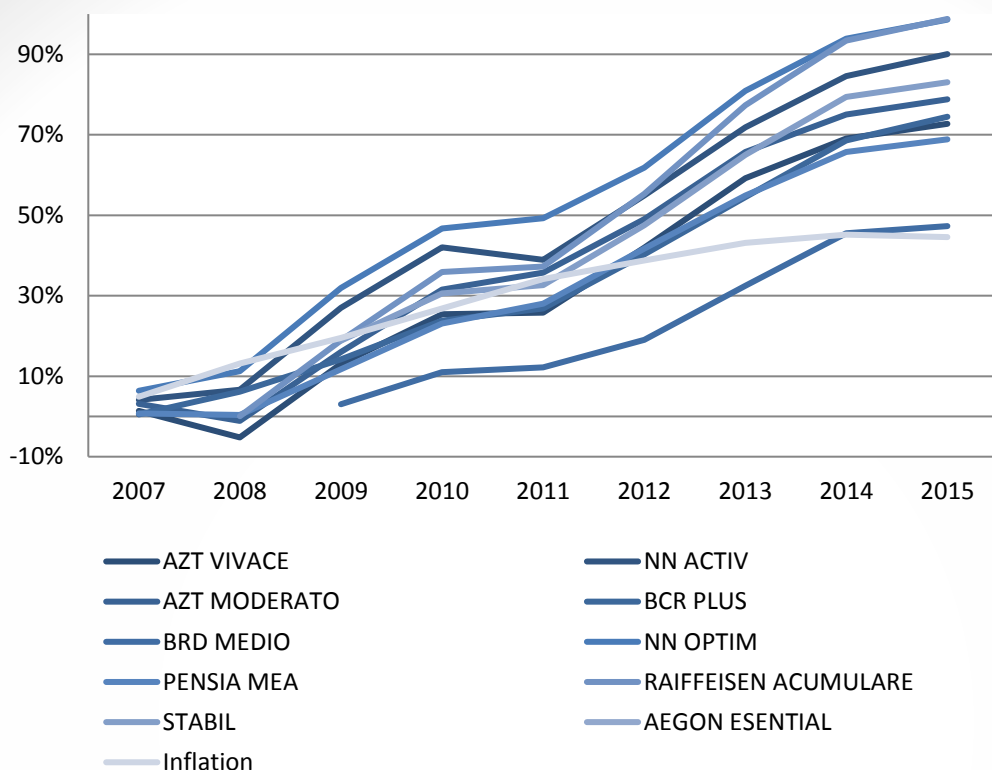
Source: Own elaboration based on <http://www.csspp.ro/evolutie-indicatori/> data, 2016 (data as of 31 December 2015)

All voluntary pension funds' performance on an annual as well as cumulative basis compared to inflation (black line) is presented in the graph below.





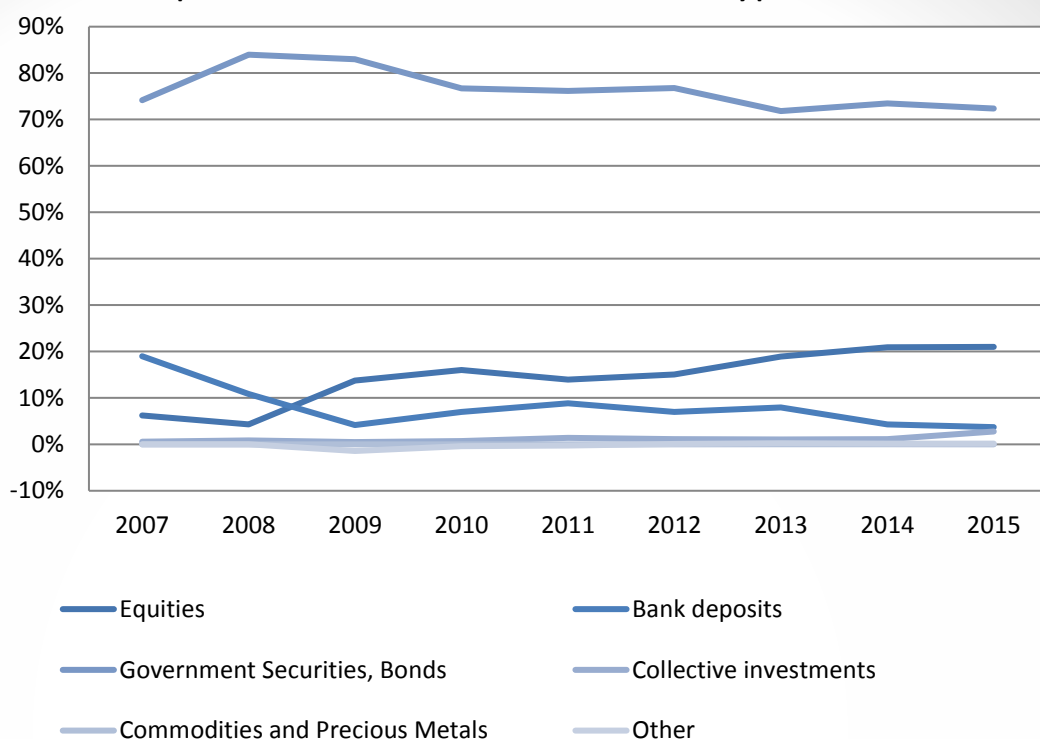
Graph RO III. Voluntary Pension Funds - Cumulative Performance



Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31 December 2015)

ASF defines the same 16 investment asset classes as in the pillar II portfolio structure (see text above). All voluntary pension funds invest mainly in Government Securities and Bonds asset classes. The second most important asset class (from the portfolio structure point of view) is Stocks and the third is bank deposits. Three other classes have minimal impact on pension fund's performance results.

Overall performance and portfolio structure of Romanian pillar III is presented in the graph below. According to this graph, currently about 73% of all investments in pillar III pension funds are bond investments and about 21% is invested in stocks, but with pillar II we can see positive uptrend in percentage share of stock investments from the beginning. On the other hand, the portfolio structure of the Romanian pillar III is very similar to that of pillar II.

Graph RO IV. Portfolio structure of Pillar III voluntary pension funds

Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31 December 2015)

Nominal as well as real returns of voluntary pension funds in Romania, weighted by AuM, are presented in a summary table below.

Table RO 10. Nominal and Real Returns of Voluntary Pension Funds in Romania								
2007	2008	2009	2010	2011	2012	2013	2014	2015
Nominal return after charges. before inflation and taxes								
1.86%	1.72%	15.49%	11.14%	1.59%	9.96%	11.36%	7.48%	2.55%
6.90%								
Real return after charges and inflation and before taxes								
-3.04%	-6.18%	9.89%	5.04%	-4.21%	6.56%	8.16%	6.08%	2.95%
2.66%								

Source: Own calculations based on www.csspp.ro data, 2016 (data as of 31 December 2015)





Conclusions

Romania's population is rapidly decreasing and ageing, which unless adopting the necessary reforms, will lead to the explosion of the demographic bomb in a few decades. That is why Romania has introduced the private pensions system based on the model tested and recommended by the World Bank in 2007. The multi-pillar private pensions system includes the 2nd pillar – mandatory schemes - and the 3rd pillar – voluntary schemes.

In the public PAYG pensions system, the state collects contributions from employees and redistributes the money among existing pensioners. Demographics show that this redistribution logic is no longer viable, as contributors' numbers will fall and the number of pensioners is already going up. The exit from this dilemma takes the form of the private pensions system, allowing each active person to save for their own future retirement.

Romanian pillar II is a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy, mandatory for all employees aged under 35 years and voluntary (optional) for employees aged 35 to 45. The starting level of contribution was set up at 2% of the participant's total gross income and increases by 0.5 percentage points annually until it reaches 6% of total gross income in 2016.

Mandatory pension funds are managed by their administrators, so called Pension Management Companies (PMCs). Each PMC is obliged by respective law to administrate and manage just one mandatory pension fund. Currently, there are seven PMCs and also mandatory funds on the Romanian pillar II market. The market share of two biggest mandatory pension funds (AZT and NN) is 51% (measured by number of participants) and 59% respectively (measured by AuM).

Romanian pillar III is also a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy. Pillar III represents privately-managed supplementary pensions. This system is opened to all income cohorts. The contribution is limited to 15% of participant's total gross income.

Voluntary pension funds in pillar III are managed by their administrators - Pension Management Companies (PMCs), Life Insurance Companies (LICs) or Asset Management Companies (AMCs). Each administrator is obliged to establish and operate at least one voluntary pension fund. Currently, there are eight providers and 10 voluntary pension funds in offer. Only two of the administrators (NN and AZT) used the opportunity to create another voluntary pension fund. NN and AZT,

as the two biggest administrators, have dominant share on the market. NN and AZT are the biggest leaders not only in pillar II but also in pillar III markets.

Mandatory as well as voluntary pension funds' investment strategy is very strictly regulated. The law imposes percentage limits and restrictions for different asset classes. It must be noted that investment rules in mandatory and voluntary system are very similar. This fact logically causes implications on portfolio structure, thus also on performance of mandatory and voluntary pension funds in Romania. Currently about 74% of all investments in pillar II pension funds are bond investments (Romanian Government Money market instruments and Bonds) and only about 19% is invested in equities. We can see a positive uptrend in percentage share of equity investments from the beginning of pillar II. However, Romanian Government Securities and Bonds still have absolutely dominant position in pillar II mandatory pension funds' portfolio structures.

This situation is very similar to situation in pillar III. According to ASF data, currently about 72% of all investments in pillar III pension funds are bond investments (Romanian Government Money market instruments and Bonds) and only about 21% is invested in equities. As in case of pillar II we can see positive uptrend in percentage share of equity investments from the system beginning.





Pension Savings: The Real Return

2016 Edition

Country Case: Slovakia

Introduction

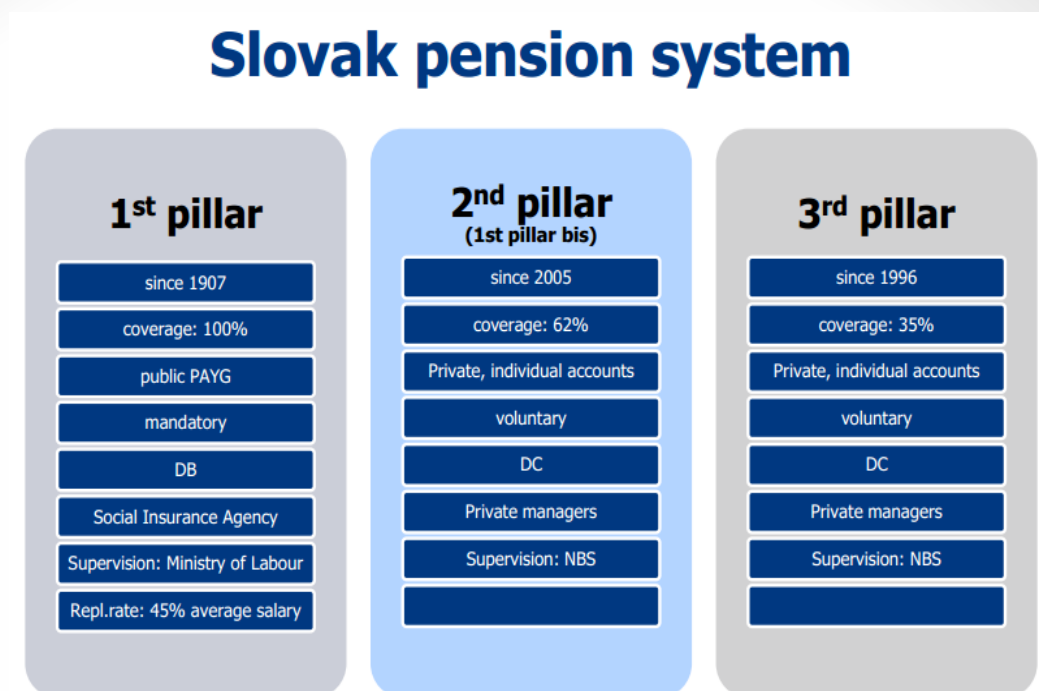
The Slovakian¹⁴⁸ old-age pension system is based on the multi-pillar approach, which consist of three main pillars:

- Pillar I – State pension organized as a mandatory Pay-As-You-Go scheme,
- Pillar II – Funded pension organized as voluntary funded DC based scheme,
- Pillar III – Supplementary pension organized as a voluntary individual pension DC based scheme.

The Slovakian pension reform started in 1996 with the introduction of the third voluntary pension pillar (introduction of a two-pillar based system). It would maybe be clearer and more correct to refer to this second pension pillar as “1bis pillar”, as it funds individual private retirement accounts with a part of mandatory Social Insurance Agency contributions; and was introduced in 2005.

¹⁴⁸ Inflation references HICP Annual average for this entire country case

Table SK 1. Multi-pillar pension system in Slovakia



Source: http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/Pensions_PeterPenzes.pdf

Pillar I – State Pensions

The first pillar of the Slovak pension system is defined by benefits and funded on an ongoing basis. It is based on the PAYG ('pay as you go') principle of redistribution. It is closely connected to the economic activity and income of the citizens. This pillar is financed by contributions of economically active individuals, amounting to 14% (18% if the saver is not in pillar II) of their income base (gross salary). These contributions are directed to the Social Insurance Agency, which distributes the allowance to the beneficiaries (current pensioners).

Pillar I is a typical PAYG scheme, however the pillar has many NDC scheme features with a certain income solidarity element. The amount the insured is entitled to as part of the insurance scheme is based on the paid insurance premium which is the main source of funding for the pension insurance scheme.

The pension of the insured person depends on three parameters:

1. Insurance period (number of working years),





2. Contribution level (ratio of individual level of income base and the average salary in Slovakia),
3. Value of pension unit (determined by the Slovak government).

The pension insurance is comprised of two independent, separately funded sub-schemes administered by the Social Insurance Agency:

- old age pension insurance: insurance to secure income in old age and in the event of death,
- disability insurance: insurance in the event of a reduced ability to work due to long-term illness of the insured and in the case of death.

Pension insurance is mandatory; statutory insurance and participation in this insurance is a legal obligation for all eligible persons. However, the Act on Social Insurance also enables voluntary pension insurance.

The basic pension insurance institutes that make up the content of the benefit scheme and affect the entitlement to individual pension benefits are: the general contribution level, the insurance period, the average personal wage point, the pension value and the retirement age.

General contribution level: a sum representing 12 times the average monthly wage in the Slovak Republic established by the Statistical Office of the Slovak Republic for the last calendar year.

Average personal wage point: determined as the ratio of the sum of personal wage points calculated for each calendar year of the reference period and the period of pension insurance in the relevant period. The average personal wage point shall be rounded up to four decimal points.

Value of pension unit: reflects the monetary value of one personal wage point. The pension value shall be adjusted on 1 January each year through the indexation, which is determined as the ratio of the average wage - determined in the third quarter of the previous calendar year and the average wage - determined in the third quarter of the calendar year two years preceding the calendar year on which the pension value is calculated. This way the determined pension value is always valid from 1 January to 31 December of the calendar year. The current pension value, which is used to calculate pension benefits, is the pension value, which is valid at the time of a claim for payment of the pension benefits.

Retirement age - generally set at 62 years and valid for both men and women; men's retirement age is already set at 62 years, women will reach the official retirement age of 62 in 2024. In order to increase the sustainability of pillar I pension scheme, the retirement age will start to increase for both men and women from 2017 onward. The increase in retirement age will depend on the increase in life expectancy of the whole population.

Pillar II – Funded pensions

Slovak pillar II was established as defined contribution (DC) scheme in 2005. Today it is a voluntary system (until 1 September 2012 it was a mandatory one). The principle of funded pension is based on the accumulation of savings during employment and investing savings in financial markets via pension funds, which are managed and administrated by Pension Fund Management Companies (PFMCs).

The role of old age pension saving along with old-age social insurance (pillar I) is to ensure income in old age for savers and their survivors in the case of his/her death.

Pillar II market is fairly concentrated. Each saver can choose one out of six currently existing providers (PFMCs) on the Slovakian market. The PFMCs are private joint stock companies with a minimum capital requirement of € 10 million, established in the territory of the Slovak Republic. Their exclusive business is the creation and administration of pension funds. As a further condition, they have to attain at least 50,000 members within a period of 18 months from the establishment of the pension fund.

Today, each PFMC is obligated by respective law (Old age pension saving Act) to operate at least two pension funds. We can divide these obligatory pension funds into two main groups:

1. Bond guaranteed pension funds (Guaranteed scheme)
2. Equity nonguaranteed pension funds (Nonguaranteed scheme)

It is fully up to the PFMC to operate additional pension funds, which are optional. These legislative changes entered into force on 30 April 2013. Before this date, each PFMC had to operate three (respectively four) obligatory pension funds:

1. Bond (Conservative) pension funds (since March 2005)
2. Mixed (Balanced) pension funds (since March 2005)
3. Equity (Growth) pension funds (since March 2005)
4. Index pension funds (since April 2012)





After legislative changes effective since May 2013, Mixed and Index pension funds became optional, and some of PFMCs merged them with obligatory Equity nonguaranteed pension funds. It is important to say, that the first three categories of pension funds are from the point of view of asset management actively managed pension funds and Index pension funds are the only funds managed entirely passively.

PFMCs are subject to a variety of regulations. The Old age pension savings Act defines the range of permissible investment instruments and sets maximum limits for portfolio allocation. Investment procedures and valuation of investments (daily at market prices) are also regulated. Thus, each category of pension funds has own investment strategy and general or special quantitative limits and conditions of operating. PFMCs and managed pension funds are supervised by the National Bank of Slovakia.

Pillar II as a voluntary DC scheme allows savers to enter the system whenever before the age of 35. In general, pension fund members (savers of pillar II) are free to choose one or two of mentioned pension funds provided by the same PFMC.

Each saver has an individual personal pension account (PPA). His contributions (savings) are redirected from the Slovak Social Insurance Agency to his PFMC and PPA at a rate of 4% of gross salary (9% before 1 September 2012). The decrease of contributions was a reaction to the financial crisis and following crisis in public finances.

Having the possibility to save in one or two pension funds at the same time, it is fully up to a saver how much of his own savings would be invested via one or another pension fund. He can invest, for example, 70% in Bond guaranteed and another part (30%) in Index nonguaranteed pension fund. It is absolutely free of charge to change this allocation ratio or switch pension funds managed by the same PFMC over time. PFMCs switching is possible for savers for free if the change is made after one year, otherwise a fee of € 16 is applied.

Recently introduced reform stipulates that the following types of pension products are allowed for a pay-out phase:

1. single annuity (for most cases) with a guaranteed payment period of 84 months,
2. single indexed annuity,
3. temporary annuity (2, 5 or 7 years),

4. programmed withdrawal (phased withdrawal)
5. perpetuity (withdrawal of annual gains)

Products 1, 2 and 3 are provided by insurance companies, products 4 and 5 by PFMCs.

Pillar III – Supplementary pensions

Supplementary pension is a voluntary funded DC based pension scheme in which the funds of the participants are administered by Supplementary Pension Fund Management Companies (SPFMCs). The SPFMCs are private joint stock companies, established in the territory of the Slovak Republic. SPFMCs and their supplementary pension funds are supervised and regulated by the National Bank of Slovakia.

The purpose of supplementary pension saving is to allow participants to obtain supplementary pension income in old age.

Currently there are four providers (SPFMCs) operating on the market, which is also fairly concentrated. Each SPFMCs is obliged by law to operate at least one contributory and one “pay-out” pension fund. The legislation does not determine specific types of contributory pension funds, however, we can divide all existing contributory pension funds according to the portfolio structure into three main groups:

- Conservative supplementary pension funds (no equity investments),
- Balanced supplementary pension funds (small portions of equity investments),
- Growth supplementary pension funds (highest portions of equity investments).

There are no specific investment restrictions regarding asset classes in supplementary pension funds, but there are some general quantitative limits.

The following benefits are paid from the supplementary pension savings upon the completion of the saving period:

- A supplementary old age pension in the form of lifelong or temporary supplementary annuity,
- A supplementary pension in the form of a lifelong or temporary supplementary pension by means of programmed withdrawal,
- A lump-sum settlement,





- A redundancy pay.

Pension Vehicles

Pillar II – Funded pensions

There are six providers - Pension Asset Management Companies (PFMCs) operating on the market. According to Assets under management measure, the two biggest, Allianz Slovenska and AXA, represent nearly 60% of the market. One of the providers (ING) has changed its name to NN as a part of rebranding in 2015. More details on the market share of particular providers are presented in the table below.

Table SK 2. Pension Asset Management Companies market share (pillar II)

Pension Fund Management Company	Assets under management (in millions €)	Market share based on AuM
AEGON	589.03	9.35%
Allianz – Slovenska	2,028.50	32.19%
AXA	1,634.05	25.93%
DSS Postovej banky	346.74	5.50%
NN (ING)	679.15	10.78%
VUB - Generali	1,025.12	16.26%
TOTAL	6,302.60	100.00%

Source: Own calculations based on ManazerUspor.sk data, 2016 (data as of 31.12.2015)

Current Slovak legislation mandates for each PFMC to operate at least two pension funds. Obligatory pension funds differ in their investment strategy and are divided into two groups according to the investment risk they carry:

- Guaranteed scheme – Bond guaranteed pension fund,
- Nonguaranteed scheme - Equity nonguaranteed pension fund.

After legislative changes in April 2013, Mixed and Index pension funds became optional pension funds, and some of PFMCs merged them with obligatory Equity nonguaranteed pension fund. Assets under management and market share for respective groups of voluntary pension funds is presented in a table below.

Table SK 3. Pillar II Pension vehicles market share

Scheme	Type of voluntary pension fund	Assets under management	Market share based on AuM
<i>(in millions €)</i>			
Guaranteed PFs	Bond guaranteed pension funds (6) - <i>obligatory</i>	5,352.49	84.93%
	Mixed nonguaranteed pension funds (3) - <i>optional</i>	69.44	1.10%
Nonguaranteed PFs	Equity nonguaranteed pension funds (6) - <i>obligatory</i>	644.27	10.22%
	Index nonguaranteed pension funds (5) - <i>optional</i>	236.41	3.75%
TOTAL	20 Pension funds	6,302.60	100.00%

Source: Own calculations based on ManazerUspor.sk data, 2016 (data as of 31.12.2015)

Drop in assets under management in 2015 compared to the year 2014 was caused by the legislative possibility to cancel the participation in pillar II and move the whole savings into the pillar I. More than € 500 million have been removed from the pillar II and more than 150 thousand savers cancelled their participation in pillar II. The main motivation was the introduction of annuity markets and poor annuities offered by insurance companies.

In Slovakia, more than 1,500,000 savers have joined the pillar II in 2005, which is more than 60% of the economically active population. About 80% of them have opted for pension funds with higher portion of equities in portfolio (Equity pension funds). After 2013, the pillar II market suffers from high concentration of savings in Bond pension funds which has been caused by the legislative switching of savings from other pension funds into the bond pension funds and high inertia of savers. After this legislative change in April 2013, the number of savers in equity pension funds has dropped significantly. Currently, 88.41% of all savings in pillar II is managed in obligatory Bond guaranteed pension funds that do not invest in equities. This fact might cause more problems and increase the political risk in the future as many savers still believe that they save in equity pension funds.

The asset allocation of pillar II pension funds is legislatively regulated, with general quantitative investment limits imposed on all pension funds – for example:





- max. 3% of AuM into one financial instrument (does not apply to bond investments or in case of passively managed pension funds),
- max. 10% of AuM into one UCITS fund
- max. 15% of the whole pension fund portfolio from one issuer (does not apply to bond investments or in case of passively managed pension funds),
- bond investments have to correspond to an investment grade from the point of view of Rating (does not apply in case of passively managed pension funds).

Two main types of obligatory and two types of optional voluntary pension funds members can choose in pillar II.

Obligatory - Bond guaranteed pension funds are actively managed pension funds and are obliged to invest 100% of the assets into bonds, money market instruments, deposits, investment funds which assets may be invested in the above securities and deposits, and other similar assets. Bond guaranteed pension funds are not allowed to invest in equities and immovables nor respective investment funds. Conservative strategy focuses on bonds and its objective is the preservation of capital and moderate growth primarily in shorter horizon. Bond guaranteed pension funds are obliged to hedge at least 95% of the whole portfolio against currency exposure.

Obligatory - Equity nonguaranteed pension funds are actively managed pension funds that proceed by investing in different types of assets from the objective under quantitative limits:

- up to 80% of the assets of the funds can be invested in equities, equity funds and other instruments similar to equity,
- at least 20% of the whole portfolio has to be hedged against currency exposure,
- max. 20% of the whole portfolio can be invested in precious metals.

Optional - Mixed nonguaranteed pension funds are actively managed pension funds and proceed in investing in different types of assets from the objective under general quantitative limits. There are no other specific limitations.

Optional - Index nonguaranteed pension funds introduced in April 2012, are only passively managed pension funds in Slovak pillar II. There are no general and also specific quantitative limits, because of the nature of investing. Slovak Index

nonguaranteed pension funds copy selected and respective stock market benchmark (MSCI World, Eurostoxx50, ACWI, MSCI Euro).

Pillar III – Supplementary pensions

There are four providers – Supplementary Pension Fund Management Companies (SPFMCs) operating on the market. According to Assets under management, the two biggest, NN Tatra – Sympatia (changed its name from ING Tatra – Sympatia in 2015) and DDS Tatra banky, represent nearly 70% of the whole market.

DDS Tatra banky has introduced TDFs (target date funds) in 2015, with the aim to provide age specific investment strategy for its savers in the pillar III.

Table SK 4. Pillar III Supplementary Pension Companies market share

Supplementary Pension Company	Assets under management (in millions €)	Market share based on AuM
DDS Tatra banky	472.57	30.58%
AXA	207.03	13.40%
NNTatra – Sympatia (ING)	592.07	38.31%
STABILITA	273.65	17.71%
TOTAL	1,545.33	100.00%

Source: Own calculations based on ManazerUspor.sk data, 2016 (data as of 31.12.2015)

Under the regulation, each SPFMC must operate at least two types of pension vehicles for supplementary pension (pillar III):

1. a contributory pension fund,
2. a “pay-out” pension fund.

The legislation does not determine the specific types of contributory pension funds. However, we can divide all existing contributory pension funds according to the portfolio structure in three main groups:

- Conservative supplementary pension funds (no equity investments),
- Balanced supplementary pension funds (small portions of equity investments),
- Growth supplementary pension funds (highest portions of equity investments).





For supplementary pension funds, there are no special investment restrictions regarding asset classes, but there are some general quantitative limits:

- max. 5% of AuM in one financial instrument,
- max. 30% of AuM in securities and money market financial instruments from one issuer (does not apply to instruments secured by a Member State),
- max. 35% of AuM in securities and money market financial instruments secured by a Member State, the EU, the ECB, a MMF or World Bank,
- max. 20% of AuM in one standard mutual fund (UCITs compliant),
- max. 10% of AuM in one special mutual fund,
- max. 40% of AuM in mutual funds.

Table SK 5. Supplementary Pension vehicles market share

Type	Supplementary pension vehicles	Assets under management (in millions €)	Market share based on AuM
Contributory	Conservative supplementary pension funds (3)	143.91	9.31%
	Balanced supplementary pension funds (4)	1,182.87	76.54%
	Growth supplementary pension funds (4)	157.24	10.17%
PAY-OUT	Pay-out supplementary pension funds (4)	61.32	3.97%
TOTAL	17 Pension funds	1,545.33	100.00%

Source: Own calculations based on ManazerUspor.sk data, 2016 (data as of 31.12.2015)

Charges

Pillar II – Funded pension

Pension Fund Management Companies (both obligatory and optional) are allowed to apply these types of charges to pension funds:

- Management fee (as percentage of NAV in respective pension fund),

- Success fee (as percentage of new highs reached in performance of respective pension fund –High Water Mark¹⁴⁹ ‘HWM’ principle),
- Administration fee - Administration of Personal pension account (as percentage of new contributions),
- Depository fee (as percentage of NAV in respective pension fund),
- Other charges (mostly trading charges).

It has to be mentioned that on top of these charges, each saver in Slovak pillar II has also to pay Administration fee to the Social Insurance Agency that administrates central collection system and transfers savers’ contributions to his personal pension account.

Following table compares applied charges in the pillar II.

Table SK 6. Pillar II Pension Funds’ Fees		
Fee type	Since 2005	as of 31 December 2015
Management fee (for PFMC)	max 0.8% p.a., NAV	max 0.3% p.a., NAV (since 1 April 2012)
Success Fee (for PFMC)	max 5.6%, HWM	max 10%, HWM (since 1 July 2013)
Administration of Personal pension account (for PFMC)	1% of new contribution	1% of new contribution
Administration fee (for Social Insurance Agency)	0.50% of new contribution	0.25% of new contribution (since 1 January 2013)

Source: Own research, data as of 31.12.2015

Pillar III – Supplementary pensions

Supplementary Pension Fund Management Companies are currently (from 1. January 2014) allowed to apply the following types of charges:

- Management fee (as percentage of NAV in respective supplementary pension fund),

¹⁴⁹ Slovak legislation defines the HWM method for calculating the success fee as a comparison of new highs of a specific pension fund to its historical performance. If today’s closing price is higher than previous historical highs, the provider has the right to charge a 10% success fee based on the difference between today’s pension unit price and the highest historical price. If the difference is negative no success fee can be charged.





- Success fee (as percentage of new highs reached in performance of respective supplementary pension fund –High Water Mark principle),
- Depository fee (as percentage of NAV in respective pension fund),
- Other charges (Switching fee).

The following table compares charges applied in pillar III.

Table SK 7. Supplementary Pension Funds' Fees

	since 2009	Since 1 January 2014
Management Fee		
1. <i>contributory SPF</i>	max 2.5% NAV (2010) => max 1.98% (2019+)	max 1.2% NAV (2015 = 1.7% and each following year -0.1%)
2. <i>payout SPF</i>	max 0.996% NAV	max 0.6% NAV (2015 = 0.85% and each following year -0.05%)
Success Fee		
1. <i>contributory SPF</i>	max 10% (2010) => max 20% (2020+); HWM principle	max 10% ; HWM principle
2. <i>payout SPF</i>		0%
Switching Fee	0% more than 3 years	0% more than 1 year / max 5% less than 1 year
Early Exit Fee	20% (5% SPC + 15% SPF)	0%

Source: Own research based on Supplementary pension saving Act, data as of 31.12.2015

Taxation

Act on Income Tax recognizes two different income tax rates in Slovakia that apply to pension saving schemes.

Personal income tax rate has been set at 19% since 2005. Since 2013, there is higher tax rate of 25% for higher earners, whose monthly income is higher than €2,918.52 (around 3% of working population).

Corporate income tax rate for 2015 was 22%.

Corporate income tax rate for 2014 was also 22% and 23% for 2012 (19% from 2004 to 2012; 25% from 2002 to 2003; 29% from 2000 to 2001; and 40% from 1994 to 1999).

Pillar II – Funded pensions

Pillar II should be viewed as a 1bis pension pillar that is basically a derivate of basic old-age security scheme as the part (4%) of the overall (18%) old-age social insurance contributions are diverted from a PAYG pillar into funded DC scheme. Understanding this principle, pillar II taxation is similar to the PAYG pillar, meaning that an EEE taxation regime is applied.

Taxation of contributions

Contributions paid to the pillar II are tax deductible. However, a saver can add voluntary contributions on top of the 4% contributions redirected from PAYG pillar. In this case, an additional 2% of contributions are personal income tax base deductible. This provision is valid till the year 2016. Additional contributions made above the “4% + 2%” rule are subject to 19% personal income tax.

Taxation of the Fund

Fund returns are not subject to Slovak income taxes at the fund level.

Taxation of pay-out phase income

Income generated via the purchase of pillar II pay-out phase products (annuity, perpetuity, programmed withdrawal) are not subject to personal income tax. In case of heritage, the amount the successor receives as inherited (accumulated) savings is not subject to personal income tax.

Pillar III – Supplementary pensions

Taxation of pillar III differs from the pillar II taxation approach significantly. There are different taxation treatments of contributions as well as pay-out phase. It is rather difficult to generalize the regime; however the EET regime can be used with several exceptions and specifications.

Taxation of contributions

When considering taxation treatment of contributions, slightly different regime is used for savers’ (employees’) contributions and different regime for employer’s contributions.

Generally, both contributions are income tax deductible; however, for employees (savers), there is a ceiling of € 180 per year. This means, those monthly





contributions to the pillar III supplementary pension fund up to € 15 are income tax base deductible. Above this amount, the contributions made to the individual saving account are subject to personal income tax. Taking into account that average salary in Slovakia (year 2015) is around € 895, employee contributions up to 1.65% of salary can be deducted from the personal income tax base.

Employer contributions are treated in a slightly different way. Contributions are tied to the monthly salary of employees and employer contributions up to the 6% of monthly salary are treated as tax expenses. Therefore, employers are motivated to contribute on behalf of employees up to this tax favorable ceiling. Taking into account average salary in Slovakia, contributions up to the € 53 per employee per month are considered as tax expenses for contributing employer. Taking into account poor supplementary pension funds' performance and relatively high level of charges, favorable tax treatment of employer contributions is the real reason, while the supplementary pension scheme is still supported by employers.

It should be noted, that there is one abnormality when considering additional obligatory health insurance duties tied to the employer contributions. Employee is held liable for increased health insurance obligations (currently 14% of monthly salary) due to the employer contributions to the pillar III. Employee (saver) income base for health insurance payment is increased due to the employer pillar III contributions, and it depends on the employer's approach, who will carry the costs of increased health insurance payments due to the employer contributions.

Taxation of the Fund returns

Fund returns are exempt from income taxes at the fund level.

Taxation of pay-out phase

There are three different types of products used for the pillar III pay-out phase (Act on Supplementary Pension Saving):

- 1) Lump-sum – paid out through SPFMC at a maximum of 50% of accumulated savings;
- 2) Annuities – paid out through the insurance company in the form of a single annuity;
- 3) Phased (Programmed) withdrawal – paid out through SPFMC for at least 5 years.

There are 3 general conditions, where at least one should be met, when entering the pay-out phase and achieve more favorable tax treatment of income stream from pillar III savings. They consist of a member's age (at least 62 years), entitlement for state retirement pension benefits or entitlement for state early retirement pension benefits.

When considering tax treatment of pay-out phase income stream from the point of a saver, there is a possibility to adjust the personal income tax base. The Act on Income Tax defines, that the deduction from income tax base will be applied to the income stream from pillar III benefits and life insurance contracts. Personal income tax base shall be lowered by the paid contributions (pillar III) or paid premiums (life insurance contract). The Act on Income Tax also defines the income tax base adjustments in case of paid monthly benefits according to the formulas. In the case of temporary annuity, the income tax base is calculated as positive balance between sum of already received benefits and sum of paid contributions. In case of single annuity, the income tax base is calculated as paid monthly benefits and total paid contributions (or premium) divided by the number of remaining years calculated as a life expectancy and the age of taxpayer (beneficiary) at the moment of first paid benefit. Therefore, we can conclude that the income tax treatment of pay-out phase is in fact a deferred taxation of investment returns applied not to the supplementary pension fund, but directly to the saver during the pay-out phase.

Pillar II – Funded pensions

The six asset managers offer 20 pension funds in Slovakia (see table below). Pension funds are divided into two main groups:

1. obligatory pension funds
 - a) bond guaranteed pension funds (6 offered)
 - b) equity non-guaranteed pension funds (6 offered)
2. optional pension funds
 - c) mixed non-guaranteed pension funds (3 offered)
 - d) index non-guaranteed pension funds (5 offered)

Groups a), b) and c) were launched at the same time the Slovak pillar II. Index nonguaranteed pension funds (only passively managed pension funds) were launched in 2012.



**Table SK 8 Pension vehicles in pillar II**

Pension vehicle	Fund Name	Fund Inception Day
Bond guaranteed pension funds (obligatory)	AEGON d.s.s. – BGPF (Solid)	22 March 2005
	Allianz - Slovenska d.s.s. – BGPF (Garant)	22 March 2005
	AXA d.s.s. – BGPF (Dlhopisovy)	22 March 2005
	DSS Postovej banky d.s.s. – BGPF (Stabilita)	22 March 2005
	NN d.s.s. – BGPF (Tradícia)	22 March 2005
	VUB Generali d.s.s. – BGPF (Klasik)	22 March 2005
Mixed nonguaranteed pension funds (optional)	DSS Postovej banky d.s.s. – MNGPF (Benefit)	22 March 2005
	NN d.s.s. – MNGPF (Harmónia)	22 March 2005
	VUB Generali d.s.s. – MNGPF (Mix)	22 March 2005
Equity nonguaranteed pension funds (obligatory)	AEGON d.s.s. – ENGPF (Vital)	22 March 2005
	Allianz - Slovenska d.s.s. – ENGPF (Progres)	22 March 2005
	AXA d.s.s. – ENGPF (Akciovy)	22 March 2005
	DSS Postovej banky d.s.s. – ENGPF (Prosperita)	22 March 2005
	NN d.s.s. – ENGPF (Dynamika)	22 March 2005
	VUB Generali d.s.s. – ENGPF (Profit)	22 March 2005
Index nonguaranteed pension funds (optional)	AEGON d.s.s. – INGPF (Index)	02 April 2012
	AXA d.s.s. – INGPF (Indexovy)	02 April 2012
	DSS Postovej banky d.s.s. – INGPF (Perspektiva)	02 April 2012
	NN d.s.s. – INGPF (Index)	02 April 2012
	VUB Generali d.s.s. – INGPF (Index)	02 April 2012

Source: Own elaboration based on www.manazeruspor.sk data, 2016

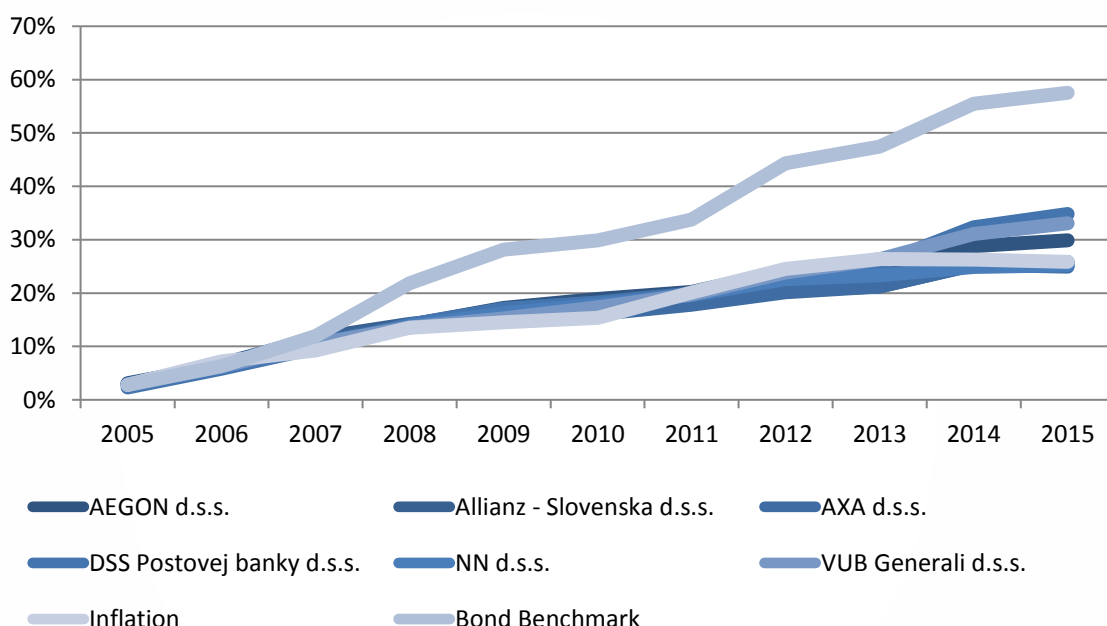
The performance (returns and respective volatility) differs in all four types of pension funds. This is caused by the portfolio structure and different investment strategies.

Bond guaranteed pension funds do not invest in equity investments. Mixed nonguaranteed pension funds invest a small portion in equity investments (currently less than 40% of AuM on average) and equity nonguaranteed pension funds invest higher portion in equity investments (currently more than 50% of AuM in average). The highest level of equity investments have optional Index

nonguaranteed pension funds (nearly 100% of AuM), because their fully passive investment strategy focuses on replication of benchmark (various equity market index) performance.

Bond Guaranteed Pension Funds' performance on cumulative basis compared to their respective benchmark¹⁵⁰ and inflation is presented in graphs below.

Graph SK I. Obligatory Bond Guaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Bond benchmark data adopted from the www.manazeruspor.sk

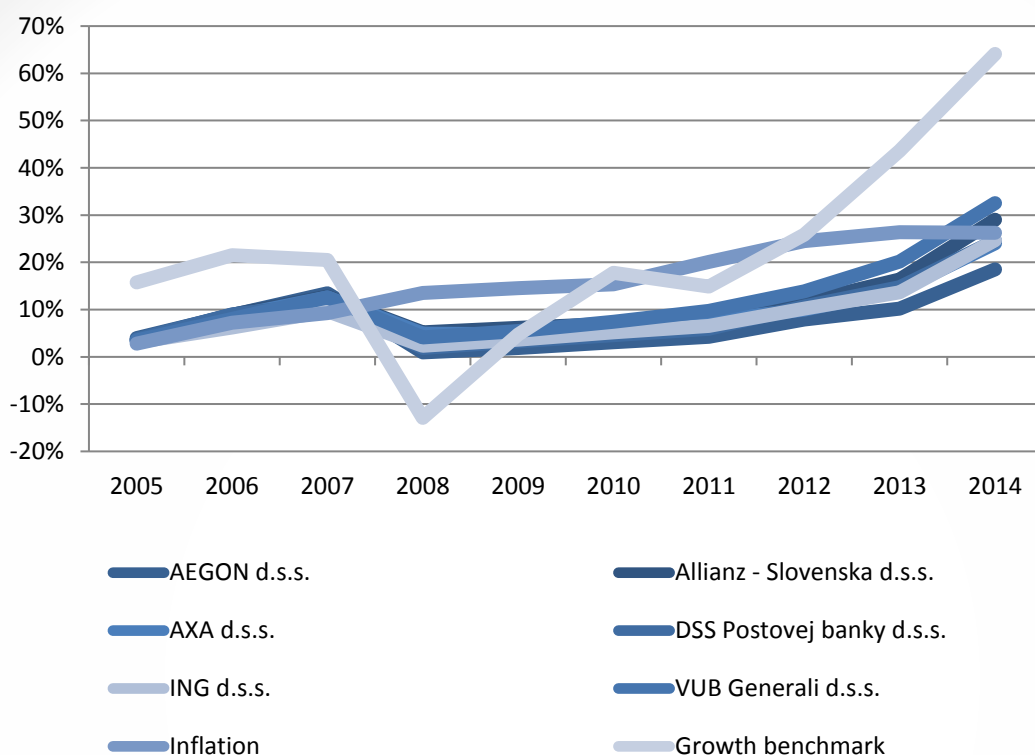
Equity Nonguaranteed Pension Funds' performance on cumulative basis compared to their respective benchmark and inflation is presented in graphs below.

¹⁵⁰ There is no official benchmark in Slovakia for pension funds. The benchmarks have been created by authors and can be seen on the web site www.manazeruspor.sk





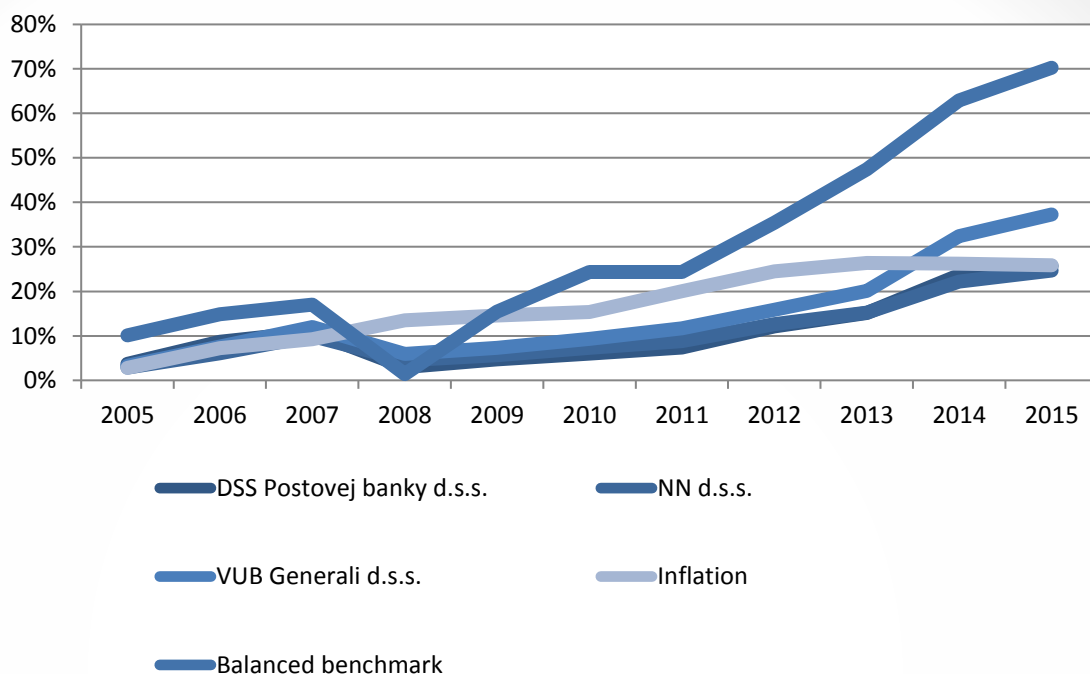
Graph SK II. Obligatory Equity Nonguaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Growth benchmark data adopted from the www.manazeruspor.sk

Optional Mixed Nonguaranteed Pension Funds' performance on an annual as well as cumulative basis compared to their respective benchmark and inflation is presented in graphs below.

Graph SK III. Optional Mixed Nonguaranteed Pension Fund – Cumulative Performance



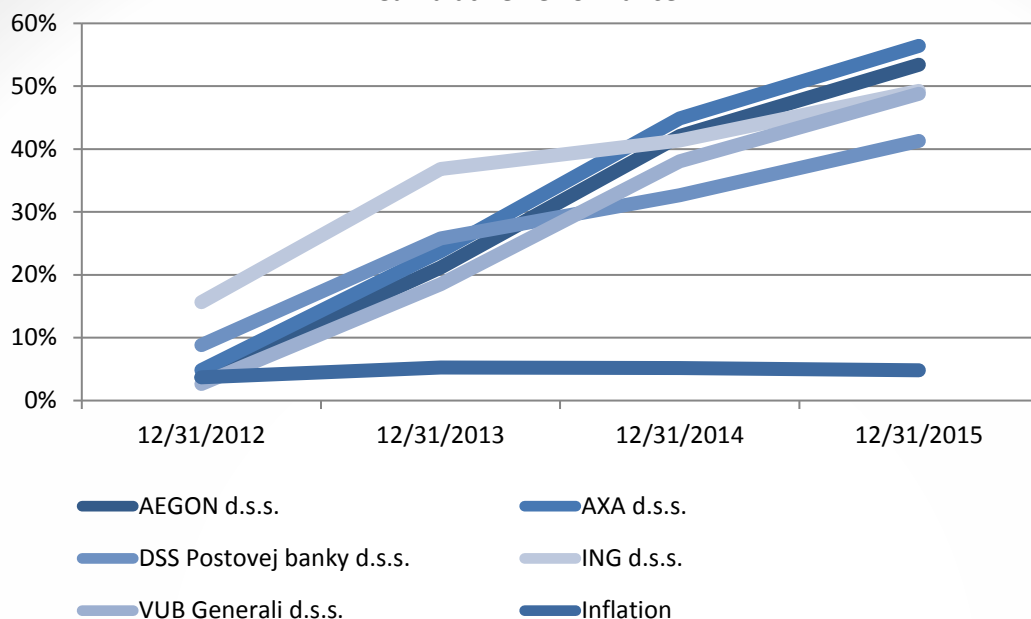
Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Balanced benchmark data adopted from the www.manazeruspor.sk

Optional Index Nonguaranteed Pension Funds' performance on an annual as well as cumulative basis compared to inflation is presented in graphs below.





Graph SK IV. Optional Index Nonguaranteed Pension Fund – Cumulative Performance

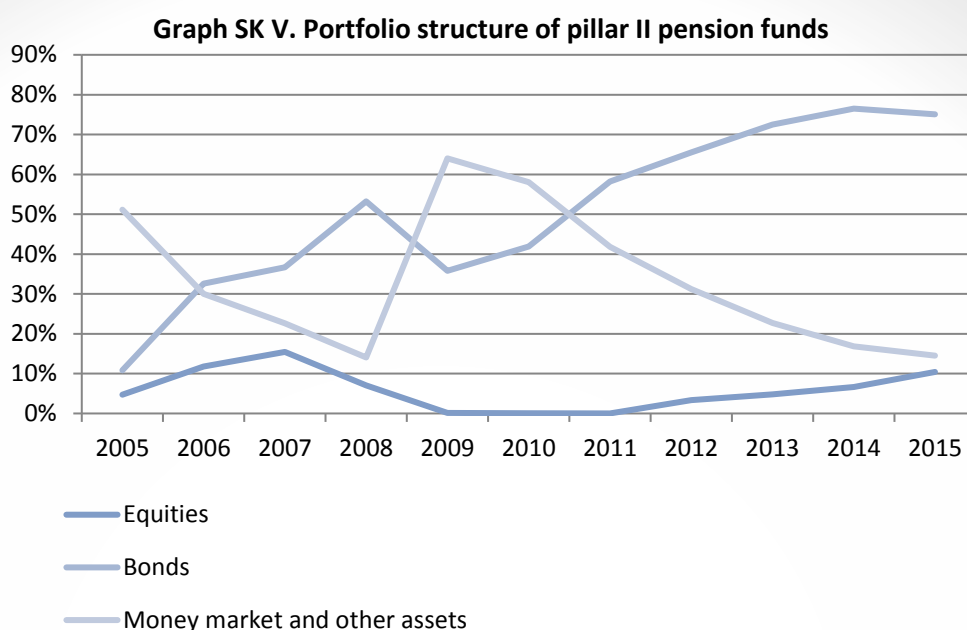


Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31.12)

It should be noted that the last graph above do not compare pension funds' performance with a benchmark. The first reason is that, according to the database from manazeruspor.sk (Slovak pillar II savers analytical website), each index pension fund in pillar II is tracking its respective benchmark very well. The second reason is that each index pension fund has selected a different benchmark:

- ING – Eurostoxx50;
- DSS Postovej Banky – MSCI Euro;
- VUB Generali – ACWI;
- AXA and AEGON – MSCI World.

Portfolio structure of pillar II pension funds according to the classes (bonds, equities, money market instruments) is presented in the graph below. According to our analysis, currently about 75% of all investments in pillar II pension funds are bond investments. On the other hand, only 6.66% of all investments are equity investments.



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31.12)

Nominal as well as real returns of pillar II pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table SK 9. Nominal and Real Returns of pillar II Pension Funds in Slovakia

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Nominal return after charges, before inflation and taxes										
3.42%	4.54%	3.67%	-6.65%	0.84%	1.26%	1.48%	3.03%	1.34%	4.03%	1.04%
1.59%										
Real return after charges and inflation and before taxes										
0.62%	0.24%	1.77%	-10.55%	-0.06%	0.56%	-2.62%	-0.67%	-0.16%	4.13%	1.34%
-0.56%										

Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December 2015)

Negative real returns between years 2008 and 2013 were caused by inappropriate legislative changes that came into effect in July 2009 after stock market turmoil. These changes forced portfolio managers to sell off all equities and hold cash in portfolios (see graph above).



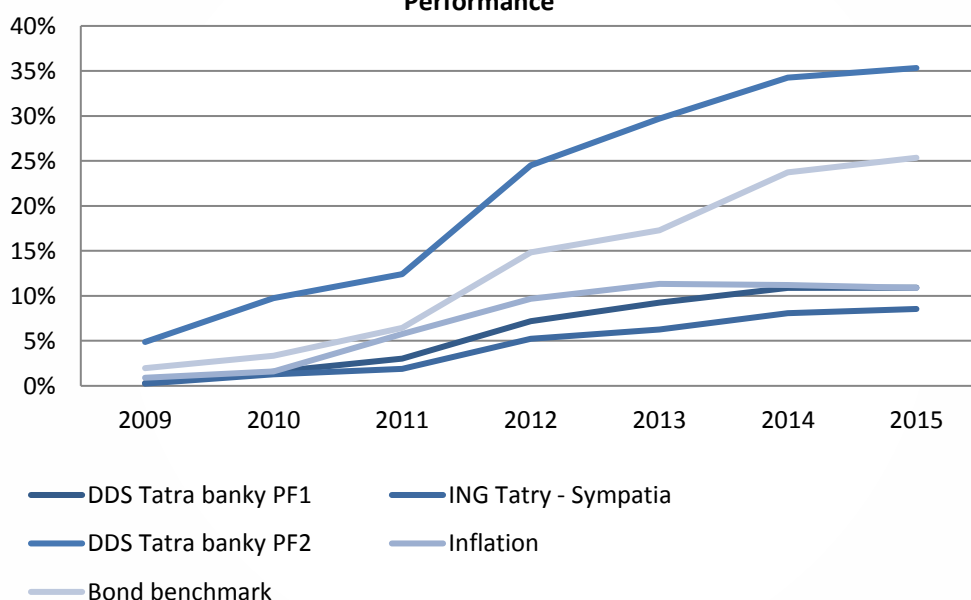


Pillar III – Supplementary pensions

Supplementary pension funds differ in strategy and also in portfolio structure. Conservative pension funds do not invest in equity investments. Balanced pension funds invest a small portion in equity investments (currently less than 20% of AuM in average) and growth pension funds invest higher portion in equity investments (currently more than 40% of AuM in average).

Supplementary Conservative pension funds' performance on cumulative basis compared to their respective benchmark (Bond benchmark – lime line) and inflation (black line) is presented in the graphs below.

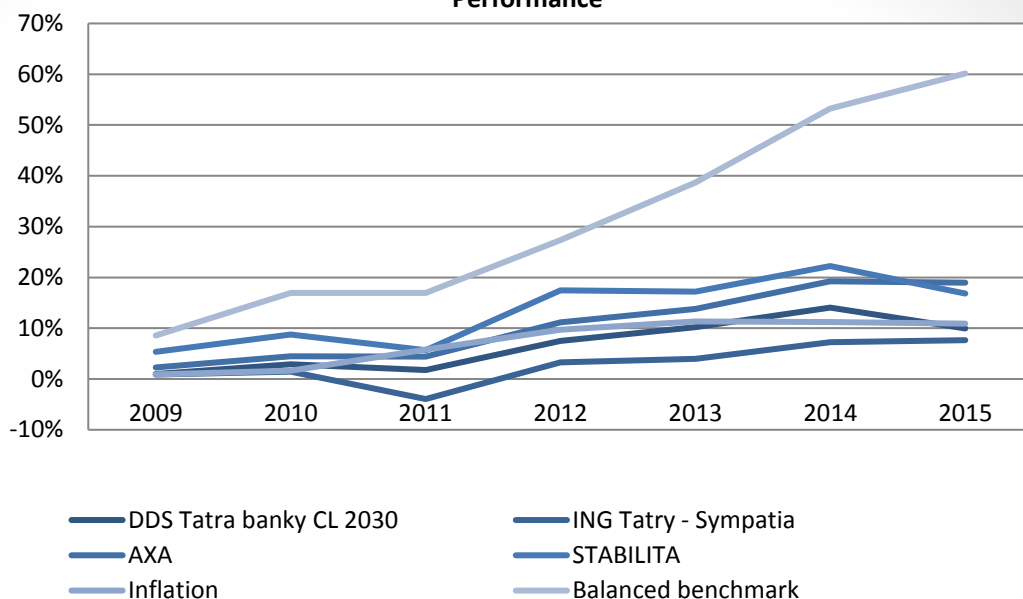
Graph SK VI. Supplementary Conservative pension funds - Cumulative Performance



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Bond benchmark data adopted from the www.manazeruspor.sk

Supplementary Balanced pension funds' performance on cumulative basis compared to their respective benchmark (Bond benchmark – lime line) and inflation (black line) is presented in graphs below.

Graph SK VII. Supplementary Balanced pension funds - Cumulative Performance



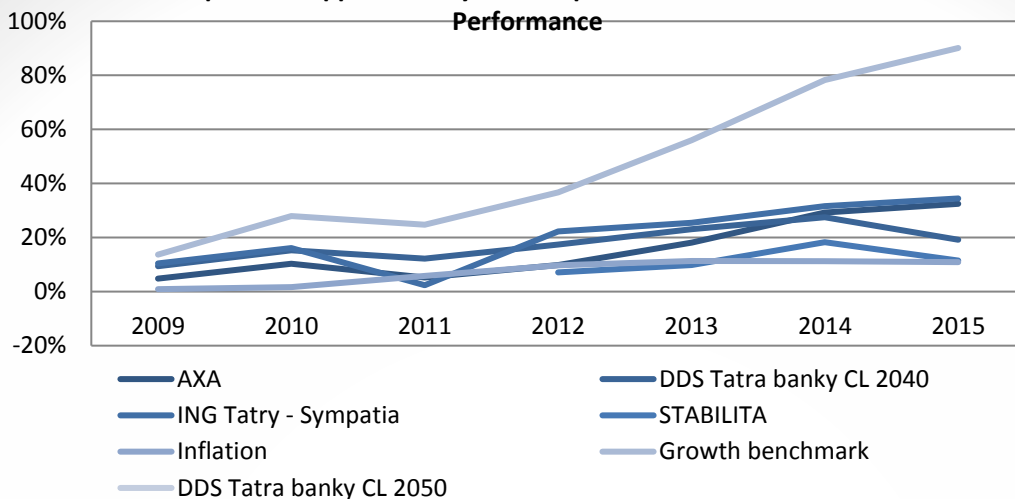
Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Balanced benchmark data adopted from the www.manazeruspor.sk

Supplementary Growth pension funds' performance on cumulative basis compared to their respective benchmark (Bond benchmark – lime line) and inflation (black line) is presented in graphs below.





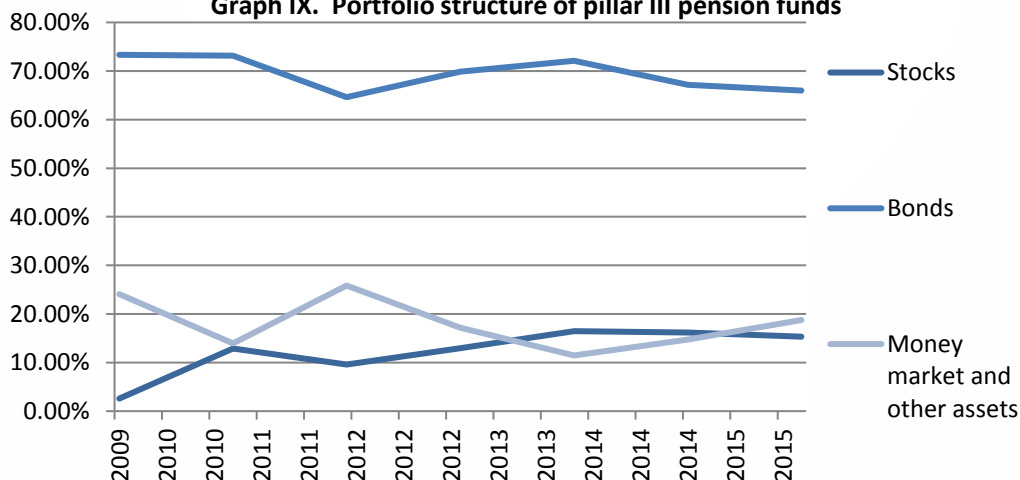
Graph VIII. Supplementary Growth pension funds - Cumulative Performance



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31 December). Growth benchmark data adopted from the www.manazeruspor.sk

Portfolio structure of pillar III is presented in the graph below. According to this graph, currently more than 60% (less than in pillar II) of all investments in pillar III pension funds are bond investments. On the other side, only 17.61% (more than in pillar II) of all investments are equity investments.

Graph IX. Portfolio structure of pillar III pension funds



Source: Own calculations based on www.manazeruspor.sk data, 2016 (data as of 31.12)

Nominal as well as real returns of supplementary pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table SK 10 - Nominal and Real Returns of Supplementary Pension Funds in Slovakia						
2009	2010	2011	2012	2013	2014	2015
Nominal return after charges, before inflation and taxes						
1.51%	1.91%	-0.78%	6.20%	2.15%	3.38%	-1.68%
1.71%						
Real return after charges and inflation and before taxes						
0.61%	1.21%	-4.88%	2.50%	0.65%	3.48%	-1.38%
0.20%						

Source: Own calculations based on www.manazeruspor.sk data, 2016 (as of 12.2015)

Compared to pillar II pension funds, supplementary pension funds have achieved positive real returns because of two reasons:

- They started in 2009 after the market downturn,
- Minimum regulatory and legislative changes affecting portfolio structure and thus performance.

Conclusions

Slovak multi-pillar pension system is not quite favorable for savers. Pillar II suffers from constant changes and significant political risk then arises not only from diverging political opinions on pension system but also by the changes in private pension scheme in neighboring countries (Poland, Hungary, Czech republic), who effectively diminished (or even effectively destroyed) pillar II schemes in favor of state PAYG schemes.

Even though there have been negative interventions into the pillar II during 2008 till 2012 (significant investment restrictions, decreasing of contributions from 9% to 4%), several positive features have been introduced recently (2012 and 2013) in pillar II. Introduction of passive index pension funds, decreasing of management charges, changes in fee structure resulting in the introduction of performance based fees (success fee with High-Water Mark principles) and decreasing regulation of non-guaranteed pension funds. However, the price for these positive changes was the transfer of savers from equity based into bond pension funds (nearly 90% of savers), which might be not beneficial for all savers, especially young ones.





Pillar III pension vehicles are generally poorly performing, costly and without significant tax benefits for employers' contributions, the pillar would never survive competition from pillar II pension funds and typical investment funds. The debate on finding an appropriate regime for pillar III scheme is still ongoing, while there are several different views on how to make the pillar III more favorable for savers.

Pension Savings: The Real Return

2016 Edition

Country Case: Spain

Introduction

Domestic household savings have always been a noteworthy feature of the Spanish model. The most common channels are direct investments or the deep-rooted practice of real estate acquisition. This turned housing properties into speculative assets which fed the housing bubble.

There is an historic absence of a consolidated social welfare system with proven guarantees offering assurance for the future. This has caused the Spanish population to start speculating and accumulating enough capital in order to face potential life changing events in the future, such as the loss of employment, retirement, incapacity and/or dependency.

The above mentioned conditions led to the appearance of an important savings and investment culture focussed on real estate. Although you can now find a well-established welfare state offering complete social cover that is seemingly sustainable, this tendency hasn't dissipated. In fact, Spanish citizens continue to invest for future needs, giving up part of their present buying power in the process.

The Bank of Spain reported that during a long period of time the savings rate in Spain was around 11%. At the onset of the 2007 crisis (end of 2007), this figure rose up to 17.8%. Since 2010, this trend was reversed and partially due to the limited disposable income, the rate once again fell to 8.2%. Since 2012, the country has been witnessing the gradual recovery of the original savings rate. In the 1st quarter of 2015, the figure was 9.9% (vs 9.8% in the 4th quarter of the year before). It must be said that this figure came down again during the next few quarters. This could partially be explained by the economic recovery and increasing consumption. Therefore, the savings rate for the last two quarters of 2015 was lower, at 9.2% and 9.4% respectively (figures of the National Institute of Statistics, March 2016). Without any doubt, this fact reflects the uncertainty surrounding the political situation in Spain, which inevitably affects consumer confidence for the future and





their economic prospects. This feature is symptomatic of a society severely damaged by an economic crisis and which is very vulnerable to new and changing political realities.

Besides this preference for saving, in times of economic distress and in this case as a consequence of the economic crisis, it is important to take into account an additional powerful, psychological component. At its core, we find the dramatic decline of future job prospects and the hard times that have been endured by many, eroding consumer confidence. Furthermore, the economic crisis exposed structural weaknesses in the Spanish economy (aging population, high unemployment rates and a large black market economy) and in its social welfare system, main victim of the austerity measures.

By the end of 2015, the financial assets owned by Spanish households rose from 1.99 trillion in the last quarter of 2014 to 2,012 trillion € by the end of 2015. So the increase from one year to the other was of 1.7% (32,852 billion €), according to the business association INVERCO.

If we take a closer look at the distribution of non-real estate assets owned by households, 2014 breaks down as follows:

Table ES 1. Financial Savings of Spanish Households (non-real estate)		
	% of total savings	% Δ 2015/2014
Bank deposits	38.6	(- 0.6%)
Direct investment	26.6	(- 0.4%)
Collective investment institutions	12.4	(+1.1%)
Insurance/ Occupational pension entities	11.1	(- 0.1%)
Pension funds	5.7	(+0.1%)
Cash	3.6	(- 0.2%)
Others	2.0	(+0.1%)
TOTAL	100	

Source: INVERCO

The above table shows that the significant cut in interest rates led to a loss of volume in Bank Deposits. According to INVERCO, 100% of the move towards financial assets was allocated to pooled assets (investment funds and investment

societies), while direct investments (fixed income and equities) showed negative flows, losing € 6,671 M.

If we look at pension funds, the total amount invested by the end of 2015 rose to € 113,878 M. This fact led to an increase of 3.1% in relation to 2014 figures in absolute terms. According to the quarterly bulletin, published by the DGSFP3 on Pension plans and funds, these funds represent 9,907 M participants. This is a similar amount to the number registered the year before of 9,946 M. This data actually indicates a lower number, around 8 million, because there are people who participate in more than one plan. If we look at figures provided by INVERCO¹⁵¹, the numbers go up to 9,967,658 participants on December 31st 2015, 0.12% higher than in 2014. This difference between the figures can be explained due to the interim nature of the data offered by the DGSFP¹⁵², as we are still waiting for their 2015 official report.

A breakdown by type shows that 20.30% (2,023,999 participants) are invested in business pension plans with assets that amounted to € 35,548 M at the end of 2015, 79.01% (7.876.399 participants) in individual plans which had assets of € 68,012 M, and 0.67% (67.260 participants) in associated plans, with assets of € 958,368 M. In all cases we have seen an increase in assets under management in relation to the figure in 2014, with an increase of 5.85% in individual plans, of 0.81% in corporate plans and of 1.94% in associated plans.

Pension Vehicles

Pension Plans

There is a clear distinction to be made between, on the one hand insurance-based pension plans (referred to as 'retirement plans' in Spain) and other pension plans. The differences between the two systems are related to their liquidity potential, risk profiles and tax treatment.

Retirement plans are insurance products developed by financial institutions with one main goal: saving for retirement. These plans tend to be aimed at the mid- to low-income population, with little purchasing power. These vehicles are more flexible, and require less commitment than a pension plan. This is because they

¹⁵¹ INVERCO: <http://www.inverco.es/38/0/104/2015/12>

¹⁵² DGSFP:

<http://www.dgsfp.mineco.es/PlanesFondos/Documentos/2016/Boletines%20trimestrales/Informacion%20Trimestral%20de%20planes%201T%202016.pdf>





allow for early recovery of the amounts deposited. However, it is important to point out that the price of an early recovery in this kind of plan is enormous.

Pension plans are private social security instruments that are compatible with and complementary to the public pension system. Payments into pension plans complement the ones made by the public pension system, even substituting them completely in some cases. The public administration promotes them, with significant fiscal stimuli, which translate into substantial direct taxation benefits.

These fiscal privileges by the administration meant that participants couldn't withdraw the contributed funds until they reached the age of retirement (60 years minimum). There were however exceptional circumstances, that allowed for early recovery such as a serious illness or unemployment. This framework changed with the introduction of Law 26/2014, making the pension system more flexible. All contributions made from 2015 onwards can be recovered, together with its accrued interest, ten years after being paid into the fund.

Furthermore, personal pension fund participants have the right to move their accrued capital to a different plan, either with the same asset manager or another. This movement does not involve any financial cost, fee or commission, moreover it has no effect on the fiscal benefits enjoyed in the past or "promised" in the future. The movement of capital must take place within seven working days so that operators have time to verify the details and carry out the migration.

INVERCO's yearly report showed that the movement of capital in 2015 within the individual system category amounted to 15,845 M€, 17% higher than the previous year. These movements represented 23.7% of the average assets in the individual plans (vs 22.1% in 2014).

The main providers of private pension plans in 2015 (according to the DGSFP) were pension fund asset managers (33.4% of assets) followed closely by insurer-asset managers (32.5%), depositary entities (29.1%), insurance companies (1.6%) and "Others" (3.4%).

In 2015 there were 2,744 pension plans in total, of which 1,264 (46%) were part of the individual system, 1,308 (47.67%) of the corporate system and 172 (6.27%) of the associated system. Out of all the corporate plans, around 70% were of the defined contribution type, 1% was defined benefit and the rest, 29%, were mixed

plans¹⁵³. INVERCO has a classification for all individual pension funds ranked by liquidity and risk. The categories are the following¹⁵⁴:

- Short term Fixed Income: There are no cash equity investments, nor derivative products based on fixed income in this portfolio. The average duration of the portfolios must be equal to or below two years (9.65% of all plans / 15.88% of participants).
- Long term Fixed Income: There are no cash equity investments in the portfolio, nor any derivative products based on fixed income. The average duration of the portfolios must be above two years (9.10% of plans / 13.39% of participants).
- Mixed Fixed Income: Less than 30% of the portfolio is invested in cash equity (17.88% of plans / 30.95% of participants).
- Mixed Equity: Between 30% to 75% of the portfolio is invested in equities (14.56% of plans / 14.18% of participants).
- Equity: Over 75% of the portfolio is invested in equities (14.24% of plans / 9.66% of participants).
- Guaranteed: Plans that offer a certain return guaranteed by a third party. (34.57% of plans -15.93% of participants).

The composition of Pension Fund's portfolios in 2015 as presented in the last quarter report of the DGSFP showed the following distribution:

Table ES 2: Pension Funds - 2015 Distribution				
	Q1	Q2	Q3	Q4
Equities	26.82%	26.55%	25.88%	27.09%
National government bonds	35.54%	33.42%	31.76%	29.45%
Foreign government bonds	9.73%	9.53%	11.98%	11.98%
Credit bonds	14.72%	15.22%	16.30%	16.04%
Deposits and money market instruments	13.29%	15.28%	14.08%	15.44%

Source: DGSFP (The General Directorate of Insurance and Pensions)

The evolution of these variables over the last two years is shown below. Graph ES 1 clearly shows the gradual growth of foreign debt to the detriment of the Spanish

¹⁵³ INVERCO: LAS INSTITUCIONES DE INVERSIÓN COLECTIVA Y LOS FONDOS DE PENSIONES Informe 2015 y perspectivas 2016. Page 50

¹⁵⁴ INVERCO: LAS INSTITUCIONES DE INVERSIÓN COLECTIVA Y LOS FONDOS DE PENSIONES Informe 2015 y perspectivas 2016. Page 50 & 45

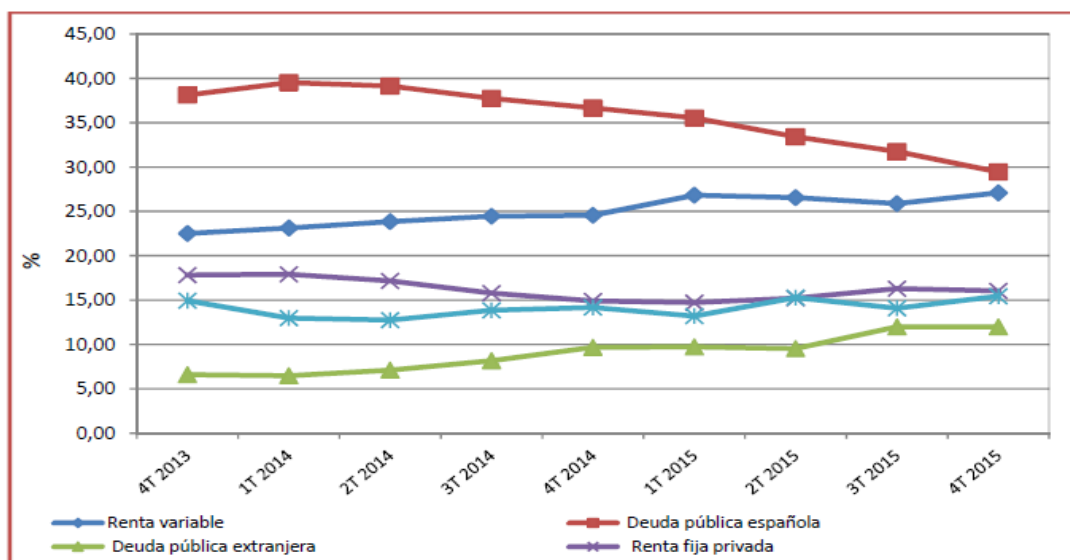




public debt. Another feature is the rise of equities due to the fact that fund managers search for higher returns.

GRAPH ES 1

Estructura de las Inversiones de los Fondos de pensiones (%)



Source : DGSFP (The General Directorate of Insurance and Pensions)

Life Insurance

Life insurance-based savings products are very popular in Spain. According to information provided by UNESPA¹⁵⁵ (the business association of the Spanish Insurance Industry) at the end of the last quarter of 2015, insurance companies were managing € 209.3 M of private savings, of which 78.56% (€ 164.43 M) were life/savings contracts and 18.56% (€ 38.85 M) were pension funds managed by the same insurers.

The following table illustrates the last figures offered by the DGSFP in relation to life insurance contracts, which saw a decrease in premiums of 2.6% in 2014.

¹⁵⁵ UNESPA: PRESS STATEMENT 11/5/2016. Page 1

Table ES 3- Life insurance asset allocation

ASSETS	PERCENTAGES
Credit bonds	23.8
Government bonds	47.7
Real estate	2.4
Equities	3.8
Collective investment institutions	3.9
Money markets and deposits	14.6
Loans	0.7
Derivatives and structured instruments	1.4

Source: DGSFP (The General Directorate of Insurance and Pensions)

Based on the last information from the DGSFP in 2013, the distribution of life insurance products occurred mainly through bank branches, bank-insurance operators, either related or not (68.7%) and exclusive agents (16.97%). The data provided refers to individual policies, which show the important role that banks play in the distribution of this type of products. This fact is mainly due to the relationship they have with mortgage and consumption lending. Another important factor to consider is the privileged access they have to potential clients' contracted services and direct debit products. This gives them a competitive advantage when they counter offer.

PPA, PIAS and PPSE

PPA Both insured pension plans (PPA) and systematic individual savings plans (PIAS) are gaining ground compared to other financial products, traditionally used to accumulate and yield profit from savings for retirement. These plans are commonly accepted as life insurance, although they are technically long-term individual savings products. The capital fund is formed by periodic payments. These payments are invested and, once the investor reaches the age, stipulated in the contract the lifelong payments are paid to the beneficiary.

PPAs guarantee a certain level of return during the capital accumulation period. In short, we could say that they are pension plans with certain similarities to insurance products. They are non-redeemable (before the agreed date). PIAS, on the other hand, allow for early recovery of consolidated rights, but only if the conditions for early recovery of pension plans are met¹⁵⁶. The recovered amount is

¹⁵⁶ UNESPA: PRESS STATEMENT 11/5/2016. Page 1





then subject to a significant tax penalty, so if it occurs within ten years of the contribution, the sum will be considered capital gains and taxed at a rate of 18%.

According to UNESPA¹⁵⁷, at the end of the first quarter of 2016, 1.6 million savers (24.67% annual increment) invested a total sum of € 8.66 M.in PIAS On the other hand, over a million people invested € 12.68 M in PPA's.

In addition to PPA's and PIA's there are corporate social welfare plans for employees (PPSE). The latter are similar to pension plans of the employment type, as contemplated in art. 51.4 of Law 35/2006 and the Royal Decree (R.D.) 1588/1999 modified by the R.D. 1684/2007. Although the tax treatment is similar to that of pension funds they aren't as well established as PPA's and PIA's.

Fees and commissions

Spanish savers have greatly benefited from the regulator's recent intervention in fees and commissions. Until this moment, the transparency of these key aspects was insufficient and inadequate. The reform established a legal limit on management and administration fees attributable to investors. However, there were no measures introduced in order to limit transaction fees. This amount tends to be paid as incentives to sales personnel on top of the management fees.

In 2012, Aguirreamalloa, Corres y Fernández¹⁵⁸ exposed these sales incentives in that commissions paid by fund providers to financial advisers were often presented to participants as ordinary expenses or commissions (such as management or deposit fees, subscription and reimbursement fees, etc.). This led to situations where financial advisors who placed pension products could make more money than the portfolio managers in some cases.

Article 84 of the Royal Decree 304/2004¹⁵⁹ established specific limits to the deposit or management fees charged to subscribers of this type of products. These limits on fees and commissions were introduced by Royal Decree 681/2014¹⁶⁰. Nonetheless the regulation allows variable commissions to be set based on yields, although the providers have to respect certain limits such as the following:

¹⁵⁷ UNESPA: PRESS STATEMENT 11/5/2016. Page 1

¹⁵⁸ Aguirreamalloa, J; Corres, L. and Fernandez, P. — Pension Funds Returns in Spain 2001-2011, IESE Research document, February 2012

¹⁵⁹ <http://www.boe.es/boe/dia5/2004/O2/25QJdfs/A08859-08909.pdf>

¹⁶⁰ <http://www.boe.es/boe/dias/2014/08/02/pdfs/BOE-A-2014-8367.pdf>

- Pension fund managers can charge a 1.5% commission (before it was 2%) of the yearly value of the administered account. This limit must be respected by the pension fund as well as by every pension plan that forms the fund, and individually for each subscriber.
- Pension fund depositary entities may charge a maximum of 0.25% (previously 0.5%) of the value of deposited accounts. They must comply with this limit for every individual pension plan, the pension fund as a whole, and individually for each subscriber.

The latest official figures show the evolution of the management and deposit fees for pension funds over the last few years (until 2014). This reflects a clear difference between fees applied to instruments of the 3rd pillar (retail) and those declared for 2nd pillar (corporate), to the order of almost 5 to 1.

Table ES 4 - Administration fees and commissions

	2012	2013	2014	2015
2nd PILLAR	0.21%	0.20%	0.22%	0.24%
3rd PILLAR	1.39%	1.38%	1.28%	1.18%

Source: INVERCO

This is a constant pattern that is repeated in deposit fees, where the difference between retail and corporate is almost 5 to 1, as manifested below. This fact shows the significant negotiating power of corporate investors in price setting with product providers, and with the high commissions charged by retail distributors. As a result, it's understandable that the regulator was pressed to limit the management and deposit fees. This in turn has shown effective in reducing sale fees charged to retail investors.

Table ES 5 - Administration fees and commissions

	2012	2013	2014	2015
2^o PILLAR	0.03%	0.03%	0.03%	0.03%
3rd PILLAR	0.18%	0.17%	0.16%	0.14%

Source: INVERCO

In 2012, the aforementioned authors Aguirreamalloa, Corres y Fernández argued that administrators failed to inform pension fund participants about the portfolio management policies. They criticise the quality of the information provided, which they deemed insufficient for taking decisions on the value of the management of





the fund. Nowadays all fees and commissions attributable to the pension plan have to be included, both in pre-contractual documentation as well as quarterly and semi-annual reports that entities must send to participants. Like this, investors are aware of commissions and fees that their subscription to the plan will entail, before they make their decision to invest. Furthermore, once invested in the plan, they receive periodic information about paid fees and their actual impact on their product and its returns¹⁶¹.

In addition, all pension plans of the 3rd pillar are obliged to provide the Key Information Documents (KID) to potential investors. This KID should include the necessary information for participants to make an informed investment decision. This document should contain key information, briefly and concisely, to allow for a clear understanding of the product. It should include the main features and nature of the product, the costs and the risk profile, as well as relevant information about its returns.

Although pension products are not included in the PRIIPS¹⁶² regulation, the KID model is strongly influenced by it. There has been a notable effort to include pension funds in this regulatory scope, two years before its official implementation (once the transitory period passes of the Royal Decree that introduced the KID). Unlike plans in the 3rd pillar, plans in the 2nd pillar do not need to present the KID. Although the same information must be presented in the pre-contractual information to participants upon joining the plan, including expenses and fees.

Taxation

We could say that the Spanish private pensions system is similar to the EET model. This system allows for savers that invest in pension products to receive fiscal stimuli, leaving the invested capital exempt from taxation. Moreover, the revenue generated by the capital investments is only taxed if it has generated profits. This illustrates the underlying political strategy that the government has taken to encourage savings through taxation measures when the pension system is in question.

¹⁶¹ INVERCO

¹⁶² CNMV – Comisión Nacional del Mercado de Valores –

http://www.boletininternacionalcnmv.es/ficha.php?menu_id=1jera_id=342&jera_id=342#

The following section is a summary of the different fiscal treatments that products receive:

Retirement Plans

This system does not contemplate fiscal benefits for contributions made to retirement plans, which were differentiated from pension plans earlier on.

If the policy holder chooses to recover the whole invested amount –together with its generated returns- at the age of retirement, the lump sum will be taxed as capital gains in the income tax declaration of that year. These gains will be considered as the difference between the capital received and the premiums paid, to avoid double taxation.

On the contrary, when the pay-outs are deferred payments (temporary or lifetime) the result of applying a percentage added to the return obtained until the constitution of the payment, will be considered as capital gains.

Thus, benefits received for retirement or disability reasons in the form of deferred payments by beneficiaries of life or disability insurance policies, will be integrated in their tax base as capital gains from the moment the amount exceeds that of the premiums that have been paid according to the contract.

Life insurance products

All fiscal benefits for contributions to life insurance products were eliminated in 1999. Today returns on the accumulated capital are taxed like any other return on financial capital.

If the policy holder is the one perceiving the payment from the insurance policy as a lump sum, this amount is treated as capital gains (the difference between capital received and the sum of the paid premiums). This difference is included in the savings tax base since 2015, being taxed at 20% up to the first six thousand euros; at 22% from six thousand to fifty thousand euros and at 24% for amounts over fifty thousand euros. These percentages will be reduced by one percent for each segment in 2016.

If the capital is received as income, it is also treated as capital gains, and it is included in the savings tax base. Each annuity has a different percentage applied depending on how many years the income will be paid or the age of the beneficiary at the start of payments.





In case of death of the insured party before the end of the policy contract, the beneficiaries will pay the tax on their inheritance, which will vary depending on the regional regulation. It must be noted that Spanish regional governments (Comunidades Autonomas) have the competency to decide on tax rates, reductions and deductions within their regions. This leads to significant differences inside the Spanish territory.

PPAs (Insured Provision Plans, “Planes de Prevision Asegurados”)

The commitment to these types of private social welfare products is reflected in the favourable fiscal treatment that they receive. All contributions reduce the labour income tax base for investors by up to eight thousand euros annually. On the other hand, payments are taxed as labour income in accordance with the age of the saver at the moment of the set-up of the payment scheme, excluding the capital gains taxation. It could therefore be said that these products enjoy the same fiscal treatment as pension plans.

PIAS (Individual Systematic Savings Plans, “Planes Individuales de Ahorro Sistemático”)

These products have also been receiving a favourable fiscal treatment. They were first defined by the Third Additional Provision of Law 35/2006 on Personal Income taxes, and then modified by section sixty-nine of the first article of Law 26/2014. Just as for the other pension products, there is a maximum annual deductible amount of eight thousand, and another of 2,000 and 40,000 in total that an investor can accumulate in this type of plan.

If these requirements are met and the first contribution to the PIAS was made within five years, the saver does not pay any taxes on the investments returns. That is, when the contributors receive lifelong payment the generated returns are completely exempt of taxation. On the contrary, there is no tax deduction if it is recovered as a lump sum.

The taxed percentage of the life time annuities depends on the age at recovery, as follows:

- Under 40 years: 40%
- In between 40 & 49 years: 35%
- In between 50 & 59 years: 28%
- In between 60 & 65 years: 24%
- In between 66 & 69 years: 20%
- 70 years and over: 8%.

Pension Plans

We could consider that private pension funds and plans constitute the most popular product to save for retirement in Spain. This is, without any doubt, due to the important fiscal benefits on personal income tax. These advantages have also been extended to other insurance products that have emerged as more flexible alternatives.

These fiscal advantages are the reason why investors have chosen private pension funds as the main non-public way of saving financial resources for retirement. In fact, the most significant contributions to these plans tend to coincide either with the end of the fiscal exercise (guaranteeing the maximum deductibility) or the payment of personal income taxes.

Law 26/2014 introduced new tax measures for Spanish pension plans and similar products. Deductions on the personal income tax base following contributions to pension plans remain unchanged. There is an exception for 8.000 euros or 30% of annual income from work or professional activity.

As for the rest of the retirement and pension products defined by Spanish law, there are three possibilities for the recovery of the savers capital after the investment period has finished:

- **Lump sum:** before 2007, there was the option to receive a lump sum as a unique payment with an implicit tax reduction of 40%. After 2007, cases in which this reduction was applicable were reduced. Moreover, a transitional regime was established¹⁶³, which is still in force, when the recovery of the sum occurs within two years of the retirement age. Those who retired before 2010 and haven't already withdrawn their capital have eight years to do so and those who retired between 2011 and 2018 have eight years also to enjoy the same treatment. This makes it almost obligatory to

¹⁶³ BOE number 288 of the 28th of November 2014





recover the amount within two years to avoid being disadvantaged tax wise, in a system in which contributions and accumulated returns are both taxed, although you could argue that the taxation of these contributions are deferred in time as well as the benefits received.

- **Annual annuity (lifelong or temporary):** It is an option in which the amount recovered is taxed, although it is deferred over the years that the payments last. The amount of the payments will be treated as labour income and are added to other incomes that the pensioners receive (public pension, dividends, coupons, etc.). Nonetheless, there is an additional advantage for these annual payments from insurance products (life, insurance, PIAS, PPAS, PPSE), that depend on the age at which the saver/policy holder starts to recover his investments, as shown in relation to PIAS.
- **Mixed payments:** In this case, both of the mentioned possibilities are combined, so that there is a lump sum received and the rest is deferred in time through annual payments, so both types of fiscal treatments are enjoyed.

As can be seen, the amount paid in taxes on retirement depends on the decision the investor makes on what type of recovery he prefers. In any case, there is an inevitable imbalance reflected in the difference between the fiscal burden that the contributor supports when he contributes part of his income to savings/pension products and what he will effectively pay when he receives the capital. Therefore, the net fiscal balance changes depending on the total annual income received and the progressive marginal applicable rate on income taxes.

These marginal rates were reduced in 2015, 19.5% for contributors with lower income (20% in the past) and 46% for the higher brackets (47% in the past). Taking a deeper look, for income lower than 12,450 €, the tax rate has fallen from 20% to 19.5%; for amounts between 12,450 € and 20,200 €, from 25% to 24.5%; for quantities between 20,200 € and 35,200 €, from 31% to 30.5%; for incomes between 35,200 € and 60,000, from 39% to 38%; and finally for amounts above the 60,000 € threshold, the rate decreased from 47% to 46%.

This is very significant for the fact that tax implications are especially relevant for retail investors when considering the final return on their pension/investment products, since they must consider how much of their return is lost due to inflation rates and taxation on recovery.

The most precise estimation of real returns can only be made at the end of the plan's investment phase. The reason for this is that the closer we come to the recovery date, the clearer the net fiscal effect will be, allowing us to calculate deductions and the tax expense of the recovery of the investment and its returns.

In the last few years, we have seen a change in tax treatment thanks to policies aimed at stimulating savings. This in turn makes it a difficult task to decide between pension funds and alternative retirement savings products, since information on future net returns is not reliable. The decision process is replete with long term uncertainty.

Pension Returns

Spanish capital markets returns

IBEX 35 is the most representative index to study national large cap returns, it is also used extensively by the press. If we look at the performance of this index over the period covered in between January 2000 and the end of 2015, we would find that this Spanish index has suffered a nominal devaluation of -11.9%. However, in order to develop a more realistic and objective study, we should consider this index in absolute terms (including dividends). This takes large cap returns over the period to 63.14%. If we take away inflation the figure is still significantly high (43.52%), offering attractive real positive returns.

Looking at a broader index, ITBM (the total index of the Madrid stock exchange) and including dividends, we see that the returns for the period from 2000 to 2015 are of 114.75%. Furthermore, nominal return is 5.23% annually, that is, three times the figure of IBEX 35.

In light of this information, it is understandable that both households and corporate investors choose to invest in blue chips. These numbers are offered by stable and financially solid national companies. To sum up, pension products are accessible to all at a low cost, with appropriate diversification.

In the case of Spanish Government bonds, the nominal annualised return for the period mentioned was of 4.01% (Barclays Spain All Maturities Index). This means that real returns for Spanish bonds are positive, as average annual inflation was 2.86% for that period of time. However, it should be noted that European households seem to have higher exposure to shares than bonds in their direct investment portfolios, based on information published by the OECD Factbook 2014.





All the data provided on returns in the different markets are calculated before taxes.

Pension fund performance

Taking as a reference the amounts published by the business association INVERCO, the annual average return for Spanish pension funds can be broken down as follows:

Table ES 6 - Return on Spanish Private Pension Funds (%)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2000 – 2015
Non-mandatory 2 nd Pillar Pension Fund from associations or worker unions to membersNon-mandatory 2 nd																
-	-0.1	-3.84	5.61	6.56	9.49	8.16	3.05	-11.1	9.23	0.95	-1.11	6.94	9.51	6.88	2.57	64.2%
Non-mandatory 2nd Pillar Pension Funds from firms to employees																
-	-0.64	-3.72	6.73	5.52	8.39	5.36	2.44	-10.5	9.28	2.01	0	8.04	7.7	7.14	2.88	61.28%
3 rd Pillar Pension Funds – Fixed returns (short term)																
3.83	3.64	3.83	1.95	1.77	1.04	1.26	1.94	2.13	1.8	-0.64	1.38	3.47	2.08	1.37	-0.2	35.31%
3 rd Pillar Pension Funds – Fixed returns (long term)																
0.68	0.62	-0.73	2.62	1.92	1.78	0.34	0.75	2.03	3.96	-0.47	1.39	4.79	4.66	8.93	-0.46	37.76%
3 rd Pillar Pension Funds – Fixed returns (mixed)																
-2.2	-2.41	-5.16	3.92	3.16	5.33	3.58	1.32	-8.79	6.05	-1.54	-2.21	5.41	6.11	3.61	0.78	16.68%
3 rd Pillar Pension Funds – Variable Returns - mixed																
-4.97	-7.73	-17.2	8.7	5.6	12.16	10.09	2.96	-23.8	14.21	-0.82	-7.01	8.62	12.51	4.77	2.5	11.6%
3 rd Pillar Pension Funds – Variable Returns																
-10.6	-16.3	-30.1	16.18	8.88	18.73	18.3	3.93	-38.4	27.2	1.63	-10.4	10.43	22.19	7.63	5.58	5.67%
3 rd Pillar Pension Funds – Guaranteed Capital																
-	-	-	-	4.66	4.64	1.44	1.48	-0.68	3.77	-3.96	1.16	5.48	9.41	11.37	0.27	45.48%
WEIGHTED AVERAGED ANNUAL RETURNS, BEFORE INFLATION AND TAXES																
-1.85	-1.64	-4.4	5.42	4.46	7.22	5.23	2.08	-8.07	7.7	-0.13	-0.76	6.59	8.36	6.92	1.78	44.38%
Inflation – CPI Spain, Eurostat																
4	2.7	3.94	2.65	3.22	3.66	2.71	4.16	1.49	0.84	2.82	2.34	2.9	0.3	-1	0	43.54%
ANNUAL RETURNS, AFTER INFLATION AND BEFORE TAXES																
-5.85	-4.34	-8.34	2.77	1.24	3.56	2.52	-2.07	-9.56	6.86	-2.95	-3.1	3.69	8.06	7.92	1.78	-0.11%
ANNUAL RETURNS. AFTER INFLATION AND AFTER TAXES																
4.35	5.86	1.85	12.97	11.44	13.76	12.72	8.13	0.64	17.06	7.25	7.1	13.89	18.26	18.12	11.98	10.2%*

*Source: INVERCO, not verified by Better Finance





For this edition of the report on pensions, we have extended the performance study period and have integrated the 2000 market as well as the upward trend of the last few years. The annual average return of Spanish pension funds is practically flat (0% after tax and inflation are deducted). This is significantly different to the positive returns the Spanish capital markets enjoyed over the same period, as we saw earlier in this section.

The high level of fees and commissions charged on these pension products is probably one of the reasons behind these disappointing results. In times like these with historic macroeconomic upheaval, it is significant to observe that these funds have barely managed to maintain their value against inflation. In this sense, 2014 was the first year in which negative inflation, or deflation (-1%), pushed fund real returns to 1%. In 2015 the CPI evolution was close to be flat (0%) so there is no return devaluation.

The studies performed by Aguirreamalloa, Corres y Fernández (2012), mentioned earlier, concluded that the other main reason behind these low returns (apart from high fees and commissions) was the conservative investment strategy followed by Spanish private pension funds. The OECD reports that Spanish funds are investing more and more of their portfolios in debt products. Although this has worked well throughout the economic crisis, it could become an obstacle to the generation of real returns for savers.

This growing trend has become especially noticeable in the portfolios of life insurance products. Part of this is due to the new regulation introduced with the Solvency II Directive as it has low tolerance for assets with high volatility, such as private and non-quoted assets, making insurance companies guarantee and maintain investors' capitals through investment in debt instruments with a supposed lower volatility. This has led to a priority positioning in Government debt instruments, which have historically offered lower returns than the rest of the market.

In this sense, the Royal Decree 304/2004¹⁶⁴, in articles 69 to 77, stipulated the Spanish pension fund portfolio allocation requirements. It indicates that pension funds must be invested, mostly, in investment instruments and deeds that are commercialised in regulated markets. On the contrary, instruments from non-regulated markets may be part of the portfolios, but they must constitute a low

¹⁶⁴ Agencia Estatal, Boletín Oficial del Estado, <https://www.boe.es/buscar/act.php?id=BOE-A-2004-3453>

percentage of the overall assets, where the regulator can also include an extensive list of eligible investment instruments.

It should be noted that if we maintain the present investment policies, the capacity for Spanish pension plans to generate returns is very limited. This situation seems especially worrisome for the 1st pillar public pension system, as the only possibilities we see are further fiscal stimuli as a way of promoting private pension saving (as another cut in fees and commissions seems improbable).

Objectively, asset managers have maintained the buying power of these funds and covered fees and commissions, although value generation has come from the fiscal authorities.

Pensions after taxes – An Individual case study

It would be interesting for end-investors to have trustworthy information on net returns (after tax and inflation) of long term investment products. But a general comparative and objective study is not possible, down to the fact that net returns are different for each pension saver and for each fiscal year. This is obviously a consequence of the difference in tax expenses derived from personal income tax in the capital recovery phase due to the different marginal rates applied to total income, with future fiscal policies being difficult to predict at the time of investment.

We could conclude that the fiscal treatment in Spain is very favourable for both pension fund providers and investors.

When considered this way, the initial net return of -0.007% that came from our previous study would become a lot more attractive once we apply all legally corresponding fiscal settlements and charges.

With this purpose in mind, we shall consider an individual case to see the real tax effect, putting all of this to the test. We should consider that the results reached would only be correct for the exact case under consideration and not to be considered as an average or model.

For example, if we considered 3% annual returns, the capital generated by a €1,000 investment after 15 years would be of €1,557, with € 557 accrued interest. The owed tax on those interests would be € 108.62 (applying the 19.5% personal income tax rate mentioned before). This tax fee would have a fiscal effect of 6.98%, if we annualize this figure it would be 1.14%.





Based on this example, let's study the case in which the future pensioner opted for the lump sum payment method at the time of recovery. All contributions made before the 31st of December 2006 benefit from a 40% reduction in their tax base that we are assuming as fully applicable in the moment of recovery of the investment, taking this into account the tax base would be reduced to € 934.20.

Applying the tax rate to the tax base we would arrive at the net tax liability. We would still need to subtract specific deductions, to establish the final payable tax liability.

Considering a 2% inflation rate and the marginal tax rates before the fiscal reform, we could arrive at the potential fiscal benefits.

So with this 2% inflation rate, a 3% annual interest rate and pre-reform tax rates we would come to these figures:

Table ES 7: Pension Returns - Individual Case Study - After Taxes						
TAX BASE	MARGINAL RATE	TAX TREATMENT	DISCOUNTED 15Y	CUOTA BASE	MARGINAL SAVING	FISCAL EFFECT
TRANCHE	PRIOR	INITIAL OUTLAY	x2% INFLATION	LIQUID € 934.20	FISCAL X €1000	PENSION PLANS
>17,707	24.75%	247.5	333	231.21	101.79	10.18%
17,707 – 33,007	30.00%	300	403.76	280.26	123.5	12.35%
33,007 – 53,407	40.00%	400	538.35	373.68	164.67	16.47%
53,407 – 120,000	45.00%	450	605.64	420.39	185.25	18.53%
120,000 – 175,000	49.00%	490	659.48	457.76	201.72	20.18%
175,000 – 300,000	52.00%	520	699.85	485.78	214.07	21.41%

As mentioned earlier, for these 3% returns, capital generated with an initial outlay of 1.000€ (after 15 years) would be €1,557, which would mean a capital increase of €557 of interest. We advanced that we would consider a 40% reduction of the tax base as the investment would be recovered as a lump sum⁸ so the tax base would be reduced to 934,20€. The table reflects the difference between theoretic

deductions on contributed capital and the applicable tax expense on investment returns. All resulting returns were in between 10% and 21%.

When the moment comes to recover the invested capital, investors will pay taxes depending on the position they hold on the tax scale (EET system, as mentioned above). In fact, if we considered the tax rates before the reform and marginal tax rates in force in 2015, the result of this theoretic exercise would be higher returns (reaching 27% in the highest brackets).

This table shows this combined effect, multiplying the brackets to join those of the initial and end-exercise to arrive at a final result.





Table ES 8: Pension Returns - Individual Case Study - After Taxes							
TAX BASE	MARGINAL RATE	TAX TREATMENT	DISCOUNTED 15Y	MARGINAL RATE	CUOTA BASE	MARGINAL SAVING	FISCAL EFFECT
TRANCHE	TO THE OUTLAY	INITIAL OUTLAY	x2% INFLATION	VALID 2015	LIQUID €	FISCAL X €1000	PENSION PLANS
<12,450	24.75%	247.5	333	19.50%	182.17	150.72	15.07%
12,450 - 17,707	24.75%	247.5	333	24.50%	228.88	103.98	10.40%
17,707 - 20,200	30.00%	300	403.76	24.50%	228.88	174.74	17.47%
20,200 - 33,007	30.00%	300	403.76	30.50%	284.93	118.65	11.87%
33,007 - 35,200	40.00%	400	538.35	30.50%	284.93	253.24	25.32%
35,200 - 53,407	40.00%	400	538.35	38.00%	355	183.13	18.31%
53,407 - 60,000	45.00%	450	605.64	38.00%	355	250.42	25.04%
60,000 - 120,000	45.00%	450	605.64	46.00%	429.73	175.64	17.56%
120,000 - 175,000	49.00%	490	659.48	46.00%	429.73	229.48	22.95%
175,000 - 300,000	52.00%	520	699.85	46.00%	429.73	269.85	26.99%
Source: INVERCO							

In any case, it would be possible for investors to escape the significant fiscal pressure of recovering all the contributed capital in one same fiscal year, even after the reduction in certain cases. The investor could consider the possibility of receiving the investment as a life time annuity and not a lump sum. Although in this case it would not be possible to benefit from the 40% reduction of the tax base.

These lifelong payments simply accumulate with other sources of income received by the contributor and will be taxed together, in accordance to the fiscal brackets set.

On the face of what has been presented, the main driver in the attractiveness of private pension plans seems to be the fiscal benefits derived from the tax treatment that personal income receives. Nonetheless, we must point out that this theoretical exercise is very optimistic, considering that the tax paid by the saver could be potentially higher. We can think of the following reasons why:

- 1st: The foreseeable accumulation of capital by the contributor throughout the years of investment in the pension fund could lead the saver to be in a higher tax rate bracket by the time of retirement. This means tax benefits are not uniform throughout the investment and recovery period, which leads to the highest tax rates being regularly applied to contributors. The fiscal brackets could change in the future, although it is not clear what direction they could take.
- 2nd: We are assuming the saver does not surpass the 8.000 € annual limit of investment in pension products. Any contributions over this limit would not benefit from the deductions.
- 3rd: In the example we assumed net real returns of 1% (gross return of 3% on investment and a 2% inflation rate). This assumption is not realistic in today's scenario, as those returns are not usually achieved by pension funds in order to protect investors' capital from inflation (moreover, if we look at returns in the long-term, returns after inflation are practically inexistent). In any case, with the current low inflation climate (with some years even reaching deflation) we might see the problem correct itself.

Conclusion

On average the net real returns on private pension plans in Spain since 2000 have been practically flat (-0,007% annualized) even if the Spanish capital market performance has been truly positive (both fixed income and equities). Furthermore, over the last few years the local securities market has thrived, together with minimal inflation. The lowering of legal limits set on fees and commissions in the last few years has been crucial in improving those return indexes. And even with all of this back-wind, pension plans have not revealed themselves as an instrument capable of offering attractive positive returns.





The momentum came from the regulator's political-tax scope. The fiscal regime in Spain promotes private pension systems, albeit for questionable reasons (either to prop up the sustainability of the public pension system or to provide the necessary stimuli for the private insurance and financial sector in Spain). Some of these measures have been tax deductions for contributions and tax benefits during the investment period. In addition, pension funds are exempt from paying tax on capital gains, received dividends, corporate income tax or VAT on management and deposit fees. The artificially low tax burden on returns falls exclusively on the saver who may have to pay higher marginal income tax if the capital is recovered as a lump sum. This creates an added incentive to replace the lump sum recovery method with annual payments that differ payment of due tax over the payback period.

In this sense it could be stated that the fiscal system in Spain is more favourable for the providers of saving/pension instruments than for savers themselves. Specially as a consequence of the significant tax reductions that have been put into place to encourage contributions to these products, even though they have difficulties to generate enough return to maintain the deposited savings' long term buying power (at least in the period between 2000 and 2015)

Regarding the evolution of the Spanish equity and bond markets, it seems pension products could offer better long-term returns for participants if there were significant changes in their choice of portfolios of assets. This could only occur if there were changes in the criteria required for institutional investors to comply with solvency requirements. Admittedly it seems that with the present disinformation and lac of protection of retail investors, it is doubtful that taking on more risk is the solution.

Policy Developments

We cannot conclude this study without mentioning the latest regulatory developments that could potentially change the legal framework of private pension savings in Spain.

On the 14th of December Order ECC/2329/2014 came into effect. It regulates the calculation of the expected returns on life insurance operations. It is an order that requires insurances companies to disclose the returns that clients could expect to achieve when contracting a life insurance savings policy. Moreover it compels them to calculate returns with homologated criteria that consider the deduction of the expected fees and commissions. This in turn allows savers to make informed

decisions by facilitating comparison between different life insurance saving policies and by fostering transparency in the market.

Until recently, insurances companies were free to sell their products using their own criteria, choosing whether to divulge the fees that could reduce their return, or not. Nowadays, in order to provide the expected return information they must all use the same variables to calculate the figure, offering an equal term similar to the way that annual percentage rate (APR) works with lending. In fact, it is colloquially known as the “APR of insurance”.

This Order affects most of the life insurance savings modalities such as PPAs, PIAs, deferred capital policies and saving plans⁵. It excludes life-risk policies that insure only death or disability contingencies and Unit Linked products in which the policy holder assumes the investment risk and return is not guaranteed.

A priori, the measure seems beneficial both for policy holders (who now enjoy more reliable, understandable and complete information) and for insurance companies (that won't have to enter into complex calculations to present their offers). This fact can increase trust and, therefore, the demand of these products as it offers greater security. For this reason, it has been especially controversial that in the new DGSFP resolution draft, on the information obligations of insurers that commercialize PPA's, it was stipulated that the new term should be complimented by the old guaranteed technical interest. This could lead into misunderstanding due to the parallelism with pension plans. This has opened a new debate on the necessary balance between the quantitative criteria of more disclosure and the quality and relevancy of information offered, providing more clarity rather than feeding the confusion.

The debate is divided into two clearly defined aspects, although it seems to be stuck at present due to the political situation and economic instability.

Conversely, Order ECC/2316/2015, from November 4th, relating to information obligations and financial product classification, is based on a colour “traffic light” system and a numeric scale that express the risk of the products.

In fact, in the absence of other measures, this visual code could end up becoming a new safeguard against banks committing fraud on a massive scale by distributing toxic products, as happened in the past (i.e. MIFID's suitability assessment test that was introduced by European legislation). Consumer protection cannot be limited to a single tool, and a well-functioning system has to be guaranteed with solid





regulation and effective policies in order to prevent mass commercialisation of high risk products.

Moreover, there are many products that been excluded from the scope of this Order, such as collective insurance products, PPSE's, insurance policies concerted by pension plans for risk cover and pension benefits or Unit Linked products. All of which are complex products for retail savers. On the other hand, entities can choose whether to use the colour coding "traffic lights" or a number on a scale from one to six in order to define the risk (which could also be colour coded). There is no obligation to include the risk indicator on product publicity, except in cases where information disclosed is about its characteristics and risks. In the end these measures have every chance of turning into new channels for fraud involving consumer savings and investment.

Pension Savings: The Real Return

2015 Edition

Country Case: Sweden

Introduction

The Swedish pension system is divided into three pillars:

- Pillar 1 - The national pension
- Pillar 2 - Occupational pension plans
- Pillar 3 - Private pension

The Swedish pension system is a combination of mandatory and voluntary components; table 1 shows how the pension capital is distributed between the different types of providers in the pension system. The average pension in Sweden was 1,713 € (16 269 SEK) per month before taxes in 2014 whereof 1,199 € (11,388 SEK) came from the national pension, 428 € (4,067 SEK) from occupational pension and 86 € (814 SEK) derived from private pension savings. The outcome furthermore differed quite a lot between genders. For women the average total pension was 1,398 € (13,275 SEK) per month before taxes and for men 2088 € (19,819 SEK) per month before taxes. Although a lot of money is locked in the pension system in Sweden, the Swedish household savings rate is quite high.¹⁶⁵

Table SE 1. - Capital Managed (billions of sek)							
	2009	2010	2011	2012	2013	2014	2015
Income-based pension	827	895	873	958	1,058	1,185	1,230
Premium pension	340	408	393	471	602	759	839
Occupational pension	1,403	1,509	1,705	1,795	1,948	2,227	
Private pension	402	423	406	412	433	465	

Source: the Swedish Pensions Agency

There is no set age at which people must retire, but the national pension can be drawn from the age of 61 onwards in Sweden. Nor is there an upper age limit on how long a person may work, and everyone is entitled to work until the age of 67.

¹⁶⁵ OECD data – household savings





The Swedish Pensions Agency administers the national pension and related pension benefits and provides information about them. The Swedish Social Insurance Inspectorate ensures that the Swedish Pensions Agency conducts its administration with due process and efficiency. The occupational and the private pension can be drawn from the age 55 onwards.

The new national pension system in Sweden was introduced in 1999. The most important change in the reform was going from a defined benefit system to a defined contribution system. Before the reform, pensions were considered a social right and people were guaranteed a certain percentage of the wage before retirement. After the reform the outcome of the pension consists of the pension savings during the working life before retirement. In this system, the pension depends on the economic and financial development, which means that it is not possible to know what the pension will be beforehand. In the new pension system, the need for information about pensions is even more important. The occupational pension system has developed in the same direction; most of the occupational pension plans are now defined contribution systems or hybrids with both defined contribution and defined benefit components.

Due to the fact that we live longer and the pension capital is supposed to last much longer the current debate on pensions in Sweden concerns raising the retirement age to solve the problem with lower pensions. The total pension for the age groups between 1938 and 1946 shrank from 86 % to 77 % of the final salary. And the national pension, which every Swedish citizen with a salary or another taxable benefit is entitled to, shrank from 61 % to 49 % of the final salary for the same age groups.

Pillar I: The national pension

The national pension consists of income-based pension, premium pension and guarantee pension. 18.5 % of the salary and other taxable benefits up to a maximum level of 7.5 income base amount¹⁶⁶ per year is set aside for the national retirement pension. 16percent is set-aside for the income pension, where the value of the pension follows earnings trends in Sweden. The income-based pension is financed on a pay as you go basis, which means that pension contributions paid in are used to pay retirees the same year. The remaining 2.5 % of the salary and other taxable benefits are set-aside to the premium pension, where the capital is placed in funds. The individual can either choose what fund or funds to place the pension

¹⁶⁶ 46 841 EUR (444 750 SEK) for 2016.

in or if no choice is made the pension will be placed in the default alternative fund. This system is unique for Sweden and was introduced in 1995. The aim was to achieve a spread of risk in the pension system by placing a part of the national pension on the capital market, enhance the return on capital and to enable individual choices in the national pension system.¹⁶⁷ The Swedish pensions Agency calculates that by 2030 the premium pension will constitute 20 % of the total pension.

The capital in the income based-system is deposited in the four buffer funds: the first, second, third fourth and sixth national pension fund. The result of the income based pension system is affected by several key economic and demographic factors. In the short run, the development of employment is the most important factor, but the effect of the stock and bond markets is also of significance, particularly in case of major changes. In the long run, demographic factors are of most importance.

The third element of the national pension is the guarantee pension. It is a pension for those who have had little or no income for work in their life. It is linked to the price base amount calculated annually by Statistics Sweden and the size of the guarantee pension depends on how long a person has lived in Sweden. Residents of Sweden are qualified for a guaranteed pension from the age of 65. To receive a full guaranteed pension, an individual must in principle have resided in Sweden for 40 years after the age of 25. Residence in another EU/EEA country is also credited toward a guaranteed pension¹⁶⁸. In addition to the national pension, pensioners with low pensions may be entitled to a housing supplement.

For administering the income based pension system a fee is deducted annually from pension balances by multiplying these balances by an administrative cost factor. The deduction is made only until the insured begins to withdraw a pension. At the current level of cost, the deduction will decrease the income-based pension by approximately one percent compared to what it would have been without the deduction.

The premium pension system is a funded system where the pension savers themselves choose the funds in which to invest their premium pension moneys. At the year-end 2013/2014, there were 850 eligible funds registered in the premium pension system, managed by 104 different UCITS. The premium pension can be

¹⁶⁷ Vägval för premiepensionen, Ds 2013:35

¹⁶⁸ Orange report 2013, s. 24.





withdrawn, in whole or in part, from the age of 61. The pension is paid out from selling off the accumulated capital. The individual choice in the premium pension system furthermore results in a spread on return on the pension capital depending on the choice of fund or funds. Table SE 2 shows the spread on the return of the premium pension capital.

Table SE 2. Funds in the Premium Pension System in 2015 and Capital Managed 2009–2015, December 31, billions of SEK

	2009	2010	2011	2012	2013	2014	2015
Equity fund	179	214	159	193	240	295	347
Mixed funds	12	17	41	51	63	77	67
Generation funds	38	43	60	71	90	114	128
Interest funds	21	24	28	24	27	27	25
AP7 Såfa/Premium Savings Fund	90	110	105	132	182	246	272
Total:	340	408	393	471	602	759	839

Source: Orange report 2015, p. 21

The costs of administration and fund management in the premium pension system are deducted from the premium pension capital. However, in this case, the deduction carries on to be made after the insured begins to withdraw the pension. The current cost deduction of the premium pension capital is 0.41 % per year. The costs of the premium pension system are however expected to decrease and the average deduction is estimated to be 0.28 % for the next 31 years. At this level of costs the deduction will decrease the premium pension by an average of about 8% from what it would have been without any cost deduction. To reduce the costs in the premium pension system, the capital managers associated with the premium pension system are obliged to grant a rebate on the ordinary management fee of the funds. In 2013, the rebates to pension savers were equivalent to a discount in fund management fees of about 0.61 percentage points. The rebates on the ordinary management fees in the premium pension system are of great importance; without them the pensions would be approximately 18% lower. Furthermore the pension savers are in a position to influence the costs of their premium pensions by choosing funds with lower management fees.¹⁶⁹

¹⁶⁹ Orange report 2013, p.37.

Table SE 3. Deductions for Costs (%)

	2009	2010	2011	2012	2013	2014	2015
Incom based pension	0.0189	0.0343	0.03	0.03	0.0307	0.033	0.0284
Premium pension	0.5	0.48	0.41	0.42	0.41	0.33	0.3
Cost of administration	0.19	0.16	0.11	0.1	0.1	0.09	0.07
Funds	0.31	0.32	0.3	0.32	0.31	0.28	0.25

Source: Orange report 2015, p. 41

Table SE 4. Return on Capital in the Premium Pension System

Premium pension - Annual return on capital 2000-2015, %

Year	AP7 S�fa (default alternative) - average investor*	Own choice of other fund or funds, on average
2000	-7.51	-8.66
2001	-10.47	-10.6
2002	-26.96	-33.01
2003	18.71	16.15
2004	10.11	8.86
2005	25.06	32.29
2006	10.5	12.98
2007	4.68	5.8
2008	-36.17	-34.46
2009	35.15	35.01
2010	14.63	10.31
2011	-10.52	-10.44
2012	17.41	10.51
2013	31.97	15.73
2014	29.28	15.09
2015	6.26	6.7
Return on average per year	4.91%	2.57%

*AP 7 S fan was before 2010 called Sparfonden, also a global index fund but without leverage.

Source: AP7

Pillar II: Occupational pensions

The occupational pension system in Sweden is mainly driven by collective agreements. A Swedish company is not required by law to pay pension to the employees but an occupational pension plan is mandatory if there is a collective





agreement at the workplace (attached to a collective agreement). The occupational pension system covers over 90% of the workforce, the self-employed are for example excluded from the occupational pension plans and it is mostly the smaller companies in new sectors of businesses that do not have a collective agreement.¹⁷⁰ There are four main collective agreements for the different sectors and each agreement has its own pension plan. The four collective agreements are: the SAF-LO Collective Pension (blue-collar workers) with 2.8 million members, the Supplementary Pension Scheme for Salaried Employees in Industry and Commerce ITP (white collar employees) with 2 million members, the Collectively Negotiated Local Government Pension Scheme (KAP-KL) with 1 million members and the Government Sector Collective Agreement on Pensions PA-03 with 500,000 members¹⁷¹.

In all four collectively negotiated pension schemes, the employees are allowed to choose a fund manager for at least part of the pension amount. To ensure that the employers receive an occupational pension that is as high as possible there is a choice centre for each collective pension plan. The choice centre's task is to contract good managers for the employer's occupational pension. The employees can choose between different types of traditional insurance and/or unit-linked insurance. The size of this individual portion depends on the size of the premiums paid by the employer in the form of annual pension provision, the length of the period during which they are paid, and how the funds are managed. In two of the collective pension schemes, KAP-KL and SAF-LO, the employees can choose a fund manager for the whole amount. If the individual does not choose a fund manager the pension capital will be placed in the default alternative, which in all four agreements is a traditional insurance procured by the choice centre of the occupational pension plan.

If there is no collective agreement at the workplace the company can choose to have an individual occupational pension plan for their employees. Among the companies that do not have a collective agreement, some have chosen to have an occupational pension plan and some does not pay out pensions at all to their employees. These individual pension plans can vary in shape and level but common for them all is that they often have worse provisions and higher costs compared to the collectively negotiated pension schemes.

¹⁷⁰ AMF, Tjänstepensionerna i framtiden – betydelse, omfattning och trender, p. 17.

¹⁷¹ Pensionsmyndighetens hemsida: www.pensionsmyndigheten.se/tjanstepensionen.html

Pillar III: Private pensions

Private pension saving is voluntary but it is subsidized via tax deductions. In 2012, 26.4% of the working population had private pension savings. The tax deduction for private pension savings is only profitable for high-income earners.

Private pension savings can be placed in an individual pension savings account (IPS) or in private pension insurance. Money placed in an IPS and in private pension insurance is locked until the age of 55. After that the individual can withdraw the money in a period of 5 years, or three years, if it is an IPS and the money is being withdrawn between the ages of 60-65.

Unlike the national pension plan and the occupational pension plans, private pension plans are individual. This results in less transparency both when it comes to offered products within the private pension plans and the charges on these products.

The deduction for private pension savings has been reduced over the years. From 1 January 2015 it was reduced from 1,254 EUR – 190 € (12,000 SEK to 1,800 SEK) per year, equivalent to 16 € (SEK 150) in monthly savings. On 1 January 2016 the deduction was abolished. The motive for this is that the deduction favours high-income earners.

“Investeringsparkontot” (Investment and savings account - ISK), is a flat rate savings product with an annual standard rate tax based on the value of the account and the government-borrowing rate. The product was introduced in January 2012. After the lowering of the deduction for private pension saving, ISK is now regarded as a low tax alternative to private pension savings. On ISK there is an annual standard rate tax, based on the value of the account as well as the government-borrowing rate. The financial institutions report the standard rate earnings to the tax authorities and there is no need to declare any profit or loss made within the account.

The calculation of the standard rate earnings is based on the average value of the account as well as the government-borrowing rate. The average value of the account is calculated by the account value of the first day of each quarter added together, divided by four, and the sum of all deposits during the year divided by four. The average value of the account multiplied with the government borrowing rate as of 30 November the previous year gives the standard earnings, which the





financial institutions reports to the tax authority. The standard earnings are taxed with a 30 % tax.

The calculated average value of an account for 2015 is taxed with 0.27%. In contrast to individual pension savings accounts, the investment and savings account are free from management fees. The taxation of the account is very favourable, and the Swedish Pensions Agency considers the investment and savings account as a great alternative to the individual pension savings account. There is no binding period, and withdrawals can be made free of charge at any given time. The taxation of the account is more favourable during periods with low borrowing rate, as the standard rate earnings are based partially on the government-borrowing rate.

Cash, securities traded on a regulated market or an MTF, and fund shares are the allowed holdings for this type of account. The cash holdings are covered by the deposit guarantee. The securities and the fund shares are covered by the investor protection guarantee. The account is not an insurance product. It is not possible to name a beneficiary, and standard inheritance laws apply.

Pension vehicles

Occupational pension plans

ITP

The ITP agreement consists of two parts: defined contribution pension ITP 1 and defined benefit pension ITP 2. Employees born in 1979 or later are covered by the defined contribution pension ITP 1. In ITP 1 the employer makes contributions of 4.5 percent of the salary per year, up to a maximum of 7.5 income base amount. If the salary exceeds this level, the amount of the contribution is also 30% of the salary above 7.5 income base amount. Half of the ITP 1 pension must be invested in traditional pension insurance but the individual can chose how to invest the remaining half. It can be placed in traditional insurance and/or unit-linked insurance. The premiums of those who do not specify a choice are invested in traditional pension insurance with Alecta. The eligible insurance companies for traditional insurance are Alecta, AMF, Folksam liv, Skandia Liv, and for unit-linked insurance they are AMF, Danica Pension, SEB Trygg Liv, SPP Liv fund insurance and Swedbank insurance.

Table SE 5. ITP Traditional Insurance and Unit Linked Insurance - Return on Capital and Costs

ITP 1	Average return 5 years: 2009-2013	Charges	Costs	Guarantee
Traditional insurance				
Alecta	9.04%	0.10%	22,506 SEK	Yes
AMF	4.91%	0.20%	39,279 SEK	Yes
Skandia	1.92%	0.23%	46,894 SEK	Yes
Folksam	5.10%	0.17%	36,548 SEK	Yes
Unit linked insurance, the entrance fund				
AMF	10.92%	0.30%	63,800 SEK	No
Danica	8.65%	0.18%	60,661 SEK	No
SEB	11.42%	0.22%	55,753 SEK	No
SPP	9.36%	0.16%	39,983 SEK	No
Swedbank	9.72%	0.29%	69,106 SEK	No

Source: Collectum

Table SE 6. ITP Traditional Insurance and Unit Linked Insurance – Returns 2011-2015

ITP 1	2011	2012	2013	2014	2015	Average return
Traditional insurance						
Alecta	-6.00	0.11	14.00	13.00	6.20	7.38
AMF	-2.80	5.30	7.10	11.10	4.90	5.02
Folksam	-1.60	4.40	10.70	12.70	5.10	6.14
Skandia	0.00	1.30	2.80	6.60	13.10	4.66
Average return	-2.63	5.44	8.57	10.49	6.71	5.62
Unit linked insurance, the entrance fund						
AMF	-8.80	8.80	20.30	16.50	5.30	7.93
Danica	-1.5	-5.70	20.20	24.60	6.30	8.14
SEB	0.7	7.50	20.00	24.00	7.50	11.61
SPP	-5	7.90	18.20	20.90	4.00	8.78
Swedbank	-4.4	6.70	18.30	19.60	5.60	8.79
Average return	-3.85	5.05	19.38	20.90	5.62	9.02

Source: Collectum

SAF-LO

The SAF-LO occupational pension plan is defined contribution in nature. The terms of the plan were improved in 2007, mostly in response to perceived unfairness in the terms of the pension provisions for blue-collar and white-collar workers. Like





ITP 1 the employer now makes contributions of 4.5% of the salary, up to a maximum of 3,749 € (SEK 35,563). If the salary exceeds this level, the amount of the contribution is also 30% of the salary above 3,749 EUR (SEK 35,563). The individual can choose how to invest the pension capital and it can be placed in traditional insurance and/or unit-linked insurance. The eligible insurance companies for traditional insurance are Alecta, AMF, Folksam liv, Skandia Liv, and for unit-linked insurance they are AMF, Danica Pension, SEB, SPP and Swedbank.

Table SE 7. SAF-LO Traditional Insurance, Return on Capital and Costs

Traditional insurance	Average return 3 years, %	Average return 5 years, %	Set up Cost, SEK	Annual Cost, %
Alecta Optimal Pension	8.5	1.21	115	0.03
AMF Framtid	6.5	8.4	110	0.03
Folksam Liv (premiegaranti)	3.6	-	70	0.1
Länsförsäkringar Tradliv	3.1	3.1	84	0.09
Nordea Tillväxtportföljen	6.5	8.6	80	0.08
Swedbank Traditionell Pension Premiegaranti	4	-	80	0.1

PA 03

The ITP agreement consists of two parts: defined contribution pension ITP 1 and defined benefit pension ITP 2. The retirement pension in PA 03 contains the following elements: the individual retirement pension (defined-contribution), the supplementary retirement pension (defined-contribution), retirement pension on income exceeding 7.5 income base amounts – (defined-benefit), retirement pension on income less than 7.5 income base amounts in accordance with transitional provisions (defined-benefit). The contribution to the individual retirement pension is 2.5% of the salary up to an annual income corresponding to 30 income base amounts. The individual can choose how the contribution of the individual retirement pension should be placed and managed. The eligible insurance companies in the individual retirement pension for traditional insurance are Alecta, AMF, Folksam liv, KPA, Kåpan, Nordea, Skandia Liv and SPP, and for unit-linked insurance they are AMF, Danica Pension, Folksam, Handelsbanken, KPA, Läsförsäkringar, Nordea, SEB, Skandia, SPP Liv Fondförsäkring and Swedbank.

The employer also pays a contribution of 2.0% of the salary per month to the supplementary retirement pension Kåpan tjänste, managed by Kåpan försäkringsförmedling. PA 03 furthermore has an element of defined-benefit pension. It applies to those who earn more than 7.5 income base amounts. If the individual earns between 7.5 and 20 income base amounts, the defined-benefit pension comprises 60% of the pensionable salary on the component of pay that exceeds 7.5 income base amounts. If the individual earns between 20 and 30 income base amounts it comprises 30 per cent of the pensionable salary on the component of pay that exceeds 20 income base amounts.

Table SE 8. PA 03 Traditional Insurance, Return on Capital and Costs

Traditional insurance	Average return 3 years	Average return 5 years	Set up cost	Annual Cost, %	Mgmt. Fee, %
Alecta Optimal Pension	8,5	12,1	75	0,12	0,03
AMF Pension	6,5	8,4	85	0,15	0,03
Folksam Liv (premiegaranti)	3,6	-	85	0,1	0,1
KPA Traditionell Pensionsförsäkring	7	8,3	85	0,13	0,07
Kåpan	7,6	8,9	12	0,08	0,05
Nordea Tillväxtportföljen	6,5	8,6	85	0,12	0,08
Skandia Liv	5,7	8,5	85	0,12	0,08
SPP Liv Premiebestämd, öppen	6,3	7,1	84	0,2	0,2

KAP-KL

The KAP-KL agreement consists of two parts: defined contribution pension AKAP-KL and defined benefit pension KAP-KL. Employees born in 1986 or later are covered by the defined contribution pension AKAP-KL. In AKAP-KL, the employer pays in an amount of 4.5% of the salary the occupational pension. If the salary exceeds 7.5 income base amounts, the amount is increasing with 30% of the salary that exceeds 7.5 income base amounts up to a maximum of 30 income base amounts. If you are covered by KAP-KL, the employer pays in an amount of 4.5% of the salary to your occupational pension. For a salary over 30 income base amounts, no premium is paid. Instead there is a defined benefit old age pension that guarantees a pension equivalent to a certain percentage of your final salary at the age of retirement. You start to earn a defined benefit old age pension from the age of 28 and it applies to





the part of the salary that exceeds 7.5 income base amounts. The individual can choose how to invest the pension capital and it can be placed in traditional insurance and/or unit-linked insurance. The eligible insurance companies for traditional insurance in KAP-KL are Alecta, AMF, Folksam, and for the unit-linked insurance in KAP-KL they are AMF, Danica, Folksam, Handelsbanken, Länsförsäkringar, Movestic, Nordea, SEB, SPP, Swedbank.

Table SE 9. KAP-KL Traditional Insurance, Return on Capital and Costs

Traditional insurance	Average return 3 years, %	Average return 5 years, %	Set up cost, SEK	Annual Cost, %	Mgmt. fee, %
AMF Pension	6.5	8.4	75	0.15	0.03
Folksam Liv	7.1	8	75	0.12	0.08
KPA Traditionell Pensionsförsäkring	7	8.3	48	0.08	0.07
SPP Liv Premiebestämd, öppen	6.3	7.1	75	0	0.2
Swedbank Traditionell Pension Premiegaranti	4	-	75	0.1	0.1

Charges

The disclosure of charges in the national pension system and in the occupational pension system is quite good, although it can be difficult for common people to understand the information that is available. For the private pension system however it is difficult to get a good overview of the available pension products and hence the charges on these products.

To meet the new need of information in the new pension system the orange envelope was introduced in 1999. It contains information about contributions paid, an account statement, a fund report for the funded part and a forecast of the future pension. The purpose of the orange envelope is to get more people interested in their pension and get more attention with the help of the special design, the orange colour and a big concentrated distribution once a year. The orange envelope has now become a brand, a trademark for pensions. Banks and insurance companies use it in their sales campaign and in media the orange envelope is used to illustrate pensions.

According to the Swedish Consumers' banking and Finance Bureau and the Swedish Consumers' Insurance Bureau, there are 22 private pension savings insurance-companies in Sweden, and their fee structures differ. One out of 22 says they charge a percentage fee on deposited premium. The fee is 1% and applies to all deposits under 105.427 € (1,000,000 SEK). 18 companies report a yearly flat rate. The average fee is 18.48 € (175.39 SEK).¹⁷²

A common part of the fee structures are management fees. The management fee is a percentage of the managed capital. 18 out of 22 companies report management fees. The average fee is 0.65 % of managed capital. The savings in these products will decrease since the deduction for private pension savings was abolished January 2016.

¹⁷² Numbers from 2014-2015.



Table SE10 - Life insurance companies' allocation of assets in %
2014.06.30

Company	Bonds	Stocks and shares	Real Estate 1)	Other assets 2)	Total (MSEK)	Change last quarter, %	Change from the beginning of the year, %
Unit linked insurance	1,2	97,2	0,0	1,6	873.431,5	6,6	10,2
AMF Pension	0,0	100,0	0,0	0,0	37.442,8	7,7	12,7
Avanza Pension	2,2	85,5	0,0	12,3	49.243,7	7,2	15,7
Danica Pension	5,1	82,8	0,0	12,1	39.169,1	7,1	13,6
Folksam Fondförs	0,0	98,4	0,0	1,6	30.710,3	8,5	12,6
Folksam LO Fondförs	0,0	99,4	0,0	0,6	53.938,4	6,1	17,4
Handelsbanken Liv	0,0	100,0	0,0	0,0	80.687,6	7,1	10,5
LF Fondliv	0,0	99,4	0,0	0,6	86.959,7	7,7	12,0
Movestic	0,0	100,0	0,0	0,0	19.074,7	8,2	12,8
SEB TL Fond	4,1	95,3	0,0	0,6	179.908,7	5,6	7,1
Skandia Fondf.	0,0	100,0	0,0	0,0	135.242,0	5,4	6,7
SPP Liv Fond	0,0	98,1	0,0	1,9	61.201,1	6,8	10,5
Swedbank Försäkring	0,0	100,0	0,0	0,0	99.853,3	6,9	9,3
Traditional insurance	44,9	43,3	2,4	9,4	2.239.660,4	1,3	6,9
Alecta	49,2	41,6	2,2	7,0	645.932,0	3,3	6,8
AMF Pension	40,3	47,9	4,1	7,7	394.138,3	-0,9	4,1
Bliwa	5,4	90,4	0,7	3,5	1.555,1	2,7	6,5
FL Gruppörs	67,6	26,2	0,0	6,2	3.749,2	2,9	3,0
Folksam Liv	52,5	38,1	2,1	7,3	149.013,2	3,1	7,0
Handelsbanken Liv	39,5	26,9	0,0	33,6	20.606,1	-2,6	1,6
KPA Livförs	66,1	31,1	0,0	2,8	4.625,1	0,6	2,2
KPA Pensionförs	50,6	44,1	0,0	5,3	127.575,8	-2,2	16,5
LF Liv	66,4	23,7	0,0	9,9	121.618,6	-2,8	2,5
Movestic	0,0	16,0	0,0	84,0	538,8	27,6	18,9
Nordea Livförsäkring	31,7	62,2	1,0	5,1	64.671,3	3,0	19,5
Nordnet Pension	6,4	79,6	0,0	14,0	27.158,6	6,2	13,5
SEB TL Gla	27,0	52,1	11,7	9,2	174.256,3	1,9	3,1
Skandia Fondf.	17,7	45,4	0,0	36,9	10.265,7	-13,6	7,2
Skandia Livf.	38,7	45,9	0,0	15,4	359.816,1	2,8	11,2
SPP Liv	77,2	12,3	0,0	10,5	101.010,6	0,5	-1,4
St Erik Liv	76,0	21,7	0,0	2,3	2.126,2	4,0	5,8
Swedbank Försäkring	3,1	83,6	0,0	13,3	31.003,4	-1,8	7,4
TOTAL	32,6	58,4	1,8	7,2	3.113.091,9	2,8	7,8

1) Some companies have their real estate holdings in subsidiaries. This is reported under stocks and shares.

2) Includes: Short-term investments (cash and bank deposits, money market instruments, repos reported gross) and loans (direct loans, loan insurances and blocked accounts at the Riksbank).

Table SE 11. Life Insurance Return 2001-2013

Total return 2001-2013 - Life insurance companies summary

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	09-'13
Alecta	Alecta Optimal Pension,														
	inriktning 60% aktier ***)	-	-	-	-	-	-	-	-	22,9	12,6	-6,8	16,8	17,3	12,1
	inriktning 50% aktier ****)	-	-	-	-	-	-	-	-	-	-	-	-	9,6	
	inriktning 40% aktier	-	-	-	-	-	-	-	-8,0	16,3	10,2	-1,9	13,8	12,2	9,9
	inriktning 10% aktier	-	-	-	-	-	-	-	5,8	6,4	6,3	5,5	9,2	4,7	6,4
	Förmånsbestämd	-	-	-	-	-	-	-	-	12,7	9,5	-2,0	11,2	9,8	8,1
AMF Pension		-	-	10,7	9,8	16,0	9,6	4,9	-6,6	12,6	9,8	2,4	8,0	9,3	8,4
Bliwa		-	-	-	-	-	-	-	-	-	6,7	-2,9	6,9	8,5	
FL Gruppfors		-	-	-	-	-	2,8	1,7	2,4	7,5	5,2	5,4	6,7	7,6	6,5
Folksam Liv	Liv 1	-	-	-	-	-	-	1,8	0,9	9,7	8,3	6,0	7,1	7,7	7,8
	Liv 2	-	-	-	-	-	-	-	0,9	11,5	9,4	7,5	6,8	7,4	8,5
	Sparande med garanti	-	-	-	-	-	-	1,1	4,8	6,6	4,6	6,5	4,8	3,7	5,2
	Sparande utan garanti	-	-	-	-	-	-	0,1	-15,0	19,5	10,6	-1,9	9,3	14,2	10,1
KPA Livfors		-	-	-	-	-	2,4	1,1	2,6	8,2	4,5	4,8	6,4	7,2	6,2
KPA Pensionfors		-	-	-	-	-	1,7	-3,0	6,3	12,4	8,2	5,6	7,2	8,2	8,3
LF Fondliv	LF Fondliv Garanti	-	-	-	-	-	-	-	-	-	-	-	-	5,6	
LF Liv	Nya Trad (startdat 20130610)	-	-	-	-	-	-	-	-	-	-	-	-	4,3	
	Nya Världen	-	-	12,5	9,6	17,1	11,1	4,2	-28,1	24,3	8,9	-3,8	12,2	12,8	10,5
	Gamla Trad	-	-	-	-	-	-	-	-	2,3	4,1	6,5	6,1	-3,0	3,1
Nordea Livförsäkring	Trad (Privat & Tjänste)	-	-	-	-	-	3,2	1,7	14,9	3,0	0,9	16,1	6,7	-0,4	5,1
	Tillväxtportföljen	-	-	6,8	8,0	15,1	5,2	1,6	-14,4	17,9	5,9	-2,7	9,5	13,4	8,6
	Trygga portföljen	-	-	1,1	4,0	2,2	1,7	2,1	1,6	3,8	0,9	1,4	5,2	4,6	3,2
PK FPK		-	-	-	-	-	-	0,1	-4,2	5,2	6,5	8,3	5,3	2,1	5,5
PRI		-	-	12,8	9,3	12,4	10,0	2,0	-3,0	14,5	9,2	-0,8	7,3	7,5	7,4
SEB TL Fond	Tjänstepension	-	-	-	-	-	-	-	5,3	7,2	4,0	8,5	6,9	2,3	5,8
	Övrig pension	-	-	-	-	-	-	-	2,5	9,3	4,5	10,4	7,7	2,2	6,8
SEB TL Gla		-	-	-	-	-	11,1	2,7	-15,7	15,1	10,8	1,5	9,9	11,3	9,6
Skandia Liv	Tradliv	-	-	-	-	-	-	4,4	-13,4	16,4	9,4	3,2	7,3	6,7	8,5
	GarantiPension Plus (25-åring)	-	-	-	-	-	-	-	-23,1	25,4	11,6	-3,9	10,4	12,8	10,9
	GarantiPension Plus (40-åring)	-	-	-	-	-	-	-	-20,2	22,7	10,9	-1,8	9,5	11,0	10,2
	GarantiPension Plus (55-åring)	-	-	-	-	-	-	-	-16,5	19,3	10,1	0,9	8,3	8,7	9,3
SPP Liv	Förmånsbestämda	-	-	-	-	-	6,8	0,5	0,6	4,1	6,0	8,6	6,6	1,4	5,3
	Premiebestämda nyteckning	-	-	-	-	-	-	0,4	-5,9	9,6	7,0	3,3	9,0	6,5	7,1
	Premiebestämda stängd	-	-	-	-	-	-	0,4	5,1	3,9	4,5	9,8	6,4	-0,1	4,8
Storebrand Liv		-	-	-	-	6,9	6,5	6,6	-1,4	4,6	4,9	4,8	5,6	5,1	5,0
Swedbank Försäkring	Traditionell Pension	-	-	-	-	-	9,7	2,4	-10,6	20,8	9,3	-1,1	5,8	8,6	8,5
	Trad Pension SAF LO	-	-	-	-	-	-	-	-	15,4	12,7	-6,3	8,2	10,9	7,9
Änke- och Pupillkassan		-	-	-	-	-	-	2,7	-8,9	17,2	8,6	-2,4	5,7	9,7	7,6

Source: Insurance Sweden

Table SE 11. Life Insurance Return 2001-2013

Total return 2001-2013 - Life insurance companies summary

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	09-'13
Alecta	Alecta Optimal Pension,														
	inriktning 60% aktier ***)	-	-	-	-	-	-	-	-	22,9	12,6	-6,8	16,8	17,3	12,1
	inriktning 50% aktier ****)	-	-	-	-	-	-	-	-	-	-	-	-	9,6	
	inriktning 40% aktier	-	-	-	-	-	-	-	-8,0	16,3	10,2	-1,9	13,8	12,2	9,9
	inriktning 10% aktier	-	-	-	-	-	-	-	5,8	6,4	6,3	5,5	9,2	4,7	6,4
	Förmånsbestämd	-	-	-	-	-	-	-	-	12,7	9,5	-2,0	11,2	9,8	8,1
AMF Pension		-	-	10,7	9,8	16,0	9,6	4,9	-6,6	12,6	9,8	2,4	8,0	9,3	8,4
Bliwa		-	-	-	-	-	-	-	-	-	6,7	-2,9	6,9	8,5	
FL Gruppfors		-	-	-	-	-	2,8	1,7	2,4	7,5	5,2	5,4	6,7	7,6	6,5
Folksam Liv	Liv 1	-	-	-	-	-	-	1,8	0,9	9,7	8,3	6,0	7,1	7,7	7,8
	Liv 2	-	-	-	-	-	-	-	0,9	11,5	9,4	7,5	6,8	7,4	8,5
	Sparande med garanti	-	-	-	-	-	-	1,1	4,8	6,6	4,6	6,5	4,8	3,7	5,2
	Sparande utan garanti	-	-	-	-	-	-	0,1	-15,0	19,5	10,6	-1,9	9,3	14,2	10,1
KPA Livfors		-	-	-	-	-	2,4	1,1	2,6	8,2	4,5	4,8	6,4	7,2	6,2
KPA Pensionfors		-	-	-	-	-	1,7	-3,0	6,3	12,4	8,2	5,6	7,2	8,2	8,3
LF Fondliv	LF Fondliv Garanti	-	-	-	-	-	-	-	-	-	-	-	-	5,6	
LF Liv	Nya Trad (startdat 20130610)	-	-	-	-	-	-	-	-	-	-	-	-	4,3	
	Nya Världen	-	-	12,5	9,6	17,1	11,1	4,2	-28,1	24,3	8,9	-3,8	12,2	12,8	10,5
	Gamla Trad	-	-	-	-	-	-	-	-	2,3	4,1	6,5	6,1	-3,0	3,1
Nordea Livförsäkring	Trad (Privat & Tjänste)	-	-	-	-	-	3,2	1,7	14,9	3,0	0,9	16,1	6,7	-0,4	5,1
	Tillväxtportföljen	-	-	6,8	8,0	15,1	5,2	1,6	-14,4	17,9	5,9	-2,7	9,5	13,4	8,6
	Trygga portföljen	-	-	1,1	4,0	2,2	1,7	2,1	1,6	3,8	0,9	1,4	5,2	4,6	3,2
PK FPK		-	-	-	-	-	-	0,1	-4,2	5,2	6,5	8,3	5,3	2,1	5,5
PRI		-	-	12,8	9,3	12,4	10,0	2,0	-3,0	14,5	9,2	-0,8	7,3	7,5	7,4
SEB TL Fond	Tjänstepension	-	-	-	-	-	-	-	5,3	7,2	4,0	8,5	6,9	2,3	5,8
	Övrig pension	-	-	-	-	-	-	-	2,5	9,3	4,5	10,4	7,7	2,2	6,8
SEB TL Gla		-	-	-	-	-	11,1	2,7	-15,7	15,1	10,8	1,5	9,9	11,3	9,6
Skandia Liv	Tradliv	-	-	-	-	-	-	4,4	-13,4	16,4	9,4	3,2	7,3	6,7	8,5
	GarantiPension Plus (25-åring)	-	-	-	-	-	-	-	-23,1	25,4	11,6	-3,9	10,4	12,8	10,9
	GarantiPension Plus (40-åring)	-	-	-	-	-	-	-	-20,2	22,7	10,9	-1,8	9,5	11,0	10,2
	GarantiPension Plus (55-åring)	-	-	-	-	-	-	-	-16,5	19,3	10,1	0,9	8,3	8,7	9,3
SPP Liv	Förmånsbestämda	-	-	-	-	-	6,8	0,5	0,6	4,1	6,0	8,6	6,6	1,4	5,3
	Premiebestämda nyteckning	-	-	-	-	-	-	0,4	-5,9	9,6	7,0	3,3	9,0	6,5	7,1
	Premiebestämda stängd	-	-	-	-	-	-	0,4	5,1	3,9	4,5	9,8	6,4	-0,1	4,8
Storebrand Liv		-	-	-	-	6,9	6,5	6,6	-1,4	4,6	4,9	4,8	5,6	5,1	5,0
Swedbank Försäkring	Traditionell Pension	-	-	-	-	-	9,7	2,4	-10,6	20,8	9,3	-1,1	5,8	8,6	8,5
	Trad Pension SAF LO	-	-	-	-	-	-	-	-	15,4	12,7	-6,3	8,2	10,9	7,9
Änke- och Pupillkassan		-	-	-	-	-	-	2,7	-8,9	17,2	8,6	-2,4	5,7	9,7	7,6

Source: Insurance Sweden

Table SE 12. Individual Pension Savings Account – Fees

	Minimum brokerage fees	Maximum brokerage fees	Minimum fee, in SEK *
Average	0.09%	0.13%	56.64
Lowest	0.025%	0.09%	39
Highest	0.30%	0.30%	100

*The average yearly account fee is 400 SEK

Source: the Swedish Consumers' Banking and Finance Bureau and the Swedish Consumers' Insurance Bureau

Table SE 13. Pension Savings Insurance – Fees (% of capital managed)

Average	0.65 %
Lowest	0.4 %
Highest	0.8 %

Source: the Swedish Consumers' Banking and Finance Bureau and the Swedish Consumers' Insurance Bureau

Taxation

All All pension income in Sweden is taxed as earned income. The rate varies depending on the size of pension due to the progressive income taxation in Sweden. The Swedish income tax is even higher for pensioners than workers because of the earned income tax credit.¹⁷³ The Swedish tax system works as follows. A proportional local tax rate applies to all earned income, including pension income. Furthermore, for incomes above a certain threshold, the taxpayer also has to pay central government income tax. The government income tax consists of two brackets. The marginal tax rates in each bracket are 20 percent for incomes between 45,328 € and 66,309 € (430,200 SEK and 629,000 SEK) and 25% for incomes from 66,309 € (629,000 SEK)¹⁷⁴ and above. When it comes to private pension savings, there was a tax deduction of 1,800 SEK per year available but it was abolished the 1 January 2016.

¹⁷³ The Swedish earned income tax credit is a refundable tax credit for all individuals aged below 65.

¹⁷⁴ Financial year 2015.





Table SE 14. Taxation on pension schemes

	National pension	Occupational pension	Private pension
Contributions	Non-deductible	Non-deductible	Non-deductible from 1 January 2016.
Tax on investments	Not subject to tax, instead the capital is taxed with income tax when paid out.	Not subject to tax, instead the capital is taxed with income tax when paid out.	Subject to income tax.
Pay-out	Income tax	Income tax	Income tax

Conclusion

The Swedish pension system is considered robust and sustainable. The balancing of the income-based system contributes to preserve the systems debt balance and secures the long-term nature of the system. The premium pension, which is a unique system for Sweden, also contributes to spread the risk in the system and enhance the return on capital by enabling people to place part of their national pension capital on the stock market. As a result of the change in the Swedish pension system the individual responsibility will increase and the occupational pension will constitute a bigger part of the total pension in the future. The occupational pension system in Sweden covers 90% of the working population. The collectively negotiated pension schemes are procured for a large number of workers, which leads to lower costs, and more transparent pension plans. Individual pension plans are, on the other hand, often exactly individual, which leads to increased costs and less transparency.

The statistics on performance, fees and taxes in the individual pension savings-area is quite insufficient. Nor the Swedish Pensions Agency, the Swedish Consumers' Banking and Finance Bureau nor the Swedish Consumers' Insurance Bureau, or any other similar provider of statistics, have been able to provide the requested data. The Swedish central bank does publish quarterly financial markets statistics including statistics on individual pension savings. The statistics include taxes and fees, deposits, withdrawals and change of value. Although the statistics include relevant information, it is not possible to calculate an average performance, or average taxes and fees-percentage (the financial institutions report taxes and fees as a single post) due to the lack of knowledge about the size of managed capital at the time of taxation, change of value and so on.

Although the Swedish pension system is considered robust and sustainable there is reason to be concerned. As life expectancy increases, the gap between wages and pensions will increase. To stop this development the retirement age must be raised and the individual also need to take more responsibility for their pension savings. This makes it even more important with accessible good pension savings products with low fees.





Pension Savings: The Real Return

2016 Edition

Country Case: The Netherlands

Introduction

The Dutch pension system is often heralded as one of the best in the world. For years it was the best, according to the annual pension systems review by Mercer, a global consultancy. Recently, it slid to the third spot as the Danish and Australian pension systems are judged to be better. In this report we will provide an outline of the Dutch pension system, which is in many aspects unique in the world. Furthermore we will take a look at the annual returns on investment of pension funds and calculate the real return, adjusting the nominal return for various charges, taxes and inflation.

Description of the Dutch pension system

The Dutch pension system rests on three pillars. We will describe all three in some detail.

The first pillar

Pillar one is a social insurance scheme and consists of the Dutch state pension, called AOW (Algemene Ouderdomswet or general old-age Law). It provides a state pension for all elderly inhabitants of the Netherlands, regardless of their nationality. For a long time; 'elderly' (for the purpose of this law) meant 65 year or older. Recently the age was increased to beyond 65, mainly to maintain the system's viability in the future as, due to ageing, the costs threaten to become too high. The reason for this is the fact that AOW is a pay-as-you-go system: it is financed by those in the workforce and the proceeds are used to pay the elderly. Each person between 15 and 65 years of age, either working or on benefits, contributes to the AOW-financing via a deduction on the salary or a benefit. In addition, the AOW is partially financed by taxes the government collects each year. Every inhabitant of the Netherlands is automatically enrolled in the AOW-system in such a way that he or she is entitled to an additional 2% of the monthly allowance for each year he/she has lived in the Netherlands between the ages of 15 and 65

(so someone living in the Netherlands that entire period is entitled to full monthly AOW-allowance as $65-15 = 50 \times 2\% = 100\%$ of the allowance).

A single person is entitled to a monthly allowance (gross) of € 1,111.55. Married or couples living together receive (gross) € 765.95 a month each. The AOW generally makes up just a slight portion of the entire old-age pension as pillars two and three, especially pillar II, are the most important ones for a large part of the Dutch population. For example, according to Statistics Netherlands, in 2013 AOW provided 18% of the total income of an average Dutch male. His retirement income from the second pillar provided 36%. For the female population, AOW does constitute a larger part of their retirement income, 49%, with the second pillar representing a share of 35%. The reason for this is the fact that females only recently became active on the labour market. For a long time, a traditional Dutch family was supported by one income, mostly earned by the male. This meant that for a long time, the female population was not enrolled in the second pillar (see below), hence the retirement income of that part of the population is largely determined by the AOW.

The second pillar

Pillar II is a system of collective pension schemes operated by pension funds or insurance companies. Little over a decade ago, there were more than 1,000 pension funds operating in the Netherlands. Over the years, many merged or were liquidated (with their assets and liabilities transferred to other pension funds or insurance companies). As a consequence, the number of pension funds declined to 225 active funds at the end of 2015 (the counting is based on the pension funds data available from the DNB, the Dutch central bank). The central bank supervises pension funds since 2004. DNB expects their number to decline further in the coming years.

Whereas the first pillar, the AOW, is a pay-as-you-go scheme, the second pillar is financed by capital funding. Each person enrolled in a pension fund contributes to its pension fund (with the employer paying a part of the contribution, often 50% or even more). The money is then invested in order to fund the retirement payouts.

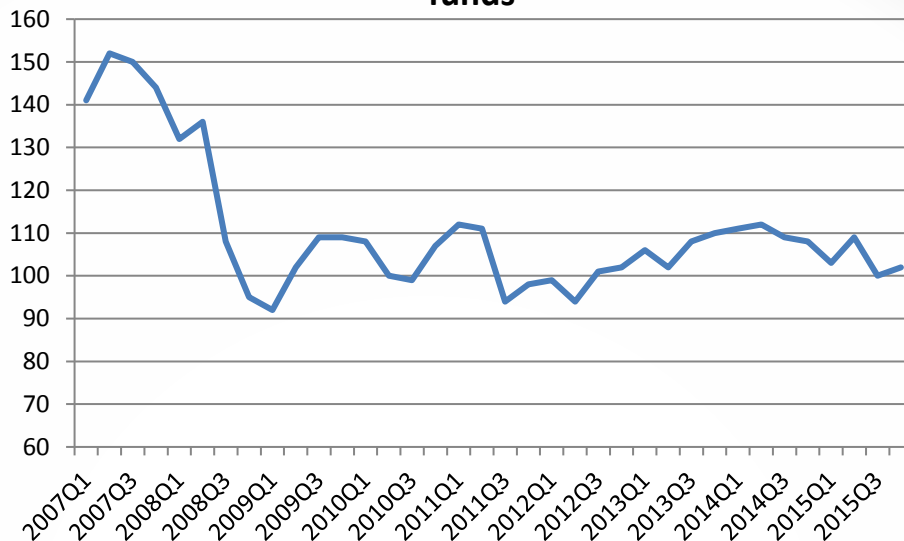
Although enrollment in a second pillar scheme is not compulsory as such, in many cases it in fact is. The reason for this is that if labour unions and employers in the Netherlands decide to set up a pension scheme for a company or a sector, the government can make it mandatory for everyone working in that company or in the entire sector. In practice, almost every working person is enrolled in a pension





scheme. The government makes it mandatory in order to achieve economies of scale. That in turn makes it possible for pension funds to operate more efficiently in terms of costs and the fees they have to pay for investing the funds. In practice, more than 90% of Dutch employees are enrolled in one or more pension fund(s). An employee can be enrolled in more than one pension fund if he/she for example moves to another job in another sector. In that case he/she starts building his/her pension with the pension fund of the new sector or company. His/her old pension capital can be left in the former pension fund or, subject to some rules, transferred to his/her new pension fund. This can be done if both pension funds have sufficient capital as required by the law. The law defines sufficient as at least 105% of the value of the future liabilities (i.e. retirement outflows). The coverage ratio is calculated by discounting the future pension liabilities. Future pension liabilities for a period of up to 20 years are calculated by using the actual market interest rates for 0 to 20 years. The discount interest rates for periods from 20 years onwards are calculated by the Dutch central bank. The interest rates calculated in this way are called Ultimate Forward Rates (UFR). Until recently, this UFR was fixed at 4.2% percent. Starting from mid July 2015, the UFR is a 120-month moving average of the one-year forward rate of a maturity of 59 years which in effect means that it is much lower than the 4.2% used previously (in July it was 3.3% for example). Hence, the coverage ratio of the Dutch pension funds fell further. The lower the interest rates on financial markets, and hence the UFR, the higher the value of future liabilities is and the greater the chance that the required coverage ratio (in Dutch *dekkingsgraad*) will be lower than 105. When this cover ratio falls below 105, the pension fund involved is required to submit a plan on how it plans to get the coverage ratio back to above 105 in three, at the most five, years. It also has to submit contingency plans in case the coverage ratio does not rise above 105 in that period of time. When the coverage ratio falls below 130 but stays above 105, the pension fund involved is not allowed to adjust pensions for annual inflation. This is only allowed when the coverage ratio is above 130.

Graph NL I - Coverage ratio of the Dutch pension funds



Source: DNB Dutch central bank

According to the statistics from the Dutch central bank, the coverage ratio was more than sufficient for almost all pension funds prior to the current crisis. For example, in the fourth quarter of 2007, only two pension funds had a coverage ratio below 105. 151 pension funds reported a coverage ratio of between 105 and 130, and 283 of them had a coverage ratio of 130 or more. In the final quarter of 2015, however, 100 pension funds did not comply with the rules as they had a coverage ratio below 105. Almost four million Dutch were affected, more than 70% of all those enrolled. Additionally, 112 funds were in the 105-130 zone and only 19 reported the coverage ratio of 130 or higher (at the beginning of 2016, the already dire situation took a turn for the worse with 156 pension funds with a coverage ratio below 105, 68 in the danger zone and only 7 staying above the 130-mark; 86% of the enrolled face pension cuts with only 1% of the enrolled being save). The danger is that the Netherlands is risking a re-run of 2009 when, at the height of the crisis on financial markets, the Netherlands went through a harsh pension crisis so to speak, since 314 pension funds that existed then (representing a staggering 92% of all enrolled) had insufficient funds to pay out all of their future obligations as they had a coverage ratio of (well) below 105. 65 pension funds managed to hold on to their coverage ratio between 105 and 130 and only 20 pension funds stayed above 130.





Note that this system does not mean that there is an individual pension account for each participant though; the system is highly based on solidarity between generations as young workers pay relatively more in the first part of their career and relatively less in the later stage. Differences in gender or age do not play a role. The same applies to health: medical examination of those about to enroll in a pension fund is prohibited. This concept works fine as long as we do not get into a situation where there are more older workers than young ones entering the workforce.

As a side-remark: this solidarity is increasingly under pressure as many young employees in the Netherlands fear that they will end up paying relatively large sums into their pension funds but that there will be insufficient funds in there for a decent income when they retire (due to ageing, a relatively large number of the Dutch will reach retirement age and draw funds from their pension funds). There are more and more of those calling for a radical overhaul of the Dutch pension system whereby each individual would have his/her own capital instead of all monthly payments going into one pile of money.

The third pillar

Pillar III is made up of individual pension products sold by insurance companies. Life insurance is an example. Another product used in the Netherlands is the so-called pensioensparen, a special-purpose savings account, with the purpose of accumulating supplementary income after retirement. Anyone in the Netherlands can enroll in this pillar, either because of the wish to save for retirement (there are those who do not fall in the second pillar scheme described above, for example entrepreneurs or those working in a sector or a company without a pension fund of its own) or to supplement the retirement income from the first and the second pillar. The purchase of various third-pillar products is attractive due to tax benefits associated with them.

Pension vehicles

Second pillar

As mentioned, there are many pension funds operating in the Netherlands. However, their number has declined in recent years and is expected to fall even further. Some of the funds are financial giants, with millions of people enrolled and hundreds of billions of euros in assets while others have just a few (tens)

participants and a couple of millions of euros invested. In the table below we provide some statistics for the 15 largest pension funds in the Netherlands.

Table NL 1. LARGEST PENSION FUNDS IN THE NETHERLANDS

<u>Pension fund</u>	<u>Sector / company</u>	<u>Assets (bn €)*</u>
ABP	Civil service	396.7
Zorg en Welzijn	Medical services	163.6
Metaal en Techniek	Metal	60.5
Bouwnijverheid	Building companies	53.6
Metalelektro	Electrometal sector	40

**Assets at the end of 2015, as reported in annual reports or other financial disclosure documents*

There are three different sorts of pension funds in the Netherlands. First, we have the industry-wide pension funds. Those administer and operate the pensions for an entire sector, such as food companies or civil service. The civil service pension fund, ABP, is by far the largest in the country with assets worth € 396.7 billion and 2.8 million people enrolled. Second, there are corporate pension funds, administering and operating pension schemes for companies. Finally, there are pension funds for independent professionals, for example medical specialists.

Pension funds are independent entities, i.e. they are strictly separated from the company (if applicable) on whose behalf they administer and run the pension scheme. One of the consequences is that if a company files for bankruptcy, employees know that their pensions are not affected. Situations such as, for example, in the United States with a company filing for bankruptcy and its personnel losing not only their jobs but their pension savings as well, are not possible in the Netherlands. Pension funds are run by a board consisting of an equal number of employee representatives (labour unions) and employer(s) ones. Pension funds are by far the most important pillar for the Dutch inhabitants.

By the end of 2015, all Dutch pension funds and insurers had assets worth € 1,443.2 billion¹⁷⁵ altogether. To put that in perspective: the Dutch gross domestic product is approximately € 600 billion, in other words, the pension assets exceed the Dutch GDP by well over 200%. Another way to illustrate the importance of pension assets to the Dutch is to compare them with the value of total savings¹⁷⁶ (excluding pension savings of pension funds e.g. money managed by separate

¹⁷⁵ Figures available via <http://www.statistics.dnb.nl/huishoudens/index.jsp>

¹⁷⁶ Such as for instance money put aside into savings accounts which is not mandatory by the system

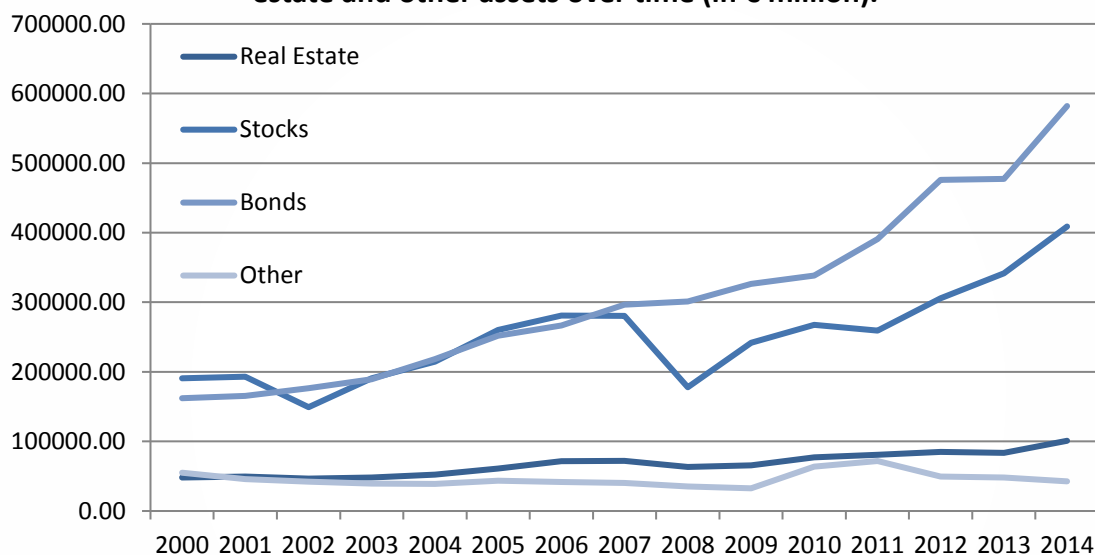




entities) of the Dutch households.¹⁷⁷ Those amounted to EUR 389.3 billion at the end of 2015 or a little bit more than a quarter of their pension assets. The share controlled by the 15 largest pension funds in total is over 62% of assets. The five largest ones hold 50% of all pension assets in the Netherlands.

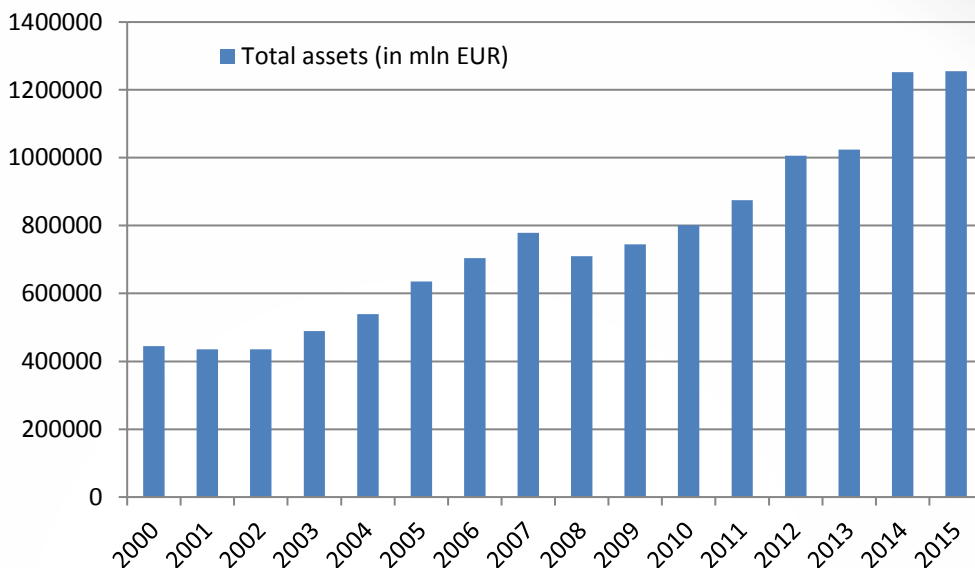
By the end of 2015, according to the Dutch central bank, the Dutch pension funds held € 1,255.4 billion in assets.

Graph NL II. Pension fund assets invested in stocks, bonds, real estate and other assets over time (in € million).



Source: DNB Dutch central bank

¹⁷⁷ OECD data includes pension savings in figures for total household savings

Graph NL III. Assets of pension funds

Third pillar

The third pillar is not mandatory and is run by private insurance companies offering various pension-like products saving for retirement or life insurance. Every employee can choose whether or not to take part in it, sometimes provided he/she fulfills the conditions to enroll as stated by the law. The most important condition in order to benefit from tax benefits associated with these products is that one has to have a shortfall in his/her pension (called *pensioentekort* in Dutch). There is an annual maximum amount any Dutch inhabitant can pay in for his retirement income. This maximum, determined by the Dutch tax authority on a yearly basis, ensures one has an acceptable retirement income. If for any reason one contributes less than the maximum amount allowed, he/she is determined to have a pension shortfall and the person involved can deposit the amount equal to the difference between the maximum allowed retirement contribution and the paid contributions into a savings account for retirement income. This difference is subject to a maximum with the maximum in 2013 amounting to 27,618 €. There is a tax benefit involved since contributions can be deducted from the taxable income, effectively reducing the income tax one has to pay. Moreover, the pay-off upon retirement is taxed at a lower tax rate than the current income. Once one





determines that he/she has a pension shortfall and decides to deposit the difference on that special-purpose savings account, the deposit(s) cannot be withdrawn before retirement.

The share of those products in the retirement mix of the Dutch households is relatively low. At the end of 2015, life insurance schemes for example accounted for circa 10% of the accrued pension rights of the Dutch households (down from almost 14% at the end of 2013), according to the calculations made using the statistics on pensions from the Dutch central bank. This shows that the second pillar is by far more important and more relevant for the Dutch than the third pillar.

Charges

Obviously, in order to make money, pension funds must spend money, i.e. there are various fees and other costs involved with investing their assets on the financial markets.

However, information on these costs is very difficult to obtain and, when available, it must be interpreted with a great deal of caution. In an article from May 2014 even the Dutch central bank itself stated that “there are reasons to believe that not all costs are reported”. The reason is not that the pension funds do not want to report them, but rather that even they are not able to determine them. For example, some companies that invest the assets of pension funds do not report all costs separately, because it is not in their interest to do so. The Dutch financial watchdog AFM has called upon those companies to disclose all costs.

Another difficulty is that transaction costs, i.e. costs associated with transactions in the financial markets such as the purchase or sale of stocks and bonds or shares in investment funds for example, are not always available. Again we use the estimate of those costs made by pension fund ABP, assuming that also in this area ABP provides a good rule of thumb. Those costs were 0.07% in 2013 but it is important to note that chances are those costs are (slightly) higher than that.

The consequence is that when DNB asked all the Dutch pension funds to provide the supervisor with, among others, an analysis and details of all costs they incur, 70 pension funds were not able to report all costs associated with their investments. Recently, much effort has gone into making sure all costs are accounted for, something which is an obligation for the Dutch pension funds from 2013 onwards. This should help various stakeholders to get a much clearer picture of the performance of the Dutch pension funds than they do currently. According to the

Dutch financial watchdog AFM, 'readers of annual reports are not able to get a clear picture of the relationship between costs, returns and risk' pension funds are taking¹⁷⁸. Just to illustrate how important costs are in the whole picture: according to the AFM, lowering costs by a 0.1% leads to a 3% higher retirement income in the medium term.

Having said that, the Dutch central bank does provide costs associated with investment activities of the Dutch pension funds, but only from 2007 onwards. The reported figures are again absolute. We re-calculate those costs in percentage of the total assets. The so obtained costs are reflected in the table below.

Table NL 2. Pension fund charges (% of total assets)

Year	Charges
2007	0.2
2008	0.24
2009	0.19
2010	0.15
2011	0.19
2012	0.21
2013	0.23
2014	0.17
2015	0.17*

** Proxy, based on the change in charges at the largest Dutch pension fund in 2015 compared to 2014, as charges for the entire pension funds population were not available*

Source: DNB Dutch Central Bank / own calculations

Calculating the average, we get 0.19 percent of total assets. We will need this average to calculate the real yearly return in a moment. Before we get to that stage, a word of caution is in order. For example, in research by consultancy bureau Lane, Clark & Peacock¹⁷⁹, researchers put those costs in 2012 for the Dutch pension funds at 0.53 percent of their assets. CME Benchmarking, a Canadian global benchmarking company, calculated that the average cost of the Dutch pension funds in 2012 amounted to, on average, 0.44 percent of their assets, with the median being 0.41¹⁸⁰ percent. This calculation however is based on a sample of 29

¹⁷⁸ Research report by AFM on information on various charges pension funds incur and how they report those in their annual reports, entitled 'Op naar een evenwichtige verantwoording over deze kosten in jaarverslagen van pensioenfondsen', July 2014.

¹⁷⁹ Research report 'LCP Netherlands: Werk in uitvoering bij pensioenfondsen 2012'

¹⁸⁰ CEM Benchmarking: Algemene Rapportage 2012





Dutch pension funds. The research by Lane, Clack & Peacock is also based on a large, sample of the total population (over 200 pension funds). The numbers provided by the Dutch central bank on the other hand are the costs of all pension funds aggregated.

Taxation

Pension Pension funds are exempted from paying company taxes in the Netherlands¹⁸¹. The money Dutch employees pay in their pension funds during their working life is deducted from their gross income and therefore not taxed. In this sense, they enjoy a tax break as their taxable income decreases and hence they fall into a lower tax bracket. As stated, pension funds then invest these funds in order to be able to pay an income upon reaching retirement age. The return, i.e. the increase in pension rights, is not taxed either. When the Dutch reach retirement, however, their pension is subject to the personal income tax rates in the pay-out phase. This so-called deferred taxing of pensions means the Dutch get another tax benefit as tax rates are lower than taxes on current income. In the Netherlands, income is taxed at various rates, which increase as the income increases. The tax rates are lower for those aged 65 and older. Just as an example, in the table below, we provide the tax rates for someone older and younger than 65 years of age in 2013, as provided by the Dutch Tax Authority.

Table NL 3. Tax rates by age and income bracket		
Income bracket (€) / age	Younger than 65	65 and older
0 – 19,645	37%	19%
19,646 – 33,363	42%	24%
33,364 – 55,991	42%	42%
over 55,992	52%	52%

This means that the tax deferral of pensions constitutes an advantage to an individual, as his/her tax rate is lower when he/she turns 65. Using various sources, mainly the historical data from the Dutch Tax Authority, we have been able to compute the average tariff applied to the income of retirees for the first three brackets since 2002. We have used the tariffs for the first three income brackets. In practice these are the tax brackets that apply to the vast majority of the Dutch

¹⁸¹ Article 3 of the law, available via (in Dutch) <http://www.rijksoverheid.nl/documenten-en-publicaties/besluiten/2009/12/15/vennootschapsbelasting-subjectieve-vrijstellingen-artikel-5.html>

retirees as Statistic Netherlands reports that the modal (most common) income for a married couple¹⁸² aged 65 and older was € 47,200 in 2015. This means that a vast majority of the Dutch retirees fall in the first three brackets. For each year we have calculated the average tariff and then, using those numbers, we get to the average annual tariff for the period 2002 – 2015. The average annual tariff thus calculated is 26.9%.

As stated earlier, contributions towards pensions are deducted from the gross income. In order to calculate the net tax advantage, we have to compare the average tax rate that is applied to the pensions (as stated: 26.9%) and the average tax rate that would have applied if contributions towards pension income was not tax exempted. We can estimate this average tax rate by computing the average of the first three brackets for each year for people younger than 65 years of age and then determine the average for the period 2002 – 2015. This average is 39,25%, which means than the average person in the Netherlands enjoys 12,35% point tax advantage on his/her pension scheme due to the fact that pension contributions are tax exempted and only pension income is taxed. At the end of this report we will report on the return for an individual, after net personal income tax has been taken into consideration.

Pension returns

As stated, the pensions the Dutch employees receive upon reaching the statutory retirement age depend on their pension funds achieving enough return on their investments. We will report nominal annual, aggregate returns for all Dutch pension funds from 2003 onwards, by using the statistics available at the Dutch central bank, which supervises pension funds and insurance companies. The results for 2015 will be calculated using another method because of the fact that some statistics are not available. For example, out of the five largest pension funds, only two had published their annual report for the year 2015 as of 15 June 2016. Annual returns will be reported for life insurance companies as well.

Then, we will focus on various charges and fees pension funds must pay. Those costs must be subtracted from the returns, as only net return is available for retirement income. In order to calculate the real rate of return, we will deduct the annual inflation in the Netherlands, as reported annually by Statistics Netherlands (CBS). Statistics Netherlands publishes two different inflation measures. One is

¹⁸² This includes couples that live together without being married

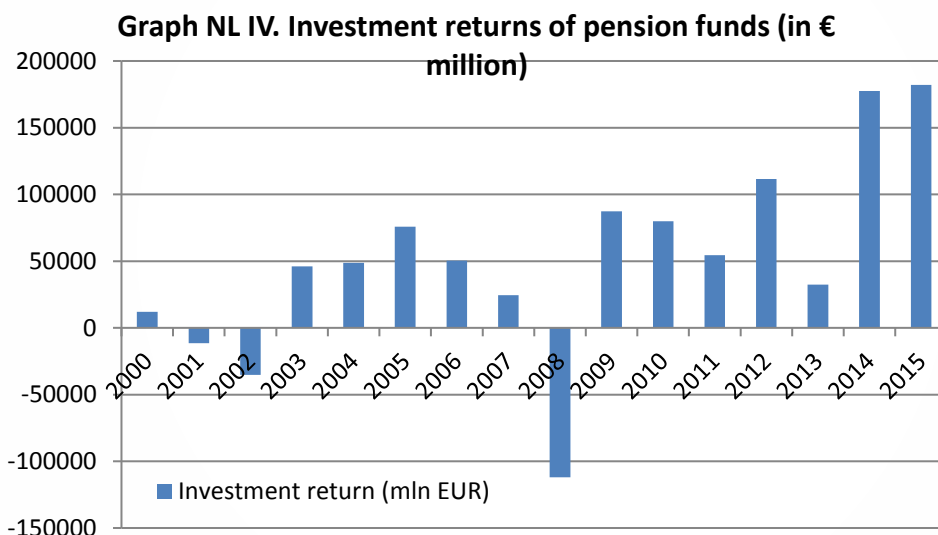




calculated according to the EU-method (Harmonized Index of Consumer Prices, which is developed in order to be able to compare inflation rates in the EU-nations); the other is the traditionally used Dutch method of inflation calculation. Although the latter one matters for the annual indexation of Dutch pensions, we will use the EU-method of calculation of the real rate of return later on in order to make the Dutch results comparable with the results from other European countries¹⁸³.

Pension funds

The Dutch supervisor of pension funds, the Dutch central bank, provides investment return figures, in billion euros, for aggregate pension funds from 1997 onward¹⁸⁴. The investment results per year are shown in the graph below.



Source: DNB Dutch Central Bank

In the graph, we can clearly see the correlation with the weak economic years. The so-called dotcom-crash on the stock markets in 2000, 2001 en 2002 immediately pops up in the graph above, as does 2008, the year the American Lehman Brothers went belly up and the current economic and financial crisis started. Note that the years since 'Lehman' have brought very good returns for the Dutch pension funds

¹⁸³ Just as a check, we performed the calculations of the real return using the Dutch method for inflation calculation as well. The average real return of pension funds does not change. The average real return for insurance companies does change, from 0,05 percent to 0,03 percent.

¹⁸⁴ <http://www.statistics.dnb.nl/financieele-instellingen/pensioenfondsen/index.jsp>

even though the economic growth was low or even absent. The explanation is to be found in the monetary policy conducted by the European Central Bank and the Fed in the United States. Those central banks slashed the key interest rates to 0% and have employed various rounds of quantitative easing. This has led to the very sharp surge of stock prices but also of the prices of government bonds. As mentioned, a large part of the Dutch pension assets is traditionally invested in stock with the other part in bonds.

As stated, DNB only provides absolute returns, as reported by the Dutch pension funds. In order to calculate the return as a percentage, we use the DNB-figures for absolute returns and total pension fund assets at the end of each reporting year. As a final step, we calculate the average yearly return for all Dutch pension funds for the period 2000 – 2015. At the time of writing, data were not available for all Dutch pension funds in 2015. As a proxy we have calculated the investment return of the Dutch pension funds for 2015 as follows:

We have taken the returns of two of the five largest Dutch pension funds that have published their annual report for 2015 at the cut-off date (15 June 2016). The largest pension fund, ABP, reported a return of 2.7% while pension fund PMT reported a 2.3% return. Those two pension funds we used as a proxy constitute almost 40 percent of all pension assets in the Netherlands, making them representative of the entire population of pension funds. We then took the average return (being 2.5%) and have applied that average as investment return of all pension funds in 2015. Moreover, we recalculated the results for 2014 since we were now able to use the actual data for the entire pension fund population rather than using a, limited, proxy. The availability of the full data for 2014 has led to a significant revision of the results for that year. The results of the calculation for the period 2000 – 2015 are provided in the table below.



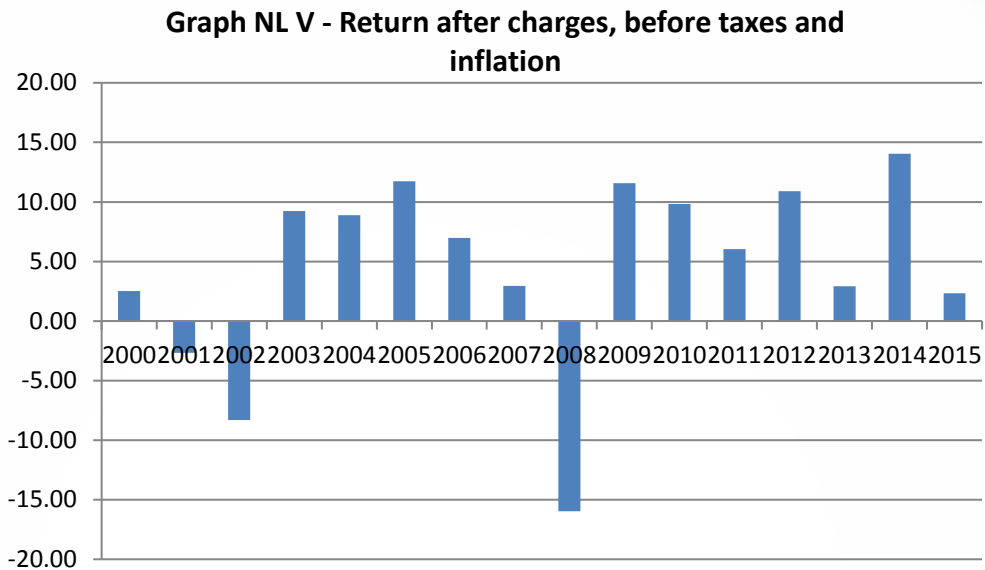
**Table NL 4. Annual nominal return all Dutch pension funds**

Year	Return as percentage of total assets
2000	2.7
2001	-2.48
2002	-8.12
2003	9.4
2004	9.06
2005	11.92
2006	7.16
2007	3.14
2008	-15.76
2009	11.73
2010	9.98
2011	6.23
2012	11.1
2013	3.15
2014	14.18
2015	2.5
Avg 2000-2015, per year	5.49

Source: DNB Dutch Central Bank, own calculations

At this stage, we have calculated nominal return on investment for each year between 2000 and 2015. By subtracting the total charges we get to the nominal return on investments after charges. However, we do run into a difficulty: as already mentioned earlier, we have nominal returns from 2000 to 2015 but charges are only available from 2007 onwards. Since we do not have data for the costs before 2007, and given their relative stability for the period 2007 – 2013, we assume those charges to be the average of those between 2007 and 2013, i.e. 0.19%, and apply that average to the years 2000 to 2006 in order to calculate the nominal return on investment after charges. As of 15 June 2016 the Dutch Central Bank could not provide us with the pension fund statistics in the field of charges for 2015. As a proxy, we have used the charges incurred by the largest pension fund by far in the Netherlands: ABP. Its charges fell in 2015 by 1.76% compared with those in 2014. Accordingly, we have reduced the average charge of all pension funds in 2014 by the same degree in order to plug in the charge for 2015 (as a side note, in the annual report of the other big Dutch pension fund, PMT, we also find that charges dropped there as well in 2015, which gives additional reasons to lower the charges for all pension funds). With those assumptions we are able to calculate the

nominal return on investments for the Dutch pension funds for the period 2000-2015 after charges and before taxes and inflation. The result is given in the graph below.



Source: own calculations

The next step on the way to calculating the real return on investment of the Dutch pension funds is to subtract the annual inflation rate from the nominal returns after charges. As already mentioned, Statistics Netherlands publishes two inflation statistics, one based on the EU-harmonized method and one on the Dutch method. We will use inflation figures calculated using the EU-harmonized method for the period 2003 and onwards¹⁸⁵ as those are only available since 2003. For the period 2000-2002 we use the inflation data calculated based on the traditional Dutch method^{186 187}.

¹⁸⁵ <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=80087NED&D1=4&D2=0&D3=12,25,38,51,64,77,90,103,116,129,142,155,&VW=T>

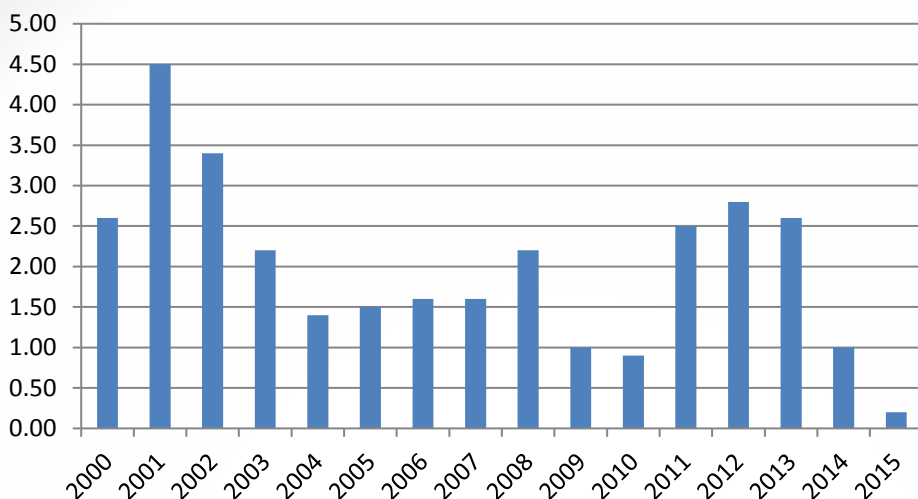
¹⁸⁶ <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=70936NED&D1=0&D2=454,467,480,493,506,519,532,545,558,571,584,597,610,623,636,649,662&VW=T>

¹⁸⁷ Comparing the inflation data calculated using the two mentioned methods, we find that they do not differ significantly in the period under consideration. For example, the average real return of pension funds does not change. Therefore, using the Dutch-method based inflation data for 2000 – 2003 is warranted.





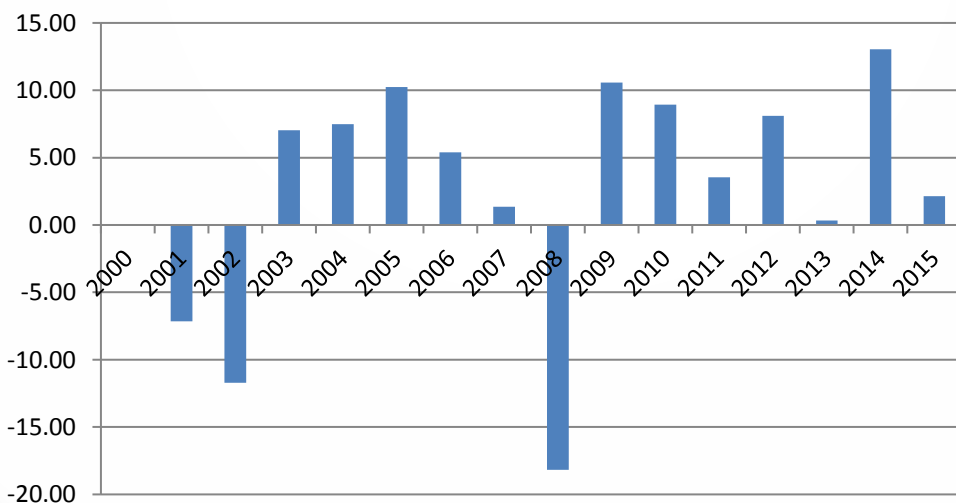
Graph NL VI - Dutch inflation 2000-2015 (annual HICP)



Source: Statistics Netherlands

When we use the annual inflation data from 2000 and adjust the return after charges for inflation, we get the following outcome:

Graph NL VII. Return after charges and inflation



Source: Own calculations, Statistics Netherlands

The same results presented in a table:

Table NL 5. Return after charges, taxes and inflation

Year	Return after charges and inflation (in %)
2000	-0.09
2001	-7.17
2002	-11.71
2003	7.01
2004	7.47
2005	10.23
2006	5.37
2007	1.35
2008	-18.17
2009	10.56
2010	8.94
2011	3.55
2012	8.1
2013	0.32
2014	13.03
2015	2.12
Average 2000-2015	2.56

Source: own calculations, Statistics Netherlands

It is now possible to conclude that the Dutch pension funds have had some good and some terrible years with regard to their annual returns. When we adjust those returns for charges, taxes and inflation, we conclude that, in the period 2000-2015, the yearly average real return has been 1.56%. Few remarks are however needed here regarding the charges pension funds incur when investing their funds.

For the years 2000-2006 we have had to assume that those costs are equal to the average of those costs between 2007 and 2014. Furthermore, as stated by the Dutch central bank and watchdog AFM among others, it is entirely possible, certainly for the years before 2013 that some costs are not or not fully taken into account. In this field things are improving fast however and we have no reason to assume that those costs that were not (fully) taken on board are such that they would significantly lower the real annual return of the Dutch pension funds in the aforementioned period. For example, we have mentioned that according to some research, based on a sample of the total population of the Dutch pension funds, costs are reported to be twice as high as costs calculated using the aggregated figures provided by the Dutch central bank for all pension funds. When we





calculate the average real annual return using those significantly higher costs, we get an only marginally lower average. As for the charges in 2015, since there is no data available, we have used the change in charges at the largest pension fund, ABP, as a proxy for the change in the total charges for all pension funds in the country.

As mentioned before, the Dutch pension system consists of three pillars, with the first being a guaranteed state elderly pension and the second pillar one where almost all Dutch employees are enrolled in one of the hundreds of pension funds. As we have just seen, the average yearly real return on investment of pension funds is 3.31%.

Third pillar vehicles

At the moment it is impossible to calculate the real rate of return on many products that fall into this third pillar-category. In 2006, it emerged that companies providing these products have charged costs that are much higher than real, disclosed, costs. Those who purchased such products were not (fully) informed about costs, such as entry costs and various annual fees. Moreover, many costs were hidden in the value of the product, making it next to impossible to disentangle the full extent of the costs. In fact, it emerged that as much as 50% of the amount paid in, was in some cases not used for investments to achieve some targeted retirement income but went towards various costs at the issuer. That in turn meant that many people were in for a shock when they learned just how much extra retirement income they would get from this third pillar: it was significantly less than they were counting on and often even significantly less than what they were told it would be upon their retirement.

This woekerpolis-affair as it is known in the Netherlands (woekerpolis can best be translated as exorbitant profit affair) is an ongoing affair with households and insurance companies engaging in talks with each other in order to compensate the Dutch households for the damages as the result of incorrect information on, among others, costs. There have even been cases that were brought before the judge in the Netherlands. The affair has already been called the largest financial scandal in Dutch history.

In 2008, another product was launched (partly in reaction to the woekerpolis-affair) called banksparen (saving for retirement). One has to have a pension shortfall, as mentioned above, to be able to purchase this tax-preferential product. The interest

rate depends on the plan one chooses and varies from variable interest rate to a fixed rate for 30 years and also differs depending on which company one chooses to purchase this product from. Currently, the interest rate falls between 1.5% for variable rate (average) to 2.4% for 30-year fixed interest rate (average)¹⁸⁸. Adjusted for inflation, the real return generally falls between approximately 0.5% and 1.8%. This is before charges, which, as stated cannot really be computed due to the woekerpolisaffair.

As for life insurance schemes, which form a large part of the third pillar products and hence can be used as a proxy for the returns in this pillar, we used the total return after charges and taxes but before inflation and the amount invested on behalf of owners of life insurance policies.

In this edition, we were able to recalculate the nominal and real return for 2014 using the complete data set for that year (in the previous version of this report, we had to work with incomplete data). Those updated results are reported in the table below.

¹⁸⁸ Various interest rates available from website www.homefinance.nl on <http://www.homefinance.nl/pensioen/pensioensparen/rentes-pensioensparen-opbouwfase.asp?o=2&t=360>





Table NL 6. Real return of life insurance companies in The Netherlands

Year	Investment result (after charges and taxes)	Investments on behalf of policy holders	Return in %	Annual inflation	Real return
2000	2,771	70,928	3.91	2.6	1.31
2001	2,593	76,960	3.37	4.5	-1.13
2002	240	68,535	0.35	3.4	-3.05
2003	2,793	76,814	3.64	2.2	1.44
2004	2,306	82,755	2.79	1.4	1.39
2005	3,322	95,972	3.46	1.5	1.96
2006	3,935	99,693	3.95	1.6	2.35
2007	6,951	100,755	6.9	1.6	5.3
2008	-5,580	87,460	-6.38	2.2	-8.58
2009	2,070	101,246	2.04	1	1.04
2010	180	106,624	0.17	0.9	-0.73
2011	-460	105,555	-0.44	2.5	-2.94
2012	360	110,790	0.32	2.8	-2.48
2013	2,208	106,480	2.07	2.6	-0.53
2014	-2,988	111,112	-2.69	1	-3.69
2015	3,547	104,934	3.38	0.2	3.18
Average			1.68	2	-0.32

Source: own calculations, Statistics Netherlands

The average annual return after charges and taxes, before inflation for life insurance companies in the Netherlands between 2000 and 2015 included, amounts to 1.68%. The average annual inflation rate in the Netherlands over the same period was 2.00%. Therefore, the average real annual return of insurance companies in the Netherlands for the period between 2000 and 2015 was -0.32%.

Putting all those calculations together, we get the following table:

Table NL 7. Average real return of pension funds and insurance companies in The Netherlands

	Nominal return pension funds (1)	Return insurance companies after charges (2)	HICP annual inflation rate (3)	Charges pension funds (4)	Real return pension funds (1-3- 4)	Real returns insurance companies (2-3)
<u>2000</u>	2.7	3.91	2.6	0.19	-0.09	1.31
<u>2001</u>	-2.48	3.37	4.5	0.19	-7.17	-1.13
<u>2002</u>	-8.12	0.35	3.4	0.19	-11.71	-3.05
<u>2003</u>	9.4	3.64	2.2	0.19	7.01	1.44
<u>2004</u>	9.06	2.79	1.4	0.19	7.47	1.39
<u>2005</u>	11.92	3.46	1.5	0.19	10.23	1.96
<u>2006</u>	7.16	3.95	1.6	0.19	5.37	2.35
<u>2007</u>	3.14	6.9	1.6	0.19	1.35	5.3
<u>2008</u>	-15.76	-6.38	2.2	0.24	-18.17	-8.58
<u>2009</u>	11.73	2.04	1	0.19	10.56	1.04
<u>2010</u>	9.98	0.17	0.9	0.15	8.94	-0.73
<u>2011</u>	6.23	-0.44	2.5	0.19	3.55	-2.94
<u>2012</u>	11.1	0.32	2.8	0.21	8.1	-2.48
<u>2013</u>	3.15	2.07	2.6	0.24	0.32	-0.53
<u>2014</u>	14.18	-2.69	1	0.15	13.03	-3.69
<u>2015</u>	2.5	3.38	0.2	0.17	2.13	3.18
<u>Avg.</u>	4.74	1.68	2	0.18	2.56	-0.32

Conclusion

The Dutch employees are far less dependent on a State pension compared to other Europeans since their individual pension plans account for the main part of their retirement income. The Dutch have some 1.200 billion € stashed away for their retirement in their pension vehicles in the second and the third pillars of the pension system.

Generally, the pension funds that invest the most part of pension contributions tend to provide decent returns after taxes, charges and inflation. For the period considered here, 2000-2015, the average annual real return is 2.56%. The pension vehicles in the third pillar, such as life insurance companies, return far less. Indeed, on average they caused an annual loss of 0.32%. However, two things have to be mentioned in order to put this performance in some perspective. In the first place,





the third pillar is relatively small and a relatively small number of individuals are enrolled in it. In the second place, generally speaking the real return in bad years, such as 2002 and 2008, is much better than the return of the pension funds, so one could say that the third pillar schemes partly cushion the blow in times when stock prices drop significantly. Given the warnings by some analysts that stock prices are (extremely) inflated by the monetary policy conducted by, among others, the American Federal Reserve and the European Central Bank, in recent years, and the danger that stock prices could fall sharply, this cushioning effect could be very important in the coming years.

Finally, one note of caution must be made with regard to the average returns at the pension funds. In recent years, the real average return has been positively influenced by two factors at the same time. In the first place, the policies of the European Central Bank have sent stock and bond prices up. For pension funds, what with those institutions sitting on a large pile of both, the financial gains have been incredible. This is what we can clearly see in the yearly returns: since the ECB started with its current policies, the annual returns have been above average. Second, at the same time the annual nominal returns have been helped by the ECB's policies, the inflation rate has tumbled, something that has recently led to a situation in which nominal returns equal real returns. Historically speaking it would be very odd for this combination to exist for a long time, so there might be tough times ahead. One wonders what the annual real rate of return will be when we calculate it in, say, 2020.

Thanks to the fact that pension funds and life insurers are under supervision of the Dutch central bank, one can access a wealth of financial data for those sectors. However, like in many other European countries, even the supervisors or indeed pension funds themselves often are not able to provide a complete overview of costs and charges. Even at the end of June there were no data available for the previous year as many pension funds, among them three of the 'big five', failed to publish their annual report. Recently, action has been taken to improve this but we cannot conclude that the situation has improved.

All in all, the Dutch enjoy a positive real return on their pension savings, with the non-weighted average being 2.24% (2.56% of pension funds and a loss of 0.32% of the third pillar vehicles). The average return from the standpoint of an individual is much higher due to the preferential tax treatment of their contributions. These are exempted from income taxes at the time they are made; pensions are taxed when one turns 65 but then the income tax rate is much lower.

When looking back, the Dutch generally have no reason to be dissatisfied with their pension schemes. However, looking into the future, one can see some dark clouds gathering above the Dutch pension system. First and most obviously, there is the current financial and economic crisis. Pension funds have been severely hit by historically low long term interest rates, so much in fact that many of them were forced to cut the pension benefits as their coverage ratio (the ratio between assets and future obligations) fell (far) below 105 points. According to the Dutch law, when the coverage ratio falls below that level, the pension fund concerned has few years to get the coverage ratio back above that threshold. If it fails to do so, it has to slash its pension benefits. Various pension funds have cut their benefits by almost 10 percent. Also, rarely has any pension fund been able to adjust pension benefits to the annual inflation in recent years.

Given the medium and long-term macro-economic outlook, chances are that the long term interest rates will stay at historically low levels for quite some time. This hurts the Netherlands relatively badly since with low long-term interest rates, many pension funds will not be able to adjust the pension benefits to the annual inflation.

Ageing is another issue at hand affecting the Dutch pension system. Currently, the Dutch pension system is characterized by a large degree of built-in solidarity. However, many young people fear that by the time they reach their retirement age, there will not be enough money for a decent pension income. Therefore, the Social and Economic Council, arguably the most important advisory and consultative body to the government consisting of employers' representatives, union representatives and independent experts, recently proposed changes to the Dutch pension system. Although it proposes to keep a large degree of solidarity intact, it wants to change the system in such a way that each individual would have his or her own pension savings account, with the possibility of choosing how the money is invested. Recently, the Dutch government published its plans for the overhaul of the current pension system in the Netherlands. One of the proposed changes, if implemented, would mean that starting in 2020, the money paid in by the young part of the Dutch population in the Pillar II pension scheme would be used for their pensions in the future. At the moment, the money they contribute to the pension funds is used for payment of the pensions of the elderly. This solidarity between generations is one of the most important characteristics of the Dutch pension system and if changed, it would truly constitute a fundamental change of the pension system as the Dutch know it.





Pension Savings: The Real Return

2016 Edition

Country Case: United Kingdom

Introduction

The pension system in the UK is based on three pillars:

Pillar I

Pillar I is a social insurance program consisting of two elements:

- The Basic State Pension

Every employee or self-employed person is required to contribute to this plan and each person can receive their basic pension on attaining the age of retirement (State pension age). The legal age of retirement is 65 years for men. Since April 2010, the statutory retirement age for women has gradually increased from 60 to 65. The statutory retirement age will gradually increase from 2018 to be fixed at 66 years in 2020 for both men and women. The basic pension depends on the number of years of contributions to National Insurance. To qualify for a full pension, thirty years of contributions are necessary. The perceived pension at the full rate since April 2016 for a single person amounts to £119.30 (€161.9) per week. It increases every year according to the following components, with the largest figure being taken into account:

- the average percentage growth in wages
- the Consumer Price Index increase

It increased by 2.5% in 2015 and 2.9% in 2016.

Employees (and not the self-employed) who earn more than £5,824 (€7,902) per year contribute to the Additional State Pension system and receive an income in addition to the Basic State Pension. The Additional State Pension depends on the number of years of contribution and earnings. Anyone wishing to save for retirement under pillar II and III may leave the State Second Pension. If the employee opts-out towards an occupational scheme, the employer and the

employee pay lower contributions and the employee cannot qualify for the State Second Pension.

The current pillar I program was replaced by a new one for people reaching the State Pension age from 6 April 2016 onwards: A single-tier State pension replaced the basic and additional pensions. The full new State Pension is £155.65 (€211.2) per week.

Pillar II

Pillar II is a system of occupational/company pension plans. There are two categories of schemes:

- Salary-related schemes (Defined benefit)
- Money purchase schemes (Defined contribution)

The number of employees saving in a workplace pension plan has risen from 12.3 million in 2003 (65% of eligible employees), to 13.9 million in 2014 (70%)¹⁸⁹. However, it is estimated that, by 2018, due to the automatic enrolment reform (see below) eight to nine million people will be newly saving, or saving more. If employers do not offer a company scheme, they have the opportunity to contribute to an individual retirement savings plan contracted by the employee. In this case, contributions must be at least equal to 3% of salary paid.

Automatic enrolment: Public Authorities sought to ensure that part of the population does not fall into poverty in retirement by establishing a safety net at the professional level. The Pension Act of 2008 aims to solve the pension problem facing people whose savings are not enough to ensure a decent retirement¹⁹⁰. The purpose of this legislation is to protect the 13.5 million UK employees who are not affiliated to any pension plan (other than the basic plan that offers a very low pension level).

Employers are required to automatically enroll all employees whose annual income is more than £10,000 (€12,411) to a basic scheme to which they contribute. Employees have to explicitly opt out of it if they do not wish to contribute. Minimum compulsory contributions will progressively rise up to 8% of the employee's salary from October 2018, of which 3% will be paid by the employer.

¹⁸⁹ Source: Official Statistics on workplace pension participation and saving trends of eligible employees, Department for Work and Pensions, October 2014.

¹⁹⁰ According to the Department for Work and Pensions (2013), 12 million people were not saving enough to ensure an adequate income in retirement.





This requirement currently applies to employers with more than 49 staff and will be extended to the smallest ones by 2017. In practice, most employers use defined-contribution schemes for this purpose. Any British employers who don't have their own scheme will have to join a national multi-employer scheme.

Automatic enrolment aims to increase the number of individual newly saving or saving more in a workplace pension by nine million and to increase the amount of pension savings by £15 billion a year. However, among those targeted by the reform (that is, people whose savings are insufficient to cover their needs at retirement), 4.5 million are not automatically enrolled in the new system. This includes young employees who are less than 22 years old, employees over the State Pension age (65) and those whose annual income is less than £10,000 (£12,411). Employees may also request to opt out of the system. Occupational schemes are subject to the same limitations in terms of contributions and capital as individual savings plans (see below).

Pillar III

Pillar III consists of individual retirement savings plans.

Anyone participating in the pillar I State Pension scheme has the opportunity to leave the State Second Pension and subscribe to a Personal Pension Plan with a bank, an insurance company, a building society or other financial intermediaries. The offer of individual retirement savings products in the UK is highly standardised and controlled by the State. There are two types of Personal Pensions: Stakeholder Pensions and Self-Invested Personal Pensions (see below for more details.)

A Personal Pension is a defined contribution scheme. The accumulated savings can be withdrawn at any age between 55 and 75 (in practice, it is between 60 and 65 in most pension schemes), even though the beneficiary is still employed.

The savers normally convert the accumulated rights into an annuity for life, which is subject to taxation. However, they may withdraw a non-taxable lump sum of a maximum of 25% of the accumulated savings from the scheme. Beyond this threshold, withdrawals are taxed at the income tax marginal rate of the retiree. Another alternative to the annuity for the subscribers is to quit their retirement savings plan and to receive taxable income from it (called Unsecured Pension – USP). After turning 75 years old, they are able to make annual withdrawals. USP can be transmitted to heirs.

Since April 2015, new flexibilities are available to members of defined contribution pension funds. Pension funds members have the opportunity to keep a portion of their rights invested in the fund, with a drawing right ("flexi-access Drawdown") on the amounts concerned, and an additional tax exemption on the amounts withdrawn up to one third of the envelope of these drawing rights.

As the retirement system in the United Kingdom is predominantly a pre-funded one, life insurance and pension funds represent the majority of total assets held by UK households.

Table UK 1. Financial Savings of UK households at the end of 2015 (non-real estate)

	<u>% of total assets</u>	<u>2015/2014 (%)</u>
Currency and bank deposits	24.3	4.4
Investment funds	4.4	15.3
Direct investments (debts products, shares and other equity)	10.4	-3.1
Life insurance and annuity entitlements	9.5	4.5
Pension schemes	51.4	-0.1
Total	100	1.7

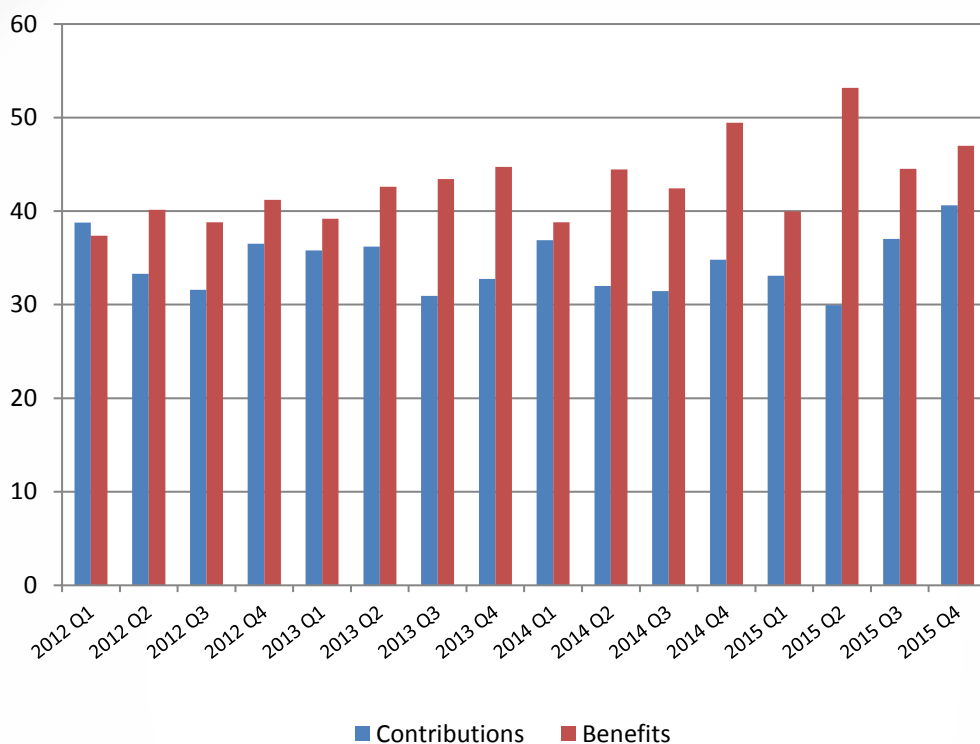
Source: Eurostat

Many occupational and individual pension funds have reached maturity and the gap between benefits and contributions widens.





Graph UK 1 - Contributions and benefits of pension funds in the UK (SA data in £ Bn)



Source: Office for National Statistics. Data include self-administered pension funds and pension fund management by insurance companies

Pension Vehicles

Pillar II

There are several types of pension schemes, including defined contribution schemes and defined benefit schemes.

Defined benefit schemes

Defined-benefit schemes are protected by the Pension Protection Fund (PPF). PPF pays some compensation to scheme members whose employers become insolvent and where the scheme doesn't have enough funds to pay members' benefits. The compensation may not be the full amount and the level of protection varies between members already receiving benefits and those who are still contributing to the scheme.

- Final salary schemes

Trustees are responsible for paying retirement and death benefits. The pension depends on the number of years the employee belonged to the scheme (pensionable service), the final pensioner salary and the scheme's accrual rate.

- Career average revalued earnings (CARE) schemes

CARE schemes are similar to final salary schemes, apart from the fact that pensions depend on the employee averaged earnings over their career (the pensionable earning) instead of the last salary before retirement. Pensions are indexed on price inflation.

Defined contribution schemes

The amount of pension depends on contributions paid by the employer and the employee, the fees charged for the management of the scheme and the performance of investments.

Small self-administered pension schemes (SSAS)

SSASs are pension schemes whose members are normally company directors or key staff. The investment policy of SSASs is more flexible than the common law system. The fund may lend money to the employer and it may borrow and invest in a broad range of products, including the employer's shares.

SSASs are managed by insurance companies, pension consultants and fund managers.

Hybrid schemes

The sponsor of a hybrid scheme commits on a minimum pension amount. The pension can be higher depending on the outcome of the investment policy of the fund.

Cash balance plans

In cash balance schemes, the employer is committed to a minimum amount of pension savings from the scheme for each period of service of his/her employees. At retirement, the accumulated capital is converted into an annuity.





Multi-employer schemes

Multi-employer schemes have been around for a long time and are common in the public sector.

The National Employment Savings Trust (NEST), established in 2011 by the government, is one of the schemes complying with the legislation on auto-enrolment (see above). It is a low-cost pension scheme and is required to accept membership from any employer. There is currently a maximum annual contribution of £4,900 (€6,648) but this restriction will be lifted in 2017.

Since the implementation of the auto-enrolment legislation, other inter-fund companies have been created and are in competition with NEST: NOW: Pensions (or just simply NOW), a UK subsidiary of the Danish national pension fund ATP, the so-called "People's Pension", Smart Pension, creative auto-enrolment.

Pillar III

Self-invested personal pensions

Self-invested personal pension plans are a type of Personal Pension Plan where the subscriber decides its own investment strategy or appoints a fund manager or a broker to manage investments. A large range of investments are allowed, although some of them (notably, residential property) support heavy tax penalties and are, therefore, excluded in practice.

Stakeholder pension schemes

Stakeholder pension schemes were created in 2001 to broaden the range of investment choices and facilitate access to individual savings plans for anyone wishing to save for retirement.

Stakeholder pension schemes are Personal Pension Plans that are regulated in terms of charges and in terms of contributions that the provider must accept; management fees must not exceed 1.5% per year for the first ten years and 1 % thereafter. Stakeholder pension plans must accept any contribution from £20 (€ 24.82) and any transfer from other pension schemes.

Group personal pension plans

Group personal pension plans are like Personal Pension Plans but they are arranged by the employer. The liability lies on an independent pension provider, usually an insurance company.

Enhanced annuities

Products for certain categories of people whose life expectancy is lower, such as smokers or people with serious diseases, are proposed by pension providers. In this case, the benefit is "enhanced" (Enhanced Annuities) and distributed over a much shorter period of time.

Charges

In 2013, a report by the Office of Fair Trading (OFT) highlighted the lack of transparency and comparability on fees charged to members of UK pension funds¹⁹¹. This was the case especially for trust-based schemes where there was no requirement to disclose charges.

Annual Management Charges (AMC) are usually the main charges levied on pension funds. However, some schemes charge additional fees as, for example a contribution charge or a flat fee. In some cases, audit, legal, custodial or consultancy fees are added to the AMC and deducted from members' pension pot¹⁹². OFT's report also showed that some providers do not include the costs of administering schemes, of IT systems or of "investment management services" in AMC. Moreover, transaction costs are never included in the AMC, but this latter practice can be justified by the fact that a major part of trading costs is the bid-ask spread of quotes or orders in order-driven markets, a cost that should be considered as an inherent component of investment returns.

To summarise, there are some operational expenses that are not included in AMC, but to which extent is unknown. Fees charged to members may be significantly higher than the average, depending, among other things, on the size of the scheme. It has also been noted by OFT that some providers charged higher AMC to deferred members than active members. In order to protect members of pension funds against the most abusive practices, a stakeholder pension scheme cannot charge an AMC superior to 1.5% and it cannot charge its members for starting, changing or stopping contributions, nor for transferring funds.

A cap on the charges within default funds in the framework of the automatic enrolment obligation, equivalent to 0.75% of funds under management, was introduced from 6 April 2015 by the Financial Conduct Authority (competent for contract-based workplace pension schemes) and the Department for Work and

¹⁹¹ Office of Fair Trading (2013).

¹⁹² Department for Work & Pensions (2013,2).





Pensions (competent for trust-based pension schemes). The same regulation also prevents firms from paying or receiving consultancy charges and from using differential charges based on whether the member is currently contributing or not.

Moreover, an audit was conducted on schemes being “at risk of being poor value for money”. It found that about one third of surveyed schemes had AMCs superior to 1% and that a significant number of savers would have to pay exit fees superior to 10% if they wanted to switch into a better performing fund.

There are various estimations available on the average weight of charges levied on pension funds in the UK.

- Charges are especially high in personal contracts other than Group personal plans. According to Oxera¹⁹³, there is a contribution charge of 0 to 1% and an average AMC of 0.95% in personal defined contribution schemes.
- The Association of British Insurers (ABI)¹⁹⁴ found that schemes newly set-up for automatic enrolment supported a 0.52% AMC on average, against 0.77% for pre-existing schemes. NEST AMC is 0.3% of assets, plus a contribution charge of 1.8% of any new contribution. Administration fees charged by NOW amount to 0.3% of assets plus £1.50 per member per month.
- According to the Office of Fair Trading (OFT), the weighted average annual management charge for new contracts decreased from 0.79% in 2001 to 0.51% in 2012.
- According to the Department for Work and Pensions¹⁹⁵, average charges in schemes qualifying for automatic enrolment prior the implementation of the charge cap were 0.42% in surveyed trust-based schemes and 0.55% in contract-based schemes in 2015. In schemes non-qualifying for automatic enrolment, average charges arose to 0.67% in trust-based schemes and 0.81% in contract based schemes.

Both latter sources are the most consistent and recent ones and we use them below to calculate investment returns before and after charges, although taking into account only AMC underestimates the actual level of charges.

¹⁹³ Oxera (2013).

¹⁹⁴ Association of British Insurers (2012).

¹⁹⁵ DWP, “Pension Charges Survey 2015: Charges in defined contribution pension schemes”

The fall in average AMC is attributed to several factors by OFT: The growing size of assets under management generated economies of scale and increased the bargaining power of employers. The AMC cap on stakeholder pensions created a new competitive benchmark. Advisers' remuneration has been excluded from AMC by some providers ahead of the regulation preventing this method of adviser remuneration from January 2013 onwards (The Retail Distribution Review, RDR).

In order to calculate the average weight of charges in total outstanding assets since the year 2000, we used assumptions of OFT on the average annual rate of switching providers (6.7% of assets) and the average annual rate of successful re-negotiations (3.6% of assets). Since no data are available on average AMC in 2000, we assumed that average AMC represented 0.79% of managed assets in 2000, as in the following three years which are documented by OFT. Data for 2013 were estimated using the DWP survey that recorded a slight increase over 2011 in AMC for trust-based schemes and a slight increase for contract-based schemes. Based on these hypotheses, we find that the average AMC decreased from 0.79% in 2004 to 0.55% of the outstanding assets of pension funds in 2014. On average, AMC represented 0.7% of assets over the eleven years from 2004 to 2014.

Table UK 2. Average AMC on schemes set up by existing contract-based and bundled trust-based pension providers in each year (%)

2000 -2004	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	Annual avg. '04-'14
0.79	0.77	0.76	0.75	0.73	0.71	0.69	0.67	0.65	0.69	0.55	0.7

Sources: OFT, GAD, DWP, own calculation

Taxation

Tax relief on contributions

Contributions to personal pension plans are deducted from the taxable income, subject to a maximum amount limited to either 100% of salary or an annual allowance of £80,000 (€108,544) until 8 July 2015; whichever is lower. The annual allowance was abolished after 8 July 2015.

Non-taxable persons benefit from a tax relief at 20% of the first £2,880 (€3,574.37) of individual contributions per year.





Moreover, there is a lifetime allowance of £1 million (€1.36 million). Pension savings are tested against the lifetime allowance when the beneficiary receives their pension benefits. The charge is paid on any excess over the lifetime allowance limit. If the amount over the lifetime allowance is paid as a lump sum, the rate is the marginal rate applicable to the taxpayer. If it is paid as a pension or by cash withdrawals, the rate is 25%.

Taxation of the funds

Pension funds do not pay any tax on the income of their assets (interest, dividends, rents) nor on capital gains.

Taxation of pensions

Pensions are included in the income tax base. There are currently three marginal rates in the UK: 20% on income from £11,001 to £43,000 (€58,343), 40% up from £43,001 to £150,000 (€203,521) and 45% above. There are income tax allowances of £10,600 (€ 14,382)¹⁹⁶ in favour of taxpayers with an income inferior to £122,000 (€165,531).

Pension Returns

When looking into Pension Returns, we will consider the returns of private pension funds as the most descriptive proxy as other options such as life insurance have marginal weight in the British market. As for other instruments such as shares, bonds and packaged products we do not have statistics that show on which proportion these products are used for purely private pension provision.

Asset allocation

Pension fund returns depend on their asset allocation.

¹⁹⁶ This amount applies to people born after 6 April, 1938.

Table UK 3. Breakdown of self-administered pension fund asset holdings (%)

	Public sector securities	Shares	Corporate bonds	Mutual funds	Other	Total assets
2003	16	46	7	17	13	100
2004	15	43	8	19	15	100
2005	12	43	8	21	16	100
2006	12	41	9	22	17	100
2007	13	33	10	26	18	100
2008	14	29	12	25	19	100
2009	14	29	13	30	15	100
2010	13	26	11	34	16	100
2011	16	22	10	33	18	100
2012	17	21	10	34	18	100
2013	18	20	9	34	18	100
2014	19	20	10	32	19	100

Source: ONS, "MQ5: Investment by Insurance Companies, Pension Funds and Trusts", various years

The share of direct holdings of corporate securities (shares and bonds) consistently decreased from 53% in 2003 to 30% in 2014. British pension funds remain among the most exposed to the stock market, either directly or through investment funds¹⁹⁷. However, faced with the uncertainty of returns achieved by the stock market and the weak performance of government bonds, managers reallocated part of their investments to alternative asset classes.

It is worth mentioning the investment policy of NEST. One of the objectives of NEST is to encourage individuals to save and it was, therefore, considered necessary to avoid any financial risk in the first few years. Until the age of around 30 years, the return of managed funds will be limited to inflation, that is to say a zero real interest rate. Unlike traditional allocations that gradually decrease market risks when approaching the retirement age, higher risks can be taken in the second savings phase, with a target performance of 3% plus inflation. Employees may also choose to allocate their contributions to the fund "NEST Higher Risk", with a targeted long-term average volatility of 17%.

¹⁹⁷ Equity funds assets represent more than two thirds of total UCITS assets in the United Kingdom. Since pension funds hold a major portion of total outstanding mutual funds in the UK, we consider that equity funds are also predominant in holdings of mutual funds by pension funds in the UK.





The amount of tax depends on the income tax rate of each retiree. We assume that the pensioner withdraws the maximum tax-free lump sum, 25% of the accumulated savings. In other words, we multiply the applicable tax rate by 0.75. The retiree will pay an amount of income tax on their nominal investment return, which depends on their applicable marginal tax rate and their tax allowance, in relation to their total income.

We calculated the real investment return for four cases:

Table UK 4. Case description

	Tax allowance (£)	Marginal Tax rate	Income tax	Average tax rate
Case 1: An annual income of £10 000	11,000	20%	0	0%
Case 2: An annual income of £20 000	11,000	20%	1,800	9%
Case 3: An annual income of £50 000	11,000	40%	9,200	18%
Case 4: An annual income of £150 000	-	40%	51,400	34%

Nominal investment returns

We calculated nominal investment returns using data on autonomous pension funds available from ONS (MQ5: Investment by Insurance Companies, Pension Funds and Trusts).

Nominal investment returns for a given year are calculated according to the following formula:

$$R = \frac{\text{Income} + \text{capital gains}}{(\text{Assets at year end} + \text{assets at beginning of the year})/2}$$

Capital gains are estimated using the following formula:

$$CG = \text{Assets at year end} - \text{assets at beginning of the year} \\ - \text{Net investments of the year}$$

Income includes following components:

$$\text{Income of investment} = \text{Rents from properties} + \text{Dividends received} + \\ \text{Interest earned}$$

Real investment returns after charges, inflation and taxes

Option 1

We apply the average tax rate to the nominal investment return and calculate the resulting real investment return after taxes. Returns rise to 2.5% per year in the most favourable case, and 1.3% in the worst case¹⁹⁸.

Table UK 5. Pension fund average annual rate of investment returns (%)

	Nominal return before charges, before inflation, before tax	Nominal return after charges before inflation, before tax	Real return after charges, after inflation, before tax		Case 1	Case 2	Case 3	Case 4
2000	-3.5	-4.3	-5.2					
2001	-5.3	-6.1	-7.2					
2002	-13.3	-14.1	-15.8					
2003	15.5	14.7	13.5					
2004	12.1	11.3	9.6					
2005	19.9	19.1	17.2					
2006	11.4	10.6	7.7					
2007	1.8	1.1	-1.1					
2008	-11.4	-12.1	-15.2					
2009	13.5	12.8	10					
2010	13.6	12.9	9.2					
2011	12.3	11.6	7.4					
2012	10.5	9.9	7.2					
2013	6.4	5.7	3.7					
2014	4.3	3.7	3.2					
Avg / Year	5.4	4.6	2.5	Real return after charges, after inflation, after tax	1.8	1.8	1.1	1.1

Sources: GAD (nominal returns in 2000), ONS, OFT, DWP, IODS calculation

¹⁹⁸ Data on returns on pension fund investments in the UK have not been published by the OECD this year. Hence we estimated nominal returns based on the variation of assets, net investments and data on the income of pension funds published by the Office for National Statistics (ONS). Running this estimation led us to revise results for previous years included in the previous edition of the present study. Since data on assets held by self-administered pension funds are not yet available for year 2014, our estimation relates to the years up until 2013. The main reason why these figures differ from figures reported by the OECD is because in their case capital gains were excluded from the calculation.





Option 2

We apply the marginal tax rate to the nominal investment return and calculate the resulting real investment return after taxes. In the most favorable case, the average annual return is 1.8%.

Conclusions

The United Kingdom is one of the European countries with the most developed and mature pension funds. Workers in the UK cannot rely on the social insurance program (pillar I) that provides only a very limited income. On the other hand, British households save less than other Europeans on average and they do not rely much on alternative assets as a means to prepare for their retirement. Hence, the government has implemented a compulsory framework of “auto-enrolment” in occupational schemes that should, in theory, extend the safety net to most employees.

But these initiatives can only be positive if the new money channelled to pension funds is efficiently managed and generates significant and sustainable revenues. The issue of the real returns of private pensions is thus crucial in the UK.

However, and surprisingly in a country which has been experiencing pre-funded retirement schemes for a long time, it is not easy to calculate these returns and identify its positive (managers’ skills and asset allocation) or negative components (charges and taxation).

Like in other countries, the financial crisis that started in 2008 resulted in changes in asset allocation that are probably generating lower returns, with more cash and less corporate equity.

Charges negotiated by employers with pension providers in the framework of new contracts or re-negotiations decreased on average since 2005. But there was a lack of transparency and comparability of charges disclosed by pension providers. Public authorities have taken initiatives to standardise and limit the fees paid to pension providers to avoid abusive practices. The Annual Management Charges, which are the main focus in the public debate, decreased from 0.79% in 2001 to 0.55% in 2014.

Another negative factor is the inflation rate, which is higher in the UK than in the euro area.

In total, the nominal average annual performance of employees' and employers' contributions to pension funds from year 2000 to 2014 was positive by 5.4%. When taking into account inflation, charges and taxes, the investment returns are estimated at +1.1% to +2.5%, depending on the personal tax rate of the retiree.





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