PENSION SAVINGS

The Real Return

2015 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

2015 Edition

A Research Report by BETTER FINANCE

COORDINATORS

Michael Klages
Juan Manuel Viver

CONTRIBUTORS

Jean Berthon
Lubomir Christoff
Didier Davydoff
Flavia Fulea
Laetitia Gabaut
Josefine Gunnarsdottir
Arnaud Houdmont
Michael Klages
Nicolas Kortesluoma
Edin Mujagić
Guillaume Prache
Mariacristina Rossi
Joanna Rutecka
Ján Šebo
Filipa Silva
Klaus Struwe
Tomáš Virdzek
Juan Manuel Viver

Table of Contents

CONTRIBUTORS

Jean Berthon is the President of Better Finance and President of FAIDER, the French Federation of pension savers which represents more than 1.4 million investors and life policy holders. He is also a member of the EIOPA (European Insurance and Occupational Pensions Auhtority) Insurance and Reinsurance Stakeholder Group. An actuary by training, he also acts as Officer for the "Groupe Consultatif Actuariel Européen".

Lubomir Christoff, PhD, ChFC is a co-founder and Chairman of the Institute of Certified Financial Consultants (ICFC) in Bulgaria. The Institute is the only non-governmental body in Bulgaria granting financial planning certification to individuals who have met education, examination, experience and ethics requirements. Christoff is a member of the Securities Markets Stakeholder Group at ESMA (European Securities & Markets Authority). Previously he has served as an Advisor to the Executive Director of the World Bank and Chief Economist of the Bulgarian National Bank.

Didier Davydoff is the director of the European Savings Institute ("Observatoire de l'Épargne Européenne"), a non-profit organisation promoting and coordinating data and research on European savings. Since 2011, he is the CEO of INSEAD OEE Data Services, the first web-based data aggregator available to European researchers. He is the author of numerous articles and books related to savings, stock indices, markets and their regulation.

Flavia Fulea is Research Assistant at Better Finance. She is studying Business, Economics and Finance at Loughborough University (UK) and completed an internship at the German Stock Exchange Group before starting her current traineeship.

Laetitia Gabaut is an economist who graduated from Toulouse School of Economics. She joined the European Savings Institute in 2010, where she is in charge of the "Overview of Savings" publication. She has been involved in European projects related to savers' behaviour and to retirement savings.

Josefine Gunnarsdottir is a lawyer and a pension expert at the Swedish shareholder association. She is also a member of The National Board for Consumer Disputes in Sweden.

Arnaud Houdmont is Chief Communications Officer at Better Finance. Prior to his career in communications and research in the heart of Europe, working closely with EU policy makers and private sector stakeholders, he earned a master's degree in Global Communication from Goldsmith's College and a bachelor's degree in International relations from Sussex University.

Michael Klages (coordinator) is an economist who graduated in international finance and banking & finance from the Leibniz University of Hanover. He joined the INSEAD OEE Data Services in 2011, where he is responsible for data analysis and complementary data calculations, research publications and international projects.

Nicolas Kortesluoma is Research Assistant at The Swedish Shareholder Association. He is studying law at Uppsala University.and will graduate in one year.

Edin Mujagić is a Dutch economist and journalist and holds a degree in Monetary Economics from the University of Tilburg. He is a member of the Economists' Club at Project Syndicate and founded the independent macro-economic consultancy Oranje Lelie. Youngest ever member of the Monetary Circle in the Netherlands, Mujagić is currently aligned to Tilburg University.

Guillaume Prache is the Managing Director of Better Finance. He is a member and former chair of the ESMA (European Securities & Markets Authority) Securities and Markets Stakeholder Group and acts as Vice Chair of the European Commission's Financial Services User Group (FSUG). He is also member of the EIOPA (European Insurance and Occupational Pensions Auhtority) Occupational Pensions Stakeholder Group.

Mariacristina Rossi is an associate professor of economics at the Department of Economics and Finance of the University of Turin and a research affiliate of CeRP and Collegio Carlo Alberto. Her research interests cover household decisions on consumption/savings over the life cycle, precautionary savings, portfolio decision and poverty analysis.

Joanna Rutecka is an associate professor at Warsaw School of Economics where she conducts research on old-age pension systems, insurance markets and consumer protection on financial markets. She cooperated with the Polish Insurance Ombudsman and was an advisor to the President of the Polish Chamber of Pension Funds. Joanna Rutecka is an active member of the Polish Association of Social Policy (PTPS), the Polish Pension Group SGH (PPG-SGH) and the European Network for Research on Supplementary Pensions (ENRSP).

Ján Šebo serves as Associate Professor at Matej Bel University in Slovakia and is Consultant at the Institute of Savings and Investment. He is a member of the Financial Services User Group (FSUG) of the European Commission and of the EIOPA (European Insurance and Occupational Pensions Auhtority) Occupational Pensions Stakeholder Group.

Filipa Silva is Communication and Administration Officer at Better Finance. She holds a Law degree from the University of Coimbra and a Master degree in European Union Law from the University of Minho (both in Portugal). She joined Better Finance in 2013 where she is now in charge of the office management, administration & finance and assisting in the development of the communication strategy development and members' relations.

Klaus Struwe, MSc (Econ), is an Independent Management Consultant. Since 2004 he acts as political advisor to the Danish Shareholders Association. He is also a member of the EIOPA (European Insurance and Occupational Pensions Auhtority) Occupational Pensions Stakeholder Group, representing consumers.

Tomáš Virdzek is a researcher at the Institute of Economic Sciences at Matej Bel University in Slovakia. He is a founder and the president of the Institute of Savings and Investment. He has participated in many research projects on private pension schemes.

Juan Manuel Viver (coordinator) acts as Policy Officer at Better Finance. He is an economist with a MA in European Economics from the College of Europe in Brugge, Belgium. He was previously responsible for International Projects and Relationships at ADICAE, the Spanish Financial Services Users' Organisation. He is a member of the Consultative Working Group of the Investor Protection and Intermediaries Standing Committee (IPISC) of ESMA, the European Securities and Markets Authority.

Pension Savings: The Real Return

2015 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 market of all throughout the European Union according to the European Commission's consumer scorecards[1].

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 for customers of the services rendered. 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 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

[1] http://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/oecdpensionsoutlook2012.htm and http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2014.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 OECD[5] are unfortunately quite incomplete:

- Certain EU countries are missing, including France, UK (in the 2014 OECD report), Sweden and several Eastern European Member States such as Romania, Bulgaria and Latvia;
- The most recent OECD publication on pension returns, "Pension Markets in Focus 2014", provides only five year returns (2008-2013) which is a very short time frame for such long term products;
- 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 "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 those do capture;
- 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.

The failure of European supervisors to report "consumer" performance data

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).

[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 2012 "Pensions Outlook" (10 year data) and the 2014 "Pension Markets in Focus" (1 and 5 year data).

To our knowledge, neither the Banking[6] nor the Insurance and Pensions[7] 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 does include "retail investor" portfolio returns in its "Trends, Risks and Vulnerabilities" reports[8], but these data are actually capital markets performance data, not retail investments performance ones, based on the 5 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 of[9]:

- 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

Our experience and findings clearly confirm that capital market performances have unfortunately very little to do with the performances of the actual savings products distributed to EU citizens. And this is particularly true for long term and pension savings. The main reason 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

[6] EBA – EBA Consumer Trends Report 2015
[7] EIOPA – Consumer Trends Report – December 2014
[8] ESMA – Trends, Risks, Vulnerabilities Report 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.

investment components of insurance and pension "packaged" products. This is actually how ESMA comes up with its "retail investor" portfolio return. But this is 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 key reasons for this are the fees and commissions charged directly or indirectly to customers. The European Commission itself publicly acknowledges this fact (see footnote 2 above).

Table 1. Real case of a Belgian occupational pension insurance	
Capital markets vs. Belgian Occupational pension fund 2000-2015* performance	
Capital markets (benchmark index) performance**	
Nominal performance	97%
Real performance (before tax)	45%
Pension insurance performance (same benchmark)**	
Nominal performance	40%
Real performance (before tax)	3%

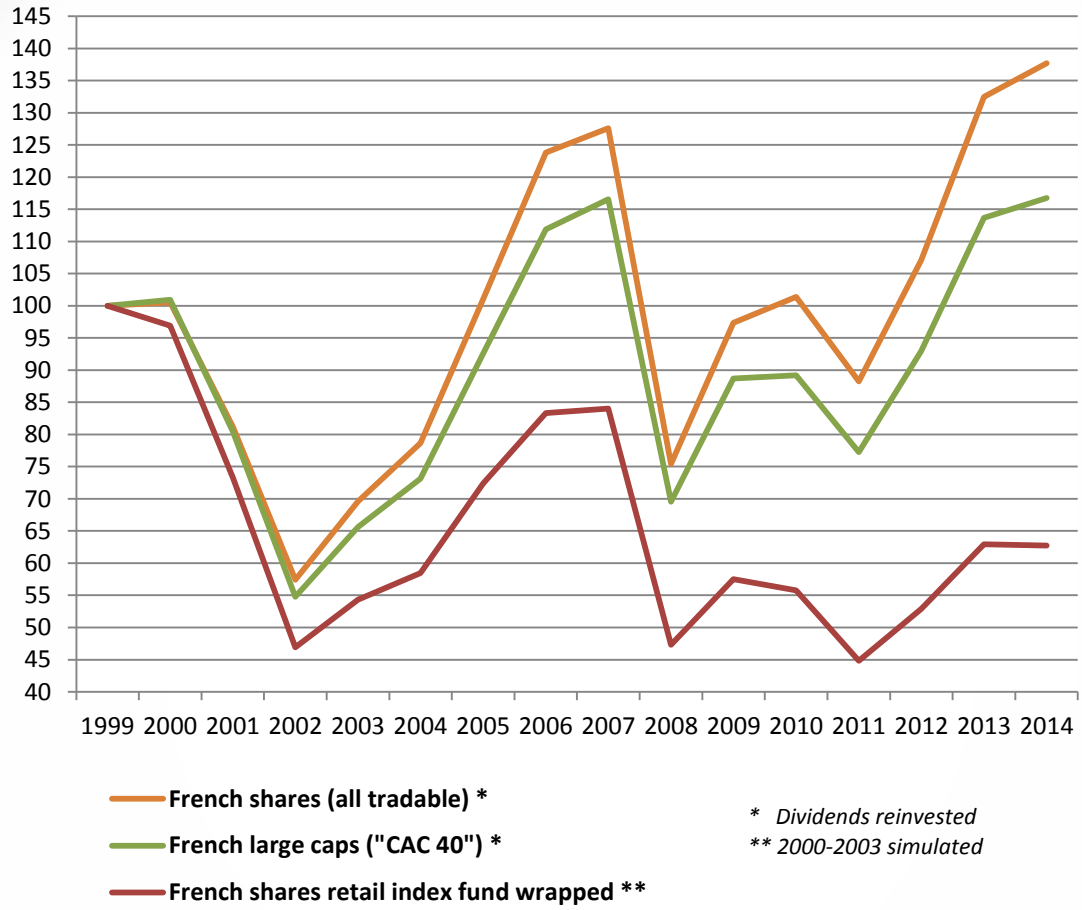
** To 31/05/2015*
*** 50 % Equity / 50 % bonds (MSCI World equity index and JPM Euro Govt Bond Index[10]) invested on 31/12/1999*
Sources: Better Finance, provider

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).

[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).

Graph1. Real case of French retail equity fund

Returns: savings products have little in common with "capital markets" (index equity fund example)



Source: Better Finance research, provider

In the case illustrated above a so called retail CAC 40 "index" fund[11] actually under-performed the relevant equity index by 8300 basis points after eleven years (+15% instead of +98% for the benchmark from 2003 to 2014), with the performance gap fully attributable to fees.

Another issue for European savers that is 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:

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

- to investors as this graph shows (the French large cap equity market underperformed the actual global French equity market by 21 percentage points over the last 15 years: +16% versus +37%),
- 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.

This approach, inappropriately chosen by ESMA, of using capital market returns as a proxy 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).

Unfortunately, the European regulator was completely right to 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…*".

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 2015 edition, now covering 85% of the EU population.

The net real return of pension saving products should be:

- the long term return (at least ten years and at least covering two full economic and financial cycles, as even long term returns are very sensitive to entry and exit dates. This time, we were able to collect up to 15 years of performance data in most countries covered);
- net of all fees, commissions and charges borne directly or indirectly by the customer;

- 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);
- net of inflation (since for long term products only the real return matters; that is the right approach taken by OECD as mentioned above).

The following 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

2015 Edition

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 Scorecard[13] ranks again 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 taxes are deducted from nominal returns and when compared to the relevant capital market benchmarks. It widely 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 15 years from 2000 to 2014 as far as data was available. Thus, the Better Finance research now covers 85.9% 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- 2014)

Indeed, since the beginning of the XXIst century (from 31 February 1999 to 31 December 2014), capital market returns have been positive (slightly for equities and very much so for bonds):

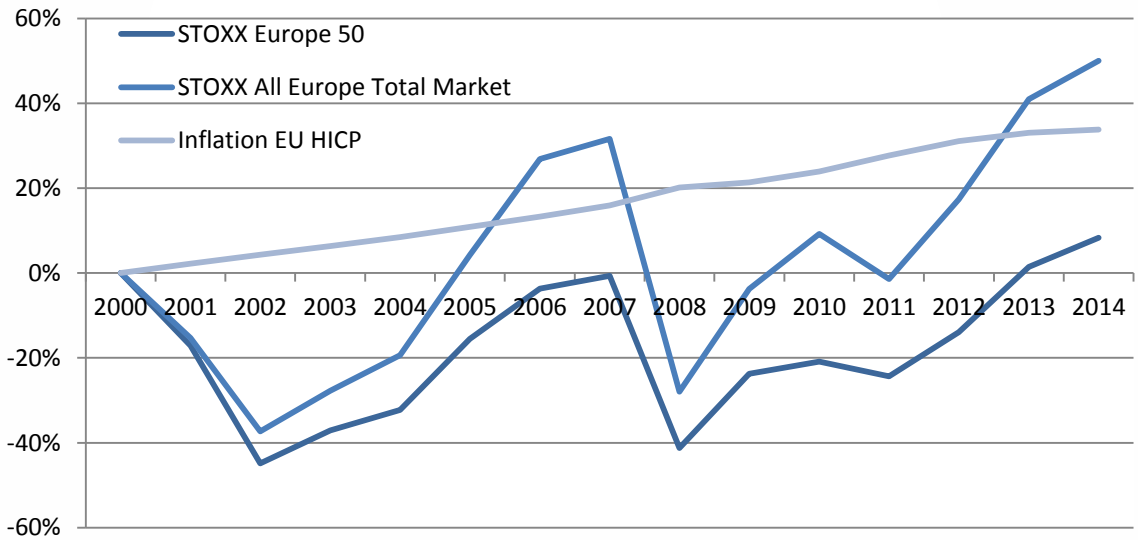
- On a nominal basis (before taking inflation into account), global stock markets have grown in value by 42%[14], the US stock market by 50%[15] and the European ones by 40%[16].
- On a real basis (net of inflation), European stock market returns also returned to positive cumulated returns by 2014 as shown in the graph

[14] As measured by the MSCI World GR index in euros.
[15] As measured by the MSCI USA GR index in euros.
[16] As measured by the MSCI Europe GR index in euros.

below, although some European countries such as Italy and some Eastern European ones are still in negative territory. Several large cap markets also continue to stuggle with negative returns. For example, at European level, the very narrow "Stoxx50" index is still in negative territory after inflation but includes only 50 European stocks.

We have chosen a period covering the last 15 years because pension savings returns should be measured on a long term horizon, and because it includes two market upturns (2003-2006 and 2009-2014) and two downturns (post dot com 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 quite material impact on real returns: in order to keep our research objective, we paid special attention to our choice of period to cover[17].

Graph 2. Cumulated performance of wide index (STOXX All Europe Total Market) vs narrow index (STOXX 50) in Europe

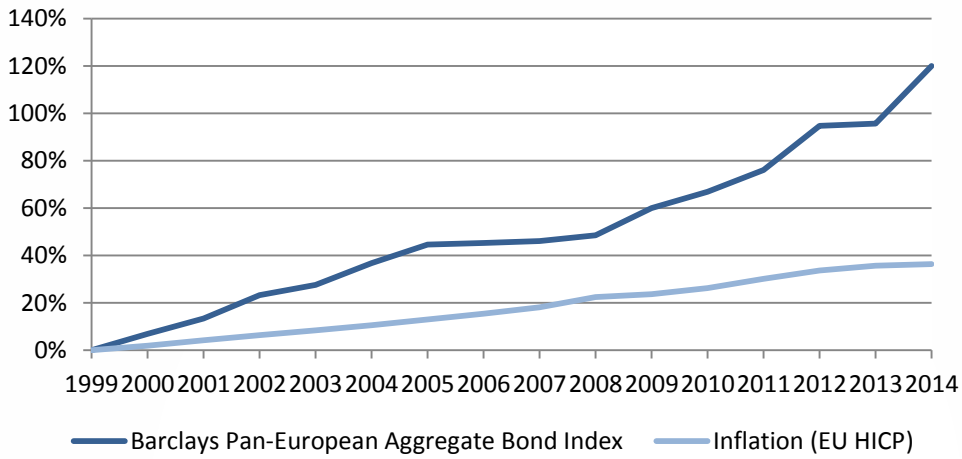


** We used data for the 2001 performance from the MSCI Europe Standard index because we did not have this figure for the STOXX All Europe Total Market index (these two indices have a similar composition).*

[17] Ideally, one should look at even longer term historical returns but the data are for the most part not available for the prior years. Also - again ideally - returns would be best computed on rolling periods instead of being based on one fixed date in the past, since pension savings are most often spread over the years. But this would face the same pre 2000 data hurdle and would require too much in terms of resources for an NGO such as Better Finance.

- 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 3. Cumulated performance of European Bond index



Overall, a direct balanced (50% in European equities / 50% in Euro bonds[18]) investment from a European saver in capital markets at the eve of the century would have returned a hefty 84% in nominal terms (gross of fees and taxes) and +35% in real terms, which means an annual average real return of +2% .

Pension products underperformed

Unfortunately our research findings show that 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.

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 a lesser extent, where mutual funds tend to replace direct holdings of shares, whose weight fell from 57% to 21% between 2001 and 2012. 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

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

also dominate in Sweden. Bonds dominate in Italy, Poland (employee pension funds), Spain, Romania and Latvia, with investments chiefly consisting of government bonds. Overall, the period 2000-2014 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 a historical 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. 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 average yearly real returns of pension funds after charges and taxation have almost reached 4% in Denmark over the period 2002-2013[19] and surpassed this level in Poland over the period 2002-2013[20]. Conversely we found negative returns in Bulgaria (Universal pension funds 2004-2014, Occupational pension funds 2000-2014, Voluntary pension funds 2002 -2014), in Estonia (funded pensions 2002-2014), in France (unit-linked life insurance contracts 2000-2014), in Italy (Open funds 2000-2014 and PIP Unit-Linked 2008-2014), in Latvia (state funded pension funds 2003-2014), in Slovakia (pillar II funded pension, 2005-2014), in Spain (unit-linked 2000-2014) and in the Netherlands (insurance companies, 2000-2014).

[19] We could not find arlier aggregate returns as for Poland, Bulgaria, Estonia and Latvia.
[20] However, in both cases returns would most likely have been lower had we been able to find return data for the earlier years of 2000 to 2002, when equity markets declined strongly.

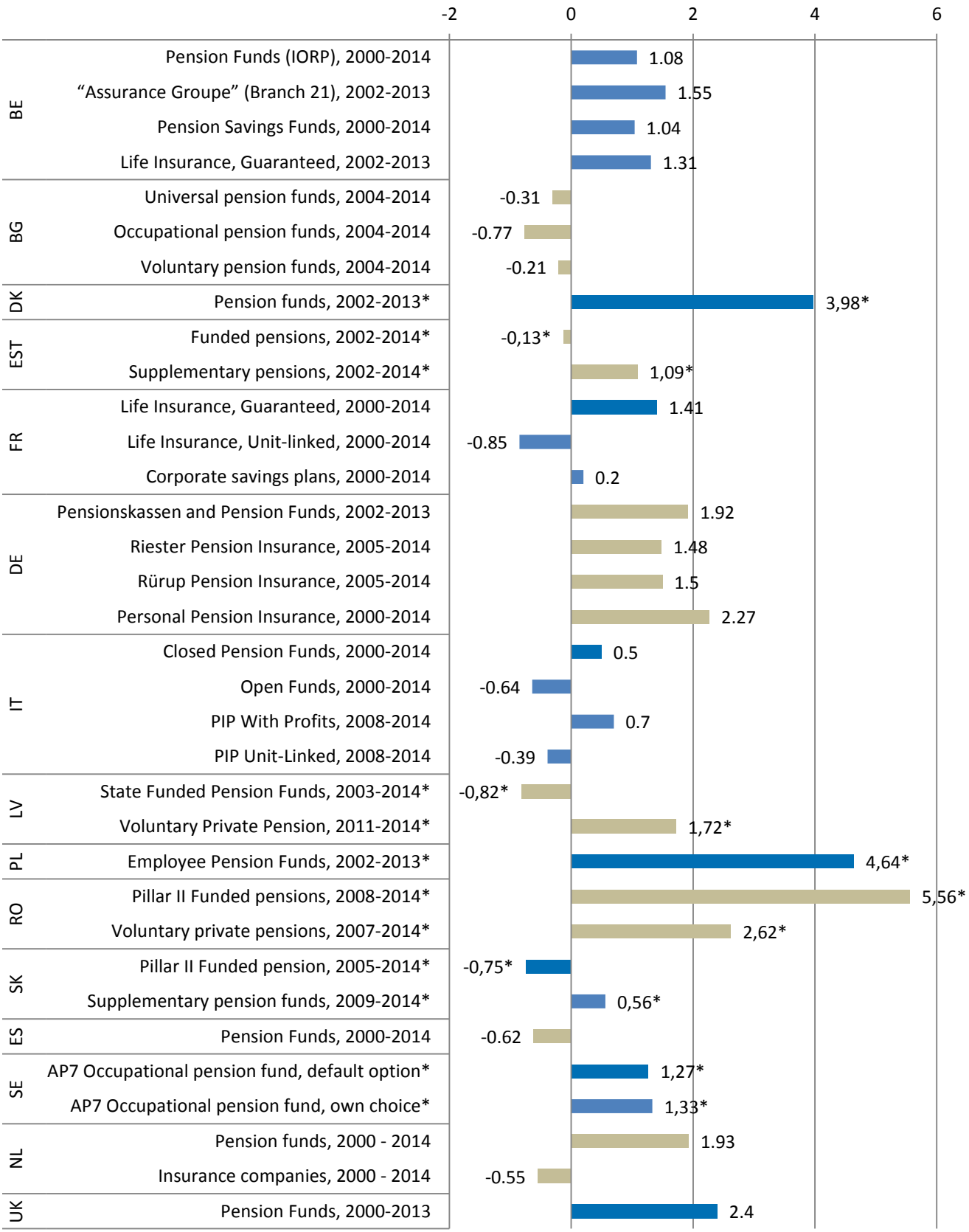
Unit-linked insurance products seem to struggle to perform everywhere, mainly due to the high (most often undisclosed) overall level of multi-layer fees.

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.

ANNUALISED REAL NET RETURNS OF PENSION SAVINGS (%)

AFTER CHARGES, INFLATION AND TAXES (EXCEPT * = BEFORE TAX)



**Before tax*

Source: Better Finance Research

Pension Savings: The Real Return

2015 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.

Both studies showed that real returns of retirement savings had 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 environement because the real return for savers can be substantially negative.

The 2015 edition of the Better Finance research report is aimed at:

- updating the existing country cases with the most recent data available at the time of print; and
- expanding the coverage to 15 EU counties. The new countries added are: Bulgaria, Estonia, Latvia, Romania, Slovakia, Sweden and the Netherlands.

The Better Finance pension savings research now covers about 85.9% of the EU population.

Country profiles

Table 2 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 of an age when they are generally economically inactive (aged 65 and over) and the number of persons of working age[21]. This ratio is low in Slovakia (19%) and Poland (21%). It is the highest in Italy, in Sweden and in Germany (more than 30%). This means that the pressure on the PAYG system is at the maximum level in these three countries. Belgium, the United Kingdom, France and Denmark are in intermediate positions, with ratios of around 25%.

Pension schemes, life insurance contracts and PAYG systems are combined differently in each country to build the overall income of retirees[22]. Replacement rates for median earners are higher than 100% in Bulgaria (106%) and in the Netherlands (101%). 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 3% in Romania to a maximum of 185% in the Netherlands. With the exception of the Netherlands, the United Kingdom (97%), Sweden (82%) and Denmark (65%), this ratio is inferior to 25% in all countries. This reflects that only those four countries 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. Hence, the net equity of households in life insurance reserves represents 82% of GDP in Denmark.

Moreover, in countries like France, life insurance is widely used by households as a means 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

[21] Eurostat definition.

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

polls confirm that this objective is a major motivation for subscribing to a life insurance contract.

The weight of life insurance is inferior to 10% of GDP in Bulgaria, Estonia, Latvia, Poland, Romania and Slovakia.

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

- In a 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 less than 15% of the GDP in Bulgaria, in Estonia, in Latvia and in Poland. Slovakia is just over 15%. 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 in an intermediate position. Pension funds and life insurance contracts represent 75% of GDP in France, 63% in Belgium, 56% in Germany, 47% in Italy and 29% in Spain. In these countries, citizens depend equally on the sustainability of PAYG systems and on the returns of pension savings. Governments focus on strengthening the public pension system (as is the case in 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 home-ownership to ensure a decent minimum standard of life.

However, home-ownership 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 2. Country Profiles (at the end of 2014)			
Belgium			
Net equity of households in pension funds reserves	76	Net equity of households in pension funds reserves as % of GDP	19%
Net equity of households in life insurance reserves	177	Net equity of households in life insurance reserves as % of GDP	44%
Working population	5.0m	Old-age-dependency ratio	27%
Net pension replacement rates, Men, % of pre-retirement earnings			62%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			50%
Bulgaria			
Net equity of households in pension funds reserves	-	Net equity of households in pension funds reserves as % of GDP	10%
Net equity of households in life insurance reserves	-	Net equity of households in life insurance reserves as % of GDP	1%
Working population	3.4m	Old-age-dependency ratio	29%
Net pension replacement rates, Men, % of pre-retirement earnings			108%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			NA
Denmark			
Net equity of households in pension funds reserves	169	Net equity of households in pension funds reserves as % of GDP	65%
Net equity of households in life insurance reserves	210	Net equity of households in life insurance reserves as % of GDP	82%
Working population	2.9m	Old-age-dependency ratio	28%
Net pension replacement rates, Men, % of pre-retirement earnings			77%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			30%
Estonia			
Net equity of households in pension funds reserves	2	Net equity of households in pension funds reserves as % of GDP	12%
Net equity of households in life insurance reserves	0	Net equity of households in life insurance reserves as % of GDP	2%
Working population	0.7m	Old-age-dependency ratio	28%
Net pension replacement rates, Men, % of pre-retirement earnings			62%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			33%
France			
Net equity of households in pension funds reserves	192	Net equity of households in pension funds reserves as % of GDP	9%
Net equity of households in life insurance reserves	1,400	Net equity of households in life insurance reserves as % of GDP	66%
Working population	28.8m	Old-age-dependency ratio	28%
Net pension replacement rates, Men, % of pre-retirement earnings			71%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			71%
Germany			
Net equity of households in pension funds reserves	739	Net equity of households in pension funds reserves as % of GDP	26%
Net equity of households in life insurance reserves	880	Net equity of households in life insurance reserves as % of GDP	30%
Working population	42.0m	Old-age-dependency ratio	32%
Net pension replacement rates, Men, % of pre-retirement earnings			57%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			55%
Italy			
Net equity of households in pension funds reserves	245	Net equity of households in pension funds reserves as % of GDP	15%
Net equity of households in life insurance reserves	519	Net equity of households in life insurance reserves as % of GDP	32%
Working population	25.5m	Old-age-dependency ratio	33%
Net pension replacement rates, Men, % of pre-retirement earnings			82%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			78%
Latvia			
Net equity of households in pension funds reserves	2	Net equity of households in pension funds reserves as % of GDP	9%
Net equity of households in life insurance reserves	0	Net equity of households in life insurance reserves as % of GDP	1%
Working population	1.0m	Old-age-dependency ratio	29%
Net pension replacement rates, Men, % of pre-retirement earnings			68%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			NA
Netherlands			
Net equity of households in pension funds reserves	1,211	Net equity of households in pension funds reserves as % of GDP	185%
Net equity of households in life insurance reserves	175	Net equity of households in life insurance reserves as % of GDP	27%
Working population	8.9m	Old-age-dependency ratio	26%
Net pension replacement rates, Men, % of pre-retirement earnings			101%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			33%

Poland			
Net equity of households in pension funds reserves	38	Net equity of households in pension funds reserves as % of GDP	10%
Net equity of households in life insurance reserves	18	Net equity of households in life insurance reserves as % of GDP	5%
Working population	17.4m	Old-age-dependency ratio	21%
Net pension replacement rates, Men, % of pre-retirement earnings			60%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			30%
Romania			
Net equity of households in pension funds reserves	4	Net equity of households in pension funds reserves as % of GDP	3%
Net equity of households in life insurance reserves	1	Net equity of households in life insurance reserves as % of GDP	1%
Working population	9.2m	Old-age-dependency ratio	24%
Net pension replacement rates, Men, % of pre-retirement earnings			54%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			NA
Slovakia			
Net equity of households in pension funds reserves	8	Net equity of households in pension funds reserves as % of GDP	11%
Net equity of households in life insurance reserves	4	Net equity of households in life insurance reserves as % of GDP	6%
Working population	2.7m	Old-age-dependency ratio	19%
Net pension replacement rates, Men, % of pre-retirement earnings			85%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			49%
Spain			
Net equity of households in pension funds reserves	159	Net equity of households in pension funds reserves as % of GDP	15%
Net equity of households in life insurance reserves	148	Net equity of households in life insurance reserves as % of GDP	14%
Working population	23.0m	Old-age-dependency ratio	27%
Net pension replacement rates, Men, % of pre-retirement earnings			80%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			80%
Sweden			
Net equity of households in pension funds reserves	340	Net equity of households in pension funds reserves as % of GDP	82%
Net equity of households in life insurance reserves	109	Net equity of households in life insurance reserves as % of GDP	26%
Working population	5.2m	Old-age-dependency ratio	31%
Net pension replacement rates, Men, % of pre-retirement earnings			55%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			34%
United Kingdom			
Net equity of households in pension funds reserves	3,643	Net equity of households in pension funds reserves as % of GDP	97%
Net equity of households in life insurance reserves	781	Net equity of households in life insurance reserves as % of GDP	21%
Working population	32.6m	Old-age-dependency ratio	27%
Net pension replacement rates, Men, % of pre-retirement earnings			42%
Net Pension Replacement Rates from Public Pension Systems for average earners, 2013			38%
Source : OECD, Eurostat, Bank of France			

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

Several of the newly added countries experienced considerably higher inflation rates than the countries initially covered in the study. Within the last twelve years, double-digit inflation rates could be withnessed for Bulgaria (11.6% in 2007), Latvia (14% in 2007 and 10.4% in 2008) and Romania 14.1% (in 2003).

The highest average inflation rate can be noted in Romania, almost tripling the average inflation rate of Poland, which was the country with the highest inflation rate in the 2013 edition of the Better Finance research report. Romanian inflation, however, significantly eased in the last three years.

Inflation rates in the Netherlands were somewhat similar to the rates observed in other big European countries with an annual average quite in line with those observed in Germany and France.

Sweden is the country with the lowest average annual inflation rate.

2014 brought low inflation rates to nearly all countries with the United Kingdom being a smaller outlier at 0.5%. Slight deflationary trends could be witnessed in several countries - Belgium, Italy, the Netherlands, Poland and Slovakia - while even some instances of distinct deflation were observed in Bulgaria (-2%) and Spain (-1.1%).

Table 3. Inflation [in %]

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Belgium	1.7	1.9	2.8	2.1	3.1	2.7	0.3	3.4	3.2	2.1	1.2	-0.4
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
Denmark	1.2	0.9	2.2	1.7	2.4	2.4	1.2	2.8	2.4	1.9	0.4	0.1
Estonia	1.2	4.8	3.6	5.1	9.7	7.5	-1.9	5.4	4.1	3.6	2.0	0.1
France	2.4	2.3	1.8	1.7	2.8	1.2	1.0	2.0	2.7	1.5	0.8	0.1
Germany	1.0	2.3	2.1	1.4	3.1	1.1	0.8	1.9	2.3	2.0	1.2	0.1
Italy	2.5	2.4	2.1	2.1	2.8	2.4	1.1	2.1	3.7	2.6	0.7	-0.1
Latvia	3.5	7.4	7.1	6.8	14.0	10.4	-1.4	2.4	3.9	1.6	-0.4	0.3
Poland	1.6	4.4	0.8	1.4	4.2	3.3	3.8	2.9	4.5	2.2	0.6	-0.6
Romania	14.1	9.3	8.7	4.9	6.7	6.4	4.7	7.9	3.2	4.6	1.3	1.0
Slovakia	9.4	5.8	3.9	3.7	2.5	3.5	0.0	1.3	4.6	3.4	0.4	-0.1
Spain	2.7	3.3	3.7	2.7	4.3	1.5	0.9	2.9	2.4	3.0	0.3	-1.1
Sweden	1.8	0.9	1.3	1.4	2.5	2.1	2.8	2.1	0.4	1.0	0.4	0.3
The Netherlands	1.6	1.2	2.0	1.7	1.6	1.7	0.7	1.8	2.5	3.4	1.4	-0.1
United Kingdom	1.3	1.7	1.9	3.0	2.1	3.1	2.9	3.7	4.2	2.7	2.0	0.5

Source: Eurostat (HICP - Annual rate of change)

The low inflation rates go hand in hand with a reduction in public sector deficits since 2011 with the exception of Bulgaria and Sweden. A surplus was observable in Denmark, Germany and Estonia. While still negative and last in ranking, Spain considerably reduced its public sector deficit as percentage of the GDP.

Most of the newly added countries had an outstanding level of public debt below the theoretical 60% ceiling of the Maastricht Treaty, with the exception of the Netherlands which, at 68.8%, is close to the ceiling. However, its debt rose from 2011 to 2014.

Table 4. Public sector deficit and debt[23] [in %]				
	Public Sector Deficit as a % of GDP		Public Debt as a % of GDP	
	2011	2014	2011	2014
Belgium	-4.1	-3.2	102.0	106.5
Bulgaria	-2.0	-2.8	15.7	27.6
Denmark	-2.1	1.2	46.4	45.2
Estonia	1.2	0.6	6.0	10.6
France	-5.1	-4.0	85.2	95.0
Germany	-0.9	0.7	77.9	74.7
Italy	-3.5	-3.0	116.4	132.1
Latvia	-3.3	-1.4	42.7	40.0
Poland	-4.9	-3.2	54.8	50.1
Romania	-5.3	-1.5	34.2	39.8
Slovakia	-4.1	-2.9	43.4	53.6
Spain	-9.4	-5.8	69.2	97.7
Sweden	-0.1	-1.9	36.2	43.9
The Netherlands	-4.3	-2.3	61.3	68.8
United Kingdom	-7.6	-5.7	81.8	89.4

Source: Eurostat

Asset Mix

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

In Belgium, mutual funds represent the main component of investments (74% in 2014). 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 are marginal, because public deficits are small, as explained in the initial study. However, in 2012 the relative weight of public bonds doubled from 24% in 2007 to 49%.

In Germany, mutual funds have become the predominant share of pension funds' assets. An additional feature of German pension funds is the importance of loans in

[23] Central Government gross debt, so-called "Maastricht debt".

their assets (5% at the end of 2014). Most of these loans are attributed to employees in companies.

In Italy, public bonds and bills represent almost 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, public debt instruments accounted for 66% of the PFE assets in 2014, but their weight decreased and in 2012 their share was equal (44%) to the share of corporate securities.

In Spain, the weight of public debt increased sharply after the financial crisis, from 28% of assets in 2007 to 40% in 2012. This trend is mirrored by the decrease of corporate bonds and shares in the portfolios.

The United Kingdom is traditionally the country where shares form a major part of asset allocation of pension funds. It decreased from 57% to 16% between 2001 and 2014, 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.

Among the countries newly covered by the present study, several have a very low percentage of equity in their portfolios, namely 5% or less in Estonia, Latvia, Romania and Slovakia.

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

Overall, the period 2001-2014 shows a sharp decline in equities (from 41% in 2001 to 14% in 2014) and a symmetrical increase in mutual funds assets (from 14% to 43%). 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 rates[24]. It is also interesting to note that the share of deposits dramatically decreased, from 13% in 2001 to 6% in 2014. Other assets, including loans and derivatives, among others, more than doubled from 6% to 15%.

[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.

Table 5. Pension funds' asset allocation, [in % of total assets]

		Currency and deposits	Debt securities	Equity	Investment funds	Other
Belgium	2001	4%	4%	15%	75%	1%
Belgium	2007	2%	8%	11%	78%	1%
Belgium	2012	3%	13%	9%	74%	1%
Belgium	2014	3%	12%	10%	74%	1%
Denmark	2012	4%	57%	17%	20%	3%
Denmark	2014	4%	53%	12%	22%	9%
Germany	2001	62%	19%	4%	0%	15%
Germany	2007	43%	9%	3%	34%	11%
Germany	2012	31%	10%	3%	47%	9%
Germany	2014	25%	7%	2%	58%	8%
Estonia	2001	33%	47%	18%	2%	0%
Estonia	2007	13%	26%	10%	51%	0%
Estonia	2012	16%	25%	5%	54%	0%
Estonia	2014	17%	21%	5%	57%	0%
Spain	2001	13%	55%	19%	2%	11%
Spain	2007	16%	52%	16%	7%	9%
Spain	2012	14%	57%	10%	10%	10%
Spain	2014	12%	58%	10%	11%	8%
Italy	2012	10%	37%	28%	25%	0%
Italy	2014	9%	39%	29%	24%	0%
Latvia	2001	33%	62%	3%	0%	2%
Latvia	2007	40%	33%	3%	23%	1%
Latvia	2012	20%	41%	1%	38%	0%
Latvia	2014	14%	47%	1%	38%	0%
Netherlands	2001	0%	36%	48%	0%	3%
Netherlands	2007	4%	35%	40%	0%	15%
Netherlands	2012	1%	23%	11%	53%	11%
Netherlands	2014	1%	24%	13%	53%	10%
Poland	2001	4%	68%	28%	0%	0%
Poland	2007	2%	60%	37%	1%	0%
Poland	2012	6%	57%	37%	0%	0%
Poland	2014	7%	10%	82%	0%	0%
Romania	2007	70%	22%	1%	7%	0%
Romania	2012	8%	80%	5%	8%	0%
Romania	2014	4%	75%	20%	1%	0%
Slovakia	2007	34%	49%	9%	3%	6%
Slovakia	2012	12%	74%	1%	12%	0%
Slovakia	2014	16%	71%	1%	12%	0%

Sweden	2001	23%	26%	11%	38%	3%
Sweden	2007	3%	19%	7%	72%	1%
Sweden	2012	0%	12%	9%	78%	0%
Sweden	2014	0%	8%	8%	83%	0%
United Kingdom	2001	5%	19%	54%	18%	4%
United Kingdom	2007	6%	22%	29%	32%	12%
United Kingdom	2012	4%	23%	17%	34%	22%
United Kingdom	2014	4%	23%	16%	34%	22%
All countries	2001	13%	25%	41%	14%	6%
All countries	2007	13%	25%	22%	29%	11%
All countries	2012	7%	23%	14%	41%	15%
All countries	2014	6%	22%	14%	43%	15%

Source : Eurostat

Asset performance

Equity markets

In the long run, the equity markets of the recently added countries showed tremendous performance differences. The nominal annual average return between the best performer, Slovakia (+7.3%), and the worst performer, Bulgaria (-10.9%), diverged by a whopping 18.2%. In spite of five consecutive years with negative returns, from 2008-2012, the Slovakian market led these countries in terms of both nominal return, as well as real annual average return (3.4%), mostly driven by the extraordinary year of 2004 where the market gained 84% in nominal terms. It is important to note, though, that this performance was gained over a 15-year period, while the Bulgarian market was only measured over the last nine years and, hence, the performance was severy impacted by market downturns.

The Estonian market gained 6.8% annually over a 12-year period, and 2.9% in real terms.

The Swedish market won 3.8% in nominal terms on average which led, in combination with the most favourable inflation rate, to a real annual average return of 2.2%.

The Dutch equity markets almost had zero growth in real terms over a 10-year period (0.2%).

Over nine years, the Romanian market noted slight positive returns on average (0.6%). However, the high inflation rate caused a dismal -3.7% in real terms.

Table 6. Historical Returns on Equity Markets, yearly average			
		Nominal return	Real return
Europe	(2000-2014)	2.6%	0.6%
Belgium	(2000-2014)	2.5%	0.5%
Bulgaria	(2006-2014)	-10.9%	-14.0%
Denmark	(2000-2014)	9.4%	7.5%
Estonia	(2003-2014)	6.8%	2.9%
France	(2000-2014)	1.5%	-0.2%
Germany	(2000-2014)	2.4%	0.8%
Italy	(2000-2014)	-1.0%	-3.1%
Latvia	(2005-2014)	-0.1%	-4.3%
Netherlands	(2000-2014)	2.3%	0.2%
Poland	(2000-2014)	4.6%	1.8%
Romania	(2006-2014)	2.8%	-1.67%
Slovakia	(2000-2014)	7.3%	3.40%
Spain	(2000-2014)	3.7%	1.2%
Sweden	(2000-2014)	4.5%	2.9%
United Kingdom	(2000-2014)	3.4%	1.2%

Source: MSCI Indices (Gross Returns), OMX Baltic Riga (Total Returns), Slovakia SAX, Eurostat, Own Research
All the used indices are total returns (value) indices except for Latvia and Slovakia, which are price indices (dividends not included

The Latvian market also experienced a negative annual average performance, albeit a very small one at -0.1% over 10 years. The real annual average return is among the worst at -4.3%.

In 2014, equity markets for most of the countries covered in the research report rose with the exception of the two Baltic states and Poland. While the Estonian and the Latvian markets lost considerably and with double digits (20.4% and 11.3%), the Polish market only lost 1.6%.

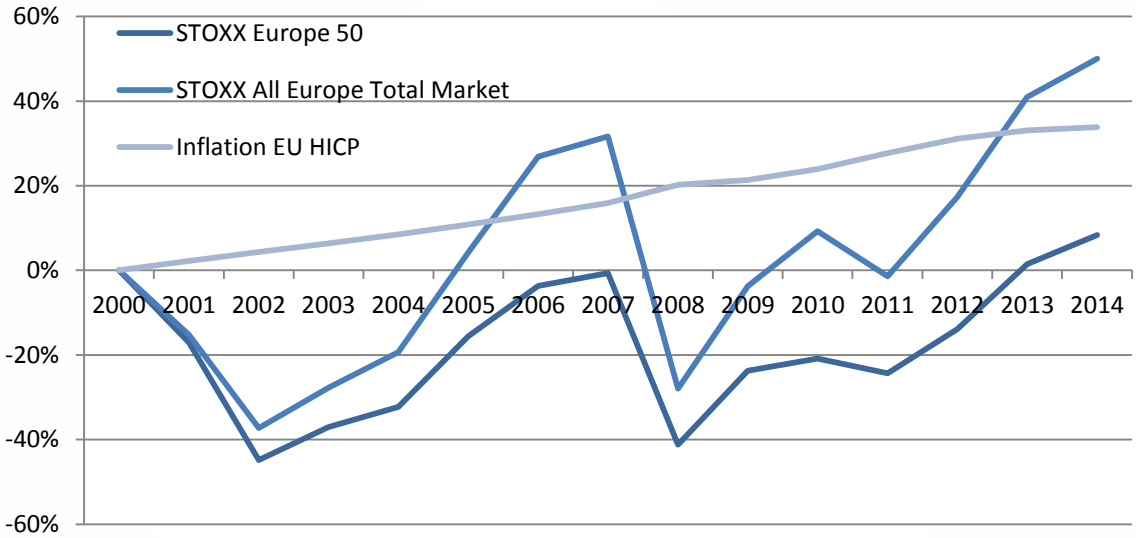
Over the last 15 years (2000-2014), which cover two down (2001-2003, 2007-2008) and to up cycles (2003-2006, 2010-2014), overall European equities did provide a positive real return, but reflect contrasted country results: real returns were not positive for Italian and French large cap equities in particular.

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 large cap or “blue chip”, narrower indices (Stoxx Europe 50, FTSE 100, DAX

30, IBEX 35, CAC 40). The broad STOXX All Europe Total Market includes approximately 1428 European stocks[25].

At EU level, the difference at the end of our 15 year period is of an astonishing +42% for the wider stock market index. And whereas the narrow index (large cap stocks) has underperformed the inflation over the last 15 years, the broader European stock market has a strong positive real performance as well.

Graph 4. Cumulated performance of wide index (STOXX All Europe Total Market) vs narrow index (STOXX 50) in Europe



Gross return indices

However, the various national broad stock markets have experienced very different performances over the last 15 years: from +115% for the Spanish broad equity market to only + 38% for the French one.

Government Bond markets

In 2014, strong returns at double-digits could be observed on all seven European Government bond markets tracked within this study. The Barclays index of Government Bonds in the euro area rose by 13.1% in nominal terms and 12.7% after deduction of the low inflation rate.

[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.

The best performance in 2014 was recorded in Spain at 16.7% in nominal terms and almost 17% in real terms due to deflationary trends. Similarly, the Italian government bond market rose by about 15% in both real and nominal terms.

The United Kingdom came in third in nominal terms at 14.6% but only fourth in real terms at 12.9% due to the higher inflation rate at 1.5%.

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.

Table 7. Historical Returns on Government Bond Markets 2000-2014, yearly average

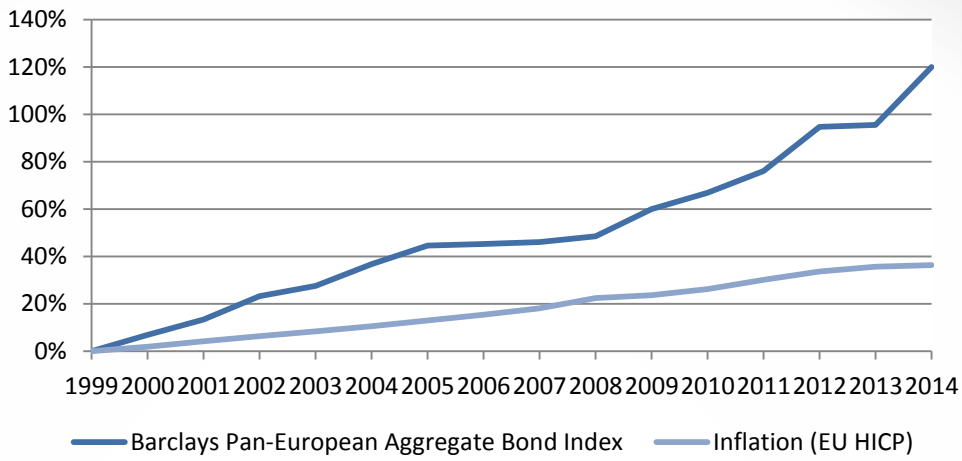
	Belgium	France	Germany	Italy	Netherlands	Spain	United Kingdom
Nominal return	6.1%	5.7%	5.5%	6.0%	5.6%	6.0%	6.1%
Real return	4.0%	3.9%	3.8%	3.8%	3.5%	3.4%	3.8%

Source: Barclays; Eurostat, Own Research

Over the last 15 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 5. Cumulated performance of European 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.

Looking at the evolution since the publication of the 2014 edition of the study, we computed the returns of equity funds and bond funds with a European investment focus in 2014, on a 3-year period (2012-2014) and on a 10-year period (2005-2014) basis. We compared those returns to a broad European stock and bond index, the MSCI Europe TR and the Barclays Pan-European Aggregate TR. We found that 44% of the equity funds out-performed the European index in 2014 and even more than half over the three-year period (52%). In the long run, however, only one third of the equity funds out-performed the benchmark.

Only 7% of European bond funds with a focus of investments in Europe out-performed their benchmark in 2014. The percentages over three years (49%) and ten years (27%) resemble the ones of equity funds.

Table 8. Beating the benchmark – European equity funds with European focus of investment*			
Benchmark	**1-year (2014)**	**3-year (2012-2014)**	**10-year (2005-2014)**
MSCI Europe TR (Net)	44%	52%	32%

Source : Lipper FMI, MSCI Indices, Own Research

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

Table 9. Beating the benchmark – European bond funds with European focus of investment*			
Benchmark	**1-year (2014)**	**3-year (2012-2014)**	**10-year (2005-2014)**
Barclays Pan-European Aggregate TR	7%	49%	27%

Source : Lipper FMI, Barclays, Own Research

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

A recent study[26] 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 proofs 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 2013-2014. Charges are often very complex and far from being harmonised for different pension providers. Generally speaking, they 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.

[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.

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 funds 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 shemes 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.

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. However, the reverse rule is applied in Poland: contributions are paid from the taxable income while pensions are tax-free (the only exception from 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 10. Overview of Main Taxation Rules Applied in the Country Reports	
Belgium	· Up to 30% of contributions are tax deductible; · No taxation in the capital accumulation phase; · Pillar II: Taxation in pay-out phase depending on origin of contribution (employee: 10%, employer: 16.5%) + 7% of local taxes; · Pillar III: Taxation in pay-out phase at 8% rate at the age of 60 + 7% of local taxes.
Bulgaria	· Annual contributions of up to 10% of annual taxable income is tax free; · Investment income and pension payments are tax-free.
Denmark	· 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	· 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	· 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	· 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	· Contributions are tax deductible up to prescribed limits; · Accruals are taxed at 11% in the capital accumulation phase; · Taxation in the pay-out phase varies from 9-15%.
Latvia	· Pillar II – State Funded Pensions arenot 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	· 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	· For funded pensions, contributions and investment incomre 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	· Funded pensions are usually not taxed (EEE regime); · Supplementary pensions follow the EET regime with several exceptions and specifications.
Spain	· 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	· 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	· 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	· 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 11. Yearly Real Returns of Private Pension Products	
Belgium	Pension Funds (IORP [27]), 2000-2014: +0.54% *"Assurance Groupe"* (Branch 21), 2002-2013: + 1.33% Pension Savings Funds, 2000-2014: +1.04% Life Insurance, Guaranteed, 2002-2013: +1.31%
Bulgaria	Universal pension funds, 2004-2014: -0.31% Occupational pension funds, 2004-2014: -0.77% Voluntary pension funds, 2004-2014: -0.21%
Denmark	Pension funds, 2002-2013: +3.98%*
Estonia	Funded pensions, 2002-2014: -0.13%* Supplementary pensions, 2002-2014: 1.09%*
France	Life Insurance, Guaranteed, 2000-2014: +1.41% Life Insurance, Unit-linked, 2000-2014: -0.85% Corporate savings plans, 2000-2014: +0.2%
Germany	*Pensionskassen* and Pension Funds, 2002-2013: +1.92% Riester Pension Insurance, 2005-2014: +1.48% Rürup Pension Insurance, 2005-2014: +1.50% Personal Pension Insurance, 2000-2014: +2.27%
Italy	Closed Pension Funds, 2000-2014: +0.5% Open Funds, 2000-2014: -0.64% PIP With Profits, 2008-2014: +0.7% PIP Unit-Linked, 2008-2014: -0.39%
Latvia	State Funded Pension Funds, 2003-2014: -0.82%* Voluntary Private Pension, 2011-2014: 1.72%*
Poland	Employee Pension Funds, 2002-2013: +4.64%*
Romania	Pillar II Funded pensions, 2008-2014: +5.56%* Voluntary private pensions, 2007-2014: +2.62%*
Slovakia	Pillar II Funded pension, 2005-2014: -0.75%* Supplementary pension funds, 2009-2014: +0.56%*
Spain	Unit-Linked, 2000-2014: -0.62%
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 - 2014: +1.93% Insurance companies, 2000 - 2014: -0.55%
United Kingdom	Pension Funds, 2000-2013, +2.4%[28]

**Before tax*
Source: Own Research, Better Finance Research

[27] Occupational pension funds as per the definition and scope of the EU "Institutions for Occupational Retirement Provision Directive" (IORP).
[28] Including capital gains (previous reported figures by us from OECD sources did not take them into account so figures differ substantially). 2.4% is the best possible case; the investment returns are estimated at +1% to +2.4%, depending on the personal tax rate of the retiree. For further details please check the UK case study.

The update of the original study by Better Finance highlights an improvement of the real returns of pension savings over the period 2000-2014 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 2013 or 2014, when data were available.

In France, the results were further improved in 2014 (after the improvement in returns in 2012 and 2013 was largely offset by higher taxes on life insurance).

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. Since 2002, employees have the right to receive part of their earnings as contributions to a pension plan under a deferred compensation arrangement and significant subsidies and tax incentives have fostered personal pension plans ("Riester" and "Rürup" pensions). An average real net return of 1.9% was achieved by occupational funds over the 12-year period from 2002 to 2013 and 1.5% by promoted personal pension plans over 10 years. However, 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 14-year period states a negative real return of -0.62%.

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 almost 4.7%. 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 with 3.98% on average 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 +1.93% over the long 15-year period, while insurance companies lost 0.55% in real terms over the same period.

The best results for funded pension schemes were recorded in Romania with a strong real return of +5.56% before taxation. Albeit perfoming only half as good as the funded ones, voluntary pensions did also clearly perform positively (+2.62%).

Funded pensions in Slovakia lost in real terms (-0.75%) over a 10-year period while supplementary pensions performed positive at +0.56% over 6 years.

In Bulgaria, pension funds, regardless of their framework, could not record positive returns despite the very favourable EEE formula. The negative real returns range from -0.21% to -0.77%.

In the Baltic States, supplementary pensions could register small positive returns (Estonia 1.09% and Latvia 1.72%) before taxation, while funded pensions lost in real terms (Estonia -0.13% and Latvia -0.82%).

Recommendations

1. Further improve and harmonise disclosures for all long term and retirement savings products:
    - PRIIPs ' KID principles extended to all retail long-term and pension investment products, including shares and bonds (for which it would favourably replace the current ineffective "summary prospectus") and for pension savings products
    - Standardised disclosure of past performance compared to objective market benchmarks : long term historical returns after inflation; after all charges to the investor; and after tax
    - Disclosure of total fees and commissions charged to the end investor, both direct and indirect
    - Disclosure of funding status
    - Disclosure of transfer/exit possibilities;

2. The European Supervisory Authorities (ESAs) must better comply with their legal duty to analyse and report on long term and pension investor trends, including actual net performance and fees of all retail long term and pension products;

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.

4. Simplify, standardise and streamline the range of product offerings
    - Forbid the use of non-UCITs funds (the 20 000 or so "AIFs") in all packaged long-term and pension products promoted to individual investors.
    - Reduce the excessive number of UCITs on offer in the EU
    - Grant ELTIFs (European Long Term Investment Funds) the same tax regime as nationally incentivised long term investment funds

- 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 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. 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 packaged investment products;

8. Special treatment by prudential regulation of all long term & pension products allowing for an effective asset allocation;

9. Taxation to incentivise long-term retirement savings and investment over consumption and short term savings; ELTIFs 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 non-financial equities and corporate bonds, individual ones in particular). To this aim, a FAT (Financial Activities Tax) may be more fit for purpose;

10. Basic financial mathematics and capital markets (shares and bonds) basics to be part of school curricula; financial institutions to have at least a part of the use of their financial education resources supervised by independent foundations.

Pension Savings: The Real Return

2015 Edition

Country Case: Belgium

Introduction

The Belgian pension system is divided into three pillars:

- **Pillar I**: PAYG 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 replacement rate for the PAYG system for average earners was 62.1% in 2012 but was much higher for low earners, at around 80.7%[29].
- **Pillar II**: Occupational pension plans are private and voluntary. This pillar exists for both employees and the 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 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

[29] Theoretical net replacement rates at different earnings levels for full-career workers entering the labour market in 2012, OECD Pension at Glance 2013.

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 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 are covered by pillar II supplementary pensions[30].

- **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 prominent in Belgium. The law of 28 April 2003 provides users of voluntary individual private pension products with tax deductions on contributions, though with a quite low ceiling limit.

[30] According to data from the FSMA.

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 IORP or to an insurance company.

In 2013, 207 occupational pension schemes were managed by an IORP. The number of affiliates to an IORP has increased by 6% from 1,394,936 in 2012 to 1,477,713 in 2013. Affiliates to sector pension schemes continued to grow from 1,026,533 in 2012 to 1,101,891 in 2013

In 2013, sector pension plans still represented almost three quarters of affiliates in IORP but only 18% of total reserves (3.2 billion), whereas company pension schemes represented 73% of total reserves (13.2 billion) with only 22% of affiliates. Three supplementary pension schemes for the self-employed (€1.37 billion of reserves) were managed by IORP.

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 2013, only €1.88 billion of reserves were managed through these contracts that represented 3.5% of the total reserves managed by "Assurance Groupe" (see Table 12).

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 12. Total reserves managed in pillar II (€billion)[31]

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
IORP[(1)]	**11.7**	**13.4**	**14.3**	**14.9**	**11.1**	**11.2**	**13.9**	**14**	**16.4**	**18**
"Assurance Groupe": Branch 21 contracts[(2)]	29.9	30.6	33.5	35.6	38	40.3	42.8	45.6	48.2	51.2
"Assurance Groupe": Branch 23 contracts[(3)]	na	1.62	1.71	1.72	1.43	1.79	1.81	1.62	1.72	1.88
Total "Assurance Groupe"[(2)+(3)]	**na**	**32.2**	**35.2**	**37.3**	**39.5**	**42.1**	**44.6**	**47.2**	**49.9**	**53.1**
Total[(1)+(2)+(3)]	**41.6**	**45.6**	**49.5**	**52.2**	**50.6**	**53.3**	**58.5**	**61.2**	**66.3**	**71.1**

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 schemes[32]

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.

[31] Data does not include the insurance dedicated to managing directors that represented around €3.3 billion of assets under management in 2012. Table 12 represents reserves managed only in pillar II. Table 17 represents all reserves managed in individual life-insurance contracts (excluding "Assurance Groupe"). Some of these reserves are managed in pillar III.

[32] Only plans for which information is available. Data on company pension plans can be partially found (source Belgian FSMA).

Sector pension plans are managed by insurance companies exclusively 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.

However, two thirds of sector pension scheme reserves (€2.47 billion) are managed by IORP, which represented 15% of the total reserves managed by IORP in 2012.

Table 13. Total reserves in sector pension schemes (€billion)[33]

	2005	2007	2009	2010	2011	2012	2013
IORP	0.42	1.43	1.48	1.62	2.04	2.47	2.74
"Assurance Groupe" (Branch 21)	0.14	0.67	0.81	0.93	1.05	1.28	1.51
Total	0.56	2.1	2.29	2.55	3.1	3.75	4.25

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 (in 2014, it amounted to €3,027.09). These ceilings can be increased to 9.40% and €3,482.82 if a social convention is included.

[33] Data for 2006 and 2008 was not available. FSMA publishes reports on sector pensions and self-employed pensions every two years.

Table 14. Total reserves managed in PLPCI conventions (€billion)								
	2006	2007	2008	2009	2010	2011	2012	2013
IORP	na	na	na	1.63	1.66	1.39	1.57	1.60
"Assurance Groupe" (Branch 21)	na	na	na	2.40	2.82	3.71	4.08	4.61
Total	**2.89**	**3.27**	**3.50**	**4.03**	**4.48**	**5.1**	**5.65**	**6.21**

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 14 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 15. Total reserves managed in company pension schemes (€billion)					
	2009	2010	2011	2012	2013
IORP (1)	**9.97**	**10.74**	**10.5**	**12.27**	**13.2**
"Assurance Groupe":Branch 21 contracts (2)	37.09	39.05	40.83	37.45	45.10
"Assurance Groupe": Branch 23 contracts (3)	1.79	1.81	1.62	1.72	1.88
Total "Assurance Groupe" (2) +(3)	**38.88**	**40.86**	**42.45**	**39.17**	**46.98**
Total (1)+(2)+(3)	**48.85**	**51.6**	**52.95**	**51.44**	**60.18**

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:

1. Pension savings products, which can take two different statues:
   - A pension savings fund;

- A pension savings insurance (through individual Branch 21 contracts).

60% of Belgian taxpayers are covered by a pillar III pension savings product (either a pension savings fund or pension savings insurance).

2. Long-term savings products corresponding mainly to a combination of Branch 23 and Branch 21 contracts[34].

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 2014, €15.61 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. 18 products were available for subscription at the end of 2014 and the net assets under management reached their highest level.

Table 16. Net assets under management in pension savings funds (€billion)

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

Source: BeAMA

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.

[34] 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).

Pension savings insurance / Long-term savings products

The net equity of households in life insurance reserves represents 59% of the Belgian GDP.

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).

Table 17. Total reserves in individual life insurance products (€billion)[35]

	2007	2008	2009	2010	2011	2012	2013
Branch 21	85.92	95.6	103.2	111.39	117.66	120.93	120.55
Branch 23	22.75	19.19	16.42	16.86	16.55	18.49	22.33
Total	108.67	114.79	119.62	128.24	134.21	139.41	142.88

Source: "Assuralia"

"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).

In 2012, reserves managed within the framework of pillar III represented 18.9% 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).

[35] 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.

Table 18. Contributions and reserves for life-insurance products in pillar III in 2013 (€billion) [36]			
	Contributions	**Reserves**	**Pillar III reserves in % of total individual life insurance reserves**
Pension savings insurance (Branch 21 contracts)	1.19	11.52	8.1%
Long-term savings products (Branch 21 and Branch 23 contracts combined)	1.06	15.45	10.8%
Total	2.25	26.97	18.9%

Source: "Assuralia"

Charges

Occupational pension schemes

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".

[36] 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 a lump sum.

Table 19. 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

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 is 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 premiums[37].

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).

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).

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

[37] Source: FSMA, 2015.

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

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: 2.2% of initial investment;
- Management fees: 1% of total assets under management;
- Total Expenses Ratio represented on average 1.25% of total assets under management;
- No exit fees.

The following table summarises the Total Expenses Ratio (TER) of 15 funds available for subscription on the Belgium market in 2014.

Table 20. Total Expense Ratio in 2014 (% of total assets under management)	
Accent Pension Fund	1.30
Argenta Pensioenspaarfonds	1.36
Argenta Pensioenspaarfonds Defensive	1.38
Belfius Pension Fund High Equities Cap	1.33
Belfius Pension Fund Low Equities Cap	1.16
BNP Paribas B Pension Balanced	1.29
BNP Paribas B Pension Growth	1.28
BNP Paribas B Pension Stability F Cap	1.28
Hermes Pension funds	1.08
Interbeurs Hermes Pensioenfonds	1.03
Metropolitan-Rentastro Growth	1.28
Pricos	1.27
Pricos Defensive	1.25
Record Top Pension Fund	1.32
Star Fund	1.09
Total Expenses Ratio, Average (simple)	**1.25**

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 21. Administration and management costs and commissions for individual life insurance contracts				
	Branch 21		Branch 23	
	Administrative and management costs (% of reserves)	Commissions (% of premiums)	Administrative and 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	0.37	2.0
2006	0.7	4.7	0.34	3.4
2007	0.7	4.6	0.32	4.2
2008	0.7	5.4	0.35	5.4
2009	0.6	5.8	0.31	5.6
2010	0.5	5.7	0.34	4.8
2011	0.5	6.0	0.30	4.6
2012	0.5	6.6	0.30	2.9
2013	0.6	8.8	0.29	4.8

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

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 22 below are applied to taxation on benefits from occupational pension plans.

Table 22. 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 16.5% for contributions made before 1993 + local tax	60 years old: 20% 61 years old: 18% 62-64 years old: 16.5% + local tax	10% for contributions made since 1993 16.5%for contributions made before 1993 + local tax	16.50% 10% if the employee remains employed until 65 years old + local tax

Source: "Assuralia"

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.

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

Periodic annuities

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

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.

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 2013 and 2014). 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 January 1st 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 2014. 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

Occupational pension schemes

The returns of occupational pension schemes depend on the types of plans. In 2013, among the 207 pension schemes managed by an IORP, 99 had a promise of returns (DB plans), 30 were DC plans and 78 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.

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

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% is levied on the final benefits.

Occupational pension schemes managed by IORPs

The Belgian Association of Pension Institutions (BAPI) provides the real average weighted returns after charges of all occupational pension schemes managed by an IORP in Belgium on its website.

Table 23. Returns of occupational pension plans managed by IORPs (%) (2000-2014)

	Nominal return before charges, inflation and tax	Nominal return after charges, before inflation and tax	Real return after charges and inflation and before tax
2000	0.9	-0.1	-3.0
2001	-4.2	-5.1	-7.0
2002	-11.0	-12	-13.1
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	-1.7
2008	-17.0	-18	-19.9
2009	16.6	15.7	15.3
2010	10.3	9.5	5.9
2011	0.1	-0.7	-3.8
2012	12.9	12.1	9.8
2013	7.5	6.7	5.5
2014	12.7	11.9	12.3

Sources: IPE, BAPI, own calculations

Table 24. Occupational pension plans managed by IORPs annual average return 2000-2014 (%)	
Nominal return before charges, inflation and tax	4.69
Nominal return after charges, before inflation and tax	3.82
Real return after charges and inflation and before tax	1.76
Real return after charges, inflation and after tax	1.08

Sources: IPE, BAPI, own calculations

Over a 15-year period (2000-2014), occupational pension schemes managed by IORP experienced negative nominal returns before charges three times: in 2001, 2002 and 2008. Over the period 2000-2014, the annual average return after charges, inflation and tax is positive at 1.08%. 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 15 year period starting in 2000. At the end of 2012, FSMA reported the average asset allocation of IORP as follows: 39% in equities, 47% in fixed income securities, 3% in real estate, 1% loans, 5% in cash and 5% in other asset classes. Equities 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 146%[38] that enables them to cope with the volatility linked to their asset allocation.

Occupational pension schemes managed by insurance companies (Branch 21 contracts)[39]

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

[38] Assets compared to accrued benefits.
[39] "*Assuralia*" does not provide information on collective Branch 23 contracts ("Assurance Groupe").

Table 25. Returns of occupational pension managed by insurance companies (%) (2002-2013)

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

Sources: "Assuralia", own calculations

Table 26a. Occupational pension managed by insurance companies annual average return (2002-2013) (%)

Nominal return before charges, inflation and tax	5.45
Nominal return after charges, before inflation and tax	4.57
Real return after charges and inflation and before tax	2.37
Real return after charges and inflation and tax	**1.55**

Sources: "Assuralia", own calculations

Over a 12-year period (2002-2013), 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 1.55%. It is not comparable, however, to the 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 13 years[40].

Table 26b. Occupational pension plans managed by IORPs vs. occupational pension managed by insurance companies (2002-2013)

	IORPs	Insurance companies
Nominal return before charges, inflation and tax	5.14	5.45
Nominal return after charges, before inflation and tax	4.28	4.57
Real return after charges and inflation and before tax	2.09	2.37
Real return after charges and inflation and tax	**1.31**	**1.55**

Sources: "Assuralia", IPE, BAPI, 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 2014.

Table 27. Average returns of pension savings funds on annual basis at the end of 2014 (%)

Over 1 year	Over 3 years	Over 10 years	Since the launch of first pension savings funds (1987-2014)
7.5	10.1	4.5	6.5

Source: BeAMA

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. No information on returns before 2002 is available in the funds' prospectuses. The following table displays the average return of all funds available for subscription on the Belgian market from 2000 to 2014.

[40] See Annex: Case study of a Branch 23 "Assurance Groupe" occupational pension plan.

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 28. 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 (2000-2014)
2000	-2.8	-4.0	-6.8	
2001	-3.3	-4.5	-6.4	
2002	-13.4	-14.5	-15.6	
2003	16.0	14.6	12.7	
2004	21.3	19.8	17.6	
2005	18.7	17.2	14.0	
2006	11.0	9.6	7.3	
2007	3.8	2.5	-0.6	
2008	-24.7	-25.7	-27.6	
2009	19.7	18.2	17.8	**1.04**
2010	8.3	7.0	3.4	
2011	-4.1	-5.3	-8.2	
2012	12.8	11.4	9.1	
2013	12.8	11.2	9.9	
2014	8.6	7.3	7.7	
Annual average return (2000-2014)	4.8	3.5	1.5	

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 15 year period (2000-2014). Moreover, benefits are taxed at a flat rate of 10%, 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%.

Individual life-insurance contracts

Table 29. Returns of Branch 21 contracts (%)[41]			
	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	2.78	2.75	1.13
2003	3.79	3.75	2.22
2004	4.80	4.75	2.80
2005	5.44	5.40	2.83
2006	5.14	5.10	2.74
2007	5.24	5.20	3.34
2008	0.10	0.10	-4.21
2009	4.32	4.30	4.30
2010	4.02	4.00	1.66
2011	2.51	2.50	-0.87
2012	4.42	4.40	1.75
2013	4.12	4.10	2.87

Sources: "Assuralia", own calculations

Table 30. Annual average return of individual Branch 21 contracts 2002-2013 (%)	
Nominal return before charges, before inflation, before tax	3.88
Nominal return after charges before inflation, before tax	3.85
Real return after charges, after inflation, before tax	1.67
Real return after charges, tax and inflation	**1.31**

Sources: "Assuralia", own calculations

[41] "*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 31. Returns of individual Branch 23 contracts[42] (%)									
	2005[43]	2006	2007	2008	2009	2010	2011	2012	2013
Nominal return before charges, inflation and tax	16.7	7.46	1.62	-18	13.3	7.46	-2.6	9.43	5.62
Nominal return after charges, before inflation and tax	11.5	7.1	1.3	-19	12.9	7.1	-2.9	9.1	5.6
Real return after charges and after inflation and before tax	8.78	4.69	-0.5	-22	12.9	4.69	-6.1	6.34	4.35

Sources: "Assuralia", own calculations

Table 32. Annual average return of individual Branch 23 contracts 2005-2013 (%)	
Nominal return before charges, inflation and tax	3.58
Nominal return after charges, before inflation and tax	3.25
Real return after charges and inflation and before tax	0.91
Real return after charges, inflation and tax	**0.63**

Sources: "Assuralia", own calculations[44]

Returns of individual life-insurance contracts provide an insight into returns of reserves invested in life-insurance contracts within pillar III. Pillar III reserves represented 18.9% of individual life-insurance reserves in 2013. 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% was applied to the benefits from Branch 23 contracts.

[42] Including individual and collective life insurance.
[43] Information before 2005 not available.
[44] Information before 2005 not available.

Over the period 2002-2013, 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.

Over a 15 year period (2000-2014), the annual average real return of pension plans (pillar II and III) after charges, taxation and inflation ranged from 0.63 to 1.55% depending on products and schemes. The tax burden significantly lowered returns for occupational pension plans.

Funds managed by IORPs (pillar II) and personal pension savings funds (pillar III) had annual average returns of 1.08% and 1.04%. 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 1.55% and 1.31% respectively. The Solvency II regulation constrained insurance companies in their asset allocation. They have thus less incentive to offer “Assurance Groupe” schemes as they must offer an annual guaranteed return of 3.25% on employer’s contributions, which is becoming challenging with the current level of market interest rates on investment grade bonds.

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 33. Capital markets vs. Belgian occupational pension fund 2000 – 2015* performance

Capital markets (benchmark index) performance**	
Nominal performance	97%
Real performance (before tax)	45%
Pension insurance performance (same benchmark*)	
Nominal performance	40%
Real performance (before tax)	3%

** As of 31/05/2015*
*** 50 % Equity / 50 % bonds (MSCI World equity index and JPM Euro Govt Bond Index) invested on 31/12/1999*
Sources: Better Finance, indices providers

As the table above shows:

- The real performance (before tax) of the pension fund is very 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 exactly the same.

What are the reasons for such a bad performance of the pension funds?

The key explanation factor is charges (fees). Whereas the benchmark does not bear any fees, the pension fund does. It appears that the 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 34. 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

2015 Edition

Country Case: Bulgaria

Introduction

The Bulgarian pension system rests on three pillars:

- Pillar I – Defined benefit, 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).

The current system is the result of a far-reaching pension reform undertaken in 1999-2000 to strengthen the fiscal sustainability of the PAYG social security system inherited from the pre-1990 period. Privately managed pillars II and III were introduced and started collecting contributions in 2001 and 2002.

The publicly managed PAYG pillarI still plays a major role in the Bulgarian pension system, as pay-outs from Pillar II have not yet started and pay-outs from pillar III are quite limited. In general, the Social security currently replaces about 40% of pre-retirement income for average earners. The replacement ratio drops to 35% and less for higher earners, as the maximum social security pension is capped at the equivalent of €429.49 per month for 2014.

Eligibility for pension income depends on the age and length of service and differs between men and women. In 2014, men aged 63 and 8 months with at least 37 years and 8 months of service as well as women aged 60 and 8 months with no less than 34 years and 8 months of service were eligible to receive a pension from the Social security system. The same age and length of service requirements apply to the eligibility for pensions from the privately managed pillars II and III, although in some cases pension withdrawals from defined contribution pillars may start five years earlier.

As a result of a patchwork of myopic, short-term oriented changes, enacted by various governments during the 2000s, the social security pillar continues to be under financial stress. In 2014, social security contributions covered only about half of the pension pay-outs, with the deficit being made up from general tax revenues. Consequently, various measures are currently being contemplated to increase the retirement age and/or reduce pension benefits. This means that the importance of the defined contribution SMPS and SVPS pillars in ensuring adequate pensions in Bulgaria is bound to increase over time.

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 35. 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 being managed by specially licenced privately owned and operated pension companies. As of the end of 2014, a total of ten companies obtained a license 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.

Each pension company can manage a single fund of each type: universal, professional, voluntary and voluntary professional. As of end 2014, one company offers all four pension fund types: universal, professional, voluntary and voluntary occupational, 8 companies offer three pension funds each (with the exception of the voluntary professional funds) and one company, which was licensed in 2014, has not started offering pension funds yet.

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

Table 36. 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 3.4 million individual pension accounts and BGN 6.6 billion (€3.37 billion[45]) in assets under management (as of end 2014). Participation in the universal funds is mandatory for employees born in 1960 or later. 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 contributions. The only difference is that universal funds are not set up 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 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 at 5% of insurable income, which in 2014 was capped at BGN 2,400 (€1,227.12) per month. This ceiling was increased to BGN 2,600 (€1,329.38) per month in 2015.

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 the basis of the average return, achieved by all pension companies over a period of the prior 24 months. The

[45] 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

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 top-up is pension companies' reserves, which should range between 1% and 3% of assets under management.

Another source of funds could be reserves formed within the respective pension fund. These reserves are accumulated in cases where 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. Currently the social security pension eligibility rate is 63 years and 8 months for men and 60 years and 8 months of age for women. These are likely to increase in the near future to contain budget transfers to the publically managed pension fund.

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. This means that women born in the first four months of 1960 will have the right to start drawing down their universal pension fund accounts before the end of 2015. A detailed legislative and regulatory mechanism of how pension companies will operate in these circumstances has not been adopted as yet. A draft proposal from the regulator, still to be officially tabled, suggests that pension companies should convert the balance on the account to a lifetime annuity extended by the same

pension company that has managed the account during the accumulation phase. If such a proposal is adopted, no viable annuities market will be allowed to develop in Bulgaria.

In case of a premature death of an insured or a 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. The proposal to fully annuitise the account balance at the time of retirement, however, collides with the current legal provision that heirs of the retired person are entitled to the balance on the account of a deceased retiree.

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 760 million (€388.6 million) in assets under management and 267,000 participants (as of end 2014), 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 the universal pension funds.

Reserves

The same provisions as for the universal pension funds apply.

Distribution

Employees, eligible for a pension from a professional fund, are normally promised a term pension for the period from the date of their early retirement through

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 in 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 draw 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 593,000 individual accounts with BGN 757 million (€387 million) in assets (as of end 2014). 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.

First, they can withdraw funds accumulated thanks to 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.

Second, they have 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.

Third, participants may choose between drawing the balance of 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 payments over a specified term. Should there be no heirs, the balance is transferred a to the voluntary fund reserves.

Voluntary professional pension funds

With only one voluntary professional fund with 6,400 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-2014) is summarised in the tables below

Table 37. Number of accounts		
	SMPS	SVPS
1. Universal pension funds	3,421,468	
2. Occupational pension funds	254,555	6,402
3. Voluntary pension funds		593,542

Table 38: Assets under management (BGN million)		
	SMPS	SVPS
1. Universal pension funds	6,638,014	
2. Professional pension funds	760,085	8,842
3. Voluntary pension funds		757,608
Total	7,398,099	766,450
Grand total	**8,164,549**	

Table 39: Assets under management (€ million)		
	SMPS	SVPS
1. Universal pension funds	3,394,016	
2. Professional pension funds	388,632	4,618
3. Voluntary pension funds		387,365
Total	3,782,648	391,886
Grand total	**4,174,518**	

Charges[46]

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

[46] 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.

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

The law caps those fees and charges as follows:

Table 40. Legal caps to fees and charges

Fees	SMPS	SVPS
Front load	5%	7%
Management fee	1%	10 %[47]
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 and 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 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.

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

[47] 10% of the positive nominal return to the fund/ individual account.

offers a 3.25% front load fee for long term participants in occupational funds and a 9% of positive returns management fee annually.

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.

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 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

As mentioned above, universal pension funds are still in the accumulation phase and have major inflows amounting to no less than 10% of total assets each year since 2002. Professional funds are also in the accumulation phase, however each year these funds disburse large lump sums to the PAYG system, which still covers early retirement under Paragraph 4 of the Social Insurance Code. Thus the professional pension funds experience large cash flows relative to total assets each

year. Lastly, the voluntary pension funds allow personal contributions to be withdrawn, leading to relatively heavy cash inflows and outflows.

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 end (entry) fee for each contribution. The money-weighed 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 countries[48]. It should be noted that the Bulgarian Financial Supervision Commission officially publishes only time-weighted returns.

Table 41 below leads 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 2014, when stock and bond markets are at or near record highs.
2. Overall, for the observed periods (April 2002 – December 2014 for universal pension funds; June 2001 – December 2014 for professional pension funds; and January 2002 – December 2014 for voluntary pension funds), 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 the negative inflation rate in 2014.

[48] 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)

Table 41. Universal Pension Funds					
Money-weighted Return	**Gross Investment return (%)**	**Fees and charges*** **	**Net Investment Return (%)**	**Inflation**	**Real Investment Return**
2001					
2002*	8.55%	10.47%	-1.91%	5.05%	-6.63%
2003	6.82%	5.36%	1.46%	2.35%	-0.87%
2004	12.54%	5.16%	7.37%	6.15%	1.16%
2005	7.66%	3.74%	3.93%	5.04%	-1.06%
2006	8.65%	3.27%	5.38%	7.26%	-1.75%
2007	14.50%	3.23%	11.27%	8.40%	2.64%
2008	-21.19%	3.15%	-24.34%	12.35%	-32.65%
2009	8.84%	2.80%	6.04%	2.75%	3.20%
2010	6.05%	2.38%	3.66%	2.44%	1.20%
2011	0.57%	2.13%	-1.56%	4.22%	-5.55%
2012	8.20%	1.90%	6.30%	2.95%	3.25%
2013	5.67%	1.83%	3.84%	0.89%	2.92%
2014	6.71%	1.71%	5.00%	-1.42%	6.51%
Total Annualised§	5.06%	2.28%	2.78%		0.51%

§ - AUM Weighted

**Universal Pension Funds were launched in April 2002*

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

Table 42. Professional Pension Funds					
	Gross Investment return (%)	Fees and charges***	Net Investment return (%)	Inflation	Real Investment Return
2001*	7.24%	7.80%	-0.56%	6.13%	-6.30%
2002	8.34%	3.92%	4.42%	5.81%	-1.32%
2003	8.85%	2.79%	6.06%	2.35%	3.63%
2004	12.57%	2.49%	10.08%	6.15%	3.71%
2005	8.42%	2.08%	6.34%	5.04%	1.24%
2006	9.56%	1.95%	7.60%	7.26%	0.32%
2007	14.86%	1.91%	12.95%	8.40%	4.19%
2008	-24.95%	2.05%	-27.00%	12.35%	-35.02%
2009	8.85%	1.98%	6.87%	2.75%	4.01%
2010	6.09%	1.83%	4.26%	2.44%	1.78%
2011	4.20%	1.80%	2.40%	4.22%	-1.74%
2012	10.19%	1.73%	8.46%	2.95%	5.35%
2013	7.80%	1.62%	6.18%	0.89%	5.24%
2014	7.40%	1.59%	5.81%	-1.42%	7.34%
Total Annualised§	6.25%	2.15%	4.10%		0.46%

§ - AUM Weighted
**Professional Pension Funds were launched in June 2001*
****No official statistics for 2002 and prior to 2002 - estimation for these years*

Table 43. Voluntary Pension Funds					
	Gross Investment return (%)	Fees and charges***	Net Investment return (%)	Inflation	Real Investment Return
2001*					
2002	15.41%	4.47%	10.94%	5.81%	4.85%
2003	9.73%	2.57%	7.16%	2.35%	4.70%
2004	11.38%	2.38%	9.00%	6.15%	2.69%
2005	9.07%	2.09%	6.99%	5.04%	1.86%
2006	7.28%	1.79%	5.49%	7.26%	-1.65%
2007	16.05%	2.64%	13.41%	8.40%	4.62%
2008	-28.91%	0.66%	-29.57%	12.35%	-37.31%
2009	8.06%	1.25%	6.81%	2.75%	3.95%
2010	6.28%	1.62%	4.65%	2.44%	2.16%
2011	-0.56%	0.44%	-1.00%	4.22%	-5.01%
2012	8.56%	1.14%	7.42%	2.95%	4.34%
2013	6.71%	0.93%	5.78%	0.89%	4.85%
2014	6.79%	1.00%	5.79%	-1.42%	7.32%
Total Annualised§	4.78%	1.64%	3.14%		**-1.08%**

§ - AUM Weighted
**Voluntary Pension Funds existed prior to 2002 but there are no official statistics available on the electronic site of the Financial Supervision Comission (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 pension funds have achieved a positive annual average real return of 0.51%. Professional pension funds achieved a positive real return of 0.46%, and voluntary pension funds managed a negative annual average real return of -1.08%. Total expense ratios remained above 2 % per annum for the 2002-2014 period for universal and occupational funds and stood at 1.6 % for voluntary funds. The expense ratios for contribution to net returns are decreasing every year and are expected to continue this trend 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. Furthermore, regulatory pressure to lower fees charged by pension fund management companies is expected to improve the situation. Inflation for the observation period (2002-2014) was around 4% on an annual basis. However, a prolonged period of lower inflation rates is

expected in the future. Pension funds in Bulgaria are not in position to withstand another market downturn in the near future without entering a negative real return territory.

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. Time-weighted returns of Bulgarian pension funds are reported in tables 44, 45 and 46 below. Time-weighted returns could be calculated for the 1 July 2004 – 31 December 2014 period, in order to compare with data on the performance of pension saving products of other countries in this teport, 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.

All pension funds report negative annualised real time-weighted returns for the 2004-2014 period with the largest funds – the universal pension funds-, reporting -0.31% annual average return, while the two smaller ones – the professional and the voluntary ones – report -0.77% and -0.21% respectively.

Table 44. Universal Pension Funds

	Time-weighted Return**	Investment return (%)	Inflation	Real Investment Return (%)
2004		6.78%	3.81%	2.86%
2005		7.82%	6.45%	1.28%
2006		8.35%	6.49%	1.75%
2007		15.67%	12.48%	2.83%
2008		-20.76%	7.76%	-26.46%
2009		7.23%	0.56%	6.63%
2010		5.18%	4.53%	0.63%
2011		-0.96%	2.75%	-3.62%
2012		7.49%	4.25%	3.11%
2013		4.50%	-1.59%	6.19%
2014		5.70%	-0.88%	6.63%
Total	126	51.62%	56.66%	-3.22%
Total Annualised		4.04%	4.37%	-0.31%

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

Table 45. Occupational Pension Funds				
	Time-weighted Return**	Investment return (%)	Inflation	Real Investment Return
2004		6.95%	3.81%	3.03%
2005		8.27%	6.45%	1.71%
2006		8.54%	6.49%	1.93%
2007		14.77%	12.48%	2.03%
2008		-24.25%	7.76%	-29.70%
2009		6.19%	0.56%	5.60%
2010		5.85%	4.53%	1.26%
2011		-0.50%	2.75%	-3.17%
2012		6.82%	4.25%	2.47%
2013		5.14%	-1.59%	6.83%
2014		5.23%	-0.88%	6.16%
Total	126	44.41%	56.66%	-7.82%
Total Annualised		3.56%	4.37%	-0.77%

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

Table 46. Voluntary Pension Funds				
	Time-weighted Return**	Investment return (%)	Inflation	Real Investment Return
2004		6.78%	3.81%	2.87%
2005		8.52%	6.45%	1.94%
2006		8.21%	6.49%	1.62%
2007		17.52%	12.48%	4.48%
2008		-25.48%	7.76%	-30.84%
2009		7.26%	0.56%	6.66%
2010		6.02%	4.53%	1.42%
2011		0.03%	2.75%	-2.65%
2012		8.00%	4.25%	3.60%
2013		6.59%	-1.59%	8.31%
2014		6.60%	-0.88%	7.54%
Total	126	53.28%	56.66%	-2.16%
Total Annualised		4.15%	4.37%	-0.21%

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

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, the asset class “Mutual Funds” still operated 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 choice of asset allocation choice remains less conservative since 2008 and is slowly tilting over to 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 2014. However, the exposure to government bond markets has been growing in the period from 2009 until the end of December 2014 reaching over 35% for the more conservatively managed mandatory funds and close to 30% for the voluntary pension funds. Particularly in 2013 and 2014 the exposure of pension funds to government bonds increased, which could be interpreted as preparation for another downturn in the valuation of riskier asset classes. Such choice in investment policy remains 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. Furthermore, such an asset allocation predetermines expectations of inadequate investment returns in the medium and longer terms to cover for expenses and inflation.

Table 47. Asset allocation - Three main Bulgarian pension schemes

Universal Pension Funds	2008	2009	2010	2011	2012	2013	2014
Cash	3.31%	4.75%	4.84%	5.46%	3.51%	8.48%	7.97%
Bank Deposits	22.07%	24.04%	20.13%	18.13%	16.30%	11.13%	8.11%
Government Bonds	32.75%	23.11%	21.72%	31.09%	35.46%	35.37%	37.21%
Corporate and Municipal Bonds	24.82%	23.82%	23.54%	22.10%	23.80%	19.79%	15.92%
Equity	8.86%	10.33%	14.24%	10.62%	9.96%	11.85%	14.66%
Mutual Funds	4.96%	10.76%	11.08%	7.34%	7.56%	10.31%	12.75%
Real Estate	1.70%	1.58%	2.82%	3.12%	2.75%	2.40%	2.30%
Other	1.53%	1.60%	1.63%	2.14%	0.66%	0.67%	1.07%
Occupational Pension Funds	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Cash	2.84%	3.84%	6.95%	5.92%	3.22%	4.79%	6.45%
Bank Deposits	21.34%	23.28%	18.18%	17.57%	17.35%	10.82%	7.46%
Government Bonds	28.35%	21.04%	17.94%	27.60%	28.43%	33.60%	35.87%
Corporate and Municipal Bonds	25.10%	24.10%	23.70%	21.05%	23.45%	20.25%	16.22%
Equity	11.77%	13.82%	17.57%	15.42%	15.05%	16.89%	18.19%
Mutual Funds	6.00%	10.18%	10.91%	7.27%	7.48%	9.71%	11.51%
Real Estate	2.61%	2.26%	3.09%	3.52%	3.00%	2.62%	2.34%
Other	2.00%	1.47%	1.66%	1.65%	2.02%	1.33%	1.97%
Voluntary Pension Funds	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Cash	2.39%	2.27%	2.68%	3.16%	2.49%	4.78%	6.26%
Bank Deposits	16.26%	23.76%	15.78%	13.01%	12.04%	7.06%	5.17%
Government Bonds	23.10%	13.34%	13.65%	23.15%	26.93%	29.80%	28.18%
Corporate and Municipal Bonds	25.10%	25.82%	28.00%	24.99%	25.23%	20.79%	17.57%
Equity	14.12%	13.76%	15.82%	16.01%	15.03%	17.46%	20.12%
Mutual Funds	7.08%	10.84%	15.43%	10.20%	10.48%	13.12%	16.00%
Real Estate	10.08%	6.75%	7.41%	7.10%	6.44%	5.94%	5.46%
Other	1.87%	3.47%	1.23%	2.38%	1.37%	1.05%	1.24%

Source: Author's calculations, based on data published by the Financial Supervisory Commission http://www.fsc.bg/Statistics-and-Analysis-en-523

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 persons 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 tilt over "to 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 positive nominal returns for fear that even the slighest negative returns could backfire on them as a whole. The effect of these strategies however has been largely negative, since returns in the period from 2009 until September 2014 have failed to fully recover losses from 2008 despite the surge in global capital markets. At this stage pension funds in Bulgaria are not prepared to withstand another down-cycle in markets, which may very well be unavoidable in the near future.

Conclusion

With the PAYG pension pillar in Bulgaria under financial stress and the mandatory nature of the quasi-occupational universal pension funds, the role of the defined contribution pillars in securing adequate pensions for future retirees is growing in importance. However, as the analysis of the real return of pension funds from 2002 to 2014 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 very difficult. 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 real terms.

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 a younger worker. More generally, the fact that each pension company is only allowed to offer one portfolio to its client bases irrespective of demographics and other circumstances, 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 since 2014 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 results for their clients at the expense of a possible short term underperformance of their peers.

Bulgarians have the obligation to contribute to universal funds but don't have the choice as to how their savings are to be managed. Similarly, even though people can choose a voluntary pension fund from one or more management companies, all clients of a single pension fund receive the same portfolio, which can only be suitable to them by accident. Under these circumstances and with the inadequacy of supplementary pensions from the second and third pillar, which will reveal itself when these funds start distributions en masse, a popular backlash in the future against the pension system as a whole cannot be ruled out.

Pension Savings: The Real Return

2015 Edition

Country Case: Denmark

Introduction

The Danish pension system is built of four elements:

- Basic State Pension ("Folkepension") – Pay-as- you-go;
- ATP, Mandatory Occupational Pension; Savings based; provided by ATP;
- Occupational pensions; Voluntary system based on agreements between the social partners; Savings based; provided by life insurance companies, lateral pension funds, banks and company pension funds;
- Private pensions; Voluntary individual; Savings based; provided by life insurance companies and banks.

The statutory retirement age in Denmark is 65. This will increase in stages to 67 between 2019 and 2022. Post 2022 the retirement age will be linked to life expectancy. Through this the government tries to reduce its contribution to the pension system.

The Danish pension system is a mix of mandatory and voluntary components. Table 48 shows how assets are distributed between the different types of providers. Denmark has close to universal pension coverage, with the ATP covering nearly 90% of the workforce. The mandatory system runs two schemes in parallel, the basic State pension – the "Folkepension" – and a State administered defined contribution scheme – the "Arbejdsmarkedets Tillægspension" (ATP)[49]. The "Folkepension" (public pension system) is a pay-as-you go scheme restricted to Danish citizens, and EEA Member States or Swiss citizens who are resident in Denmark or have been residents in Denmark during a certain number of years. Citizens from other countries can qualify if they fulfil certain more demanding criteria. The pension pays a flat rate for all those who are eligible, with

[49] ATP is established by law. The Minister of Employment appoints the Committee of Representatives on recommendations offered by the social partners. The Minister also appoints the members of the Board.

supplementary entitlements assessed on family status and income. The ATP is a fully funded defined contribution scheme, which provides a lifelong pension from the age of 65 and a survivors' lump sum benefit for dependents in the case of the death of the ATP member. All employed persons are obliged to contribute, with contributions divided 2/3 and 1/3 between employer and employee, the contribution rate is a function of monthly working hours. The self-employed are invited to join the ATP system, which advertises itself as having lower administration costs (64 DKK/year - €8.59) than any private pension scheme in Denmark, though the total cost, investment and administration charges, approach 330 DKK/year (€44.27).

Table 48. Savings based pension assets in Denmark 2009-2013 (DKK billion)

	2009	2010	2011	2012	2013	2009-2013	Mkt. share 2013
Life insurance companies	996	1.092	1.208	1.344	1.384	8.56%	48%
Lateral pension funds[50] (Tværgående pensionskasser)	354	382	411	427	443	5.77%	15%
Commercial banks and savings banks	379	407	401	441	443	3.96%	15%
Company pension funds (Firmapensionskasser)	-	38	43	44	39	-	1%
ATP, LD[51]	420	478	582	627	593	8.99%	20%
Total	**2.186**	**2.398**	**2.643**	**2.883**	**2.901**	**7.79%**	**100%**

Source: Danish FSA.
Note: For banks, pension assets are calculated as the sum of the following: Index Accounts, endowment, pension accounts, pension annuity accounts, capital deposits, instalments - pension deposits and pension deposits. For the other types of companies, life insurance and pension provisions are applied including provisions for unit-linked contracts.

According to the OECD Factbook 2014, as of 2012 Danish households held 18.7% in currency and deposits; 2.8% in securities and shares; 17.1% in shares and other

[50] Danish nationwide occupational pension funds covering employees from more than one company (in contradiction to company pension funds).

[51] "*Lønmodtagerns Dyrtidsfond*" (Employees' Fund). The government suspended the indexed regulation of salaries in both the public and the private sector from 1977 – 1979. The amounts were placed on individual accounts in a pension fund LD "Lønmodtagernes Dyrtidsfond" (the fund for the wage earners cost of living allowance) created for that purpose by law. The amounts paid in to the fund for a full employed person was DKK 4368 (€3,585). And that has increased to DKK 110,000 (€14,755.62) for those who left the investment management fully to the fund.

equity; 7.4% in mutual fund shares and 28.3% in life insurance and 22.8% in pension funds.

Company pension funds cover only 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.

Danish pension funds are very large by international standards. In most countries, pension funds cover one company only (or even a single person), which is much more expensive. Large collective schemes have much lower costs for the beneficiaries. The 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 member (which would entail higher costs to be deducted from the pension benefits)[52].

The self-employed, if they decide to join the ATP system, pay a fixed contribution equal to 270 DKK/month (€36.22) each quarter. The description of the ATP and its associated charges are clearly presented on the ATP website[53]. 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, as they decide whether to join this scheme or not[54].

The pay-out from the "Folkepension" is DKK 71,964/year (€9,653.39), supplementary entitlements can increase this pay-out to DKK 147,096/year (€19,731.75). These supplementary entitlements start to reduce in value when other income exceeds DKK 67,500/year (€9,054.6), they 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 24,000/year (€3,219.4). Naturally, for a DC scheme, the actual pay-out is the sum of contributions, investment performance and the age of retirement. There are other

[52] www.atp.dk
[53] Idem.
[54] OECD Pensions at a Glance 2011: Retirement-Income Systems in OECD countries: Denmark, page 2 http://www.oecd.org/denmark/47272339.pdf

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 special 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 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, 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 contribute to private pension schemes other than occupational schemes[55]. 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. It has been suggested that the normal system with tax deduction of contributions to occupational pensions and private pensions could be modified so that pension pay-out would become tax free. The idea has been criticised because it will start forming a problem for governments in the future, when these will not collect tax revenues from the pension pay-out phase.

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

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-out[56];
- Lump sum pension ("Alderspension") with one pay-out.

All private pension products are defined contribution schemes. The asset selection is not directly regulated; it is the responsibility of each company to select assets that enable it to fulfil its obligations to the saver. This may take the form of a guarantee or more commonly an asset selection that faithfully matches the description of the product. All pension companies offered, until 1994, a guaranteed basic return rate of 4.5% per annum; effectively this forced the pension companies to invest heavily in bonds (government bonds or mortgage bonds).

Since 1994, the Danish FSA has progressively reduced this guaranteed return to the current level of 0.5%. Whilst these reductions have protected the solvency of these schemes, they no longer protect the real value of their pension savings.

With the decline in interest rates, there has been a shift towards market-based products. While this has expanded the freedom of portfolio managers to invest in real assets, such as shares, it has also increased the investment risk of pension portfolios.

Charges

Disclosure on charges has been very poor. There is a plethora of pension products on offer in Denmark, public information, where it is available, is of little value as the data offered by providers is not comparable. Providers calculate yearly costs for members both in DKK and as a percentage of assets. However, the basis for these calculations differs between banks, insurance companies and pension funds. These circumstances present significant information barriers to users, who may choose to compare products on the basis of past performance and charges.

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

Pressure from consumers on providers to improve disclosure appears to be having some effect. All pension companies, from the end of 2012, must inform their clients or members of the yearly costs related to their pension scheme both in DKK and as a percentage. Providers will offer a cost-calculation facility, on their websites, making it possible to compare costs.

In December 2012, the Danish Insurance Association opened a new public service called “Facts on pensions”. This web-based system gives information about occupational pension products from insurance companies and lateral pension funds. Through the website, it is possible to compare information about savings, insurance, service and advisory services, interest, returns and charges from all providers. However, design limitations restrict the viewer’s ability to make comparisons. The website posts information on charges, as yearly charges in DKK, as a percentage of assets. The information is further disaggregated 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 system on pension contributions, assets and pay-outs from schemes is multidimensional. Table 49 rationalises the system by pension vehicle.

Table 49. Taxation on Pension Schemes				
Pension Vehicle	**Life assurance contract**	**Unit-linked pension product**	**Personal pension "Rate pension"**	**Personal pension *"Alderspension"***
Contributions	Tax deductible		Tax deductible	Non deductible
			Up to 47,600 DKK a year	Max contribution 28,600 DKK a year
Tax on the investment	Interest, dividends, earnings and losses are taxed at 15.3%			
Pay-out[57] [58]	**Taxed like personal income On average 42% to 46%**			**Tax free**
Source: Better Finance Research				

Contributions to occupational pension schemes and individual private pension schemes are tax deductible, with limits on certain schemes. From 2013 however, deductibility exemption ends for the lump sum pension scheme ("Kapitalpension").

A new lump sum scheme called "age-pension" ("Alderspension") has been introduced; contributions are not tax deductible and consequently the pay-out is tax-free.

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 expanded to 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.

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

[58] 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.

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%. As mentioned above, payments from the "Alderspension" are free of tax.

Pension Returns

We could not find a source for aggregate information detailing the investment returns for pension savers. While life insurance companies, lateral pension funds, company pension schemes and banks have to give scheme information to members on the development of pension plans, none of this information is publically available in aggregated form. The information published by the Danish FSA breaks information down by business type:

- Life-insurance companies and lateral pension funds;
- Company pension funds;
- Commercial banks and saving banks; and
- ATP.

The Key Performance Indicators of private pension funds of the National Danish supervisor provide a good overview of the last years' after tax performance of the first category of pension plans[59]. Only companies active in all five years are shown in tables 50 and 51.

[59] http://www.finanstilsynet.dk/en/Tal-og-fakta/Statistik-noegletal-analyser/Noegletal.aspx

Table 50. Return on customer funds after expenses[1] but before income tax – Life Insurance[2]								
Selskabsnavn (Company)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
AP Pension Livsforsikringsaktieselskab	3.30	-6.60	7.10	8.90	15.30	9.30	-1.60	11.40
BP Livsforsikringsselskab A/S				0.00	0.00	0.00	0.00	0.00
Danica Pension, Livsforsikringsaktieselskab	0.00	-1.30	5.50	4.60	6.10	7.70	-1.10	11.70
Forsikrings-Aktieselskabet ALKA Liv II	0.00	0.00	0.00	0.00	-1.40	-1.90	-1.60	-1.80
Forsikringsselskabet Alm. Brand Liv og Pension A/S	-0.06	-1.20	8.10	7.40	6.90	6.90	1.10	9.60
Forsikringsselskabet SEB Link A/S	0.00	0.00	0.00	0.00	0.00	0.00		
Forsikringsselskabet SEB Liv III A/S	0.00	0.00	0.00	0.00				
FunktionærPension, Pensionsforsikringsaktieselskab	0.30	-5.60	6.90	11.50	15.20	14.40		
Industriens Pensionsforsikring A/S	-0.70	3.50	10.90	16.90	4.80	17.30	-0.90	16.50
Lærernes Pension, forsikringsaktieselskab	1.60	-3.90	12.70	11.83	6.11	14.57	7.11	15.58
Livsforsikringsselskabet A/S				40.69	0.00	0.00	5.78	
Nordea Liv & Pension, livsforsikringsselskab A/S	1.10	-3.44	5.50	6.40	6.60	8.70	-0.71	11.30
Nordea Liv og Pension A	-1.80	3.11						
Nykredit Livsforsikring A/S	-23.70	-19.70	-15.60	-22.00	-22.70	-15.70	-14.60	-18.40
PenSam Liv forsikringsaktieselskab	0.90	-11.50	18.30	9.90	8.70	41.90	10.80	18.00
PensionDanmark Pensionsforsikringsaktieselskab	2.10	-5.40	14.60	6.60	12.10	4.50	-1.50	9.50
PFA Pension, forsikringsaktieselskab	0.40	2.20	5.30	7.10	10.50	9.56	-1.70	14.20
PFA Soraarneq, forsikringsaktieselskab	-1.30	-7.20	8.10	5.80	3.40	2.00	-4.10	14.60
PKA+Pension forsikringsselskab A/S	3.20	0.22	6.57	6.52	2.53	8.85	3.48	2.95
PMF-Pension, Forsikringsaktieselskab	8.60	-11.40	10.10	3.30	15.20			
Sampension KP Livsforsikring A/S	-2.10	1.10	0.80	16.00	20.80	11.60	-1.80	22.50
SEB Pensionsforsikring A/S	6.20	-4.50	4.30	9.30	4.20	9.30	2.40	10.70
SHB Liv Forsikringsaktieselskab	0.00	0.00	0.00	0.00	0.00			
Skandia Link Livsforsikring A/S	17.80	-19.40	31.30	0.00	-6.60	13.50	10.60	0.00
Skandia Livsforsikring A A/S	-44.80	-263.80	4.00	8.60	10.80	0.00	-24.10	3.20
Skandia Livsforsikring A/S	0.00	-14.20	-1.00	16.10	4.20	2.90	3.00	
Topdanmark Link Livsforsikring A/S				0.00	0.00	0.00		
Topdanmark Livsforsikring A/S	1.40	-13.30	10.10	4.70	-1.00	5.20	3.20	7.80
Topdanmark Livsforsikring II A/S	0.00	0.00	0.00	0.00	0.00	0.00		
Topdanmark Livsforsikring III A/S	-9.70	-32.60	-22.10	-18.70	-12.30	-14.50		
Topdanmark Livsforsikring V A/S	-1.80	-1.10	5.70	9.60	9.70	10.70		

[1] Return on insurance provisions before tax (Forrentning af kundernes midler efter omkostninger før skat). Source: https://www.finanstilsynet.dk/en/Tal-og-fakta/Statistik-noegletal-analyser/Noegletal.aspx

[2] Livsforsikringsselskaber (Life insurance business)

Source: Danish FSA

Table 51. Return on customer funds after expenses but before income tax[1] – Life Insurance								
Selskabsnavn (Company)	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Arbejdstagernes Pensionskasse - SISA	-1.80	-21.90	14.50	10.90	0.50	8.90	7.70	10.30
Arkitekternes Pensionskasse	4.30	-22.00	16.20	7.40	4.40	5.70	5.40	5.59
BANKPENSION Pensionskasse for finansansatte	4.08	-15.43	9.32	12.80	4.39	9.71	9.62	5.90
Danske civil- og akademiingeniørers Pensionskasse	-8.20	2.70	6.40	6.90	3.10	5.40	4.20	4.20
Finanssektorens Pensionskasse	4.84	-5.21	4.69	10.52	6.19			
Juristernes og Økonomernes Pensionskasse	2.70	5.30	8.30	8.10	12.20	13.70	10.10	3.00
Lægernes Pensionskasse	0.70	-8.40	7.30	13.30	13.40	-0.80	6.50	10.00
MP Pension, Pensionskassen for magistre og psykologer	-0.50	-5.70	10.40	1.70	5.40	6.50	4.60	6.34
Pensionskassen for Apotekere og Farmaceute	0.60	-6.20	3.66	6.22	2.87	5.35	4.08	7.04
Pensionskassen for amtsvejmænd m. fl.	-3.00	1.20	3.00					
Pensionskassen for Bioanalytikere	1.10	2.53	7.96	8.54				
Pensionskassen for Børne- og Ungdomspædagoger	1.06	-12.10	-2.48	-6.76	-14.61	12.17	6.41	10.63
Pensionskassen for Farmakonomer	6.10	2.60	3.10	6.07	5.47	5.84	4.04	6.74
Pensionskassen for Håndværk og Industri	1.90	-19.90						
Pensionskassen for Jordbrugsakademikere og Dyrlæger	1.90	-13.00	14.50	9.70	3.90	5.60	5.40	5.96
Pensionskassen for Jordemødre	-0.50	6.32	6.39	7.61				
Pensionskassen for Kontorpersonale	1.30	1.19	9.87	8.30	9.78	11.73	4.27	
Pensionskassen for Kost- og Ernæringsfaglige	0.70	4.21	7.36	10.11				
Pensionskassen for Lægesekretærer	1.00	0.41	10.55	8.25	9.98	11.55	1.24	
Pensionskassen for Nærings- og Nydelsesmiddelområdet	0.60	-19.80						
Pensionskassen for portører	-3.10	-0.10	4.00	10.30	13.00	6.20		
Pensionskassen for Socialrådgivere og Socialpædagoger	-0.30	7.91	3.04	15.15	11.19	14.07	4.68	11.27
Pensionskassen for Sundhedsfaglige	0.80	3.47	7.58	8.12	10.27	11.71	4.69	11.18
Pensionsk. for sygehjælpere, beskæftigelsesvejledere, plejere og plejehjemsass.	-4.00	0.70	3.80	8.60	10.10			
Pensionskassen for Sygeplejersker og Lægesekretærer	0.80	0.42	10.54	8.61	10.61	12.42	4.69	11.37
Pensionskassen for teknikum- og diplomingeniører	16.60	-9.90	4.30	8.10	18.40	7.70	-1.60	18.80
Pensionskassen for trafikfunktionærer og amtsvejmænd m.fl.	-2.70	-4.80	3.30	9.20	11.10	8.70		
Pensionskassen for Værkstedsfunktionærer i Jernet	0.60	-0.50	7.73					
Pensionskassen PenSam				8.60	10.10	8.90	0.10	11.30

[1] Forrentning af kundernes midler efter omkostninger før skat (Return on insurance provisions before tax)

Source: Danish FSA

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 52. Unit-linked products are not covered by these aggregated data.

Table 52. Pension funds' real average net annual rate of investment returns, 2002 to 2012 (after inflation, before taxes) in %

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013[60]	Avg 2002 -2013
-6.7	6.3	11.5	14.8	1.3	-3.3	5.1	1.2	7.1	12.1	5.4	-4.6	**3.977**

Source: OECD (2012)

In spite of these good results and the good performance of Danish equity markets in 2013, the OECD (2014) reports a real net rate of return on investments for pension funds from December 2012 to December 2013 of -4.6%. This could be 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. As a matter of fact, the OECD (2014) reports that Danish pension funds reduced their allocations in shares by almost 20pc (19.4%) over the period between 2007 and 2013.

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.

[60] Data from the OECD Pension Markets in Focus No.11 2014, Pension funds' real, net investment rate of return in selected OECD countries, Dec 2012 - Dec 2013.

Table 53. Taxes raised on investment returns on pension savings, Danish Krona billion[61]								
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013***	**2014***
Banks	2.6	0.3	0.6	3.7	0.5	3.1	-	-
Life insurance and pension companies and institutions	2.4	10.8	9.1	34.1	38.9	41.1	-	-
Total	5	11.1	9.7	37.8	39.4	44.2	42.1	23.9
Portion of GDP, in %	0.3	0.6	0.6	2.1	2.2	2.4	2.3	1.3

Source: Danish Ministry of Taxation
** Estimates December 2013*

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

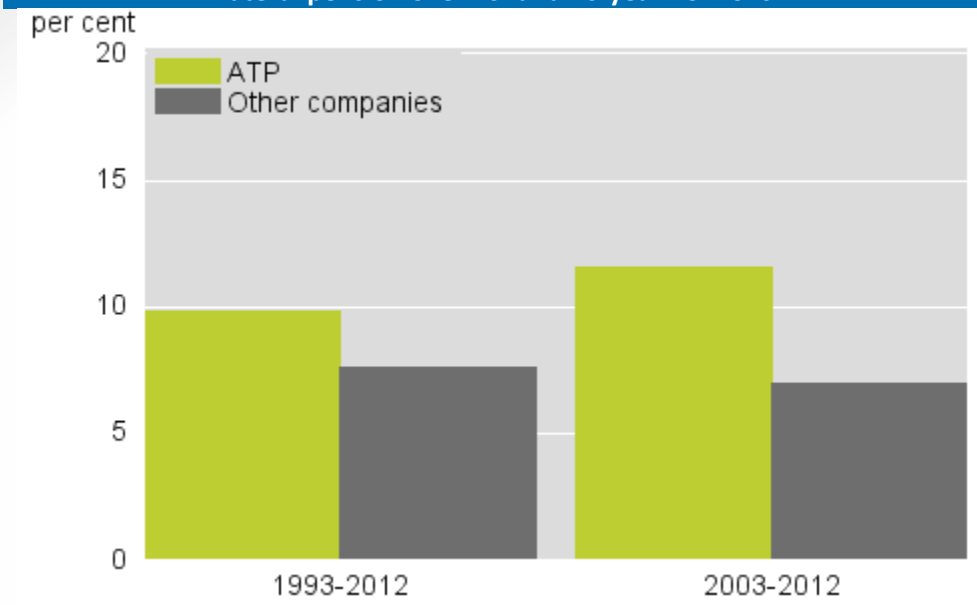
[61] Note: Figures differ from those corresponding to the "NR-accounts", since taxes raised from *Den Sociale Pensionsfond* (DSP) are included.

value creation for ATP's members comes from both sources: the guarantees and the bonus potential. Actually, the contribution from the part consisting of guarantees to the value creation within a declining interest rate environment will fall, since new guarantees are more expensive to make, but in a rising interest rate environment the ratio will increase as ATP will be able to make better new guarantees. 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 3.8% in 2014.

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 Annual Report 2014, ATP claims to have achieved 9.7% average annual returns over the last 20 years. However, ATP clarifies 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.

Graph 6. 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

There is little information on performance and charges, making it difficult to compare across different types of pension providers (pension funds, insurance companies, banks). The recent web based tools launched by the Danish Insurance Association may represent a substantial improvement on the previous situation for occupational pensions provided by members of that organisation.

Denmark has managed not only to protect the real value of the beneficiaries' pension pot, but also to grow this pot in real terms. This is something that unfortunately just some of the countries included in our analysis have managed. This in turn suggests that other EU Member States could learn from Danish pension practices and prudent fiscal policy. The low cost structure of the ATP is perhaps a model for European provision.

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.

The taxation of investment returns has a material impact on net investment returns to savers. It is therefore important for consumers to be informed about the tax consequences of a pension scheme.

Pension Savings: The Real Return

2015 Edition

Country Case: Estonia

Introduction

The Estonian old-age pension system is based on a multi-pillar approach, which consists of three main pillars:

- Pillar I – a state pension organised as a mandatory PAYG scheme;
- Pillar II – a funded pension organised as a mandatory funded DC based scheme;
- Pillar III – a supplementary pension organised as a voluntary individual pension scheme.

The Estonian multi-pillar pension reform started 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 matching government contributions, was put into law in 2001 and became operational on 1 July 2002.

Table 54. Multi-pillar pension system in Estonia		
Pillar I State Pension	**Pillar II Funded pension**	**Pillar III Supplementary pension**
• 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)	• Mandatory • Funded • DC • Basic benefit • Individual pension accounts • Privately managed pension funds	• Voluntary • Funded • DC • Complementary benefit • Individual pension contracts • Two vehicles: 1. Privately managed pension funds 2. Pension insurance

Source: own elaboration, 2014

Pillar I – State Pensions

The state pensions (pillar I) should guarantee a 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 towards social tax, whereof 13% is allocated to health insurance and 20% (16% in case of participation in pillar II) goes towards the pensions of today's pensioners.

There are two kinds of state pension: the pensions that depend on work contribution (the old-age pension, work incapacity benefits and the survivor's pension) and the national pension. A person is entitled to the old-age pension provided by the state, 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 the 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 the same for everyone, irrespective of the person's salary. The minimum amount of the old-age pension (€140.81 in 2014) is also ensured by law irrespective of the social tax paid.

The pensionable service period component represents the part of the 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 entitles him or her to the pension. The period of pensionable service is taken into account 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 expected to diminish in future years (temporary component) as the third component (insurance contributions) will account for a larger portion of the 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 the 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 compared to the social tax paid on the average state salary. The annual factor for social tax paid on the average salary is 1.0 and its monetary value in a monthly pension is €4,964, the same as for the pensionable service period component.

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

The solidarity part of the state pension insurance involves a redistribution mechanism of income from individuals with high salaries to those with lower salaries. The base component of a pension is equal for all, irrespective of the

person's salary. Furthermore the minimum amount of the old-age pension – today at € 140.81– is also guaranteed by law irrespective of the social tax paid.

The statutory retirement age is 63 for men and women alike. However, on 7 April 2010 the Estonian Parliament adopted the Act to amend the State Pension Insurance Act and related acts, putting the general pensionable age up to 65. A transition period, starting from 2017, is provided for those born from 1954 to 1960. For these, the retirement age will gradually increase by three months for every year of birth, and reach 65 in 2026. The amendment shall take effect on 1 January 2017.

The national pension (also called National Pension Rate – NPR) ensures a minimum pension for those who are not entitled to a pension based on their work contribution, provided they have lived in Estonia for at least 5 years before applying for the pension. The amount of the national pension since 1 April 2014 is €148.98. Generally, no additional benefits are provided via the state pension scheme.

The indexation of state pensions is performed by the Social Insurance Board and is aimed at adjusting the level of state pensions in order to correspond to the increase of the cost of living and of social tax income (growth of the salary fund). Once a year (1 April of each year) pensions are multiplied by the index. 20% of the index is calculated based on changes in the consumer price index (cost of living) and 80% on the yearly increase in social tax collected (labour market conditions). Until 2008 the indexation introduced in 2002 was based on the increase of the consumer price index and social tax contributions, with both elements weighted equally (50% and 50%). This changed in 2007 to the current 20% and 80% weights respectively. According to the Pension Insurance Act, the Government of Estonia has to analyse the impact of the increase in pensions on financial and social sustainability and every 5 years suggest any potential need for changes to the indexation to the parliament.

Pillar II – Funded Pensions

Both the funded pension and supplementary funded pension put individuals in charge of their own future – the amount of the pensions depends on how much each person puts aside towards retirement during his or her 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) became operative in July 2002.

The funded pension is based on the accumulation of assets (savings): a working person 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 each individual, the state adds 4% of the current social tax that is paid by the employee and retains 29%. The state pension insurance component of a person who subscribed to the funded pension is also respectively smaller (for the years when 16% was received for the state pension instead of 20%).

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

Subscription to the funded pension is mandatory for people entering the labour market, i.e. people born in 1983 or later. The funded pension was voluntary for those born between 1942 and 1983. Subscription was possible for seven years from 1 May in 2001 until 31 October in 2010. By applying for a subscription, the person assumes a binding obligation – once subscribed the person will never be able to renege on the funded pension.

Each Pillar II participant has his or her own individual pension account that stores records regarding paid contributions and accumulated savings. A pension account is a pool of data that comprises all data related to a saver's funded pension. A pension account is a special type of securities account, in which only units of mandatory pension funds and data related to these units are kept, including data about the unit-holder registered.

With view on the impact of the financial crisis on the Estonian economy, temporary changes related to the amount of new contributions flowing into the mandatory pension funds had been put in place. Through the Act that amends the Funded Pensions Act and the Social Tax Act (which entered into force on 28 May 2009), temporary changes were adopted in connection with the contributions to the second pension pillar for the years 2009-2017. Contributions to funded pensions were suspended in the period from 1 June 2009 to 31 December 2010. Those interested could have continued contributing to funded pension themselves from 2010 based on an application. From 2011, the contributions resumed but at half-volume, i.e. the state contributed 2% and the savers themselves 1%. Customary contributions to the pillar II (2% + 4%) were restored in 2012. To those who

voluntarily continued their contributions in 2010 and 2011, the state will pay an additional 6% during 2014-2017. Those who did not submit applications for continuing the contributions in 2010 could have submitted an application in 2013 to pay an increased contribution of 3% during 2014–2017, to which the state will then add 6%. Those persons will 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 for there to be at least 5% nominal economic growth of the Estonian economy. In case this prerequisite is not fulfilled, the state is allowed to postpone the increase of the contribution rate

Pillar III – Supplementary pensions

The 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 (Chapter 3 and following).

The supplementary pension was introduced with the objective of helping to maintain the established life standard and add flexibility in securing a stream of income after one reaches the age of 55. The state pension and pillar II pension are estimated to deliver a replacement ratio of approximately 45%. The supplementary pension has been designed to help achieve a recommended level of 65% replacement ratio of an individual's previous income in order to maintain the established life standard.

The supplementary pension is based 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.

The amount of contributions is determined solely by the free choice of an individual and can be changed during the duration of the accumulation phase. It is possible to discontinue contributions and to terminate the contract as well.

The supplementary funded pension contracts can be entered into with life insurers in the form of pension insurance or by acquiring pension fund units with fund managers. An individual can choose between three different pension products:

1. Pension insurance with guaranteed interest;
2. Pension insurance with investment risk; or
3. Pension fund.

Pension Vehicles

Pillar II – Funded pensions

The only pension vehicles allowed by the Funded Pension Act for the mandatory Pillar II are the mandatory pension funds. Currently (as of 30 September 2014) 20 mandatory pension funds have been operational in the pillar II market.

Mandatory pension funds differ in their investment strategies 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 55. Mandatory funded pension vehicles market share

Type of mandatory pension fund	Assets under management *(in €)*	Market share based on AuM *(in %)*	Number of participants	Market share based on participants *(in %)*
Conservative funds	185,766,705	8.46	46,904	7.42
Balanced funds	299,232,588	13.63	68,414	10.82
Progressive funds	1,524,604,932	69.43	401,682	63.55
Aggressive funds	186,418,075	8.49	115,107	18.21
Total	**2,196,022,300**	**100**	**632,107**	**100**

Source: own calculations based on pensionikeskus.ee data, 2014 (data at 31.12.2014)

The asset allocation of mandatory pension funds is regulated by law, where quantitative investment limits are imposed on 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.

These 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;
- the 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;
- the 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;
- the 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 the portfolio. Roughly 9% have opted for pension funds with a conservative strategy and 14% for those with a balanced strategy.

Even more interesting is the analysis of pension vehicles (preference for pension funds) based on the income level of participants. Wealthier and higher earning cohorts 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.

Aggressive mandatory pension funds recorded the highest increase in the number of participants since their inception in 2011 (18.77% annually), while the rest of the pension vehicles (conservative, balanced and progressive mandatory pension funds) account for a 1.59 % annual increase in the number of participants.

Pillar III – Supplementary pension

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

1. voluntary pension funds, and
2. supplementary pension insurance contracts.

Considering the size of pillar III based on the coverage of the economically active population, the Estonian pillar III amounts to only 16.71% of the economically active population. In voluntary (supplementary) pension funds there are no investment restrictions regarding asset classes.

Table 56. Supplementary Pension vehicles market share

Supplementary pension vehicles	Assets under management/ reserves (in €)	Market share based on AuM/ reserves (in %)	Number of participants/ contracts	Market share based on participants (in %)
Voluntary pension funds	117,389,925	34.74	45,011	44.49
Supplementary pension insurance contract	220,533,000	65.26	56,162	55.51
Total	337,922,925	100.00	101,173	100.00

Source: own calculations based on pensionikeskus.ee data, 2014 (data at 31.12.2014)

Charges

Pillar II – Funded pensions

Pension funds are offered by asset management companies, who are managed under the Investment Funds Act and, as such, those funds are considered to be typical UCITS funds under special regulation from the Funded Pension Act.

A saver, when contributing into a 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 considered to be redeemed upon cancellation thereof with the register. Ownership of a unit is proven by an entry in the register.

Since pension funds are considered to be typical UCITS funds, fees and charges typical for UCITS funds are also applied to pension funds with some legislative restrictions.

Management companies of mandatory pension funds are allowed to apply these types of charges:

- entry fee (unit issuance fee, resp. contribution fee based on the amount of contribution paid),
- administration and management fee (fee based on the value of pension savings, resp. value of assets under management),
- exit fee (unit redemption fee based on the redeemed value of savings),
- depository fee (fee based on the value of pension savings, resp. value of assets under management,
- other charges.

The comparison table of the most common charges applied by the asset management companies of the mandatory pension funds is presented below.

Table 57. Mandatory Pension Funds' Fees					
Fund / Charge type (year 2014)		**Management Fee**	**Subscription Fee**	**Redemption Fee**	**Depositary Fee**
Conservative funds	Pension Fund LHV XS	0.90%	0.00%	1.00%	**0.10%**
	Pension Fund Danske Pension Interest	**0.70%**	0.00%	1.00%	**0.15%**
	SEB Conservative Pension Fund	0.95%	0.00%	1.00%	0.12%
	Swedbank Pension Fund K1	0.90%	0.00%	1.00%	0.12%
	Nordea Pension Fund C	1.60%	0.00%	1.00%	0.13%
	Pension Fund LHV S	1.20%	0.00%	1.00%	**0.10%**
Balanced funds	Pension Fund LHV M	1.60%	0.00%	1.00%	0.11%
	Pension Fund Danske Pension 25	1.45%	0.00%	1.00%	0.13%
	Swedbank Pension Fund K2	1.41%	0.00%	1.00%	0.13%
	Nordea Pension Fund B	1.50%	0.00%	1.00%	0.13%
	SEB Optimal Pension Fund	1.30%	0.00%	1.00%	0.13%
Progressive funds	Pension Fund Danske Pension 50	1.85%	0.30%	1.00%	**0.10%**
	Pension Fund LHV L	1.82%	0.00%	1.00%	0.12%
	Nordea Pension Fund A	1.60%	0.00%	1.00%	0.13%
	SEB Progressive Pension Fund	1.32%	0.00%	1.00%	0.14%
	Swedbank Pension Fund K3	1.29%	0.00%	1.00%	0.14%
Aggressive funds	Pension Fund LHV XL	**2.00%**	0.00%	1.00%	0.12%
	SEB Energetic Pension Fund	1.70%	0.00%	1.00%	0.14%
	Swedbank Pension Fund K4	1.59%	0.00%	1.00%	0.14%
	Nordea Pension Fund A Plus	1.70%	0.00%	1.00%	0.14%
Source: Own research based on the most recent terms of respective pension funds, 2014					

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

Most of the pension funds use the decreasing model of depositary fees tied to the amount of assets under management. Based on the analysis of the terms of pension funds, some of the pension funds (managed by the SEB) have this model applied to the management fees as well, but this is rather an exception than the standard approach.

When considering the historical changes in charges, there is a significant transparency gap. Most asset managers do not disclose past charges and only recent charges applied to pension funds are disclosed. Analysing the prospectuses, the terms, as well as the monthly reports of the pension funds, only Swedbank fully disclosed past charges effectively applied to the managed mandatory pension funds. Other pension funds disclose only recent charges or charges applied from a certain period onwards. Using the data from available prospectuses, terms and monthly reports we were able to estimate the trends in charges using the simple averaging approach.

Table 58. Average fees in Estonian mandatory pension funds

Fee / Year	Management fee	Subscription fee	Redemption fee	Depositary fee
2002	1.42%	1.50%	1.00%	N/A
2003	1.42%	1.50%	1.00%	N/A
2004	1.42%	1.50%	1.00%	N/A
2005	1.42%	1.50%	1.00%	N/A
2006	1.42%	1.50%	1.00%	N/A
2007	1.42%	1.50%	1.00%	N/A
2008	1.42%	1.50%	1.00%	N/A
2009	1.42%	1.50%	1.00%	N/A
2010	1.35%	0.00%	1.00%	N/A
2011	1.35%	0.00%	1.00%	N/A
2012	1.36%	0.00%	1.00%	0.11%
2013	1.31%	0.00%	1.00%	0.11%
2014	1.36%	0.00%	1.00%	0.18%

Source: Own calculations based on data from pensions' Prospectuses, Terms and Monthly Reports, 2014

Management and depository fees are types of charges that are applied on a daily basis. It should be noted that their effect during the saving cycle is therefore exponential, which should be calculated using formulas for compounded interest. Management and depositary fees are deducted from the market value of the

fund's assets on a daily basis and will be paid for services provided during a preceding month.

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 or when the saver sells the pension units to the issuer. The effect of these charges is limited to the transaction and there is therefore only a cumulative effect that can be calculated on a simple summation. Subscription as well as redemption fees are also tied to the ability of savers to switch among different pension funds during the saving period. A fund can only be replaced by another fund that is part of the mandatory funded pension. The choice of 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 pensions are organised in two ways: insurance contract or supplementary pension fund. The ways charges are disclosed to the client differ significantly between these two different types of supplementary pensions.

With regard to insurance contracts, no charges are disclosed publicly. The terms and conditions for insurance contracts cover the topic of charges; however, no charges are disclosed. In most cases, during the validity of the insurance contract, the insurer is entitled to change contract fees and risk payments (paid premiums to cover the biometric and financial risks) unilaterally. The insurer is obliged 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/she is allowed to terminate the contract.

With regard to supplementary pension funds, most of the funds disclose most actual charges, which are presented in the table below.

Table 59. 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	N/A
	Redemption fee	N/A
	Entry fee	N/A
	Depositary fee	N/A
Voluntary Pension Fund Danske Pension Interest Pluss	Management fee	N/A
	Redemption fee	N/A
	Entry fee	N/A
	Depositary fee	N/A

Source: Own research based on supplementary pension funds´ Prospectuses and Terms, as of 31.12.2014

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, which is generally taxed.

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 2% withheld from wages and other remuneration is tax deductible, i.e. not subject to Estonian income tax. Certain specifications apply to the procedure of contributions during the years 2014 to 2017.

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

During the pay-out phase, income tax is charged on payments made from a mandatory pension fund to a unit holder, the successor of a unit-holder and on payments made to a 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. The Estonian income tax rate since 2008 is 21%.

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

In addition to the basic exemption, a resident unit-holder who receives a pension may deduct the increased basic exemption provided for by law, in relation to the amount of a pension paid on the basis of the laws of a contracting state of the EEA, a mandatory funded pension provided for in the legislation of a contracting state of the EEA or a pension paid under a social security agreement, from his or her taxable income but not more than the extent provided for by 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 Bankers are playing leading roles not only in Estonia, but generally in all Baltic States. The two incontestable leaders (Swedbank and SEB) absorb 60-70% of the market, with exceptionally strong 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 60 below). The number of pension plans generally corresponds to the population size (and, as such, the 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).

The borderlines among the groups vary. In Estonia the proportion of stocks in fund portfolios is arranged by increments of 25% for the four groups (zero; < 25; 25–50; 50–75). The most aggressive funds were introduced only from 2009. Also some players (namely Nordea) entered the market in 2008. The respective inception days of the mandatory pension funds analysed are presented in table 60 below.

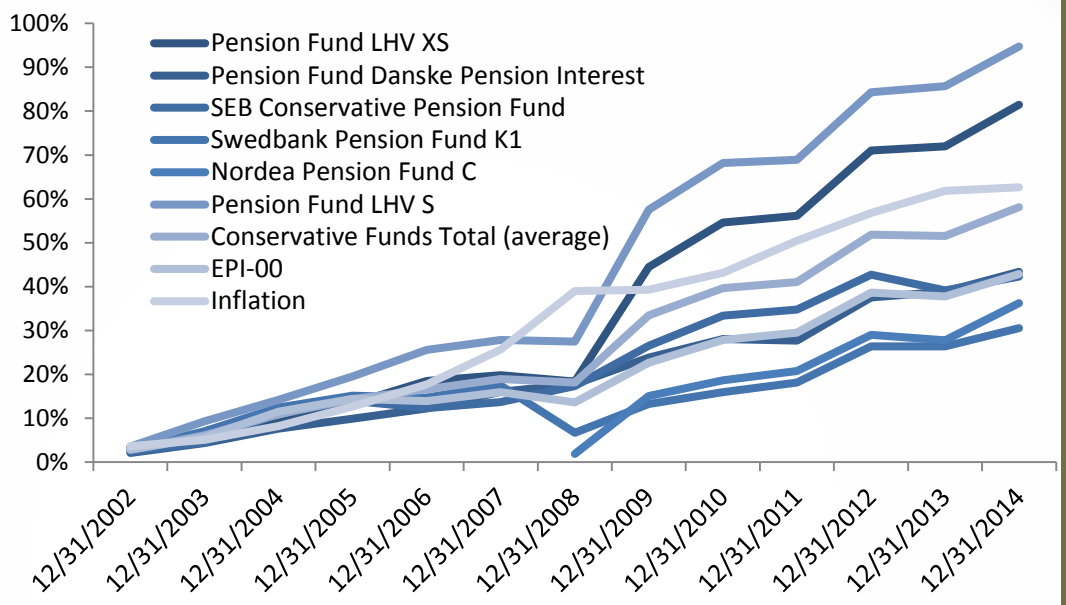
Table 60. Mandatory Pension Funds in Estonia and respective inception dates		
Conservative funds	Pension Fund LHV XS	03-07-02
	Pension Fund Danske Pension Interest	02-07-02
	SEB Conservative Pension Fund	02-07-02
	Swedbank Pension Fund K1	08-07-02
	Nordea Pension Fund C	15-09-08
	Pension Fund LHV S	13-06-02
Balanced funds	Pension Fund LHV M	03-07-02
	Pension Fund Danske Pension 25	06-07-02
	Swedbank Pension Fund K2	08-07-02
	Nordea Pension Fund B	15-09-08
	SEB Optimal Pension Fund	02-10-08
Progressive funds	Pension Fund Danske Pension 50	06-07-02
	Pension Fund LHV L	13-06-02
	Nordea Pension Fund A	15-09-08
	SEB Progressive Pension Fund	02-07-02
	Swedbank Pension Fund K3	08-07-02
Agressive funds	Pension Fund LHV XL	03-07-02
	SEB Energetic Pension Fund	04-09-09
	Swedbank Pension Fund K4	31-12-09
	Nordea Pension Fund A Plus	08-12-09
Source: http://www.pensionikeskus.ee/		

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

All data on the pension funds´ returns are presented in net values, i.e. after all fees charged on the fund portfolio. The graphs also contain inflation on a cumulative basis.

The performance of conservative mandatory pension funds on an annual as well as cumulative basis compared to their respective benchmark ("EPI-00") and peer average ("Conservative Funds Total (average") is presented in the graph below.

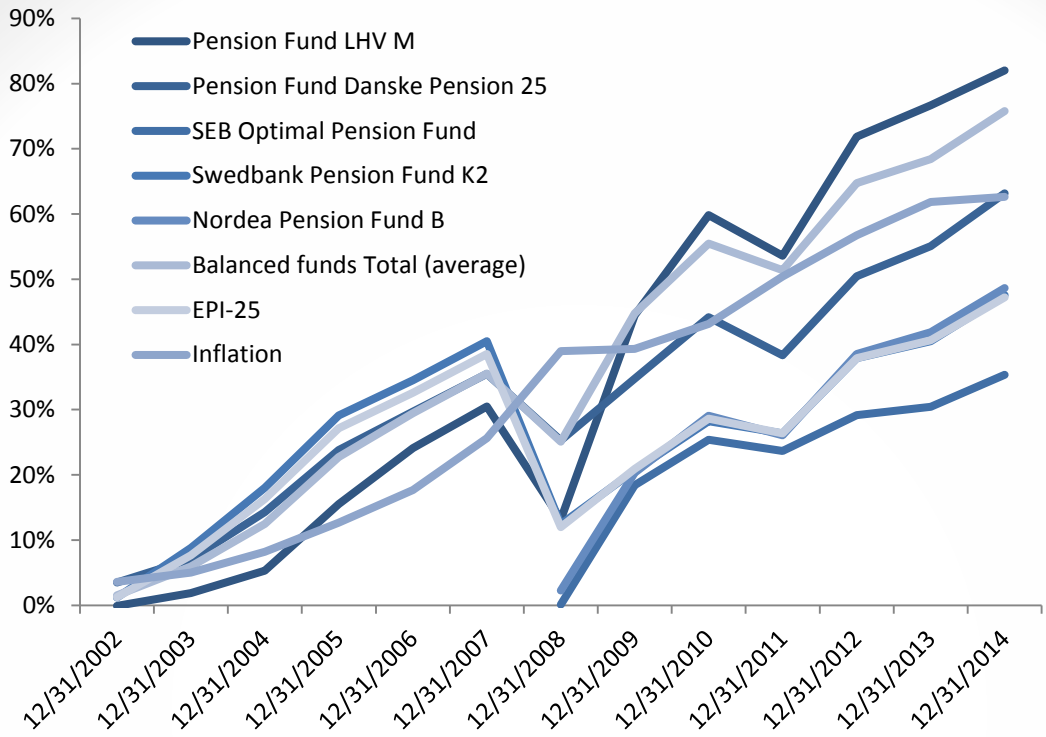
Graph 7. Conservative Pension Funds' Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2014

The performance of Balanced Mandatory Pension Funds (annual and cumulative) compared to the respective benchmark ("EPI-25") and peer average ("Balanced Funds Total (average)") is presented in graph below.

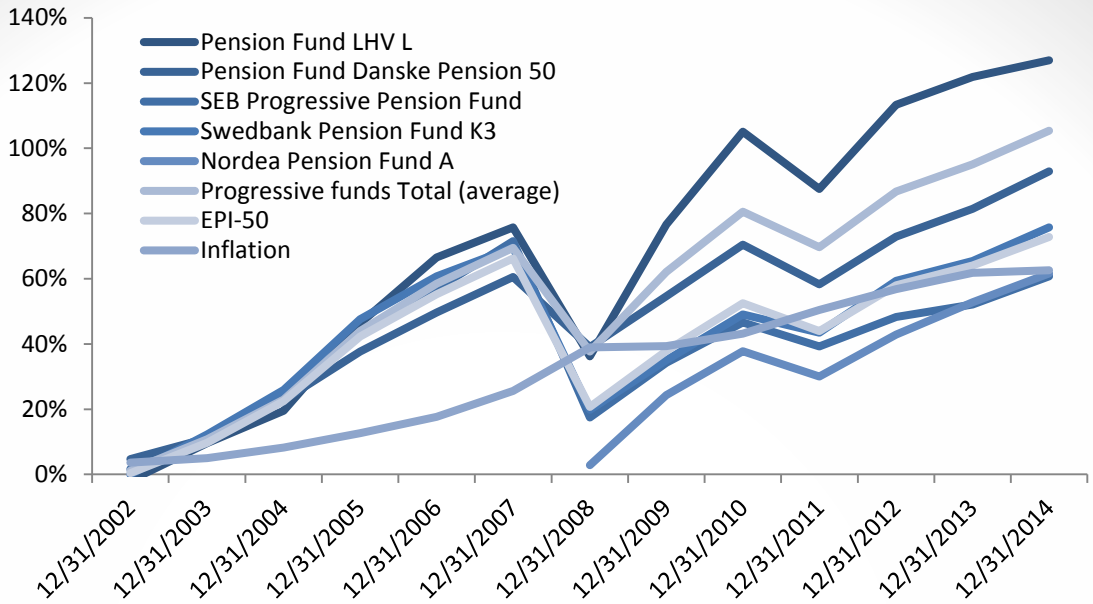
Graph 8. Balanced Pension Funds' Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2014

The performance of progressive mandatory pension funds on an annual as well as cumulative basis compared to their respective benchmark ("EPI-50") and peer average ("Progressive Funds Total (average)") is presented in the graph below.

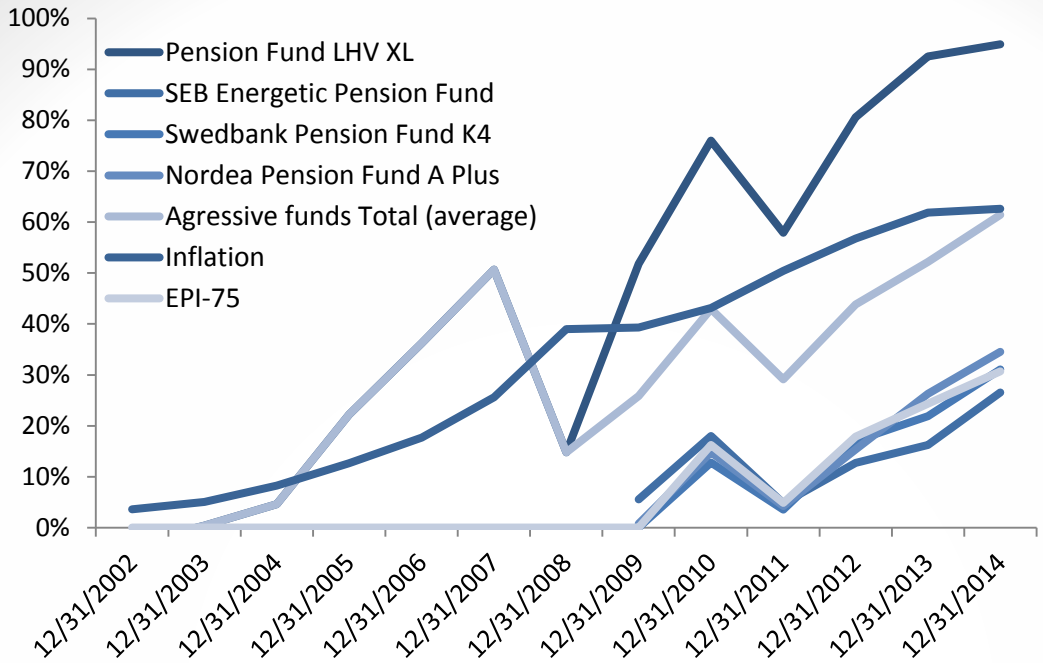
Graph 9. Progressive Pension Funds´ Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2014

The last group of pension funds with the most volatile investment strategies and the highest share of equity investments (up to 75% of the fund portfolio) are the aggressive pension funds. The performance of aggressive mandatory pension funds on an annual as well as cumulative basis compared to their respective benchmark ("EPI-75") and peer average ("Aggressive funds Total (average)") is presented in the graph below.

Graph 10. Aggressive Pension Funds´ Cumulative Performance

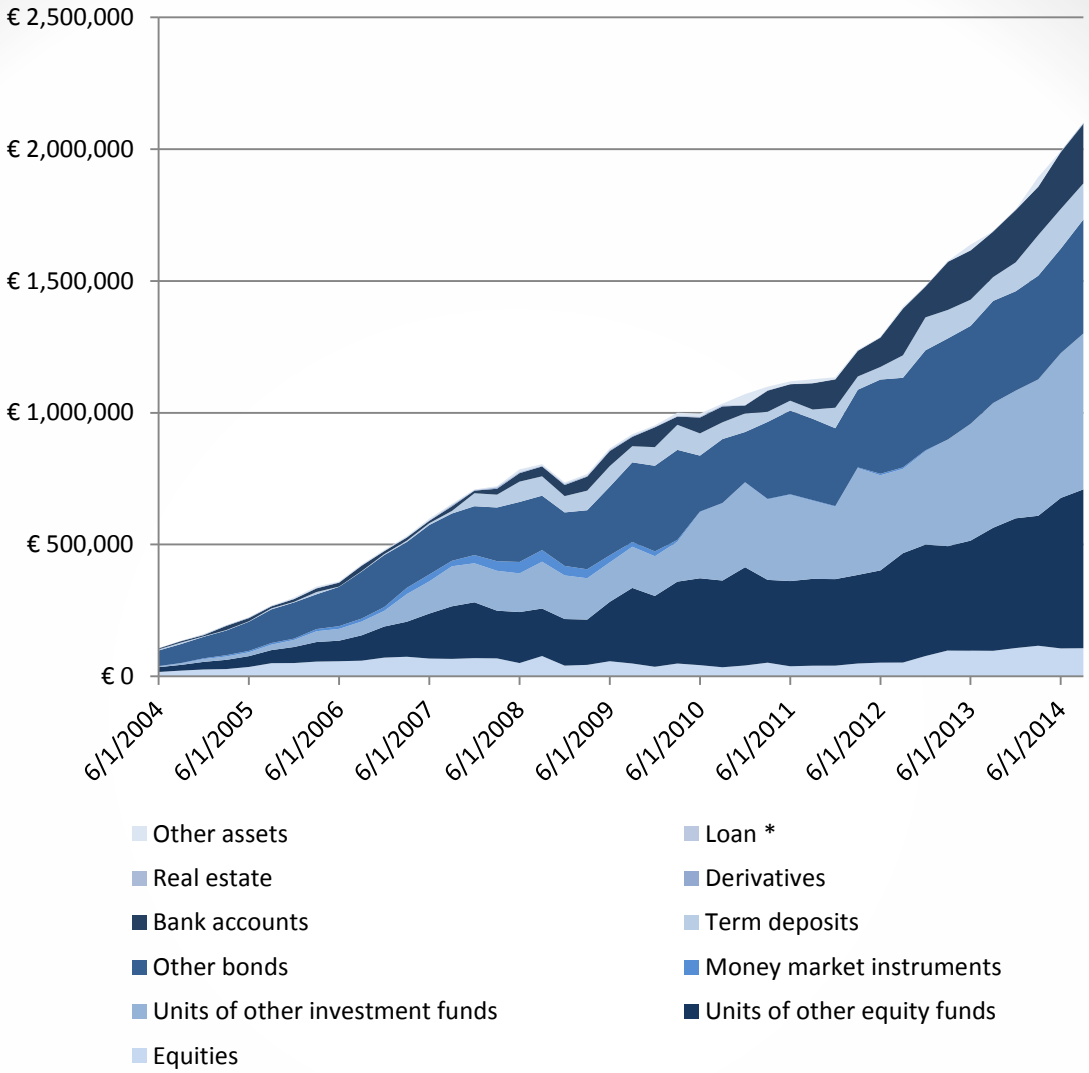


Source: Own calculations based on Pensionikeskus data, 2014

Most of the aggressive funds emerged later in 2009, together with their respective benchmarks (EPI-75). However, one fund (Pension Fund LHV XL) has been operational since 2002. The negative real returns of aggressive mandatory pension funds are a result of relatively high inflation in Estonia and two significant equity market downturns in 2008 and 2011.

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

Graph 11. Portfolio structure of mandatory pension funds



Source: *https://www.fi.ee/koond/eng/invest_koond10.php (Own calculations), 2014*

When analysing the portfolio structure of mandatory pension funds in Estonia, one trend emerges: the replacement of direct investments into bonds and shares with packaged products (UCITs) aimed at bond and/or equity investments.

Nominal as well as real returns of mandatory pension funds in Estonia weighted by AuM are presented in the summary table below.

Table 61. 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		7.40%			2.95%	
2007	**Nominal return after charges, before inflation and taxes**	6.25%		**Real return after charges and inflation and before taxes**	-0.48%	
2008		-23.42%	**4.02%**		-34.06%	**-0.13%**
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%	

Source: Own calculations based on Pensionikeskus data, 2014

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

Pillar III – Supplementary pensions

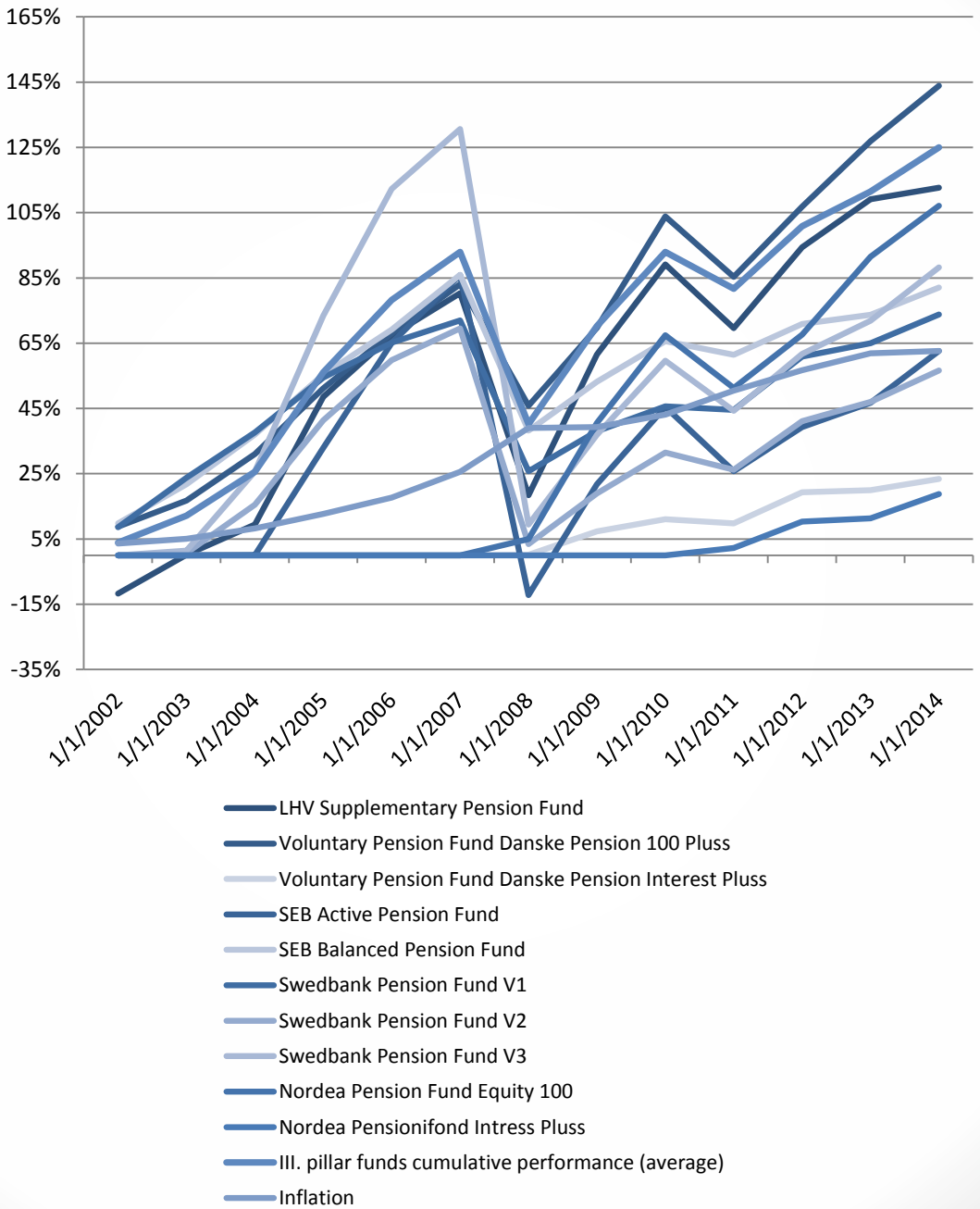
When analysing the performance of supplementary pension vehicles, only the funds can be considered. Insurance based vehicles do not disclose this information on a periodical basis as the market risk is shifted onto the insurer[62].

Supplementary pension funds do differ in their strategy, mostly due to the volatility of their portfolios. In most cases, when compared with mandatory pension funds, the investment strategies by portfolio managers of supplementary pension funds are far more aggressive. In most cases, 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 also started to offer supplementary pension funds with a conservative strategy.

[62] As the contract has its final value stated at the moment of origin, insurance companies do not disclose annual performance for insurance contracts. This information is disclosed in most countries but not in Estonia.

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

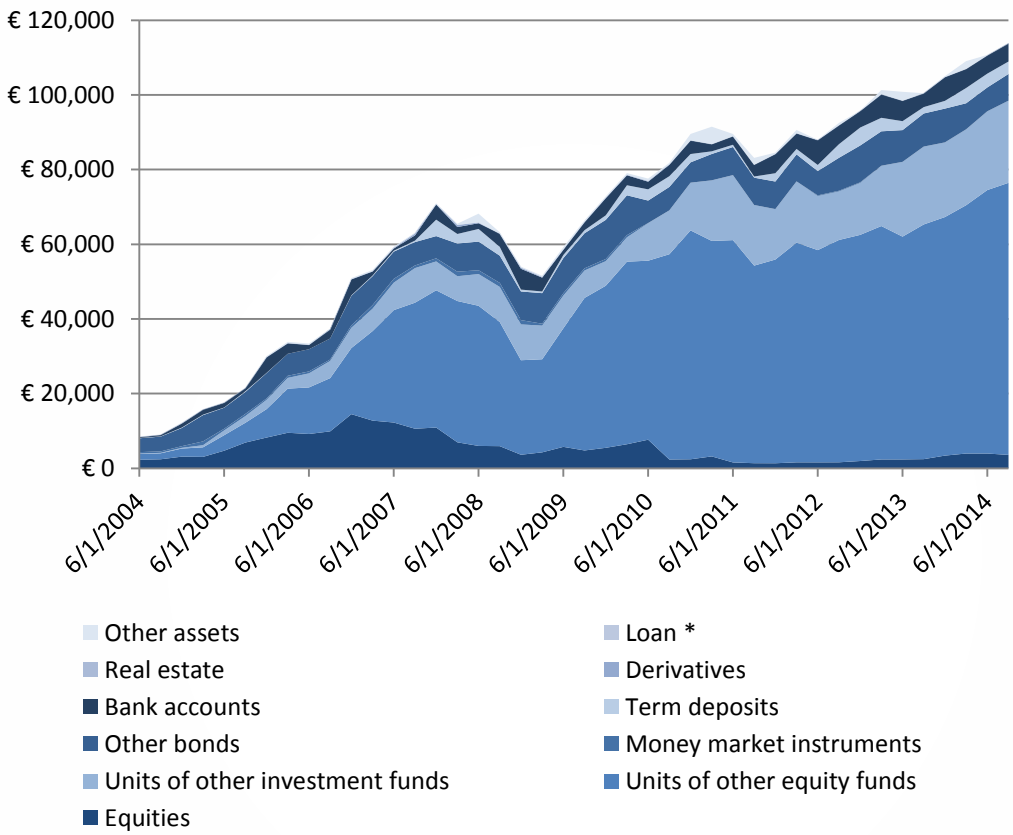
Graph 12. Supplementary pension funds´ cumulative performance



Source: Own calculations based on Pensionikeskus data, 2014

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

Graph 13. Supplementary pension funds´ portfolio structure



Source: *https://www.fi.ee/koond/eng/invest_koond11.php (own calculations), 2014*

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

Table 62. Nominal and Real Returns of Supplementary Pension Funds in Estonia						
2002	**Nominal return after charges, before inflation and taxes**	8.19%	**5.58%**	**Real return after charges and inflation and before taxes**	4.59%	**1.09%**
2003		10.22%			8.83%	
2004		13.03%			10.00%	
2005		23.72%			19.60%	
2006		15.80%			11.35%	
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%	

Source: Own calculations based on Pensionikeskus data, 2014

Contrary to mandatory pension funds, voluntary pension funds have a more aggressive portfolio structure oriented towards equity funds and real estate, which allowed them to achieve marginally positive real returns over the 13 year period whilst overcoming two major market downturns in 2008 and 2011.

Conclusions

In the mid-nineties of the previous century, public discussions began in Estonia about the necessity for pension reform which eventually led to the adoption of the 1998 State Pension Insurance Act. Estonia, as an early pension system reformer, introduced a typical multi-pillar pension system that combines fully funded and unfunded state, mandatory and voluntary pillars. Pillar II is mandatory for newcomers to the labour market (and for all the people born in 1984 and later), and Pillar III is a voluntary pension scheme. A multi-pillar pension scheme rests on the assumption that income at retirement age is to be formed from several different sources, each with different legal, organisational and financial principles.

The different types of pension vehicles in pillar II as well pillar III allows savers to choose from a wide variety of investment strategies. However, the possibility to compare returns is quite easy compared to the ability to compare the costs associated with the different pension vehicles. Lower transparency in terms of fee history contrasts with the high transparency of performance disclosed on a daily basis. The exceptions are pillar III insurance contracts, for which no performance or

fee information is publicly disclosed. This resulted in the inability to compare the nominal as well as real returns of insurance contracts with other options available to Estonian savers.

The volatility of the performance of most pension vehicles is relatively high. However, Estonian savers tend to accept higher risk when their savings are concerned. Pillar III vehicles are typical examples of highly volatile pension vehicles. However, after the financial crisis, pension asset management companies also started to offer more conservative funds for pillar III savers.

As far as the portfolio structure of pension funds is concerned, one trend is clear: portfolio managers are steadily replacing direct investments into bonds and equities with structured financial products. Thus the question of potential future returns when using financial intermediaries should be raised.

Even if in most cases the net performance (adjusted for fees) is disclosed by pension funds, the overall level of fees is questionable. The fact that the level of fees is close to the cap of 3% p.a. - with ongoing management fees on average at 1.4% p.a. - will significantly undermine their ability to deliver above benchmark performance in future years.

Pension Savings: The Real Return

2015 Edition

Country Case: France

Introduction

In 2014, the value of financial assets held by French households increased by 2.5%. 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 2014, from €1.355 billion to €1.400 billion, whereas deferred annuity plans[63] grew by 9.6% from €175 billion to €192 billion, which is still a very small part of the financial assets of households:

Table 63. Financial assets of French households at the end of 2014

	% of total financial savings	2014/2013
Currency and bank deposits	31.20%	2.10%
Investment funds	7.00%	-4.50%
Life insurance	32.90%	3.30%
Pension funds	4.50%	9.60%
Direct investments (direct holdings of bonds and shares)	24.50%	2.80%
Total	**100.00%**	**2.50%**

Source: Banque de France, «National Financial Accounts»

[63] 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).

Savings and investment products used for retirement

Life insurance contracts

In 2013 and 2014, mathematical provisions related to unit linked contracts rose more than those of "*contrats en euros*" (capital guaranteed) and their share in total mathematical provisions increased slightly from 16% to 17%. This 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 and 31% in 2014.

Table 64. Mathematical provisions (in € billion)

	2012	2013	2013/2012	2014	2014/2013
Capital-guaranteed contracts	1 161	1 195	2.90%	1 235	3.40%
Unit-linked contracts	218	239	9.40%	259	8.40%
All contracts	**1 379**	**1 433**	**3.90%**	**1 494**	4.20%

Source: FFSA

Deferred annuity contracts

Personal pension plans (PERP[64])

Thanks to higher contributions and paid benefits[65] 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%) and €12.3 billion in 2014 (+16.6%). 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 (2.2 million plans, +1.5%) and in 2013 (+2%, i.e. 85,000 new PERP contracts).

"Contrats Madelin" subscribed by self-employed

Mathematical provisions related to "*contrats Madelin*" increased by 11.6% in 2012, from €24.8 to €27.6 billion and by 13% in 2013 to €31.2 billion. The growth in 2014 is estimated to be more than 7%. There were 1,278 million outstanding contracts

[64] "*Plan d'épargne retraite populaire*".
[65] The legal framework of the PERP was established in 2003.

at the end of 2013 (+3.3%). 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*" increased by 8.9% in 2013, from €4.1 billion to €4.4 billion. 274,000 farmers had an open contract at the end of 2013.

Individual deferred annuity plans

Préfon, a deferred annuity plan open to all current and former public employees and their spouses, had close to 400,000 participants at the end of 2013. Its assets under management reached € 12.9 billion (market value) at the end of 2013[66] from € 12.3 billion at the end of 2012.

Corem, a deferred annuity plan mainly subscribed by civil servants, had 404,722 participants at the end of 2014. Its assets under management grew from €7.7 billion at the end of 2012 to €9 billion (market value) at the end of 2014[67].

CRH ("*Complementaire 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 €2.83 billion[68]. It is very difficult to find more precise information on their website.

Collective deferred annuities

Defined contribution plans under "Article 83": assets under management increased by 5% from €51.0 billion at the end of 2012 to €53.5 billion at the end of 2013.

Defined benefit plans "Article 39": assets under management grew by 5.9% from €36.2 billion at the end of 2012 to €37.2 billion at the end of 2013.

Corporate long-term savings plans

The total assets of French corporate savings plans (PEE[69] + PERCO) continued to grow in 2014, from €104.4 billion at the end of 2013 (+10%) to 109.9 billion at the

[66] As of June 2015, *Préfon* had not released its 2014 results.
[67] Combined participants and assets of *Corem* and "R1", a closed pension plan related to *Corem*.
[68] Source: *Guide d'information de la retraite complémentaire du CGOS* – no date.
[69] PEE: « Plan d'épargne entreprise » is a corporate savings plan where savings are typically blocked for a minimum of five years.

end of 2014 (+5%). 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) is still less mature than other pension plans as it started in 2003. But it continues to grow rapidly. Assets under management amounted to €8.6 billion at the end of 2013 (+28%) and 10.3 billion at the end of 2014 (+20%). 1,780,000 employees had a PERCO at the end of 2014 (an annual growth of +16%) and 191,000 companies propose this type of plan to their employees.

Charges

Flows of financial savings of French households dramatically decreased in 2011 and 2012: in 2012 the net financial savings amounted to €52 billion against €157 billion in 2010. They recovered somewhat in 2013 (€109 billion) and 2014 (€107 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. We estimate that average entry costs were around 2.6% in 2015[70]. However, High Net Worth Individuals can negotiate lower entry fees, or even avoid them, depending on the amount of their investment.

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 2013[71]. Unit-linked contract fees alone account for 0.95% in fees on average per annum on assets[72]. 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.

[70] Average of 165 contracts available for sale (source: IODS).
[71] Source: La lettre de l'Observatoire de l'épargne de l'AMF - n° 13 - Juin 2015
[72] Source: dossiers de l'épargne n°152, 2014

Taxation

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).

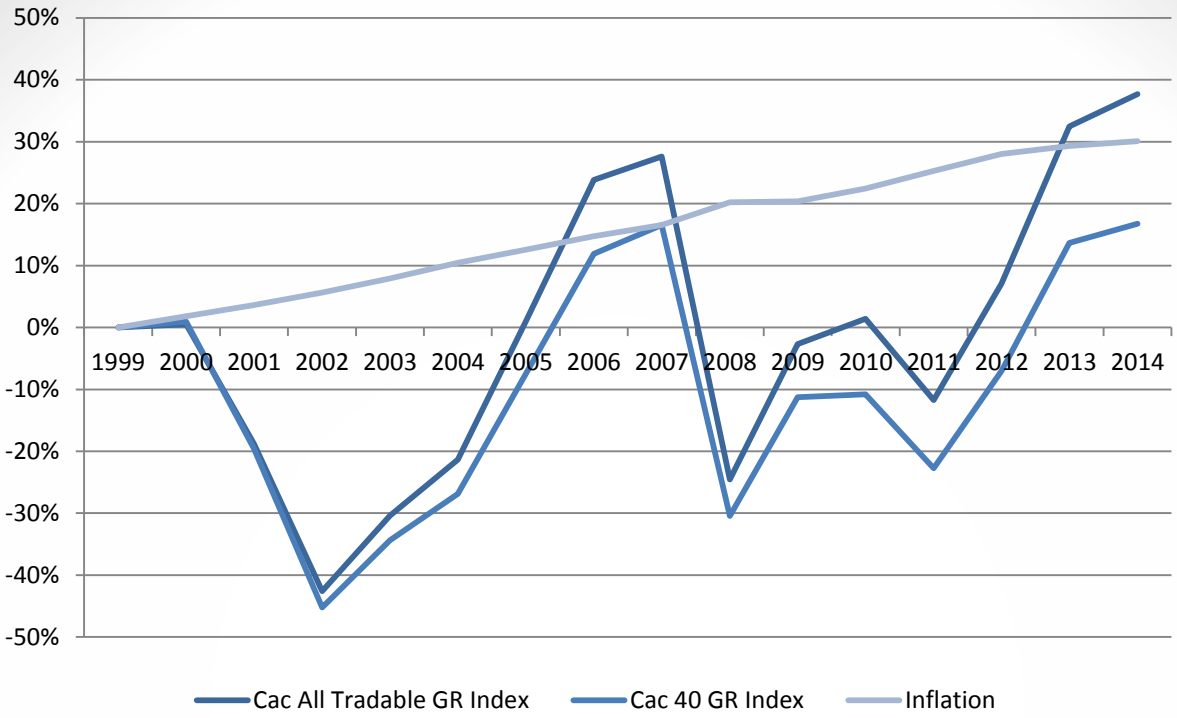
The only recent innovation was the creation of a new type of life insurance contract, named "*Eurocroissance*", a contract that does not guarantee the invested capital in case of withdrawal before 8 years after subscription. This new type of contract is supposed to incite savers to accept a higher risk in the short-term for a potentially better long-term return, for example by investing more on the equity market. By the end of 2014, 35% of insurers had a *Eurocroissance* contract on offer.

Pension and long term savings returns

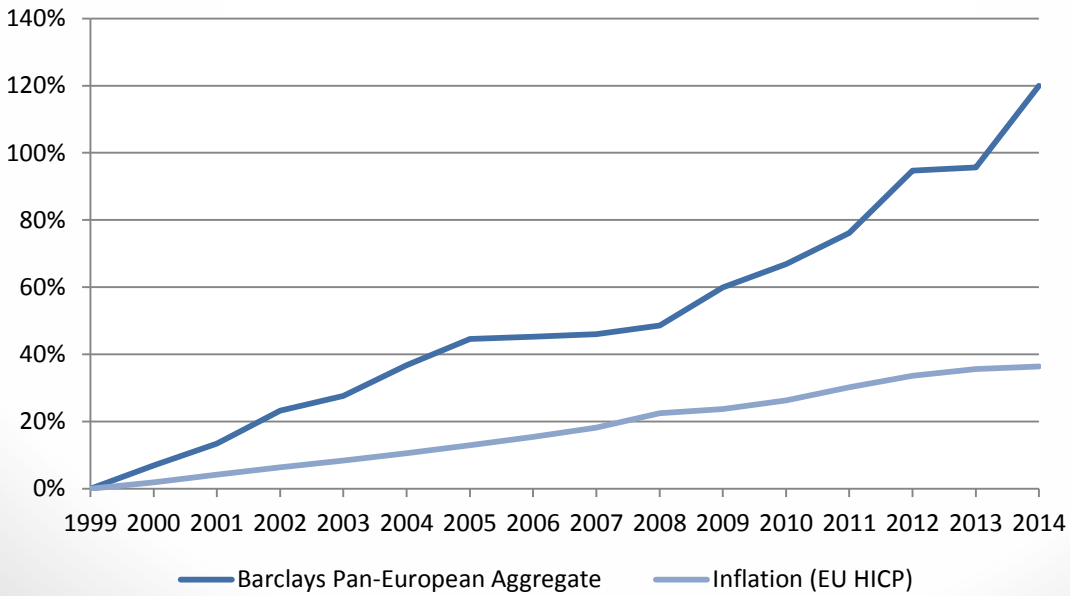
Shares and bonds (direct investment in securities)

Over the last 15 years the French equity market (dividends reinvested) returned as a whole (all shares) + 37,7%, (+2,15% annual average) and the large capitalisations only (CAC 40 index, dividends reinvested as well) returned +16.7% (+1,04% annual average): less than half, demonstrating the very strong over performance of small and mid-cap equities. Inflation over the same period was +26%. 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 was negative.

Graph 14. French Equity market performance: broad market vs. big caps market - 15 years (2000-2014)



Graph 15. Cumulated performance of European Bond index



Overall capital markets delivered significantly positive returns over the last fifteen 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 increased again in 2014 in real terms thanks to nearly zero level inflation. Such returns (+1.8%) 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 years[73].

Over a 15-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 65. The returns of French life insurance contracts – capital guaranteed (%)

	Disclosed return	Real return before tax	Real return after tax
2000	5.3	3.5	**2.8**
2001	5.3	3.8	**3.1**
2002	4.8	2.6	**1.9**
2003	4.5	2.1	**1.5**
2004	4.4	2.0	**1.4**
2005	4.2	2.4	**1.6**
2006	4.1	2.4	**1.6**
2007	4.1	1.3	**0.5**
2008	4.0	2.8	**2.0**
2009	3.6	2.6	**1.8**
2010	3.4	1.4	**0.7**
2011	3.0	0.3	**-0.3**
2012	2.9	1.4	**0.7**
2013	2.8	1.9	**1.3**
2014	2.5	2.4	**1.8**

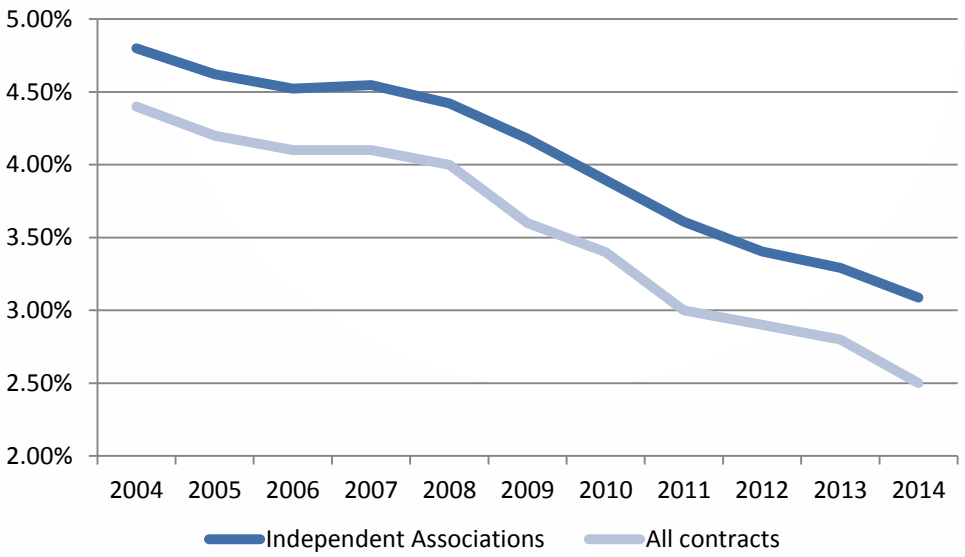
Source: FFSA, Eurostat (ICPH index), IODS calculation (deduction of HICP price index variation from disclosed returns)

[73] Christophe Benne, Alain Peuillet, "*L'assurance-vie en 2010:Une composante majeure du patrimoine des ménage*", INSEE Première n° 1361, July 2011.

Contradictory factors impacted real returns after tax again in 2014:

- Nominal returns decreased more than in the previous two years. This reflects the continued downward trend of interest rates, but, at the same time, IODS computed that French insurance companies recorded €105 billion of unrealised capital gains in 2014, due to the decrease in interest rates. These unrealised gains are not accounted for in the disclosed returns above.
- Also, these average returns mask important differences depending on the distribution network and governance: for the contracts distributed by banks, the 2014 return was only 2.38%[74], whereas the return of contracts subscribed by independent associations was 3.09%[75]. Considering that contracts distributed by banks represent 61% of the French life insurance market, this return gap of 0.71% in 2014 constitutes an opportunity cost of more than €5 billion for that year alone for savers getting their capital-guaranteed life insurance contracts from their bank instead of from independent associations.

Graph 16. Nominal returns all contracts versus independent life insurance associations



Source: FAIDER (French Federation of Independent pension savers associations)

[74] ACPR - Analyses et Synthèses nr. 47, June 2015.

[75] Sources: Faider, Facts & Figures. Independent associations representing life insurance contracts holders include AGIPI, AMAP, AMIREP, ANCRE, ASAC-FAPES and GAIPARE.

- Inflation slowed down dramatically, from 2.7% in 2011 to 0.1% in 2014[76]. 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 66. French nominal and effective tax rates on capital guaranteed life insurance returns (%)

	Inflation	Nominal tax rate	Effective* tax rate
2000	1.7	13.0	20.0
2001	1.4	13.0	19.0
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	32.0
2007	2.8	18.5	60.1
2008	1.2	18.5	26.6
2009	1.0	19.6	27.7
2010	2.0	19.6	48.5
2011	2.7	21.0	201.4
2012	1.5	23.0	49.3
2013	0.8	23.0	33.1
2014	0.1	23.0	23.9

Source: Eurostat (HICP index), IODS computation
** Effective tax rate = tax / real (net of inflation) income*

Life insurance contracts – unit-linked

Nominal returns were pushed upwards by the rise in stock prices from 2012 to 2014, against the background of declining inflation. Despite heavier taxation, real returns after taxes were above 7% in 2012 and 2013 and +3.5% in 2014.

Over a 15-year period of time, real returns after tax of unit-linked life-insurance contracts were very volatile. The worst performance was recorded in 2008 (-19.1%) and the best one in the following year (+10.4% in 2009).

[76] Source: Eurostat, HICP.

Table 67. The returns of French life insurance contracts – unit-linked (%)			
	Disclosed return	Real return before tax	Real return after tax
2000	-2.0	-3.7	-3.4
2001	-9.5	-11.0	-9.5
2002	-15.2	-17.0	-15.0
2003	8.4	5.9	4.8
2004	6.4	4.0	3.1
2005	14.4	12.4	9.8
2006	8.8	7.0	5.4
2007	1.5	-1.3	-1.5
2008	-22.0	-23.2	-19.1
2009	14.4	13.2	10.4
2010	5.2	3.1	2.1
2011	-7.0	-9.4	-8.0
2012	11.3	9.6	7.0
2013	10.7	9.8	7.3
2014	4.7	4.6	3.5

Source: FFSA, Eurostat (HICP index), own calculation (deduction of HICP price index variation from disclosed returns)

Life insurance contracts – 15 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 +21.66 % for this 15 year period of investment on guaranteed contracts, and a negative one of -11.33% on unit-linked contracts. On a yearly basis, the rates of returns would be +1.32% and -0.80% 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 15 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

a positive real performance over the same period. But the performance of unit-linked contracts is very sensitive to the period of reference.

Table 68. Real returns of all life contracts 2000-2014 (based on the relative weight of both categories in the overall mathematical reserves)		
	15-year return	**Average yearly return**
Capital guaranteed contracts	+21.66%	**1.32%**
Unit-linked contracts	-11.33%	**-0.80%**
All contracts (avg.)	**+15.22%**	**0.95%**

PERP

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 70% of total PERP assets at the end of 2014[77], the weighted average nominal return of the capital guaranteed PERPs ("fonds en euros") was 2.54% in 2014, marginally down from the 2013 level of 2.58%. 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 (64% market share) had lower returns (2.41%) than the overall average in 2014 as in 2013 (2.44%). By contrast, PERPs from mutual insurers enjoyed higher returns than the overall average (respectively 3.43% and 3.09%). 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).

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 organisations, a 2010 Law[78] made this a legal requirement from 2011 on. However,

[77] Source: ACPR - Analyses et synthèses nr. 48 – July 2015.

[78] Law n° 2010-737 of 1 July 2010 - art. 35 (V), which modified Article L441-3 of the French Insurance Code.

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.

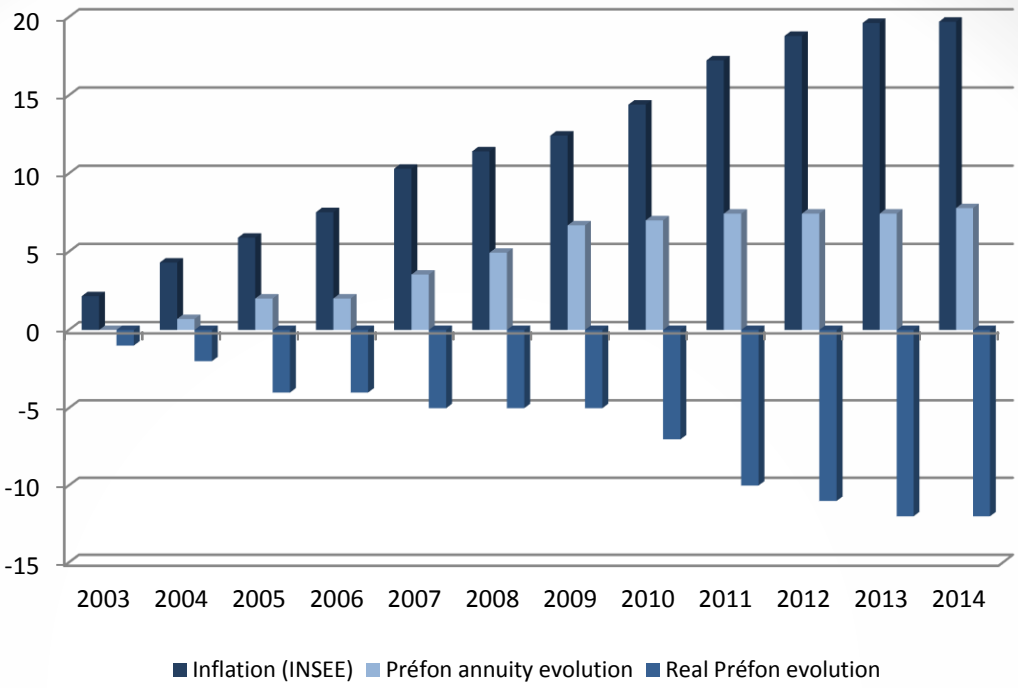
Préfon

Préfon published an accounting return (net of fees) on its investment portfolio for 2013 of 6.16% versus 4.64% in 2012. However, as mentioned above, the accounting return does not take into account the changes in the market value of assets. 2014 figures were not released at the time of print (August 2015). 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 liabilities[79] . 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"[80]. 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.

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 17). Since the end of 2002, Préfon participants have lost 12% of the real value of their entitlements (before tax). This key performance information is not disclosed to new participants[81].

[79] "*Les Echos"* 27 December 2010. This information was not disclosed by *Préfon* to the participants.
[80] 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.
[81] ARCAF http://www.EpargneRetraite.org 2014.

Graph 17. Préfon annuities real value, compounded evolution in %



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.

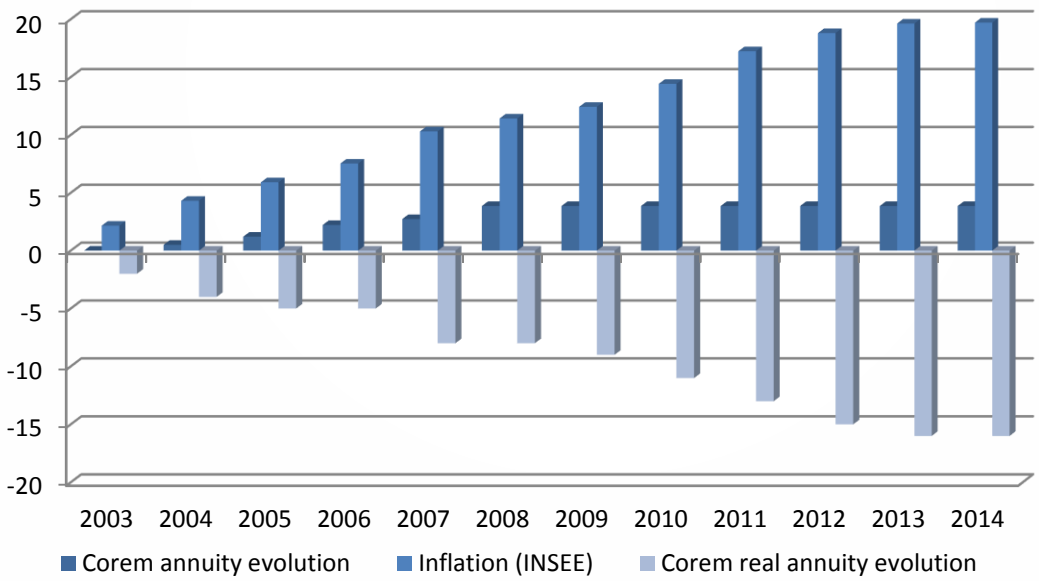
It is difficult to compute the evolution of the *Préfon* annuities paid after tax, since they are taxed at the marginal income tax rate on pensions and salaries, and since contributions have been deducted from the taxable income for income tax purposes (but not for social levies).

Corem

Corem publishes the annual return on its investments, but also does not specify if these are gross or net of fees. The accounting return for 2014 was +4.41% down from +5.04 % in 2013. 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 12 years (see graph 18). 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 rules[82].

Graph 18. Corem annuities real value, compounded evolution in %



Source: ARCAF 2014

[82] 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 102% of its liabilities.

Overall, Better Finance estimates the loss of purchasing power over the last twelve years (2002-2014) of participants to French Public Employee Pension Schemes at minus 13.5% (-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 69. French corporate savings plans - Average 15 years returns of funds 2000-2014

Fund ("FCPE") category	Equity euro	Equity intl	Equity France	Diversified	Bond	Money market	All funds
15Y Nominal return	5.1%	14.7%	-4.5%	39.3%	65.0%	29.2%	33.8%
Yearly average	0.3%	0.9%	-0.3%	2.2%	3.4%	1.7%	2.0%
15Y Real return	-18.5%	-11.0%	-25.9%	8.0%	28.0%	0.3%	3.8%
Yearly average	-1.4%	-0.8%	-2.0%	0.5%	1.7%	0.0%	0.2%

Source: AFG/Europerformance, Own calculation

We combine information provided by "Europerformance" on the performance of each category of funds with data from AFG on their relative weight in total outstanding[83] to estimate the overall returns of corporate savings.

Returns of corporate DC plans over a 15-year period, from the end of 1999 to the end of 2014, were low: the yearly average real performance of the aggregate of all funds was +0.2%.

The overall returns are influenced predominantly by the negative real return of DC equity funds, and the small positive return of balanced funds (32% of assets; +0.5% yearly real return on average) and of money market funds (34% of assets; 0% real return). Equity funds, which account for about 18% of total outstanding assets

[83] Data published by AFG relate to "FCPE L214-39". These funds are diversified funds which do not buy 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 2014.

(excluding company stock), heavily underperformed the French equity markets (see graph 14 above) on French equity returns over the last 15 years). Also DC Bond funds (around 16% of assets) showed a +1.7% average yearly real return over the period versus + 5.4 % for the European bond markets (see graph 15).

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.[84] Another reason is that equity FCPEs are not 100% invested in equities.

A limitation of such a calculation is that performance indexes provided by "Europerformance" only relate to diversified funds inside the corporate savings plans. They do not take into account the part of corporate savings which is invested in shares of the concerned company (company stock), accounting for about one third of all corporate savings plans.

Conclusions

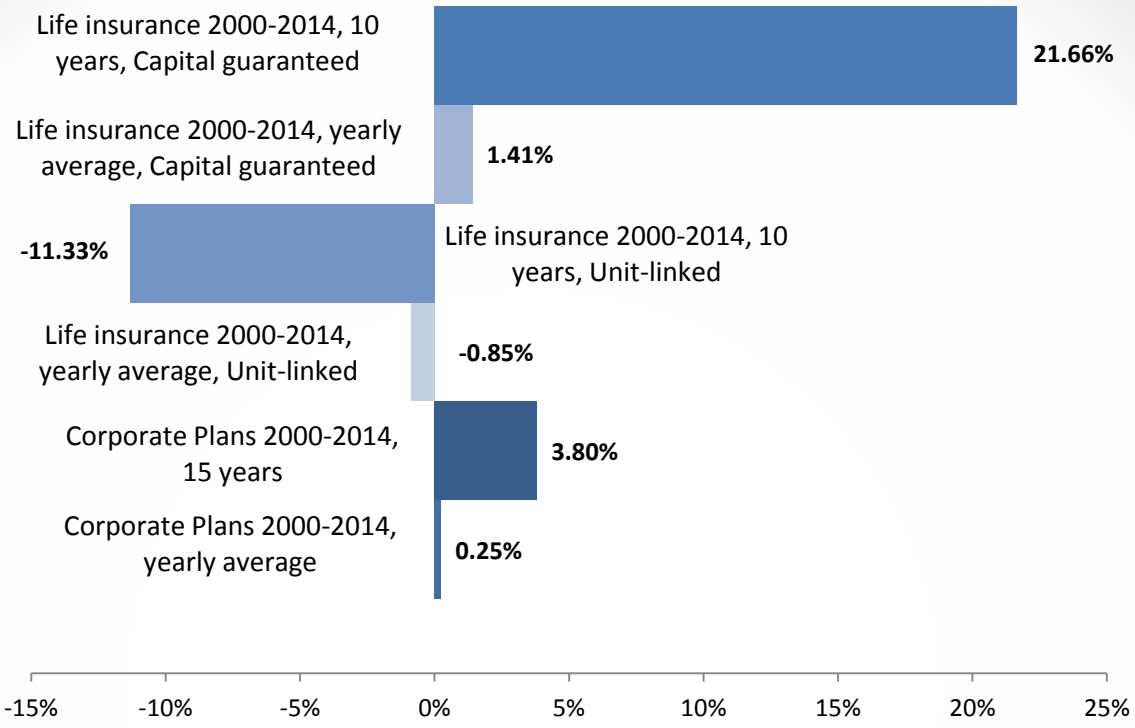
After a year of negative real returns before tax in 2011, subsequent years were more favourable to investors. Against the background of bullish stock markets and lower inflation, unit-linked life insurance contracts showed a real performance before tax of +9.6% in 2012 and +9.8% in 2013. In 2014, the rise of equity markets slowed down and the real performance of unit-linked life insurance contracts went down to +4.6%. The real performance of capital-guaranteed life insurance contracts ("contrats en euros") increased every year since 2011 and reached +2.4% in 2014, despite the general 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%. After taxation, the average real return of capital-guaranteed contracts was +0.7% in 2012, +1.3% in 2013 and +1.8% in 2014. Unit-linked contracts provided a real return of +7.0% in 2012, +7.3% in 2013 and +3.5% in 2014.

Over a 15 year period, from the end of 1999 to the end of 2014, capital-guaranteed life-insurance contracts show an average positive yearly performance of +1.32% in real terms and the unit-linked contracts a negative yearly return of -0.80%.

[84] The average management fees represented up to 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.

Graph 19. French Pension Savings Real Returns, 2000-2014



The performance of corporate plans is also very low when the time period 2000-2014 is considered. We find an average +0.2% real annual return for corporate savings plans over the last 15 years.

Pension Savings: The Real Return

2015 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 up 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[85]. In 2015, 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[86]. 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 forcing younger generations to assure an adequate retirement income through private savings[87].

[85] "*Deutsche Rentenversicherung*", 2013.
[86] 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 2015: €72,600 for the old "*Bundesländer*" ("*Beitragsbemessungsgrenze West*") and €62,400 for the new "*Bundesländer*" ("*Beitragsbemessungsgrenze Ost*").
[87] OECD, 2013a.

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 cap[88] 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)[89].

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 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

[88] *"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%.*
[89] BVI, 2014.

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 recently 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 granted[90] 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. 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

[90] 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.

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 70. 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

The "Riester" support is rarely used within the framework of occupational pension schemes. It is registered in only 1-2% of the cases[91].

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.

"*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 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

[91] *"Bundesministerium für Arbeit und Soziales"*, 2012.

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 taxation[92].

"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:

- "*Banksparplan*" (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.
- "*Fondssparplan*" (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 agreements[93].

At the end of 2014, about 16.3 million "Riester" contracts have been subscribed to. After steady increases in early periods, only about 0.3 million contracts per year have been added since 2012. Suggested explanations include the financial crisis along with less favourable media coverage of "Riester" products that has

[92] "*Bundesministerium für Arbeit und Soziales*", 2014.
[93] GDV, 2014.

reinforced general doubts[94] 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 €2100 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[95].

Table 71. Number of "Riester" contracts (in thousand)

	Pension insurance	Bank savings plan	Investment fund savings plan	Building savings agreements	Total
2001	1,400	na	na	na	1,400
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	14,463
2011	10,988	750	2,953	724	15,415
2012	11,058	781	2,989	953	15,781
2013	11,012	806	3,027	1,154	15,999
2014	11,029	814	3,071	1,377	16,291

Source: Bundesministerium für Arbeit und Soziales: http://www.bmas.de/SharedDocs/Downloads/DE/Thema-Rente/riesterrente-III-2015.pdf?__blob=publicationFile (Accessed on 03.07.15).

[94] 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.

[95] "*Bundesministerium für Arbeit und Soziales*", 2012.

"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 guarantees[96].

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" contracts[97].

Table 72. 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.

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

[96] "*Deutsche Rentenversicherung*", 2013.
[97] "*Bundesministerium für Arbeit und Soziales*", 2012.

allowable deductions or subsidies. The classic pension insurance however does play an important role in personal retirement provisions with about 23.1 million contracts[98] concluded at the end of 2013, whilst at the end of 2001, about 11.4 million contracts were concluded[99].

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.

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.

[98] 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 2014, there were 88.3 million life insurance contracts subscribed to with €819 billion AUM.
[99] GDV, 2015.

Table 73. 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	0.210

Source: OECD Global Pension Statistic

Table 74 details information on charges for all types of life insurance contracts.

Table 74. 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

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 since[100]. The German legislator only dictates that acquisition and distribution charges of "Riester" products have to be spread over 5 years so the initial cost burden is slightly alleviated. Own research shows that estimations of 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 contracts[101].

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 period[102].

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 currently discusses the implementation of a regulation that would oblige "Riester" providers to disclose binding and comparable cost figures, such as the reduction in yield ratio.

---

[100] *Rürup–Kommission*, 2003.

[101] Gasche, Bucher-Koenen, Haupt, Angstmann 2013.

[102] ZEW (*ZEW – Zentrum für Europäische Wirtschaftsforschung* – The Centre for European Economic Research), 2010.

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.

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 2014 28% 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-outs[103].

[103] "*Deutsche Rentenversicherung*", 2013.

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 2014, contributions through deferred compensation were tax exempted up to €4,656 (4% of the 2014 contribution cap +€1,800) and exempted from social security contributions up to €2,856 (4% of the 2014 contribution cap)[104]. Investment income is tax exempted while benefits are subject to taxation[105].

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.

[104] If the limits have not already been reached by employers' contributions.
[105] "*Bundesministerium für Arbeit und Soziales"*, 2013.

Table 75. 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 taxed[106].

Table 76. 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

[106] "*Bundesfinanzministerium*", 2014.

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

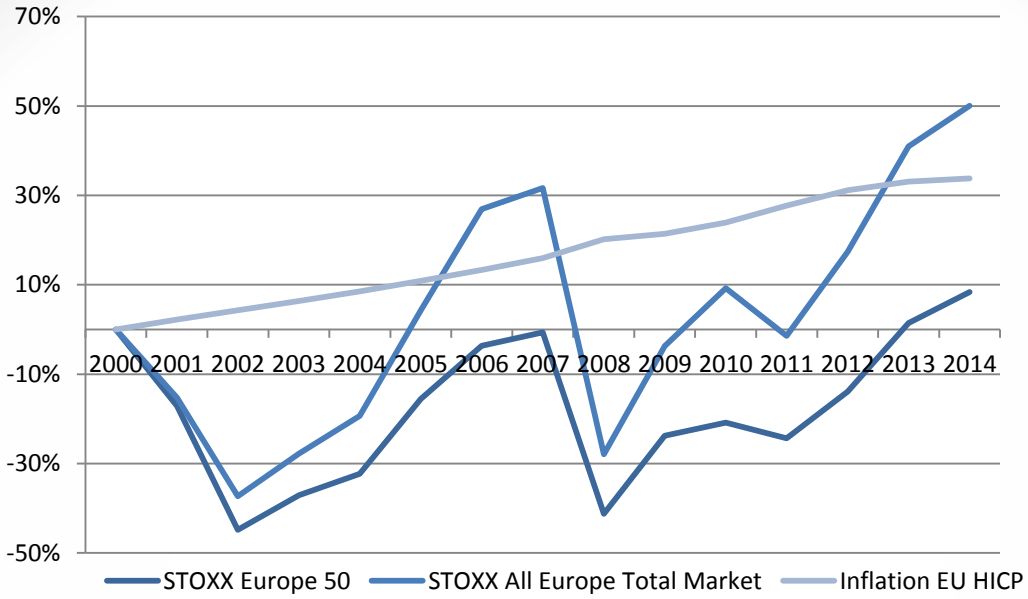
Like we have done for certain major EU capital markets in this Report, we will look at the returns of the German stock markets to judge how well capital markets performed over the period we are considering.

To this end, we based ourselves on the most widely used indexes for German stocks: the DAX (Deutscher Aktienindex), covering the 30 main companies listed on the Frankfurt stock exchanges as a “narrow” index, and the CDAX (or Composite DAX index) which covers the full German market with 439 companies listed in the General Standard or Prime Standard market segments as a “broad” index. Data for both indices are presented in terms of total returns, in order to properly compare the full return with that of other possible 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 better than the performance of the “narrow” index, with a cumulative difference of almost 20% between them. Both indices manage to outperform inflation as well (not impressively though) and this over performance mainly took place during the last two years. The outperformance for the whole 2000 to 2014 can be partly explained by the fact that German inflation has traditionally been very low.

Comparing the annualised net performance of both indices (0.67% for the DAX and 1.34% for the composite DAX) with the after tax performance of packaged products, in order to see if packaged pension products performed better than local stock markets would not be possible since the period for which we have data available is different. Moreover, the portfolio of those products includes bonds (which in this concrete period from 2000 to 2014 performed better than stocks, contrary to what tends to happen on the long run) and foreign stocks."

Graph 20. Cumulated performance of wide index (DAX 30) vs narrow index (CDAX) in Germany



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 formulas[107] (or intermixtures) can still be found. This should be kept in mind when interpreting real return results.

[107] 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"

Occupational pension schemes

"Pensionskassen" and pension funds

The following table shows real return calculations for pillar II aggregate "Pensionskassen" as well as pension funds.

Table 77. "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	2.83
Annual average	4.18	3.76	2.03

** 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 2013, 66% of the pay-outs were subject to deferred taxation.

Table 78. The real return of "Pensionskassen" and pension funds	
	Real return after charges, inflation, tax (12-year average, in %) / 2002-2013
Pensionskassen and pension funds	1.92

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 poorly[108].

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 70% 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"[109]. 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 7 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

[108] OECD, 2013b.

[109] "*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).

for a 15-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.

"Riester" pension

Table 79. "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	2.81	0.70
2006	4.18	2.77	1.36
2007	4.18	2.80	-0.30
2008	4.36	2.98	1.86
2009	4.27	2.91	2.09
2010	4.19	3.91	1.97
2011	4.05	3.79	1.46
2012	3.92	3.66	1.63
2013	3.56	3.31	2.09
2014	3.35	3.10	3.00
Annual average	4.03	3.20	1.58

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 80. "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	2.88	0.77
2006	4.2	2.79	1.38
2007	4.21	2.83	-0.27
2008	4.37	2.99	1.87
2009	4.27	2.91	2.09
2010	4.21	3.93	1.99
2011	4.07	3.81	1.48
2012	3.9	3.64	1.61
2013	3.57	3.32	2.10
2014	3.36	3.11	3.01
Annual average	4.05	3.22	1.60

Source: Assekurata; Eurostat; GDV; Own Research

As discussed above, the contributions to "Rürup" pensions are, in contrast to "Riester" pensions[110], 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 centres[111] usually only advice "Rürup" pensions if consumers are professionally established and if the payments of contributions are secured in the long run[112].

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 has to be careful with the interpretation of its return. Since contributions have to

[110] Contributions (gross premiums) and state subsidies for all kinds of "*Riester*" contracts are guaranteed.
[111] Such as, for instance, Verbraucherzentrale Hamburg e. V.
[112] Gasche, Bucher-Koenen, Haupt, Angstmann 2013.

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 phase[113] 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.

[113] 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 81. 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	5.62	3.35
2001	7.10	5.59	4.13
2002	6.12	4.63	3.39
2003	4.84	3.38	2.35
2004	4.43	2.99	0.68
2005	4.31	3.94	1.81
2006	4.24	3.9	2.46
2007	4.25	3.93	0.80
2008	4.39	4.08	2.94
2009	4.28	3.98	3.15
2010	4.20	3.92	1.98
2011	4.07	3.81	1.48
2012	3.91	3.65	1.62
2013	3.61	3.36	2.14
2014	3.40	3.15	3.05
Annual average	4.68	3.99	2.35

Source: Assekurata; Eurostat; GDV; Own Research.

Table 82. The real return of "Riester" and "Rürup" pensions

	Real return after charges, inflation, tax (10-year average, in %)
	2005-2014
***"Riester"* pension insurance**	1.48
***"Rürup"* pension**	1.50

Source: Destatis; Own Research

Table 83. The real return of personal pension insurances

	Real return after charges, inflation, tax (15-year average, in %)
	2000-2014
Personal pension insurance	2.23

Source: Destatis; Own Research

There is no information available on the return of life insurance contracts only in the context of occupational pension schemes.[114]

Conclusions

The performance of "Pensionskassen" and pension funds in real terms has been positive over the period from 2002-2013 with about 1.9% 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 1.5% for "Riester" and "Rürup" pensions over a 10-year span, and 2.3% for classic pension insurances over a 15-year span. The only year with negative performances could be witnessed 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" pensions in the course of 2015. 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.

[114] 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

2015 Edition

Country Case: Italy

Introduction

The pension macro context

Italy spends 17.3% of its GDP on State pensions, while the average OECD level is at about 9.8%[115]. Pensions, therefore, represent a massive ratio of GDP in the country. Employment rates also compare unfavourably to other OECD countries, with 46.2% (26%) of population aged 55-64 (60-64) working in 2014, while the average employment rate for OECD countries was 57.3% (45% for Italy)[116].

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 no. 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, the replacement rate, due to State pension, is about 30%. It is worth reminding 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

[115] Source: OECD, 2015 Pension Policy Notes, Italy.
[116] 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 consistent. If all pension contributions and housing 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 housing.

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 reforms carried out 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 private pensions by the public pension system has been studied extensively. However, consensus on the issue has been very low. If anything, displacement is very small or even negative (Rossi, 2009).

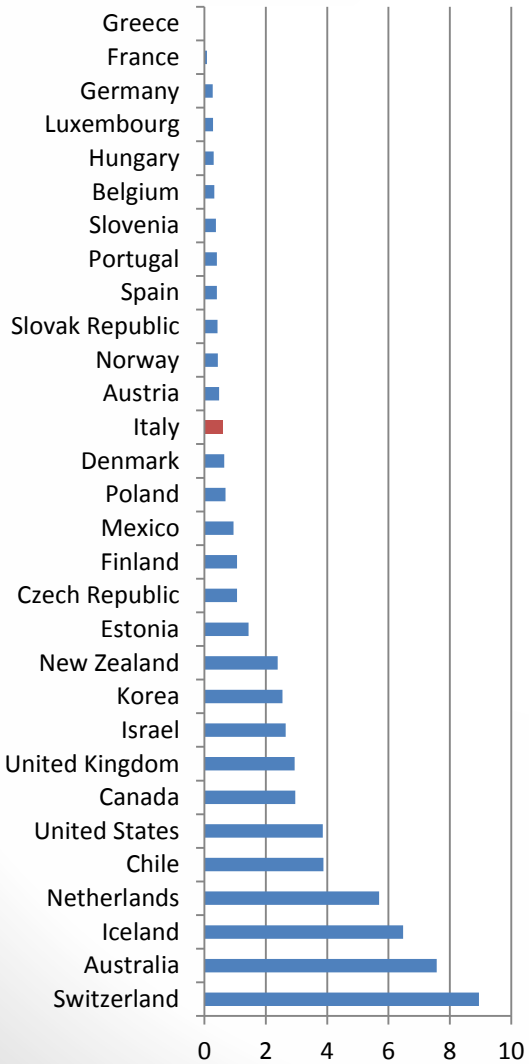
The graph below represents pension contributions to the public and private systems. If individuals are already covered by a strong public pension system (such as in Italy, where pension contributions are the highest), one can expect smaller private savings, mostly in the form of voluntary contributions to private pension funds. From the graph 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 rate, which could be seen as contradictory given the high mandatory pension contributions. In 2008, the household gross savings rate was 14%, it then declined to 10% in 2009, the lowest level ever experienced in history. This dramatic decline suggests that the bad

financial situation of the country, together with stagnant growth, translated into fewer resources for households and, thus, a lower savings rate. However, since 2012 the savings rate rose again to 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% gross earnings, which is the second highest percentage of mandatory savings for retirement purposes in Europe (behind Hungary). However, in April 2015 the Italian Constitutional Court declared

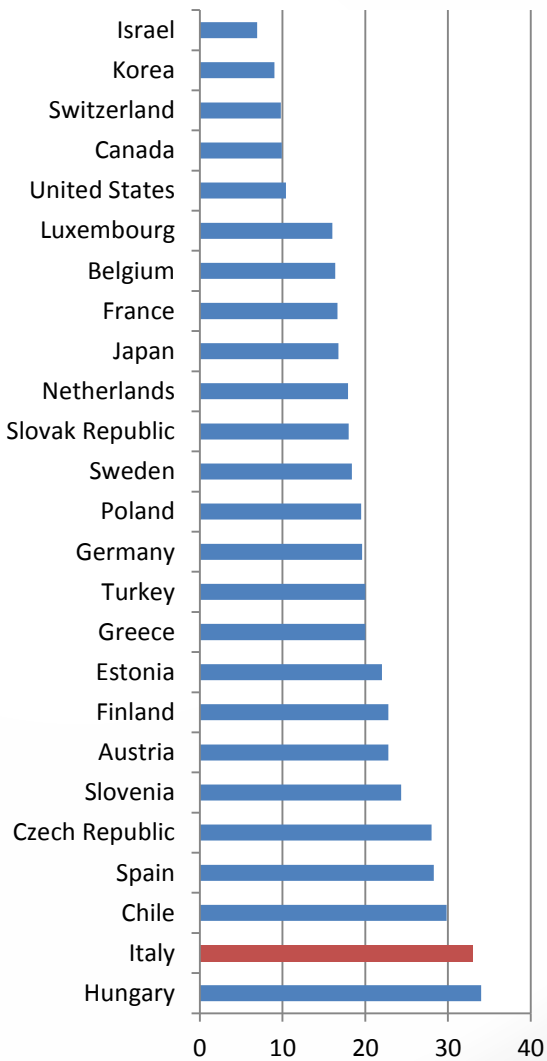
Contributions to pension funds

Graph 21a (% of GDP - 2013)



Public pension contribution rate

Grahp 21b (% of gross earnings - 2012)



that the suppression of inflation-based indexation of pensions included in the "Fornero law" was unconstitutional, a ruling that will add unforeseen costs to the first pillar.

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. 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 is 1.5% on a yearly basis, in addition to the partial inflation coverage (75%). 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 2015 stability law enabled employees in the private sector to receive their severance payment in advance with a state guarantee on bank loans to companies. The decision to implement this innovation on an experimental basis, from March 2015 to June 2018, will reduce the pot that will be availble for employees at retirement.

The tax rate was fixed at 11% until 2014, but it increased to 17%, effective as of January 2015.

The TFR represents a huge savings pot and its management underwent heavy changes from January 2007 onwards. Since then, each worker can opt for accumulating their TFR by joining a supplementary pension system. In the case of "silence", the TFR is transferred to sector funds. If a worker does not express any decision, the tacit consent applies and the funds are transferred to collective pension funds, if there are any for that specific contractual decision.

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). For those workers who work for companies with 50 or more employees and did not opt for a pension fund, the severance indemnity is transferred to the INPS (National Institute for Social Security), which manages severance payments

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 (Trattamento di Fine Rapporto, corresponding to Severance Payment) remains in the firms they work in, acting, de facto, as a loan to the firm.

If employees decide to opt for a pension fund, 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 a PIP, workers can decide the amount they contribute, a new element in the Italian framework, with no discretion in terms of pension contributions.

Table 84. Pension contribution rate (% of gross earnings)

	1994	1999	2004	2007	2009	2012	Employee 2012	Employer 2012
Italy	28.3	32.7	32.7	32.7	32.7	33.0	9.2	23.8
EU27	N/A	N/A	23.8	23.3	22.5	22.6	8.0	14.6

Source: OECD

Current Pension System

The current pension system is based on a Notional Defined Contribution system, while in the past it was a generous Defined Benefit system. The Italian pension system was intensively reformed. 1995 was the year when the move from a defined benefit system towards a defined contribution system was started, due to one of the most important laws that restructured the pension system, the Dini reform (law no. 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 Trattamento di Fine Rapporto (Severance Payment upon work termination) 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 2014, the total stock of pension funds amounted to €131 billion, a rise by 12% compared to 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 pension accumulation, albeit when State pension contributions are high, it is natural to expect that private pension funds will not have a predominant role in shaping retirement savings. This is likely to be the case for Italy.

At the end of 2014, the total number of workers enrolled in personal pensions amounted to 6.5 million (COVIP, annual report 2014). The main increase in enrolment is due to PIP's new subscribers. It is worth noting that about 200,000 individuals have very little stock stored in complementary pensions, around €100.

The vast majority of members of the complementary pension funds are employed in the private sector (about 4 million).

Table 85. Number of subscribers in Complementary Pension Funds (2014)	
Closed Pension Funds	1,944,304
Open Pension funds	1,053,139
Pre-existing Closed Pension Funds	654,000
New PIP	2,453,938
Old PIP	505,000
Total	**6,584,983**

Source: Covip, relazione annuale; 2013

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.

Table 86. Asset allocation of pension funds (end of 2013, in %)	
Treasury bonds	50.0
Corporate bonds	11.0
Equities	16.1
Mutual funds	12.5
Real estate	3.4
Alternatives	2.0
Cash	5.0
Total	**100**

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

Contractual funds are also called closed funds since only certain groups of people can join. As an example, among employees, subscription is reserved for those whose contract is regulated by a collective agreement. As for the 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. Their 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, managers' mandates are usually five years or even longer for certain types of assets.

At the end of 2014, assets managed by contractual funds amounted to €39.6 billion[117].

Open funds

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.

Like for closed funds, a depositary bank is required and administration costs can be outsourced.

At the end of 2014, assets managed by open funds amounted to €14 billion.

[117] Source: COVIP annual report, 2014.

PIP, individual pension funds

They are subscribed on individual basis only, as insurance contracts within 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.

A draft bill adopted by the Council of Ministers in 2015 foresees full portability of employees' pension contributions from occupational schemes to individual pension schemes.

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 regarding 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 from 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 of this treatment.

They can collect money directly from subscribers and distribute them without intermediaries.

The number of new members in pension plans is not increasing fast and it is driven by insurance companies and banks.

Life Insurance

Despite being a potential great channel for savings and replacement of the traditional pension channel, in Italy the life insurance market is very limited. Jappelli and Pistaferri (2008) show that a reform of tax breaks, which could have dramatically increased the demand for life insurance, in reality had 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 among households that are able to more accurately estimate 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%.

Costs did not change much in 2014 as compared to 2013. 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 0.2% after 35 years of participation. With respect to PIP, it drops from 3.6% to 1.5%. It is important to mention that small differences in terms of cost will translate into effects of considerable magnitude. Ceteris paribus, PIP (open funds) will have a final return that is 23% (17%) lower than that of closed pension funds.

There are wide differences between the different fund categories, depending on the distribution channels of the products and the fees paid to distributors. Economies of scale translate into lower costs for closed funds while no such impact can be observed on new PIPs or open funds, according to a review of individual figures by COVIP.

Table 87. Average costs at the end of 2014 (in %)*				
	2 years	5 years	10 years	35 years
Closed Funds	**0.9**	**0.5**	**0.3**	**0.2**
Min	*0.4*	*0.2*	*0.1*	*0.1*
Max	*2.6*	*1.2*	*0.7*	*0.3*
Open Funds	**2.1**	**1.4**	**1.2**	**1.1**
Min	*0.6*	*0.6*	*0.6*	*0.5*
Max	*4.5*	*2.8*	*2.1*	*1.7*
PIP (new)	**3.5**	**2.3**	**1.9**	**1.5**
Min	*0.9*	*0.9*	*0.9*	*0.7*
Max	*5.4*	*3.8*	*3.0*	*2.5*

Source: COVIP Relazione annuale; 2013

** 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).

In stage 2, accruals are taxed. 11.5% of tax is applied to the accrued income paid by the insurer or by the pension fund. From 1 January 2015, the rate increased to 20%. However, tax payable on income derived from public bonds is limited to 12.5%. The difference between the taxation rates of bonds and shares provides an incentive to change asset allocation towards the former, a trend that will probably lower returns for pension products in the future.

In order to avoid double taxation, benefits are taxed only to those corresponding to shares that were not taxed during the accumulation phase. Hence, contributions that have not been deducted, and have therefore already been 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

Below we illustrate gross returns broken down by the type of activities. The variation across returns varies by type of investment.

Table 88. Gross return by type of investments

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Closed Funds	**7.5**	**3.8**	**2.1**	**-6.3**	**8.5**	**3**	**0.1**	**8.2**	**5.4**	**7.3**
Guaranteed	-	-	-	3.1	4.6	0.2	-0.5	7.7	3.0	4.6
Bonds Only	2.1	2.6	2.2	1.6	2.9	0.4	1.7	3	1.3	1.2
Bonds Mixed	6.9	2.7	2.1	-3.9	8.1	3.6	1.1	8.1	5.0	8.1
Balanced	7.9	5.6	2.4	-9.4	10.4	3.6	-0.6	9.2	6.8	8.5
Equity	14.9	8.2	1.3	-25.0	16.1	6.2	-3.0	11.4	12.8	9.8
Open Pension Funds	**11.5**	**2.4**	**-0.4**	**-14**	**11.3**	**4.2**	**-2.4**	**9.1**	**8.1**	**7.5**
Guaranteed	2.9	1.0	1.9	1.9	4.8	0.7	-0.3	6.6	2.0	4.3
Pure Bonds	3.3	-0.2	1.6	4.9	4.0	1.0	1.0	6.4	0.8	6.9
Mixed	6.4	1.0	0.3	-2.2	6.7	2.6	0.4	8.0	3.6	8
Balanced	11.4	2.4	-0.3	-14	12.5	4.7	-2.3	10.0	8.3	8.7
Equity	16.2	3.7	-1.6	-28	17.7	7.2	-5.3	10.8	16	8.7
PIP new										
With Profits-Separate management				3.1	3.1	3.2	3.2	3.2	3.2	2.9
Unit linked				-22	14.5	4.7	-5.2	7.9	10.9	6.8
Bonds				*2.4*	*3.7*	*0.6*	*0.8*	*4.9*	*-0.3*	*3.3*
Balanced				*-8.3*	*7.8*	*2.5*	*-3.5*	*6.4*	*5.8*	*8.2*
Stocks				*-32*	*21*	*6.7*	*-7.9*	*9.6*	*17*	*7.1*

Closed funds

Table 89 estimates the total net returns for closed pension funds. The first column gives the nominal return for closed pension funds as in the COVIP report (2014 and previous years). The Second column is equal to the first after subtracting 0.2% of the return, corresponding to the percentage cost for a 35-year old subscriber. The third column is equal to the second minus the Inflation Rate (as CPI index variation in percentage). The fourth column is the net return, equal to the third, once 15% of the return has been taken out.

More specifically pension benefits are 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% of reduction in taxation of the benefit.

Between the end of 1999 and the end of 2014, the real return for closed funds, after deduction of inflation, charges and taxes, was 0.5%.

Table 89. 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	Real Return net of inflation, charges and taxes
2000	3.8	3.6	1.0	
2001	-0.4	-0.6	-2.9	
2002	-3.2	-3.4	-5.9	
2003	5.2	5.0	2.1	
2004	4.8	4.6	2.2	
2005	7.7	7.5	5.2	
2006	4.0	3.8	1.6	
2007	2.3	2.1	0.1	
2008	-6.1	-6.3	-9.5	
2009	8.7	8.5	7.6	
2010	3.2	3.0	1.4	
2011	0.3	0.1	-2.7	
2012	8.4	8.2	4.7	
2013	5.6	5.4	4.0	
2014	7.5	7.3	7.1	
Annual average	3.4	3.2	1.0	**0.5**

Source: Own calculations based on COVIP, Eurostat

Open funds

We now proceed to calculate the returns for opens funds. The difference in calculation applies to the second column only where charges are higher (1.1% for long term subscribers) and is used to calculate the return. The same tax treatment applies.

Between the end of 1999 and the end of 2014, the real return for open funds, after deduction of inflation, charges and taxes, has been negative (-0.64% per year on average).

Table 90. 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	4.1	3.0	0.4	
2001	-4.6	-5.6	-7.8	
2002	-12.2	-13.1	-15.4	
2003	6.9	5.7	2.8	
2004	5.4	4.3	2.0	
2005	12.7	11.5	9.1	
2006	3.5	2.4	0.2	
2007	0.7	-0.4	-2.4	
2008	-13.1	-14.0	-16.9	
2009	12.5	11.3	10.4	
2010	5.3	4.2	2.6	
2011	-1.3	-2.4	-5.2	
2012	10.3	9.1	5.6	
2013	9.3	8.1	6.7	
2014	8.7	7.5	7.3	
Annual average	2.9	1.8	-0.4	**-0.64**

Source: Own calculations based on COVIP, Eurostat

Individual Pension Plans

As regards Individual Pension Plans, which have the highest costs of all pension products in Italy? The charges applied to PIPs are 1.5% for long term subscribers.

The performance of the PIPs differs according to types. With-Profits policies have a comparable performance to Open Funds while Unit-Linked PIPs have a negative average performance on the market and are very volatile. However, this could be associated with the relative short timeframe considered, corresponding to the financial crisis years. Moreover, given the shorter time frame, the high variability might lead to misleading conclusions.

Table 91. 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	5.1	3.50	0.0	
2009	5.1	3.50	2.7	
2010	5.4	3.80	2.2	
2011	5.1	3.50	0.6	
2012	5.4	3.80	0.5	
2013	4.7	3.2	1.9	
2014	4.4	2.9	2.7	
Annual average	4.68	3.13	1.17	**0.7**

Source: Own calculations based on COVIP, Eurostat

Table 92. PIP Unit Link: 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	-23.8	-24.9	-27.44	
2009	18.0	16.3	15.38	
2010	6.8	5.2	3.54	
2011	-4.3	-5.7	-8.36	
2012	10.5	8.9	5.42	
2013	12.6	10.9	9.48	
2014	8.4	6.8	6.59	
Annual average	3.34	1.82	-0.12	**-0.39**

Source: Own calculations based on COVIP, Eurostat

Conclusions

The Italian Pension System has a strong State connotation, which is likely to displace the Complementary Pension Funds. Currently, 6.6 million individuals are enrolled in pension funds. Given the mandatory contribution rate amounting to 33% for pension contributions only, and the fact that the system is pre-funded, the

contribution to the pension system will translate one to one in terms of future pension incomes. It is therefore plausible, that under these circumstances the development of the second and third pillars is taking a long time to take off.

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 the period 2000-2014 on closed and open funds and PIPs.

With profit PIPs showed the highest returns (an average of 0.70%) but their history (since 2008) is shorter than that of closed and open funds. The performance of unit-linked PIPs was slightly negative. Since 2000, closed funds recorded a slightly positive average return, while open funds recorded a negative one of -0.64%.

Compared to 2013, the investment performance of closed funds, open funds and with-profit PIPs improved in 2014, while in the case of unit-linked PIPs it deteriorated.

The number of pension fund members slightly dropped in 2014 and COVIP recorded an increasing number of pension fund members discontinuing contributions. The higher tax rate on pension benefits that applies to pension benefits from 2015 onwards will worsen the return on savings for retirement and might constitute a disincentive for active individuals from joining pension funds.

Pension Savings: The Real Return

2015 Edition

Country Case: Latvia

Introduction

Latvia is currently operating a multi-pillar pension system based on three pension pillars. The reform followed World Bank recommendations in favour of creating a mixed unfunded PAYG and funded pension pillar. Since 2001, the 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 a multi-pillar pension system allows for a different approach for each individual pillar, with as overall objective to ensure an adequate pension for all individuals and the stability of the system and address the demographic challenges.

The Latvian pension reform started in 1995, when it was decided to implement a three pillar pension system. Firstly, the shift from the old Soviet-styled PAYG pension system to the notionally 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 it came into force as of 1 January 1996. The state mandatory funded pension scheme (pillar II) started operations as of July 2001. The private pension funds (pillar III) have been operating since 1998[118].

From the point of individuals therefore the Latvian pension system combines two aspects: personal interest in building wealth (based on the level of contributions and the length of the saving period) and intergenerational solidarity.

[118] Groduma, 2002.

The Latvian NDC PAYG based pillar I was introduced by a partial reform in January 1996 and represents a mandatory scheme for all economically active people, 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. The Latvian pillar I is organised as a NDC scheme, where the notional value of career contributions is recorded on each contributor's personal account. Prior to the pension calculation, the pension capital is updated and the pension amount is recalculated in accordance with the laws and regulations.

The pension pillar II is in fact a state organised pillar I bis, meaning that part of the individually paid social contributions are channelled to pension pillar II and recorded on individual pension accounts. Monthly contributions are invested into individually chosen investment plans (pension funds) managed by a private pension fund management company. Pillar II was effectively launched in July 2001 and completed the multi-pillar based pension reform in Latvia.

Pillar III (or voluntary private pension scheme) was launched in July 1998 and is organised as a private voluntary pension scheme. It accumulates individual contributions as well as employer contributions made on behalf of individual employees to the selected voluntary pension fund.

Table 93. Multi-pillar pension system in Latvia

Pillar I State Pension	Pillar II State Funded pension	Pillar III Voluntary private pension
Mandatory	Mandatory	Voluntary
NDC PAYG	Funded	Funded
Financed by social insurance contributions	DC	DC
Benefits paid via State Social Insurance Agency	Financed by social insurance contributions	Privately managed two types of pension plans:
Publicly managed	Individual pension accounts	1. open (individual)
	Privately (and publicly) managed pension funds	2. closed (quasi occupational)

Source: own elaboration, 2014

Pillar I – State Pension Insurance

The 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 system records the amount of paid contributions for each individual.

The state old-age pension is paid out of social insurance contributions. The total level of social insurance contributions is 34.09% of salary or gross income (the employer contributes 23.59% and the employee 10.5%; self-employed people pay 27.52%). Of the total contribution in 2014, 16% of covered earnings finance the pillar I NDC pension and 4% of covered earnings are redirected to the individual account under pillar II. The remainder finances the disability pension, health and maternity benefits, work injury benefits, parents' benefits and unemployment benefits.

In 2014 the minimum amount for annual declared earnings used to calculate contributions is €3,840; while the maximum amount of annual earnings used to calculate contributions is €46,400.

The statutory retirement age in Latvia in 2014 is 62 and 3 months both for men and women. However the law accommodates a gradual increase of the retirement age by 3 months every year until the general retirement age of 65 years is reached in 2025. Early pension is possible in Latvia, for which two conditions should be met: the applicant should have reached the age of 60 and three months with at least 30 years of coverage (gradually rising by three months a year until reaching 65 in 2025).

The old-age pension is based on the insured person's contributions, the annual capital growth adjusted according to changes in the earnings index and average life expectancy. Old age pension is calculated 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 argued that the Latvian NDC PAYG pillar I shifted towards a situation where only 20% of all retirees receive a pension below €213 (equal to 40% of the average net salary of the working population). However, considering the level of contributions to 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 pensions in Latvia are shown in the table below.

Table 94. 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%

Source: Own calculations based on Central Statistical Bureau of Latvia (http://data.csb.gov.lv), 2014

The minimum old-age pension mechanism was 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 2014) 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 95. 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, 2014 (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 part of everyone's social contributions is invested into the financial markets and accumulated on personal accounts of pillar II participants. Everyone who is socially insured is entitled to be a participant in pillar II, provided that on 1 July of 2001 the person was not older than 50. Participation in the second tier is compulsory for those who had not reached the age of 30 on 1 July of 2001 (were born after 1 July 1971).

Gradually all employees will be involved in pillar II. Those who were between the ages of 30 and 49 (born from 2 July 1951 up until 1 July 1971) at the moment the scheme was launched could and still can join the system voluntarily. The administration of pillar II contributions is carried out by the State Social Insurance Agency, which collects and redirects 20% of old-age pension insurance contributions between the individual accounts of the NDC and FDC pillar pension scheme. According the Law on State Funded Pensions the State Social Insurance Agency also performs additional tasks related to the administration of pillar II.

The Ministry of Welfare, as stipulated by the Law on State Funded Pensions, performs the supervision of the funded pension scheme and has the right to request and receive an annual account from the Agency regarding the operation of the funded pension scheme.

Total redistribution of the old-age pension contributions between pillars I and II of the pension scheme is shown in the table below.

Table 96. 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, 2015

Contributions into pillar II were raised continually following the adopted reforms. However, during the financial crisis, the contributions into pillar II were reduced to 2%, with growth gradually picking up again after 2012. It should be mentioned that the largest part of contributions (8% of salary) had been allocated to the pension fund in 2008, just before the crash of financial markets. This also significantly influenced the performance of these funds, which is analysed in the chapter "Pension Returns". Investments are performed by a third party: licensed fund managers.

The pension is based on the insured person's account balance. Upon retiring the participant of pillar II will be able to make a choice: either to 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 his or her choice and buy a single annuity.

Several changes have been made in the area of managing the 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 - that invested the funds exclusively into Latvian state bonds and into the deposits of the largest and safest Latvian banks. As of 1 January 2003 the private fund managers became involved and currently the participants of pillar II are in a position to choose their fund manager themselves. The private fund managers also offer to invest the pension capital into corporate bonds, shares and foreign securities. Participants of the system are entitled to change their fund manager once a year and investment plans with the same fund manager twice a year. The performance

of private fund managers is supervised by the Finance and Capital Market Commission[119].

Pillar III – Voluntary private pensions

The voluntary private pension scheme or the 3rd pension pillar was launched in July 1998, and provides the opportunity to create additional voluntary savings in addition to the state guaranteed pension pillars I and II. The amount of contributions that the individual and/or the employer regularly pay into the pension fund is invested in different securities, depending on the chosen investment strategy.

The Law on Private Pension Funds foresees that the following entities have the right to establish private funds: Latvian commercial banks that can collect deposits from individuals, insurance companies which are entitled to provide life insurance, as well as legal persons. These private pension funds invest the contributed money with the aim of not only maintaining but also increasing 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
2. closed pension funds (only one operating in Latvia in 2014).

Pension scheme participants participate directly in a pension scheme by entering into an individual participating 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 entered into a collective participating contract with an open or closed pension fund. A collective participating contract with a closed pension fund may be entered into only in case the relevant employer is also one of the founders (stockholders) of the same closed pension fund. Legal relationships between the employer and employees arising in connection with the implementation of a pension scheme and participation of employees therein are regulated by the employment contract or collective work agreement. Acknowledging the fact that employers may enter into a collective agreement with employees and establish a pension scheme, the voluntary private pension funds could then be recognised as a collective pension scheme.

[119] http://www.fktk.lv/en/

In case an employer entered into a collective participating contract with an open or closed pension fund and more than 100 employees of a particular employer joined the pension fund, the employer and employees who participate in the pension scheme will jointly establish a pension scheme committee with equal representation between employer and employees.

According to the Law on Private Pension Funds, a saver can access the accumulated pension capital in a private pension fund from the age of 55 onwards. In order to receive pillar III's accrued pension, an individual must submit an application for the accumulated pension capital with the respective pension fund. The supervisory authority for all voluntary private pension funds in Latvia is the Financial and Capital Market Commission.

Pension Vehicles

Pillar II – State Funded Pensions

The only pension vehicles allowed by the Law of State Funded Pensions for the state funded pension scheme are the pension funds. The law sets that a funded pension scheme is a State organised set of measures for making contributions, the administration of funds contributed and the 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 contributions for old age pensions in financial instruments, and other assets in accordance with the procedures specified by Law.

Currently (as of 31 December 2014), 23 pension funds as part of the state funded pension scheme have been operational on the pillar II market. There is no specific legal recognition of the 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 a type of pension fund that responds to demand in order to succeed in 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 the prospectus of the relevant pension fund and in a key information document for participants of the funded pension 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. The pension fund

prospectus must clearly define the risk-reward profile and indicate the proposed investment strategy with a respective expected portfolio structure.

Although there is no legal recognition of the types of pension funds, they can basically be divided into three types based on their risk/return profiles[120]:

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.

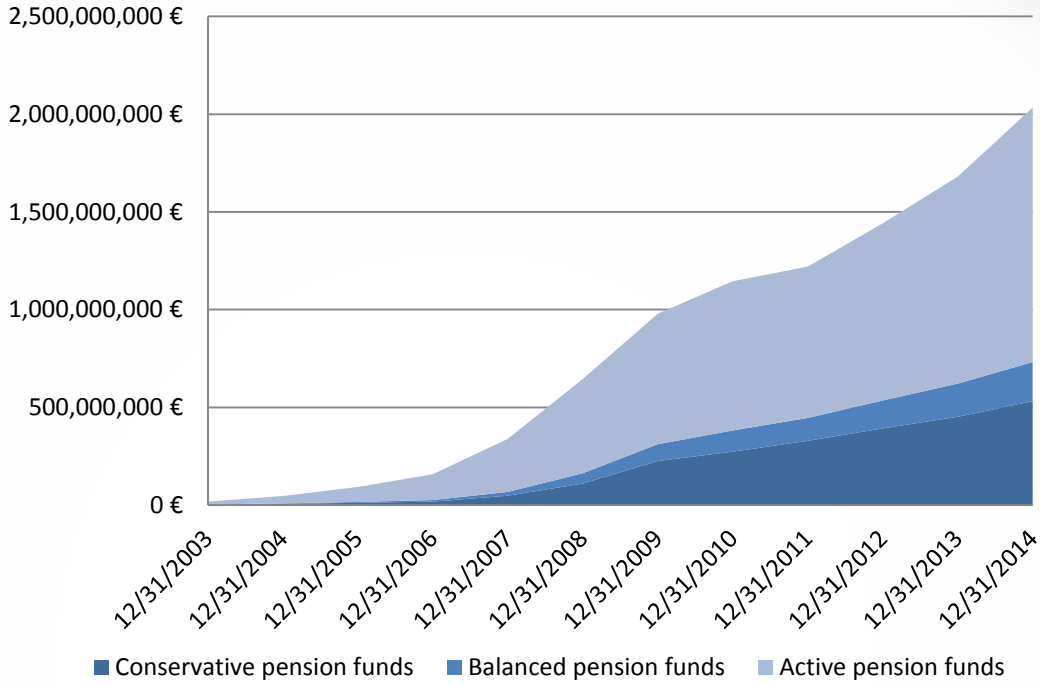
The legislation sets relatively strict quantitative investment limits for pension funds, in an attempt to supplement the prudence principle.

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 the different types of pension funds according to their investment strategy.

Contrary to many other EU 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.

[120] There are more than 20 different quantitative limits in legislation. Together equity or equity based securities may not exceed 50% of AuM (various types of capital securities, equity UCITS funds, AIFs and other similar types of financial instruments are considered equity investments).

Graph 22. Assets under Management in State Funded Pension Scheme pension vehicles

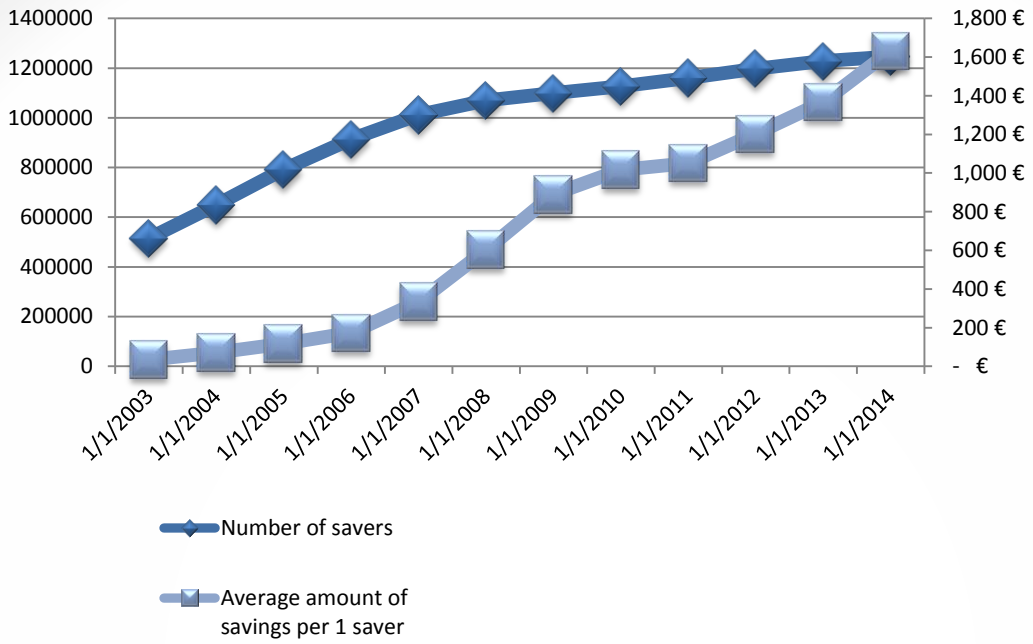


Source: own calculations (http://www.manapensija.lv/en/2nd-pension-pillar/statistics/data), 2015

Latvian savers have a preference for stable investment strategies. However, the financial crisis has changed the proportion of assets in favour of more conservative investment strategies. The total amount of assets under management is rising constantly.

Since 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 their individual accounts is rising. The chart below indicates that the pillar II market is starting to be saturated in as far as the number of participants is concerned.

Graph 23. 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), 2015

The increase in the amount of assets under management is also due to the rapid pick-up rate of the average amount of savings per participant. It remains though, at relatively low levels.

The list of the 23 pension funds that are active on the pillar II market in Latvia offered by 7 financial institutions is presented in the table below.

Table 97. 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*
* Citadele pensiju plāns Blūzs	Active	*29.6.2006*
* Citadele pensiju plāns Džezs	Active	*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*
* SEB iegulījumu plāns "Safari"	Active	*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/, 2014

** merged into other pension fund in 2014*

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, accessible only to staff of the (corporate) fund founders
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 since closed private pension funds (there is currently only one operating in Latvia) could be recognised as a typical occupational pension fund. However, open private pension funds are more personal ones.

The Law on Private Pension Funds, which is the main legislative document regulating the voluntary private pension scheme in Latvia, provides a wide range of possibilities to organise 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 and regulates 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.

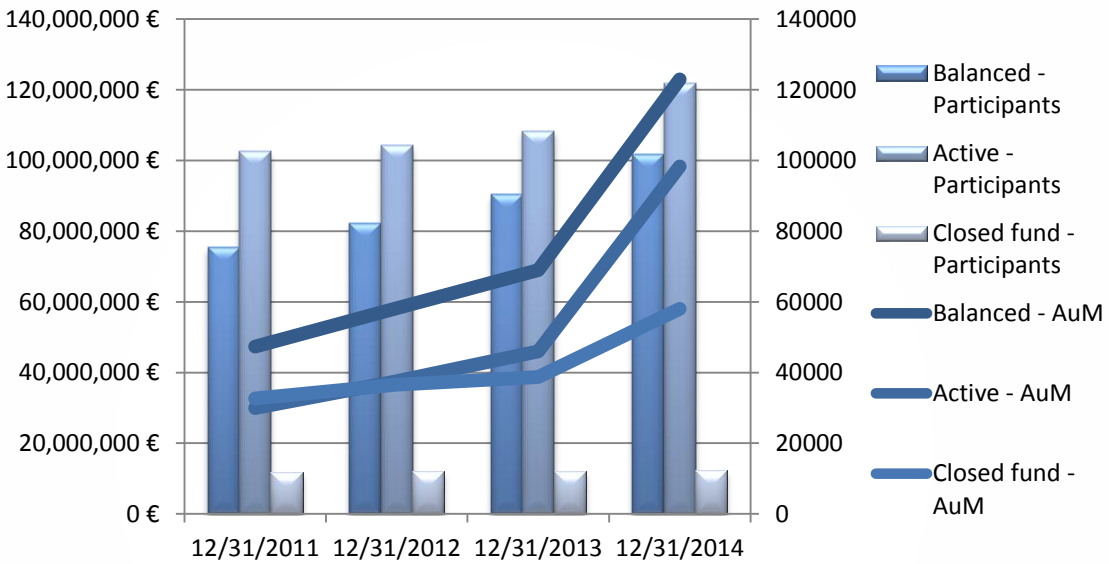
These founders usually hire a management company that creates a different pension plan managed under one pension fund and manages the investment activities. Pension scheme assets can be managed only by the following commercial companies:

- 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 until the year 2011 is rather low; therefore the analysis of the market and

main pension vehicles was performed with publicly available data starting from 31 December 2011. Currently (as of 31 December 2014) 17 open private pension funds and 1 closed private pension fund exist on the market. The structure of the pension vehicles according to the type of fund and investment strategy offered is presented in the graph below.

Graph 24. Pillar III pension vehicles market share based on AuM and number of participants



Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2015

It should be noted that balanced pension funds have around 40% market share based on AuM, with only four funds on offer. Active funds – for which the investment strategy allows more equity investments - are gaining market share. 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 the active pension funds. The GE Money Fund 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% market share based on the number of participants commands more than 25% of the market share based on assets under management, which means that the closed pension fund has the highest level of assets per participant.

The development of existing pension funds and respective assets under management are shown in the table below.

Table 98. Pillar III Pension vehicles AuM

	Private Pension Fund Name	Inception Day	31.12.2011	31.12.2012	31.12.2013	31.12.2014
Balanced	Citadele Sabalansētais	*30.9.1999*	€ 11 217 000	€ 12 967 000	€ 14 668 000	€ 23 429 382
	Nordea sabalansētais pensiju plāns	*18.10.2011*	€ 46 000	€ 857 000	€ 1 937 000	€ 5 336 000
	"SEB - Sabalansētais" pensiju plāns	*31.7.2000*	€ 31 731 000	€ 37 832 000	€ 42 315 000	€ 70 912 757
	Swedbank pensiju plāns Stabilitāte+25	*14.7.2003*	€ 4 335 000	€ 6 582 000	€ 10 030 000	€ 23 299 742
Active	Citadele Aktīvais	*21.3.2000*	€ 3 700 000	€ 4 310 000	€ 4 877 000	€ 7 732 734
	Citadele Aktīvais EUR	*12.10.2007*	€ 2 089 000	€ 2 559 000	€ 3 254 000	€ 4 540 369
	Finasta plāns "Dzintars - Konservatīvais"	*23.10.1998*	-	€ 338 000	€ 332 000	€ 497 859
	Finasta plāns "Jūra - Aktīvais"	*7.3.2008*	€ 84 000	€ 39 000	€ 43 000	€ 62 412
	Finasta plāns "Saule - Sabalansētais"	*7.3.2008*	€ 504 000	€ 447 000	€ 450 000	€ 648 912
	Citadele plāns "Rumba"	*8.1.2005*	€ 456 000	€ 464 000	€ 287 000	€ 257 051
	Citadele plāns "Tvists"	*10.4.2007*	€ 108 000	€ 108 000	€ 91 000	€ 33 404
	Nordea progresīvais pensiju plāns	*18.10.2011*	€ 26 000	€ 537 000	€ 1 211 000	€ 3 055 000
	"SEB Aktīvais" pensiju plāns	*15.9.2004*	€ 7 164 000	€ 8 305 000	€ 9 407 000	€ 34 043 653
	Swedbank pensiju plāns Dinamika+60	*1.8.2003*	€ 11 376 000	€ 14 806 000	€ 18 995 000	€ 34 575 188
	Swedbank pensiju plāns Dinamika+100	*27.12.2006*	€ 3 390 000	€ 4 339 000	€ 5 463 000	€ 9 639 397
	Citadele Aktīvais USD	*1.4.2006*	€ 405 000	€ 482 000	€ 587 000	€ 1 064 316
	Swedbank pensiju plāns Dinamika+(USD)	*14.7.2003*	€ 650 000	€ 841 000	€ 1 015 000	€ 2 209 404
Closed fund	"Pirmais Pensiju Plāns"	*1.12.1999*	€ 32 706 000	€ 36 517 000	€ 38 744 000	€ 59 369 000

Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2015

Charges

Pillar II – State Funded Pensions

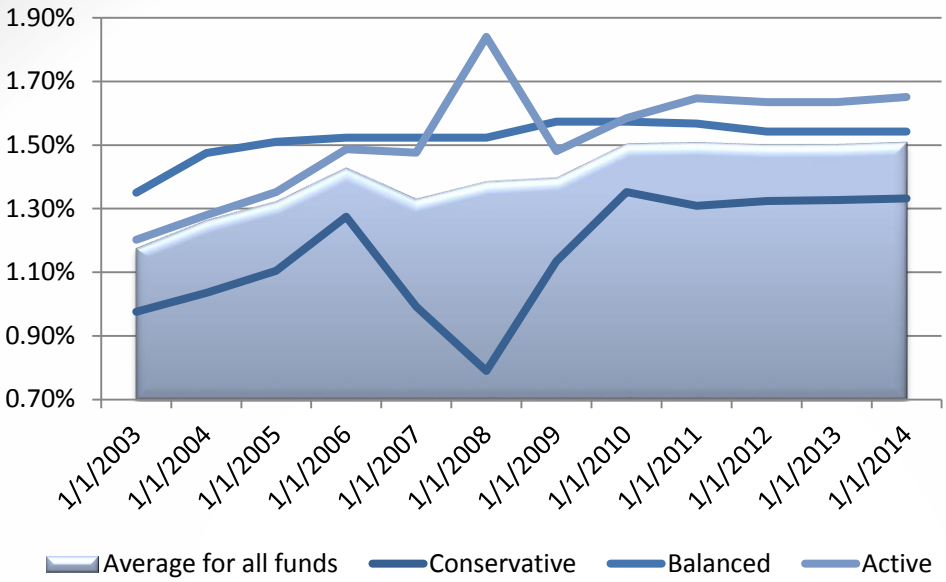
Latvia adopted a cap on fees within pillar II, which obliges pension fund managers to not exceed a maximum fee level for the management of investment plans, including the fixed and variable parts of these fees, for the last 12-month period, of:

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.

By law, fees related to pension funds that can be charged by fund managers can either be seen as fixed or variable. The law stipulates that payment to the fund manager of the funded pension scheme 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.

Graph 25. Average fees charged to the pillar II pension funds in Latvia



Source: Own calculation based on monthly reports, annual reports and prospectuses of pension funds

There is a rather uncommon trend regarding fee policies in Latvia. While the average relative charges in most of the EU countries appear to be stable or decreasing (Hernandez and Stewart, 2008), this is not the case in Latvia. The average level of fees charged to pension funds are increasing both on a relative as well as absolute level, which could be seen as detrimental to the long-term savings of Latvian savers.

Table 99. Pillar II Pension Funds' Fees in 2014		
Pension Fund Name	**Investment strategy**	**Fund fees and charges**
Citadele Aktīvais pensiju plāns	Active	1.68%
Citadele pensiju plāns Blūzs	Active	1.25%
Citadele pensiju plāns Džezs	Active	1.68%
Citadele Universālais pensiju plāns	Conservative	1.25%
DNB Aktīvais ieguldījumu plāns	Active	1.68%
DNB Konservatīvais ieguldījumu plāns	Conservative	1.38%
DNB Sabalansētais ieguldījumu plāns	Balanced	1.48%
Finasta Konservatīvais ieguldījumu plāns	Conservative	1.37%
Finasta pensiju plāns "EKSTRA PLUS"	Active	1.68%
Finasta pensiju plāns "KOMFORTS"	Balanced	1.64%
Nordea aktīvais ieguldījumu plāns	Active	1.68%
Nordea konservatīvais ieguldījumu plāns	Conservative	1.28%
NORVIK IPS plāns "Daugava"	Conservative	1.55%
NORVIK IPS plāns "Gauja"	Active	1.61%
NORVIK IPS plāns "Venta"	Balanced	1.55%
SEB aktīvais plāns	Active	1.70%
SEB Eiropas plāns	Active	1.70%
SEB iegulījumu plāns "Safari"	Active	1.83%
SEB konservatīvais plāns	Conservative	1.53%
SEB Latvijas plāns	Conservative	1.15%
SEB sabalansētais plāns	Balanced	1.50%
Swedbank pensiju ieguldījumu plāns "Dinamika"	Active	1.70%
Swedbank pensiju ieguldījumu plāns "Stabilitāte"	Conservative	1.15%

Source: Own research based on the most recent terms of respective pension funds, 2015

Pillar III – Voluntary private pensions

Voluntary private pensions typically have a lower level of transparency when it comes to their fee policies. In most cases only current fees and charges are disclosed. Historical data on the level of fund fees is almost impossible to track via publicly accessible sources.

Most recent charges related to voluntary private pension funds are presented in the table below. Administration costs, fund managers' commissions and custodian bank's commission are based on the assets under management. Funds managed by Nordea and Swedbank use mixed administration costs, which are a combination of entry fees and ongoing charges.

Table 100. Voluntary Private Pension Funds' Fees[121] (as of 31.12.2014)		
Citadele Aktīvais	Administration Cost	1.50%
	Fund Manager´s Commission	0.90%
	Custodian bank´s commission	0.20%
Citadele Aktīvais EUR	Administration Cost	1.50%
	Fund Manager´s Commission	0.90%
	Custodian bank´s commission	0.20%
Citadele Aktīvais USD	Administration Cost	1.50%
	Fund Manager´s commission	0.90%
	Custodian bank´s commission	0.20%
Citadele Sabalansētais	Administration Cost	1.50%
	Fund Manager´s commission	0.75%
	Custodian bank´s commission	0.20%
Finasta plāns "Dzintars - Konservatīvais"	Administration Cost	2.00%
	Fund Manager´s commission	0.70%
	Custodian bank´s commission	0.50%
Finasta plāns "Jūra - Aktīvais"	Administration Cost	1.00%
	Fund Manager´s commission	1.00%
	Custodian bank´s commission	0.50%
Finasta plāns "Saule - Sabalansētais"	Administration Cost	1.00%
	Fund Manager´s commission	1.00%
	Custodian bank´s commission	0.50%
Nordea progresīvais pensiju plāns	Administration Cost	2% from each payment and 1% per year from average assets
	Fund Manager´s commission	1.60%
	Custodian bank´s commission	0.15%
Nordea sabalansētais pensiju plāns	Administration Cost	1% from each payment and 1% per year from average assets
	Fund Manager´s commission	1.10%
	Custodian bank´s commission	0.15%
"Pirmais Pensiju Plāns"	Administration Cost	1.50%
	Fund Manager´s commission	1.30%

[121] All charges are retrieved from prospectuses and monthly reports of each pension fund. Every fee is asset based on AuM if not stated differently.

	Custodian bank´s commission	0.20%
"SEB Aktīvais" pensiju plāns	Administration Cost	1.50%
	Fund Manager´s commission	0.90%
	Custodian bank´s commission	0.20%
"SEB - Sabalansētais" pensiju plāns	Administration Cost	1.50%
	Fund Manager´s commission	0.90%
	Custodian bank´s commission	0.20%
Swedbank pensiju plāns Dinamika+(USD)	Administration Cost	2% from payments; 0.6% from assets per year
	Fund Manager´s commission	1.25%
	Custodian bank´s commission	0.20%
Swedbank pensiju plāns Dinamika+100	Administration Cost	2% from payments; 1% from assets per year
	Fund Manager´s commission	1.60%
	Custodian bank´s commission	0.20%
Swedbank pensiju plāns Dinamika+60	Administration Cost	2% from payments; 0.6% from assets per year
	Fund Manager´s commission	1.25%
	Custodian bank´s commission	0.20%
Swedbank pensiju plāns Stabilitāte+25	Administration Cost	2% from payments; 0.6% from assets per year
	Fund Manager´s commission	0.90%
	Custodian bank´s commission	0.20%

Source: Own research based on supplementary pension funds' Prospectuses and Terms, as of 31.12.2014

Comparing the charges applied to voluntary private pension funds to those applied to state funded pension funds, one notes that 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 to the pension fund, the procedures for covering the expenses of the pension scheme and provision of 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 pension 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. The personal income tax rate is 24% and the pension benefits obtained from the NDC PAYG scheme (pillar I) and State funded pension scheme (pillar II) are considered to be 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. In case of pension benefits, the non-taxable minimum for people who have been granted a pension is €235 per month in 2014.

Pillar III – Voluntary private pensions

Latvian tax legislation also applies the EET regime (similar to pillar II) to voluntary private pension schemes, where the contributory phase at the level of the individual is treated in a slightly different way. From the amount of the annual taxable income, payments made to private pension funds established in accordance with the Republic of Latvia's Law on Private Pension Funds or to pension funds registered in another Member State of the European Union or the

European Economic Area shall be deducted, provided that such payments do not exceed 10% of the person's annual taxable income. However, there is a limit on deductible payments. The total amount in 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

The performance of pension funds 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. By 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).

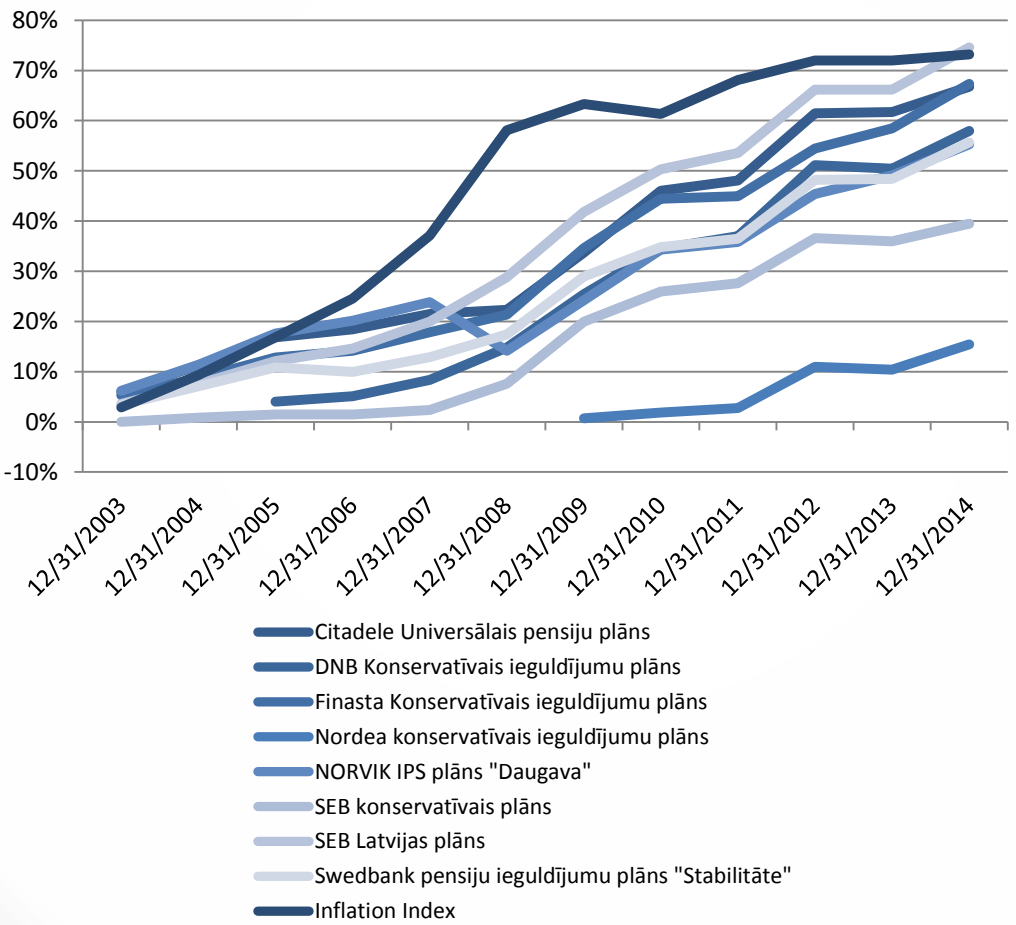
There is no maximum limit for international investments, as long as pension funds invest in securities listed on stock exchanges in the Baltics, other EU member countries or the European Free Trade Area. However, the law stipulates a 70% currency matching rule. There is also a 10% limit for each non-matching 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 also contain inflation on an annual as well as cumulative basis.

Pension reform introduced pillar II in July 2001; however pension funds started their effective operation only from January 2003, therefore only data for the period from 2003 until 2014 are presented.

The performance of conservative mandatory pension funds on a cumulative basis compared to the inflation is presented below.

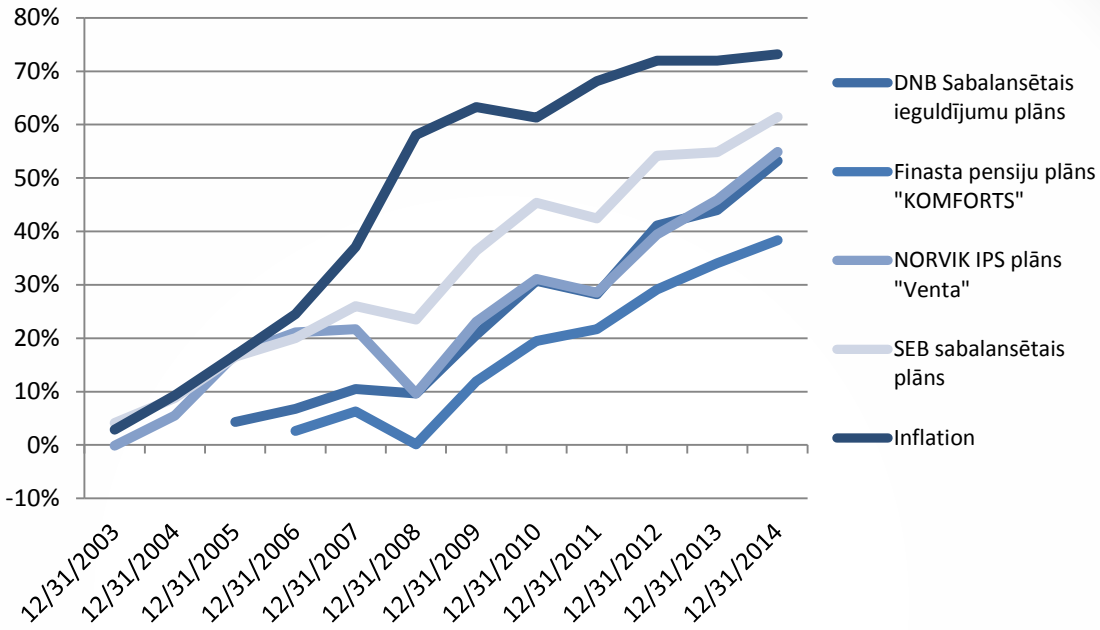
Graph 26. Conservative Pension Funds' Cumulative Performance



Source: Own calculations based on Manapensija data, 2015. Data as of date of effective start of operation by January 2003

The cumulative performance of balanced pension funds compared to the Latvian inflation is presented in the graph below.

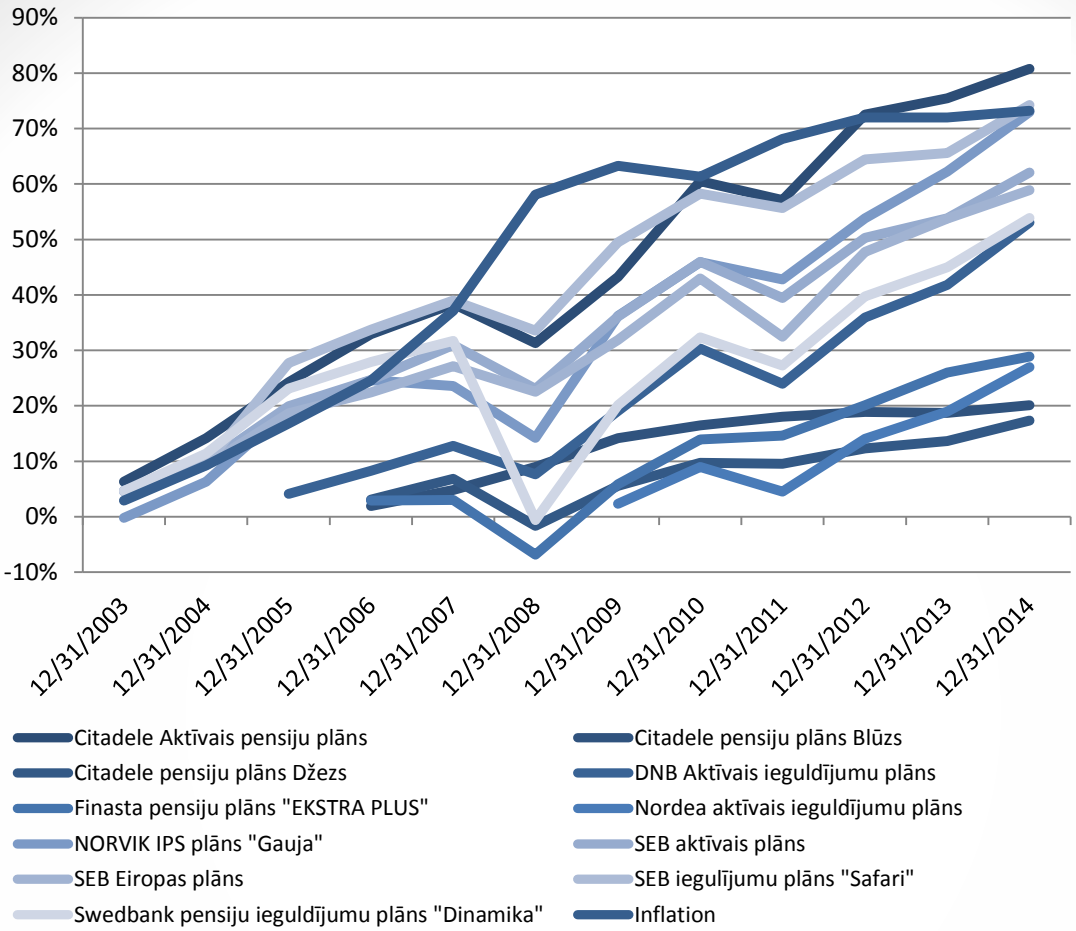
Graph 27. Balanced Pension Funds´ Cumulative Performance



Source: Own calculations based on Manapensija data, 2015

The performance of active pension funds on a cumulative basis compared to the inflation is presented in the graph below.

Graph 28. Active Pension Funds´ Cumulative Performance



Source: Own calculations based on Manapensija data, 2015

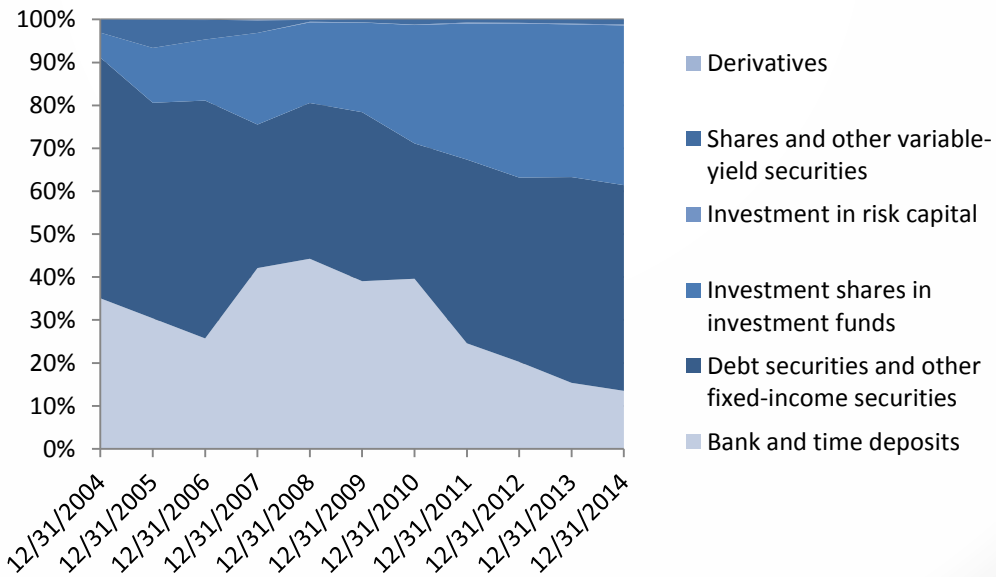
Nominal as well as real returns of state funded pension funds in Latvia weighted by AuM are presented in a summary table below.

Table 101. Nominal and Real Returns of State Funded Pension Funds in Latvia						
2003	**Nominal return after charges, before inflation and taxes**	4.78%	**4,26%**	**Real return after charges and inflation and before taxes**	1.88%	**-0.82%**
2004		5.79%			-0.41%	
2005		8.94%			2.04%	
2006		3.91%			-2.69%	
2007		3.51%			-6.59%	
2008		-9.93%			-25.23%	
2009		13.36%			10.06%	
2010		8.32%			9.52%	
2011		-2.05%			-6.25%	
2012		8.92%			6.62%	
2013		2.29%			2.29%	
2014		5.24%			4.54%	

Source: Own calculations based on Manapensija data, 2015

Negative real returns of Latvian state-funded pension funds are a result of several factors. The first one is a relatively conservative investment strategy (see graph below) that is mainly focused on the preservation of assets rather than achieving above-inflation returns requiring a more volatile portfolio structure.

Graph 29. State funded pension funds' portfolio structure



Source: Own calculations based on Financial and Capital Market Commission data, 2015

The conservative portfolio structure can even be seen on the performance curves of active pension funds (see graph 26 above), where the low volatility of the performance of the pension funds (even during the turbulent years 2008 – 2011) is evident. Such a low volatility of returns can be achieved only via a conservative investment strategy. The second factor causing negative real returns is a fee policy that is relatively high (around 1.5% annually). The most worrying fact is a rising fee policy, which in conjunction with a conservative investment strategy might lead to long-term negative returns and leave savers with inadequate pension pots at the end of the saving period.

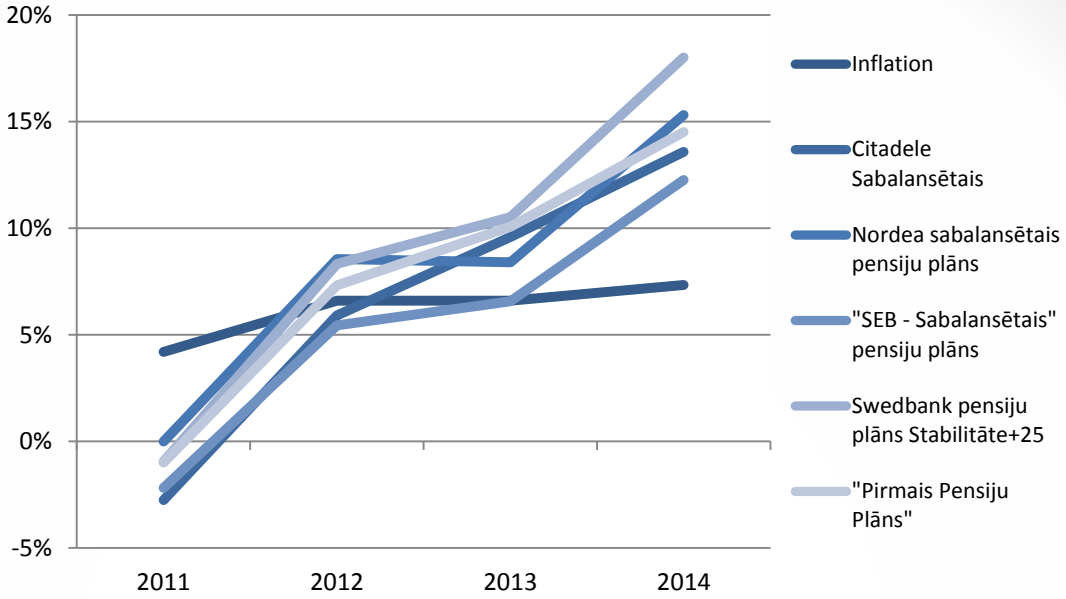
Pillar III – Voluntary private pensions

The analysis of the performance of voluntary pension funds uses annual as well as cumulative approaches and a comparison with peers and inflation.

Investment rules for private pension funds are similar to those for state funded scheme funds, but are more flexible. For example, investment in real estate is permitted (with a limit of 15%), the currency matching rule amounts to only 30% and limits for some asset classes are higher. Considering the structure of voluntary pension funds´ portfolios in Latvia, a 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 30. Balanced voluntary open and closed pension funds' cumulative performance

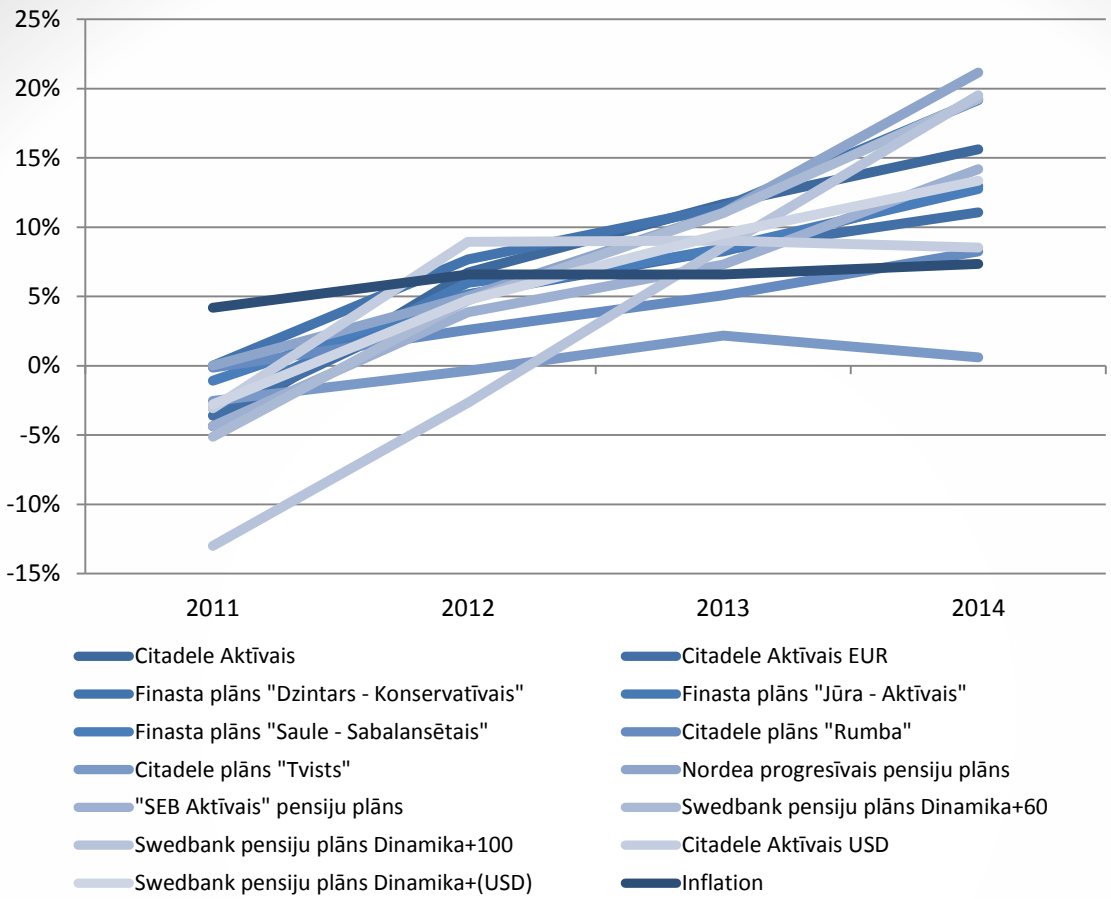


Source: Own calculations based on Manapensija data, 2015

Contrary to the balanced pillar II funds, balanced pillar III funds all provide positive real returns (outperform inflation). Balanced pillar III funds have a more aggressive portfolio structure. However, short-term historical data does not allow for comprehensive conclusions on this matter. There is a backward pressure in terms 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. There are some funds (Citadele Rumba and Tvists), which significantly underperform their peers and even inflation. These funds were terminated at the end of October and November, 2014 respectively. The performance of analysed voluntary private pension funds on a cumulative basis is presented in the graph below.

Graph 31. Active voluntary pension funds´ cumulative performance



Source: Own calculations based on Manapensija data, 2015

The nominal as well as real returns of voluntary pension funds in Latvia weighted by AuM are presented in a summary table below.

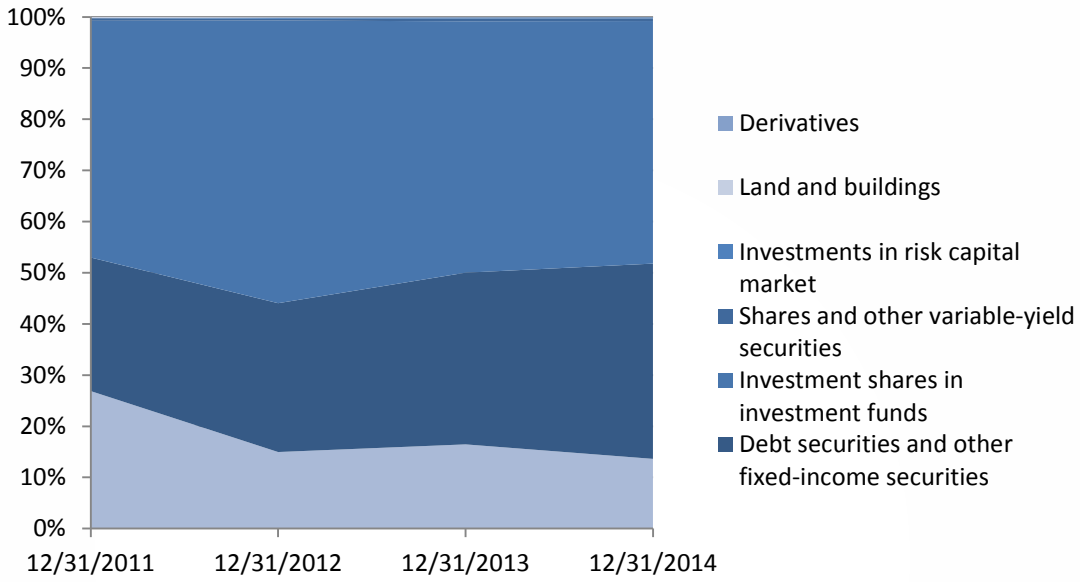
Table 102. Nominal and real returns of voluntary pension funds

2011	2012	2013	2014
Nominal return after charges, before inflation and taxes			
-2.71%	8.75%	3.08%	5.51%
3.57%			
Real return after charges and inflation and before taxes			
-6.91%	6.45%	3.08%	4.81%
1.72%			

Source: Own calculations based on Manapensija data, 2015

The positive real return of Latvian voluntary pension funds can be assigned to the more aggressive investment strategies adopted by portfolio managers, where more than 50% of portfolios is invested into equity based UCITS funds (see graph below).

Graph 32. Voluntary pension funds' portfolio structure



Source: Own calculations based on Financial and Capital Market Commission data, 2015

However, considering the fact that pension funds invest highly into UCITS funds, the double charging effect should be considered. At the same time, high charges in pillar III might reverse the positive trend.

Conclusions

Latvia managed to build a sustainable pension system over the last decade with impressive growth in pillar II funds. Acceptance of voluntary pension savings in the Pillar III is still weak, but this trend changed since the crisis. Pillar III pension funds will enjoy the highest inflow of new contributions in 2014 despite a rather weak performance.

Latvian pillars II and 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 inflation. One of the reasons is also a 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 limited their engagement in direct investments. Thus the question of potential future returns when using financial intermediaries multiplied by high fee policies in both schemes should be raised.

Pension Savings: The Real Return

2015 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 mandatory, funded system; and
- Pillar III - voluntary, occupational and individual pension vehicles.

Table 103. Multi-pillar pension system in Poland

Pillar I	Pillar II	Pillar III
Mandatory	Mandatory/Voluntary[122]	Voluntary
PAYG	Funded	Funded
NDC	DC	DC
Basic benefit	Basic benefit	Complementary benefit
Publicly managed:	Privately managed:	Privately managed:
Social Insurance Institution (ZUS)	Open Pension Funds (OFEs) Managed by Pension Societies (PTEs)	Pension savings managed by different financial institutions, depending on the form organised by employer or individual

Source: own elaboration

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 pension contribution is transferred to pillar I (written down on individual accounts of the insured and sub-accounts) and

[122] It was mandatory until the end of March 2014.

2.92 p.p. may be allocated (voluntarily) to an open pension fund (pillar II). If a person did not join pillar II and did not decide to stay in an open pension fund in 2014, all contributions are transferred to the PAYG system (pillar I).

The first pillar is managed by the Social Insurance Institution (ZUS) that 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 started to increase in 2013 (by one month every three months) until 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 (powszechne towarzystwa emerytalne, PTE). Up until the end of March 2014, 2.8 p.p. of mandatory pension contributions went to pillar II and were invested on financial markets within limits laid down by law. Members of the system were allowed to choose just one fund out of 14 OFEs operating in the market. Starting from April 2014, participation in the open pension funds of pillar II is voluntary[123]. 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 since changes included the transfer of OFEs' bond portfolios to the Social Insurance Institution (ZUS) at the beginning of 2014[124]. Now the withdrawal of the OFEs is expected.

An insured person who enters the labour market has the right to choose whether to join an OFE or whether to remain in the PAYG system (NDC, pillar I). When the insured chooses to contribute to the OFE (pillar II), 2.92% of his/hers gross salary will be transferred to the fund. But then his or her money will be invested more aggressively, since the new pension law imposed a ban on the purchase of government bonds by OFE. If no decision is taken by the member, his or her total old-age pension contribution (19.52%) will automatically be transferred to the

[123] The law of 6 December 2013 introduced from 1st January 2014 and 1st April 2014.

[124] 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).

Social Insurance Institution (ZUS). This default option can result in a huge decrease in OFEs´ 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 pillar I (NDC system)[125].

Polish open pension funds are frequently treated as typical private pension plans (OECD 2012) or even employer-arranged pension funds (Oxera 2013) and 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 pension plan. Moreover, the law establishes the contribution and the pension benefits that are to be 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 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:

- 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 the plans organised by the employer for their employees. PPE settlement happens after an employer agrees with the representatives of the employees on the operational conditions of the plan, signs the contract on asset management with a financial institution (or decides to manage assets by 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

[125] Money gathered on individual accounts in an 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).

money. Participants of the programme can pay in additional contributions deducted from their after-tax salaries. There is a yearly quota limit for additional contribution amounting to 4.5 times the average wage (PLN 17,815.50 - €4,257.9 - in 2015). 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 of age.

Individual retirement accounts (indywidualne konta emerytalne, IKE) were introduced in 2004, offering people the possibility to save for retirement. They can be obtained in 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 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 11,877 - €2,838.6 - in 2015). 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 lump sum or a programmed withdrawal.

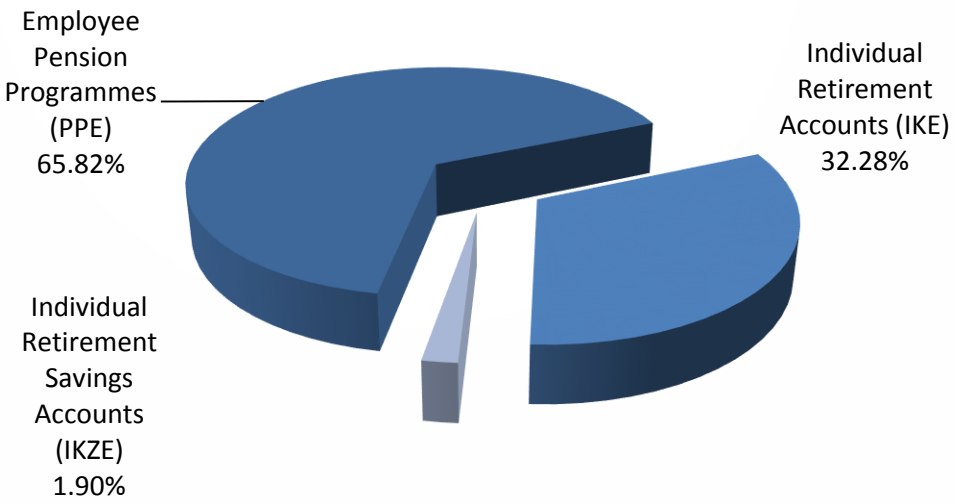
Individual pension savings accounts (indywidualne konta zabezpieczenia emerytalnego, IKZE) are the most recent products within the voluntary pension sector. They started to operate in 2012 and are offered in the same forms as individual retirement accounts (IKE) but have other contribution ceilings and 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 tax but the benefits are subject to taxation (at a reduced tax rate). Savings accumulated on IKZE are paid to the individual as a lump sum or via a programmed withdrawal after the saver reaches the age of 65.

Table 104. Architecture of voluntary pension system in Poland (pillar III) at the end of 2014

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 · Investment fund · Employee pension fund	· Unit-linked life insurance · Investment fund · Account in the brokerage house · Bank account · Voluntary pension fund	· Unit-linked life insurance · Investment fund · Account in the brokerage house · Bank account · Voluntary pension fund
Assets under management (PLN million)	**10,259.53 (€ 2,452)**	**5,030.54 (€1,202.3)**	**295.35 (€70.6)**

Source : own elaboration and KNF, 2015

Chart 1. Market share of Polish voluntary pension system elements by assets under management as of 31 December 2014



Pension Vehicles

Employees' pension programmes

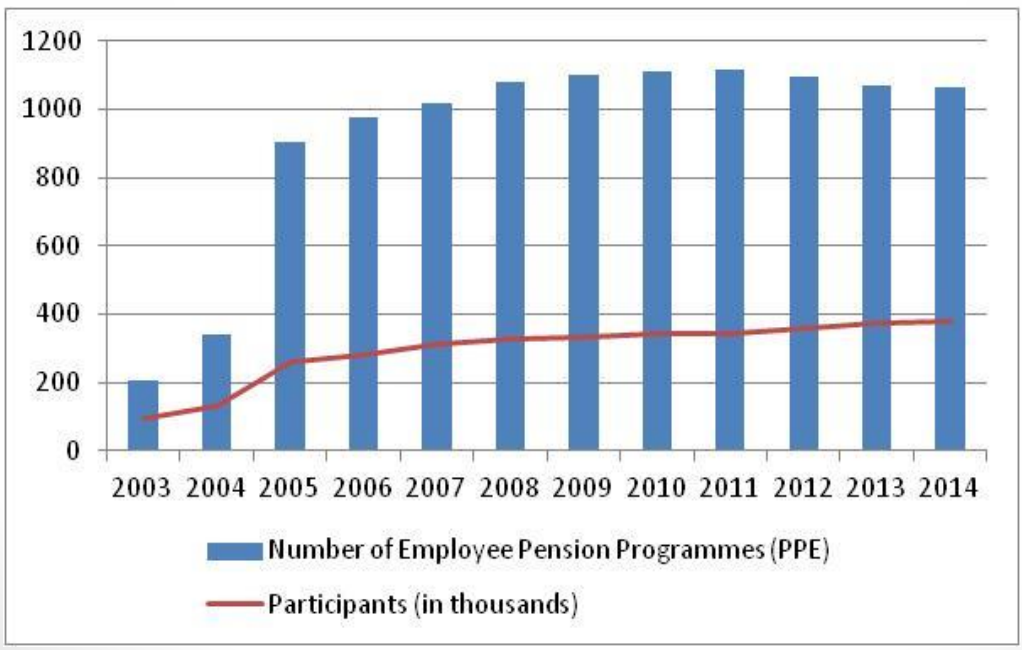
PPEs can be offered in four forms:

- 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 slow during the first five years of operations. Then due to changes in the 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 and the size of the market has remained more or less the same since that year. 1064 programmes were operating by the end of 2014 (chart below).

PPEs cover 381,000 employees which represents only 2.38% of the working population in Poland.

Graph 33. Number of Employee Pension Programmes and the number of PPEs participants in 1999-2014



Source: KNF, 2015

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 105. Number and assets of Employee Pension Programmes (PPE) by form of the programme in 2014

	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	702	66.0%	30.8%	2,760.90	26.9%
Investment fund	324	30.4%	57.5%	5,724.90	55.8%
Employee Pension Fund	38	3.6%	11.7%	1,773.70	17.3%
Total	1,064			**10,259.53**	

Source: KNF, 2015

The average basic contribution paid in 2014 amounted to PLN 3,686.20 (€881). The average additional contribution financed by the employee amounted to PLN 1,113.8 (€266.2) on average. PPEs managed assets worth PLN 10.3 billion (€2.5 billion) and the average account balance equals PLN 27.1 thousand (€6,4760.9) in 2014. 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.

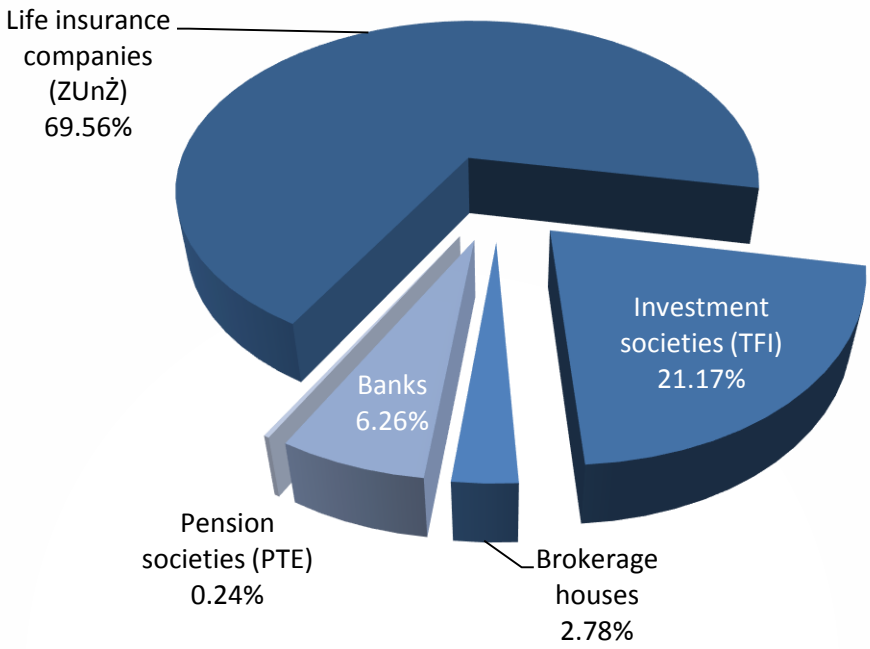
Pension accounts are offered by life insurance companies, investment societies (asset management companies), brokerage houses, banks and pension societies. The most recent pension vehicles are voluntary pension funds that were introduced in 2012 at a time of significant changes in the statutory old-age 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 (powszechne towarzystwo emerytalne, PTE) that also manages one of the open pension funds (OFE under pillar II) in Poland. Of course assets of the funds are separated to guarantee the safety of the system also due to stricter OFE investment regulations. Having participants in the mandatory funds (that have been made voluntary since 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 2015), these two forms of plans represent 90.8% of all IKE accounts.

Chart 2. Structure of IKE market by number of accounts and type of provider as of 31 December 2014



Source: KNF

At the end of 2014, only 824,500 Polish citizens had an individual retirement account (IKE) which represents 5.1% of the working population. They gathered PLN 6.1 thousand (€1,451.9) on average on an account. IKE holders do not fully use the contribution limit. The average contribution paid from 2004 to 2014 remains permanently below the statutory limit (3 times the average wage, see table below). The total amount of IKE assets amounted to PLN 5 billion (€1.2 billion) as of 31 December 2014.

Table 106. Number of Individual Retirement Accounts (IKE) by type of the product (2004-2014)						
	Unit-linked life insurance	Investment fund	Account in the brokerage house	Bank account	Voluntary pension fund	Total
2004	110,728	50,899	6,279	7,570		**175,476**
2005	267,529	103,624	7,492	49,220		**427,865**
2006	634,577	144,322	8,156	53,208		**840,263**
2007	671,984	192,206	8,782	42,520		**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	579,090	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	49,370	1,473	**817,651**
2014	573,515	174,515	22,884	51,625	1,946	**824,485**

Source: KNF

Table 107. Limits on contributions and average contribution paid into IKE in 2006-2014 (in PLN)									
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Contribution limit	3,521	3,697	4,055	9,579	9,579	10,077	10,578	11,139	11,238
Average contribution paid	2,199	1,719	1,561	1,850	1,971	1,982	2,584	3,130	3,440

Source: KNF

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.

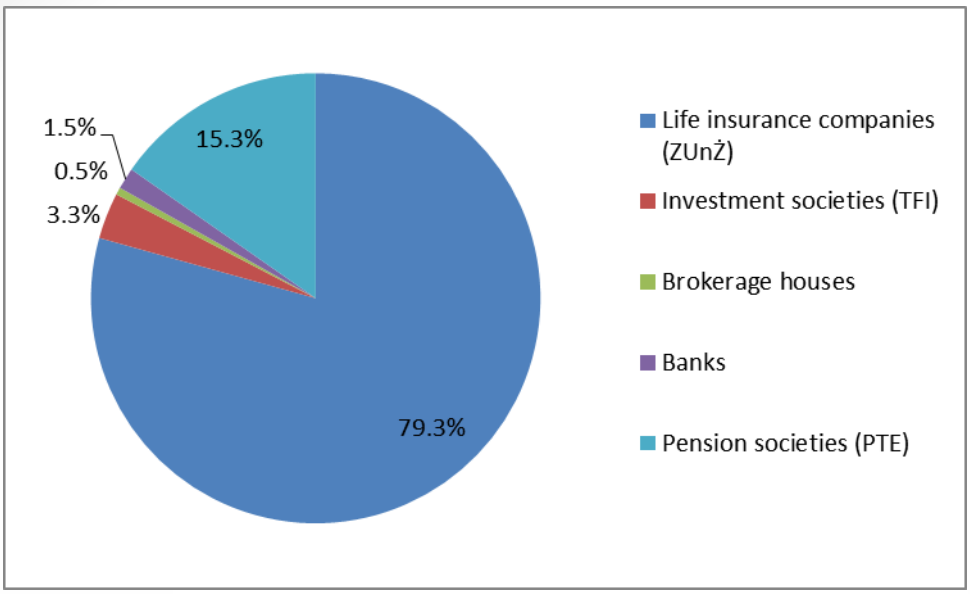
As this part of the pension system only has a two-year history (started in 2012), the number of participants is still at an unsatisfactory level. Only about 3.3% of the Polish working population (2014) is covered by this type of supplementary old-age provision.

Table 108. Number of Individual Retirement Savings Accounts (IKZE) by type of the product (2012-2014)			
Type of the product	**2012**	**2013**	**2014**
Unit-linked life insurance	363,399	388,699	418,935
Investment fund	5,202	9,565	17,510
Account in the brokerage house	559	1,012	2,797
Bank account	19	33	8,105
Voluntary pension fund	127,642	97,117	80,795
Total	**496,821**	**496,426**	**528,142**

By the end of 2014 circa 524 thousand Poles had subscribed to individual retirement savings accounts. As shown on chart 4, the IKZE market is dominated by insurance companies that run more than 79.3% of the accounts. Investment societies (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 2014, financial institutions managed funds amounting to PLN 295.4 million (€70.6 million). It is worth noting that this capital was raised through contributions over just three years. The rapid growth of the IKZE market in terms of coverage and the value of assets is expected over the following 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).

Chart 3. Structure of IKZE market by number of accounts and type of provider as of 31 December 2014



Source: KNF

Table 109. Assets of IKZE (in thousands PLN)

Type of the product	2012	2013	2014
Unit-linked life insurance	36,393	75,117	167,737
Investment fund	7,973	23,371	63,559
Account in the brokerage house	1,673	4,815	14,638
Bank account	40	98	11,624
Voluntary pension fund	6,803	15,805	37,792
Total	**52,882**	**119,206**	**295,350**

Source: KNF

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 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 in a type of pension fund for employees (Pracownicze Fundusze Emerytalne, PFE) that is managed by an employee pension society set up by an employer (in-house management of PPE). 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 a 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 financial institution can charge an up-front fee, use different buy and sale prices for investment units (spread) and deduct other administrative fees from the pension savings accounts (flat-rate administration fee, conversion fees, 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 IKZE they offer (with 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 110. 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 Długu 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: own elaboration and Ostrowska K. (2012), Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych, "Rzeczpospolita", 01.03.2012 r.

Table 111. 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 collaboration, detailed informatiom from: Ostrowska K. (2012), Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych, "Rzeczpospolita", 01.03.2012 r. and analizy.pl.

Table 112. 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 but not less than PLN 300
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 but no more than PLN 500
Pocztylion-Arka PTE	DFE Pocztylion Plus	max 2.5%	0-3%, depending on the quota of contribution	10% of assets, PLN 100 at least
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	ING DFE	Max. 2% + 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, 2015

Taxation

Employees' pension programmes (PPE)

Basic contributions financed by employers are subject to a personal income tax that 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 11,877 - €2,838.6 - in 2015). 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 since 2014. Every individual can pay up to 150% of the average salary into an account (4,495.2 PLN - €1,074.3 - in 2014 and 4,750.80 PLN - €1,135.4 - in 2015).

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 uses 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 a PPE participant the possibility to invest in funds from a broad group of investment funds operating in the market (not only

the funds dedicated solely to pension savings), it is impossible to indicate what the portfolios of the majority of PPEs are[126].

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 113. Portfolio of employees' pension funds (PFE) as of 31 December 2014 (as % of assets)

	PFE "NOWY ŚWIAT"	PFE NESTLÉ POLSKA	PFE ORANGE POLSKA	PFE UNILEVER POLSKA
Shares	36.43	34.66	31.97	29.56
Gov. bonds	61.77	62.41	61.30	66.96
Investment funds units	0.00	0.00	6.10	0.00
Bank deposits	1.76	2.93	0.62	3.48
Other investments	0.03	0.00	0.00	0.00
Assets under management (in PLN mln)	**405.55**	**51.05**	**1,265.72**	**61.13**
Market share (as % of total PFEs' assets)	22.74	2.86	70.97	3.43

Source: KNF, 2015

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 are contained in the

[126] Neither Financial Supervisory Commission nor the Ministry of Labour and Social Policy collects data that allow to indicate the name of investment funds in which pension savings are gathered and the value of accumulated capital.

portfolios of IKE and IKZE holders or 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 114. 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 Pocztylion Plus	DFE PZU	ING DFE	MetLife 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

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 given nominal rates of return below take into account the levels of management costs. The only fee that is to be included when calculating after-charges returns is an upfront-fee deducted from contributions paid into accounts.

During the period of 2002-2014 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative results appeared only in the years 2008 and 2011 when equity markets dropped significantly. After-charges real returns observed in 11 of 13 years and the average return in the 13-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 115. Nominal and real after-charges returns of Employees Pension Funds in 2002-2014 (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	1.9	5.98
2003	-	-	10.28	-	10.44	8.71	10.14	0.7	9.44
2004	11.25	-	12.3	14.24	13.64	-	12.59	3.6	8.99
2005	12.53	-	14.82	12.93	13.81	-	14.5	2.2	12.3
2006	12.41	10.6	15.4	13.41	15.25	-	14.99	1.3	13.69
2007	5.1	4.52	6.1	5.77	6.23	-	5.94	2.6	3.34
2008	-10.1	-11.33	-13.54	-6.34	-13.86	-	-13.14	4.2	-17.34
2009	13.33	14.83	15.78	12.74	17.41	-	15.85	4	11.85
2010	9.98	9.6	10.33	9.75	10.52	-	10.22	2.7	7.52
2011	-5.05	-3.1	-4.75	-3.59	-5.2	-	-4.51	3.9	-8.41
2012	15.82	13.6	14.96	15.01	14.15	-	14.57	3.7	10.87
2013	5.19	5.21	3.45	4.56	5.71	-	4.28	0.8	3.48
2014	4.42	-	3.91	4.92	2.56	-	**3.65**	0.1	**3.55**
Annual average	6.51	5.15	7.05	6.88	7.15	-7.36	7.13	2.43	**4.64**

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 117).

Table 116. 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 2013.*

Source: www.analizy.pl, Eurostat.

Table 117. Nominal and real returns of voluntary pension funds (DFE) in 2014 (in %)

	Allianz Polska DFE	DFE Pekao	DFE Pocztylion 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	1.93	1.17	-2.32	3.54	-0.83	5.98	10.68	2.44
Nominal after charges	0.50	-1.26	-5.15	0.12	-4.7	3.44	6.36	2.54
Real after-charges return	0.40	-1.36	-5.25	0.02	-4.8	3.33	6.25	2.44

**Returns after charges were calculated with an assumption that an individual pays one contribution of PLN 2.000 at the beginning of the year 2014.*

Source: www.analizy.pl, Eurostat.

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 definitely 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

2015 Edition

Country Case: Romania

Introduction

The Romanian old-age pension system is based on the World Bank's multi-pillar model, which consists of three main pillars:

- Pillar I – State pension organised as a mandatory PAYG scheme,
- Pillar II – Funded pension organised as a mandatory funded DC based scheme,
- Pillar III – Supplementary pension organised as a voluntary individual pension DC based scheme.

The Romanian multi-pillar pension reform began in 2007, when pillar III was introduced into the pension system (collecting the first contributions) and became a voluntary option for all people earning any type of income. Pillar II was put into place in 2008 (collecting the first contributions) and became mandatory for all employees aged 35 and under.

Table 118. 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).
Pillar I Quick facts	Pillar II Quick facts	Pillar III Quick facts
Pensioners (mil. Pers.):	9 pension funds	11 pension funds
-total: 4.7	9 administrators	8 administrators
-age limit: 3.3	4 custodian banks	4 custodian banks
-early retirement: 0.1	4 auditors	4 auditors
-disability: 0.8	9.6 billion RON net assets (€2.2 billion)	0.6 billion RON net assets (€0.14 billion)
-survivor's: 0.5	5.8 million members	0.3 million members
Average pension for age	55% coverage ratio	3% coverage ratio
limit: 900 RON (€ 203)	(working age population 15 – 64 years)	(working age population 15 – 64 years)
	1.58% of GDP.	0.10% of GDP.
Source: Own elaboration based on http://www.csspp.ro/uploads/files/private-pensions-quarterly-review_mmo2.pdf, 2015		

Pillar I – State Pensions

Pillar I 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 social contributions for pensions from the contributors and immediately uses this income to pay out the pensions to current pensioners. It is based on solidarity among 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 for 99% financed by social security contributions and is also the biggest consumer of these contributions to social security. It is paid by both employers and employees.

Both the employer's contribution of 20.8% of the payroll as well as the employee's 10.5% of income (gross earnings) are paid into the State social insurance budget in the form of social insurance contributions. 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, which distributes the benefits to the beneficiaries (current pensioners).

The pensions are calculated according to an algorithm based on pension points by comparing each respective salary to the average monthly salary.

According to Romania's country report, starting on the 1 January 2011, the standard retirement age will reach 63 for women and 65 for men. These levels will gradually be reached as follows:

- 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 the Law no. 263/2010, regarding public pension schemes and valid since 1 January 2011, early retirement or pre-pension is possible maximum 5 years before the standard pension age. This only applies to workers with 8 or more contribution years during the time required by law. Early retirement does not take into consideration the following stages: the compulsory military stage, the university stage, pension through disability, military school. Those stages are only valid and taken in to account when retiring at the standard pension age limit. The

penalty on the total pension is a fixed one: minus 0.75% for each month (9% per year) of anticipation, with a maximum penalty of 45% from the standard pension age. The penalty is valid until the standard age limit is reached.

Partial early retirement

Partial pre-pension is possible maximum 5 years before the standard pension age. This only applies to workers with less than 8 contribution years during the time required by law. There is only one exception allowing for partial early retirement without penalty: for those people who were residents for at least 30 years in extremely polluted areas. In that particular case the applicant for partial pre-pension may benefit of a two-year reduction of the standard age limit for retirement without any penalties. The reduction of the standard age limit foreseen for pre-pensioning or anticipated pre-pensioning 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 the capacity to work and capacity of self-care;
- second degree - total loss of capacity to work but with the capacity of self-care;
- third degree - losing at least half of the capacity to work, the person is capable to perform a work activity for maximum half of the official work time.

The pensioner who falls within the first degree of invalidity has the right, as part of the pension, to an indemnity for a companion in the form of a fixed revenue representing 80% of the value of one pension point.

Pension for survivors

The pension for survivors is given to the orphans or to the surviving spouse if the deceased was a pensioner or in position to get a pension. Orphans have the right to a successor pension until the age of 16 or if they continue to study in a legally recognised education framework but not beyond the age of 26 or during a period of invalidity (disability) of any degree acquired in period mentioned above. The

surviving 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 survivor spouse is reduced by 0.5% for each month, or by 6% for each year below 15 as a penalty. The level of the successor pension is calculated by applying a percentage on the average annual point of pension realised by the breadwinner 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. At retirement, participants will receive at least the sum of contributions, minus fees. During the accumulation phase each fund has to comply with a minimum return mechanism that is set by national regulation on a quarterly basis and is based on the 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 became 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. The collection of contribution is centralised by the CNPAS (the National House of Pensions), which collects and directs the contributions towards the mandatory pension funds. Employers don't 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 out and send (to the CNPAS) nominal declarations regarding the paid contributions. Contributions to pillar II are

part of the individual contributions 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 or her 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 set at 2% of the participant's total gross revenues and increases by 0.5% per year, to reach 6% of total gross revenues by 2017 since the gradual increase in contributions was frozen in 2010. The contribution level is thus fixed, and the participant cannot save more in this system.

The contributions to a pension fund are recorded in individual personal pension accounts, which give participants the ownership of the net assets, with the money to be invested by the managers, according to each pension scheme and as stipulated in the legislation. Participants can choose only one pension fund.

Mandatory pension funds are managed by their administrators: Pension Management Companies (PMCs). Each PMC is obliged to manage a maximum of one mandatory pension fund and not more. A mandatory pension fund is unitised and functions similarly to an investment fund. To enter and function within the Pillar II market, a PMC must obtain several licenses from Romania's pension market's regulatory and supervisory body.

Control, regulation, supervision and information about private pensions is carried out by the Supervision Commission for the Private Pension System, an independent administrative authority and legal entity under the control of the Parliament of Romania.

Withdrawal from the system is only allowed at retirement, according to 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 start 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).

Participation is open to everybody earning an income - from employees to the self-employed, those with independent activities or liberal professions. The collection of contributions is done by the employers, who have to direct the contributions of participants (only in the case of employees) towards the voluntary pension funds. In all the other cases (self-employed, etc.), the participant can directly send his or her own contributions. The contributions are paid by the employee, but the employer can contribute a share.

Voluntary pension funds, as the only type of product 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. On the other hand and in comparison with pillar II each administrator can manage as many funds as it wishes. A voluntary pension fund is unitised and functions similarly to an investment fund. To enter and function within the pillar III market, potential administrators must get several licenses from Romania's pension market's regulatory and supervisory body.

A participant to such a fund contributes during his or her active life and will get a pension after 60 (both woman and men). The contribution is limited to 15% of the participant's total gross income. The contribution level is flexible - it can be decided upon, changed, and even interrupted and resumed.

Pension Vehicles

Pillar II – Funded pensions

As indicated above, each PMC in Romania is only allowed to manage a maximum of one mandatory pension fund, not more. At the very beginning of the system, the total number of authorised administrators (funds) was 18, which had come down to 14 by the time participants had made the choice amongst the different funds. Currently, there are only 7 PMCs as well as mandatory funds on the Romanian pillar II market. The two biggest mandatory pension funds, from AZT and ING, have a 52% (according to the number of participants) or a 59.73% (according to AuM) share of the whole market.

Each PMC is authorised by the ASF[127] (formerly CSSPP - Romania's pension market's regulatory and supervisory body) and must get several licenses from the ASF. One of the most important conditions imposed on the PMC is to attract at least 50,000 participants. The ASF withdraws the fund's authorisation if the number of participants drops below 50,000 for a quarter.

The pension fund is constituted by civil contract. Accounting is separated between the administrator and the administered mandatory pension fund. That's why it cannot be declared bankrupt.

The structure of savers, assets under management and market share of the respective mandatory pension funds (PMC) is presented in a table below.

Table 119. Pension Management Companies market share in Romania (Pillar II)

Mandatory Pension Fund (PMC)	Assets under management *(in million €)*	Market share based on AuM *(in %)*	Number of participants	Market share based on participants *(in %)*
FPAP ARIPI	355.99	8.34	601,143	9.55
FPAP ALICO	605.8	14.2	880,300	13.99
FPAP AZT VIITORUL TAU	947.22	22.2	1,429,914	22.72
FPAP BCR	254.82	5.97	508,069	8.07
FPAP BRD	127.69	2.99	270,858	4.30
FPAP ING	1593.66	37.35	1,833,997	29.14
FPAP VITAL	381.62	8.94	768,861	12.22
TOTAL	**4,266.80**	**100.00**	**6,293,142**	**100.00**

Source: Own calculations based on http://www.csspp.ro/evolutie-indicatori/ data, as of 31.12.2014

The investment strategies for mandatory pension funds are 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 RO, UE or SEE;
- up to 30% in bonds and other transferable securities issued by local public administrations in RO, EU or EEA, traded on a regulated market in RO, EU or EEA;
- up to 50% in securities traded on a regulated market in RO, EU or EEA;

[127] ASF - Autoritatea pentru Supraveghere Financiara since 2013, after a merger of 3 supervisory authorities for the non-banking financial sector.

- up to 15% in bonds issued by third-party states, traded on a regulated market in RO, 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 RO, 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 RO, EU or EEA;
- up to 5% in bonds issued by Nongovernmental Foreign Bodies, traded on a regulated market in RO, EU or EEA;
- up to 5% in Undertakings for Collective Investment in Transferable Securities - UCITS, including ETF in RO, 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 RO, 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 have also 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 4 providers and 6 voluntary pension funds, and later 10 providers and 13 pension funds, on the market. Currently, there are only 8 providers and 10 voluntary pension funds on offer. Only two administrators[128] (ING and AZT) currently exploit the opportunity to offer two voluntary pension funds.

ING and AZT, as providers, have an absolutely dominant market share. These two biggest administrators have 60.2% (according to the number of participants) or 68.6% (according to AuM) share of the whole market. Based on these numbers ING and AZT are the biggest leaders not only in pillar II, but also in the pillar III market.

Each administrator in pillar III (PMC, LIC or AMC) is authorised by ASF and must get several licenses from ASF. ASF withdraws the fund's authorisation if the number of participants remains under 100 for a quarter.

As in the case of the pillar II mandatory pension fund, the voluntary pension fund is also constituted by civil contract and is authorised by ASF. Accounting is divided between the administrator and the administered voluntary pension fund. That's why it cannot go bankrupt.

It has to be mentioned that the investment rules for the voluntary system are the same as for the mandatory system (see quantitative and restriction limits for different asset classes above), with slightly larger limits regarding private equity (5%) and commodities (5%).

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

[128] There was another administrator (BRD) who managed two pension funds, but decided to merge them, probably, because of the low number of members.

Table 120. Voluntary pension funds market share in Romania (Pillar III)				
Voluntary pension fund	**Assets under management** *(in million €)*	**Market share based on AuM**	**Number of participants**	**Market share based on participants**
FPF AZT VIVACE	13.63	5.87%	20,486	5.91%
FPF ING ACTIV	26.75	11.51%	35,407	10.22%
FPF AZT MODERATO	32.09	13.81%	36,235	10.46%
FPF BCR PLUS	38.15	16.42%	98,310	28.38%
FPF BRD MEDIO	11.55	4.97%	16,445	4.75%
FPF EUREKO CONFORT	1.19	0.51%	3,748	1.08%
FPF ING OPTIM	86.39	37.18%	111,277	32.12%
FPF PENSIA MEA	9.10	3.92%	10,067	2.91%
FPF RAIFFEISEN ACUMULARE	11.06	4.76%	9,429	2.72%
FPF STABIL	2.43	1.04%	5,048	1.46%
TOTAL	**232.34**	**100.00%**	**346,452**	**100.00%**

Source: Own calculations based on http://www.csspp.ro/evolutie-indicatori/ data, as of 31.12.2014

Charges

Pillar II – Funded pensions

According to the Mandatory Pensions Law, the income of the administrators resulted 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 (depository fee),
- Transaction costs (trading fees),
- Bank commissions (banking fees),
- Fund auditing taxes (pension fund auditing fees).

The following table compares effective charges on mandatory pension funds in pillar II over time (calculated via total and net NAV on a monthly basis).

Table 121. Effective monthly charges in mandatory pension funds (pillar II)							
Mandatory pension fund	**31.12.08**	**31.12.09**	**31.12.10**	**31.12.11**	**31.12.12**	**31.12.13**	**31.12.14**
ARIPI	1.20%	0.84%	0.72%	0.72%	0.60%	0.60%	0.60%
ALICO	0.60%	0.72%	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%
BCR	1.68%	0.96%	0.72%	0.60%	0.60%	0.60%	0.60%
BRD	2.04%	1.08%	0.84%	0.72%	0.72%	0.60%	0.60%
ING	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%
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%**

Source: Own calculations based on http://www.csspp.ro/evolutie-indicatori/ data, as of 31.12.2014

Pillar III – Voluntary private pensions

According to the Voluntary Pensions Law, the administrator will charge a fee to participants and beneficiaries for the management of a pension fund.

- The levels of fees have to be established in the pension scheme prospectus and have to be the same for all participants and beneficiaries.
- Participants have to be notified of any change to the fees 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).

The transfer penalty is the amount paid by the participant in the case of a transfer to another fund within the first two years of having joined the first fund; its upper limit shall be established by Commission norms.

From the participant's point of view the commissions to be paid are the following:

- 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 (depository fee),
- Transaction costs (trading fees),
- Bank commissions (banking fees),
- Fund auditing taxes (pension fund auditing fees).

The following table compares effective charges on voluntary pension funds in pillar III over time (calculated via total and net NAV on a monthly basis).

Table 122. Effective monthly charges of voluntary pension funds (Pillar III)

Voluntary pension fund	31.12.2007	31.12.2008	31.12.2009	31.12.2010	31.12.2011	31.12.2012	31.12.2013	31.12.2014
AZT VIVACE	1.08%	1.44%	2.88%	2.88%	2.52%	2.04%	2.04%	2.04%
ING ACTIV	0.00%	1.68%	1.80%	2.40%	2.16%	2.28%	2.16%	2.16%
AZT MODERATO	0.96%	1.80%	2.16%	1.92%	1.68%	1.44%	1.32%	1.32%
BCR PLUS	5.64%	2.40%	2.28%	2.76%	2.40%	2.40%	2.28%	2.28%
BRD MEDIO			0.84%	1.92%	1.56%	2.88%	2.16%	2.28%
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%
ING OPTIM	0.12%	1.56%	1.68%	2.04%	1.92%	2.04%	2.04%	2.04%
PENSIA MEA	3.24%	3.12%	2.88%	2.64%	2.64%	2.76%	2.64%	2.64%
RAIFFEISEN ACUMULARE		0.12%	2.88%	2.40%	2.28%	2.16%	2.40%	2.28%
STABIL			2.28%	1.56%	1.56%	1.68%	1.68%	3.84%
BRD PRIMO			0.84%	1.56%				
OTP STRATEG	n/a	n/a	0.32%	0.24%				
AVERAGE	**4.68%**	**1.92%**	**2.16%**	**2.28%**	**2.04%**	**2.04%**	**2.04%**	**2.04%**

Source: Own calculations based on http://www.csspp.ro/evolutie-indicatori/ data, as of 31.12.2014

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 at the level of pension funds 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 a personal health contribution (5.5%) above a certain level (€180 in 2012).

Pillar III – Voluntary private pensions

An employee can contribute up to 15% of his gross income to a voluntary pension fund. The employer can contribute a part.

Contributions to voluntary pension funds are fiscally deductible for all subscribers from their gross monthly wages or any other assimilated revenue if the total amount does not exceed the equivalent in lei of €400 in one fiscal year. The same scenario is applied to the employer side, meaning that an employer can deduct the amount of up to €400 per year paid towards an employee's voluntary pension account.

The investment returns on assets in pillar III funds are tax exempt until payments toward subscribers start.

The pension benefits paid from pillar III are subject to 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 similarities in their investment strategies, implying a similarity in terms of the structure of the pension fund portfolios.

Table 123. Pillar II pension vehicles			
Risk Profile	**Mandatory pension fund**	**Fund Inception Day**	**Fund closing date**
High	FPAP ARIPI	May 2008	Opened
Medium	FPAP ALICO	May 2008	Opened
	FPAP AZT VIITORUL TAU	May 2008	Opened
	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, as of 31.12.2014

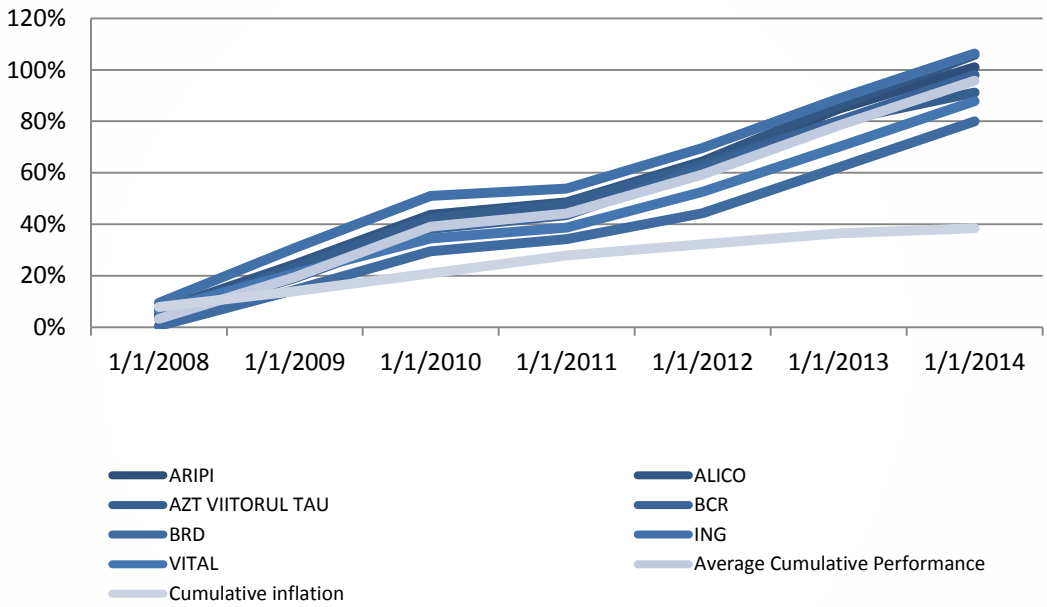
According to the ASF portfolio structure database, all mandatory pension funds can invest into 16 asset classes:

- Bank deposits,
- Government Securities / Municipal Bonds,
- Government Securities,
- Municipal Bonds,
- Corporate Bonds,
- Supranational Bonds,
- Shares,
- Undertakings for Collective Investment in Transferable Securities – UCITS,
- Other Collective Investment Undertakings – non UCITS,
- Commodities and Precious Metals,
- Commodities and Precious Metals Funds,
- Instruments for hedging risk,
- Private Equity,
- Infrastructure,
- Other financial instruments,
- Amounts in settlement at the end of reporting date.

For the purposes of this study we extracted a short portfolio structure – only 6 main asset classes (see methodology above). Romania's mandatory pension funds invest mostly in the asset class of government securities and bonds. The second most important asset class (from the portfolio structure point of view) is equities and the third bank deposits. Three other classes have a minimal impact on the performance of pension funds.

The performance of Mandatory Pension Funds on an annual as well as cumulative basis compared to inflation and on average is presented in the graph below.

Graph 34. Mandatory Pension Funds – Cumulative Performance

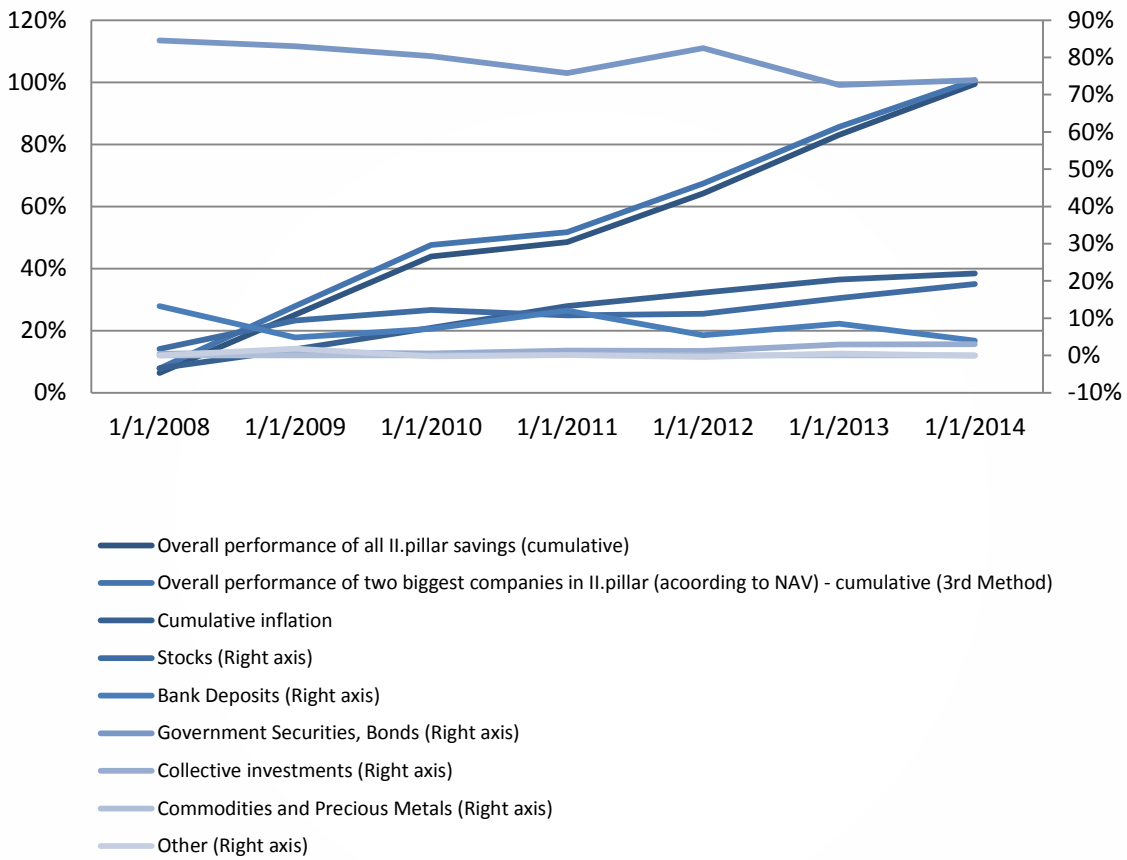


Source: Own calculations based on www.csspp.ro data, 2015 (data as of 31.12.2014)

The overall performance and 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 stocks. However, from the launch of pillar II we can see a positive uptrend in terms of the percentage share of stock investments. The overall performance of the Romanian pillar II was calculated using two methods:

- 1st Method – overall performance was calculated based on net NAV, weighted by annual return of all pension funds separately,
- 2nd Method – overall performance was calculated based on the two biggest companies according to net NAV.

Graph 35. Overall performance and Portfolio structure of Pillar II



Source: Own calculations based on www.csspp.ro data, 2015 (data as of 31.12.2014)

The nominal as well as real returns of the pillar II pension funds in Romania weighted by AuM are presented in a summary table below.

Table 124. Nominal and Real Returns of Pillar II Pension Funds in Romania						
2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Nominal return after charges, before inflation and taxes						
6.40%	17.57%	15.04%	3.22%	10.55%	11.48%	8.92%
			10.36%			
Real return after charges and inflation and before taxes						
-1.50%	11.97%	8.94%	-2.58%	7.15%	8.28%	7.52%
			5.56%			

Source: Own calculations based on www.csspp.ro data, 2015 (data at 31.12.2014)

Pillar III – Voluntary private pensions

The eight asset managers offer 10 voluntary pension funds in Romania. AZT and ING are the only providers that offer two voluntary pension funds. A look at the performance of all pension funds shows the same finding as for pillar II mandatory pension funds: there is a similarity in the investment strategies of voluntary pension funds. Performance results also imply a similarity in terms of the structure of pension fund portfolios.

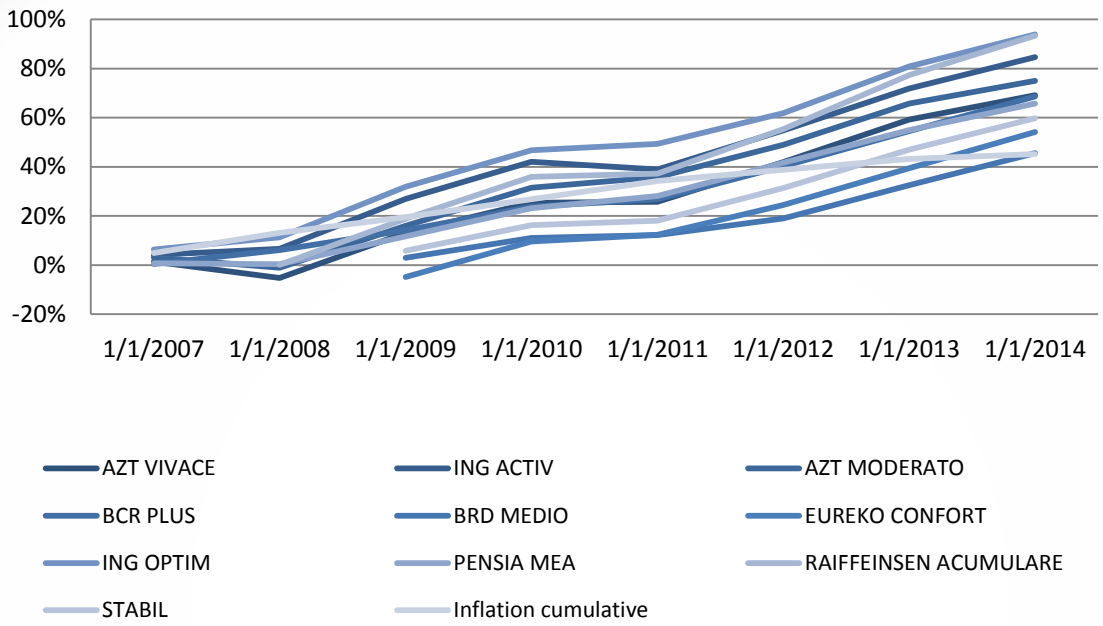
Table 125. Pillar III pension vehicles			
Risk Profile	**Voluntary pension fund**	**Fund Inception Day**	**Fund closing date**
High	FPF AZT VIVACE	May 2007	Opened
	FPF ING ACTIV	May 2007	Opened
Medium	FPF AZT MODERATO	May 2007	Opened
	FPF BCR PLUS	May 2007	Opened
	FPF BRD MEDIO	July 2009	Opened
	FPF CONCORDIA MODERAT	September 2008	Closed February 2013
	FPF EUREKO CONFORT	February 2009	Opened
	FPF ING OPTIM	May 2007	Opened
	FPF PENSIA MEA	May 2007	Opened
	FPF RAIFFEISEN ACUMULARE	July 2008	Opened
	FPF STABIL	April 2009	Opened
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, as of 31.12.2014

Like for the pillar II portfolio structure (see text above), ASF defines the same 16 investment asset classes. All voluntary pension funds invest mainly in the asset class of government securities and bonds. 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 a minimal impact on the performance of pension funds.

The performance of pillar II voluntary pension funds on an annual as well as cumulative basis compared to inflation and on average is presented in graph below.

Graph 36. Voluntary Pension Funds - Cumulative Performance

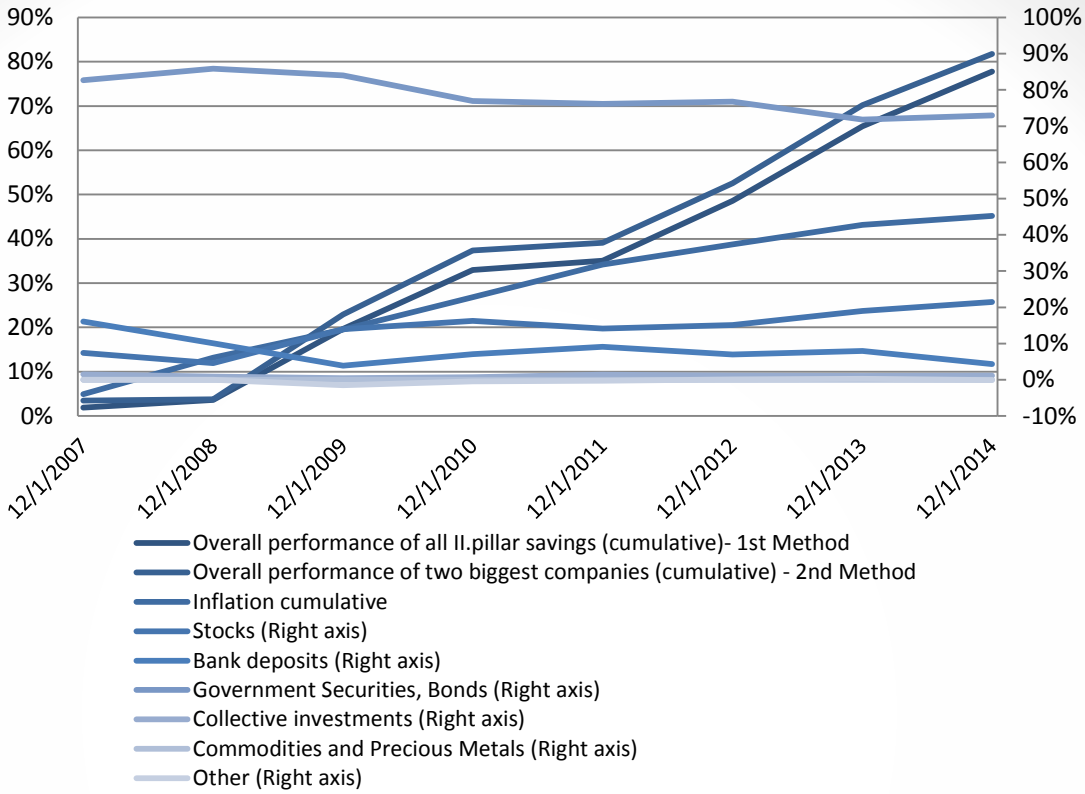


Source: Own calculations based on www.csspp.ro data, 2015 (data as of 31.12.2014)

The 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. However, like for pillar II we can see a positive uptrend in the percentage share of stock investments from the onset. On the other hand, it has to be mentioned, the portfolio structure of Romanian pillar III is very similar to the portfolio structure of pillar II. The overall performance of Romanian pillar III was also calculated using two methods:

- 1st Method – the overall performance was calculated using net NAV, weighted by annual return of all pension funds separately,
- 2nd Method – the overall performance was calculated based on the two biggest companies according to net NAV.

Graph 37. Overall performance and Portfolio structure of pillar III



Source: Own calculations based on www.csspp.ro data, 2015 (data as of 31.12.2014)

The nominal as well as real returns of voluntary pension funds in Romania as weighted by AuM are presented in a summary table below.

Table 126. Nominal and Real Returns of Voluntary Pension Funds in Romania

2007	2008	2009	2010	2011	2012	2013	2014
Nominal return after charges, before inflation and taxes							
1.86%	1.72%	15.49%	11.14%	1.59%	9.96%	11.36%	7.48%
7.46%							
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%
2.62%							

Source: Own calculations based on www.csspp.ro data, 2015 (data at 31.12.2014)

Conclusions

All recent international studies (conducted by the World Bank, the International Monetary Fund, the European Commission, the European Bank for Reconstruction and Development, the United Nations and Romanian research institutes) point out that Romania's population is rapidly decreasing and ageing, which, unless the necessary reforms are adopted, will lead to the explosion of a demographic bomb in a few decades. That is why, in 2007, Romania introduced the private pensions system, based on the model tested and recommended by the World Bank. The multi-pillar private pensions system includes pillar II mandatory schemes and pillar III voluntary schemes.

As part of the public PAYG pension 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 the number of contributors will fall and the number of pensioners is steadily increasing. The way out of this dilemma comes in the shape of the private pensions system, allowing each active person to save for their own future retirement.

The Romanian pillar II is a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy, mandatory for all employees aged 35 or under and voluntary (optional) for those employees aged between 35 and 45. The starting level for contributions was set at 2% of the participant's total gross income and increases by 0.5 percentage points annually until it will reach 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 law to administrate and manage maximum one mandatory pension fund, not more. Currently, there are 7 PMCs as well as mandatory funds on the Romanian pillar II market. The market share of the two biggest mandatory pension funds (AZT and ING) amounts to 52% (as measured by number of participants) and 59.73% (as measured by AuM).

The 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 open to all income cohorts with a contribution limited to 15% of the 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 8 providers and 10 voluntary pension funds on offer. Only two of the administrators (ING and AZT) made use of the possibility to create another voluntary pension fund. ING and AZT, as the two biggest administrators, control 60.2% (according to the number of participants) or 68.6% (according to AuM) of the entire market share. ING and AZT are the leaders not only in pillar II, but also in the pillar III market.

The investment strategies of mandatory as well as voluntary pension funds are strictly regulated. The law imposes percentage limits and restrictions for different asset classes. It is important to point out, that from this point of view, the investment rules for the mandatory and voluntary systems are very similar. This alos applies portfolio structures, and therefore impacts on the 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. Since the launch of pillar II a positive uptrend in the percentage share of equity investments could be observed. However, Romanian Government Securities and Bonds still command an absolutely dominant position in the portfolio structures of the pillar II mandatory pension funds.

This situation is very similar to the situation in pillar III. According to ASF data, currently about 73% 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 the case of pillar II, since the system's launch, we can see a positive uptrend in terms of percentage share of equity investments.

Pension Savings: The Real Return

2015 Edition

Country Case: Slovakia

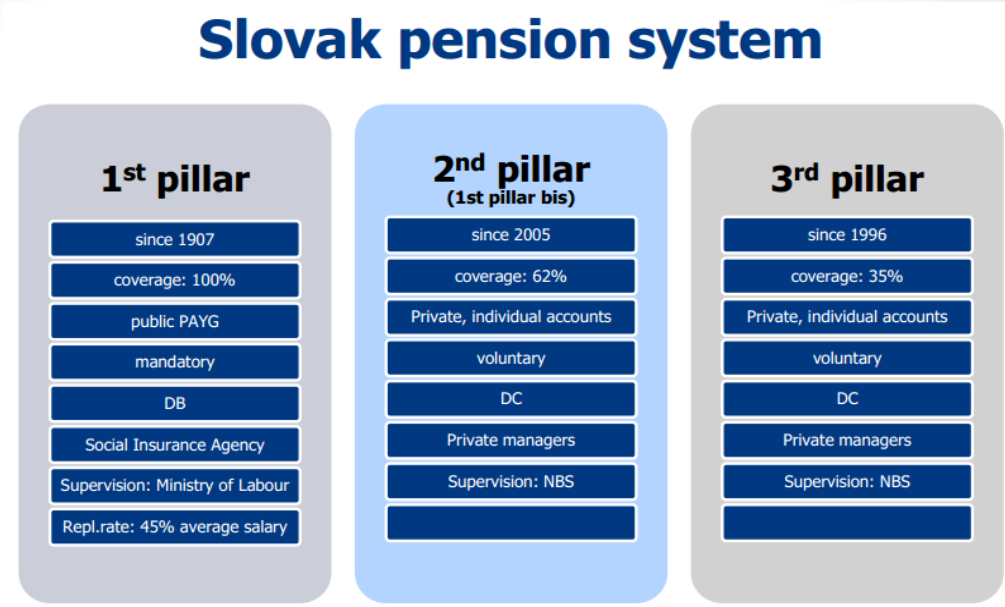
Introduction

The Slovakian old-age pension system is based on the multi-pillar approach, which consists of three main pillars:

- Pillar I – a state pension organised as a mandatory PAYG scheme,
- Pillar II – a funded pension organised as a voluntary funded DC based scheme,
- Pillar III – a supplementary pension organised 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 “pillar I bis” since it funds individual private retirement accounts with a part of mandatory Social Insurance Agency contributions; and was introduced in 2005.

Table 127. Multi-pillar pension system in Slovakia



Source:http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/Pensions_PeterPenzes.pdf

Pillar I – State Pensions

Pillar I 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 citizens. This pillar is financed by contributions of economically active individuals, amounting to 14% (18% if the saver is not in the 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).

The link between the amount of payments into the scheme and the amount of benefits provided is a manifestation of the distinctive elements of the merit principle in this scheme. 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 people. However, the Act on Social Insurance also enables voluntary pension insurance.

The basic pension insurance foundations 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.

The general contribution level corresponds to 12 times the average monthly wage in the Slovak Republic as established by the Statistical Office of the Slovak Republic for the last calendar year.

The average personal wage point is determined as the ratio of the sum of personal wage points calculated for each calendar year of the reference period and for the relevant period of pension insurance. The average personal wage point is rounded up to four decimal points.

The value of a pension unit reflects the monetary value of one personal wage point. The pension value on 31 December of the calendar year is adjusted on 1 January of the following calendar year through 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.

The retirement age is generally set at 62 years and valid for both men and women, with men already retiring at the age of 62 and single women to reach the retirement age of 62 by 2024. Starting from 2017, the retirement age will start to increase with the average increase in life expectancy.

Pillar II – Funded pensions

Pillar II was established as a 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 pensions is based on savings accumulation from the saver's side during his or her employment and the investment of these savings in financial markets via pension funds, 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 at old age for savers and their survivors in the case of death.

The 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 minimum capital requirements of € 10 million, established in 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 obliged by 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)

Following legislative changes that took effect in May 2013, mixed and index pension funds became optional, and some of the PFMCs merged them with obligatory equity non-guaranteed pension funds. It is important to say that, from the point of view of asset management, the first three categories of pension funds are actively managed pension funds and Index pension funds are the only funds managed 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 the valuation of investments (daily at market prices) are also regulated. Thus, each category of pension funds has its own investment strategy and general or special quantitative limits and operational conditions. 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 at any point before the age of 35. In general, pension fund members (savers of pillar II) are free to choose one or two of aforementioned pension funds provided by PFMCs.

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 - 4% of gross salary (9% before 1 September 2012).

Having the possibility to choose between saving in one or two pension funds at the same time, it is fully up to a saver to decide how much of his savings would be invested via one or the other pension fund. The saver can invest for example 70% in a Bond guaranteed fund and another part (30%) in an Index non-guaranteed pension fund. It is absolutely free of charge to change this allocation ratio or switch pension funds managed by the same PFMC over time. Switching PFMCs for free is possible for savers if the change is made after one year, otherwise the fee (€ 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

The 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 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 in 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 3 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 in the Slovak market. According to the "assets under management" measure, the two biggest, Allianz-Slovenska and AXA, represent nearly 60% of the market.

Table 128. Pension Asset Management Companies market share (Pillar II)

PFMC	Assets under management (in million €)	Market share based on AuM (in %)
AEGON	619.64	9.68%
Allianz – Slovenska	2,086.91	32.60%
AXA	1,666.09	26.02%
DSS Postovej banky	360.87	5.64%
ING	688.26	10.75%
VUB - Generali	980.59	15.32%
TOTAL	**6,402.35**	**100%**

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

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:

a) Guaranteed scheme – Bond guaranteed pension fund,
b) Nonguaranteed scheme - Equity nonguaranteed pension fund.

Following legislative changes in April 2013, Mixed and Index pension funds became optional pension funds and some of the PFMCs merged them with obligatory Equity nonguaranteed pension funds. The assets under management and the market share for the respective groups of voluntary pension funds are presented in a table below.

Table 129. Market share of Pillar II Pension vehicles			
Scheme	**Type of voluntary pension fund**	**Assets under management** (in million €)	**Market share based on AuM** (in %)
Guaranteed PFs	Bond guaranteed pension funds (6) - *obligatory*	5,660.40	88.41%
Nonguaranteed PFs	Mixed nonguaranteed pension funds (3) - *optional*	63.45	0.99%
	Equity nonguaranteed pension funds (6) - *obligatory*	585.89	9.15%
	Index nonguaranteed pension funds (5) - *optional*	92.61	1.45%
TOTAL	**20 Pension funds**	**6,402.35**	**100%**

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

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).

In pillar II members can choose between two main types of obligatory and two types of optional voluntary pension funds.

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 whose assets may be invested in the above securities and deposits, or other similar assets. Bond guaranteed pension funds are not allowed to invest in equities or immovables nor in respective investment funds. The conservative strategy focuses on bonds and its objective is the preservation of capital and moderate growth primarily on a 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 by 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 the Slovak pillar II. There are no general or specific quantitative limits, because of the nature of investing. Slovak Index nonguaranteed pension funds copy selected and respective stock market benchmarks (MSCI World, Eurostoxx50, ACWI, MSCI Euro).

In Slovakia, more than 1,500,000 people have joined pillar II in 2005, which is more than 60% of the economically active population. About 80% of them have opted for pension funds with a higher portion of equities in the portfolio (Equity pension funds). After legislative changes in April 2013 this number significantly changed and currently 88.41% of all savings in the Slovak pillar II is in obligatory Bond guaranteed pension funds that do not invest in equities.[129]

Pillar III – Supplementary pensions

There are four providers – Supplementary Pension Fund Management Companies (SPFMCs) operating in the market. Based on assets under management, the two biggest, ING Tatry - Sympatia and DDS Tatra banky, represent nearly 70% of the whole market.

[129] Sebo, Sebova, Virdzek, 2014

Table 130. Market share of Pillar III Supplementary Pension Companies		
SPC	**Assets under management** (in million €)	**Market share based on AuM** (in %)
DDS Tatra banky	456.14	31.07%
AXA	188.59	12.85%
ING Tatry - Sympatia	548.88	37.39%
STABILITA	274.45	18.69%
TOTAL	**1,468.05**	**100.00%**

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

By law each SPFMC must operate at least two types of pension vehicles for supplementary pensions (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).

Supplementary Pension Funds:

- 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 131. Supplementary Pension vehicles market share			
Type	**Supplementary pension vehicles**	**Assets under management** (in million €)	**Market share based on AuM** (in %)
Contributory	Conservative supplementary pension funds (3)	124.87	8.51%
	Balanced supplementary pension funds (4)	1,151.43	78.43%
	Growth supplementary pension funds (4)	125.17	8.53%
PAY-OUT	Pay-out supplementary pension funds (4)	66.58	4.54%
TOTAL	**15 Pension funds**	**1,468.05**	**100.00%**

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

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 Mark130 '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 the Slovak pillar II also has to pay an administration fee to the Social Insurance Agency that administrates the central collection system and transfers savers´ contributions to respective personal pension accounts.

The following table compares applied charges in pillar II.

[130] 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.

Table 132. Pillar II Pension Funds' Fees		
Fee type	**Since 2005**	**Today**
Management fee (for PFMC)	max **0,8%** p.a., NAV	max **0,3%** p.a., NAV *(from 1.4.2012)*
Success Fee (for PFMC)	max **5,6%**, HWM	max **10%**, HWM *(from 1.7.2013)*
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 *(from 1.1.2013)*

Source: Own research as of 31.12.2014

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),
- 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 133. Supplementary Pension Funds' Fees		
	From 2009	**From 1.1.2014**
Management Fee *1. contributory SPF*	max **2,5%** NAV (2010) => max **1,98%** (2019+)	max **1,2%** NAV (2014 = 1,8% and each following year -0,1%)
2. pay-out SPF	max **0,996%** NAV	max **0,6%** NAV (2014 = 0,90% and each following year -0,05%)
Success Fee *1. contributory SPF*	max **10%** (2010) => max **20%** (2020+); HWM principle	max **10%** ; HWM principle
2. pay-out SPF		**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, as of 31.12.2014

Taxation

The Act on Income Tax recognises two different income tax rates in Slovakia that apply to pension saving schemes.

A personal income tax rate has been set at 19% since 2005. Since 2013, there is higher tax rate of 25% for those individuals, whose monthly income is higher than €2,918.53. Only around 3% of employees in Slovakia have a monthly income higher than € 2,918.53.

The corporate income tax rate for 2014 is 22%.

The corporate income tax rate for 2013 was 23% (From 2004 until 2012 - 19%; from 2002 until 2003 - 25%; from 2000 until 2001 - 29%; from 1994 until 1999 - 40%).

Pillar II – Funded pensions

Pillar II should be viewed as pillar I bis at it is basically a derivate of the basic old-age security scheme as a part (4%) of the overall (18%) old-age social insurance contributions are diverted from a PAYG pillar into funded DC scheme. Following this principle, taxation of pillar II is similar to the PAYG pillar, meaning that an EEE taxation regime is applied.

Taxation of contributions

Contributions paid to pillar II are tax deductible. However, a saver can add voluntary contributions on top of the 4% contributions redirected from the PAYG pillar. In this case, the additional 2% of contributions are personal income tax base deductible. This provision is valid until 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

The taxation of pillar III differs significantly from the pillar II taxation approach. There are different taxation treatments of contributions as well as the pay-out phase. It is rather difficult to generalise the regime; however the EET regime can be used with several exceptions and specifications.

Taxation of contributions

When considering the taxation treatment of contributions, a slightly different regime is used for savers´ (employees´) contributions compared to the 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 that those monthly contributions to the pillar III supplementary pension fund of up to €15 are income tax base deductible. Above this amount, the contributions made to an individual savings account are subject to personal income tax. Taking into account that the average salary in Slovakia (year 2014) amounts to more or less €880, employee contributions up to 1.7% of the 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 the monthly salary are treated as tax expenses. Therefore, employers are motivated to contribute on behalf of employees up to this tax favourable ceiling. Taking into account the average salary in Slovakia (€880 in 2014), contributions of up to the €53 per employee per month are considered as tax expenses for the contributing employer. Seeing the poor performance of supplementary pension funds and the relatively high level of charges, the favourable tax treatment of employer contributions is the real reason why 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 employer contributions. The employee is held liable for increased health insurance obligations (currently 14% of monthly salary) due to the employer contributions to pillar III. The employee (saver) income base for health insurance payment is increased due to the employer contributions to pillar III, and it depends on the employer´s approach.

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 three general conditions, of which at least one should be met, for entering the pay-out phase and achieve a more favourable tax treatment of the income stream from pillar III savings. They consist of a member´s age (at least 62 years), his or her entitlement to state retirement pension benefits or his or her entitlement to early state retirement pension benefits.

When considering the tax treatment of the pay-out of the income stream from the point of view of a saver, there is a possibility to adjust the personal income tax base. The Act on Income Tax defines that the deduction from the income tax base

will be applied to the income stream from pillar III benefits and life insurance contracts. The personal income tax base is reduced by 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 a temporary annuity, the income tax base is calculated as a positive balance between the sum of benefits already received and the sum of paid contributions. In case of a 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 based on life expectancy and the age of the taxpayer (beneficiary) at the moment of the first paid benefit. Therefore, we can conclude that the income tax treatment of the 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.

Pension Returns

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 134. Pension vehicles in Pillar II		
Pension vehicle	**Fund Name**	**Fund Inception Day**
Bond guaranteed pension funds (obligatory)	AEGON d.s.s. – BGPF (Solid)	*22.3.2005*
	Allianz - Slovenska d.s.s. – BGPF (Garant)	*22.3.2005*
	AXA d.s.s. – BGPF (Dlhopisovy)	*22.3.2005*
	DSS Postovej banky d.s.s. – BGPF (Stabilita)	*22.3.2005*
	ING d.s.s. – BGPF (Tradícia)	*22.3.2005*
	VUB Generali d.s.s. – BGPF (Klasik)	*22.3.2005*
Mixed nonguaranteed pension funds (optional)	DSS Postovej banky d.s.s. – MNGPF (Benefit)	*22.3.2005*
	ING d.s.s. – MNGPF (Harmónia)	*22.3.2005*
	VUB Generali d.s.s. – MNGPF (Mix)	*22.3.2005*
Equity nonguaranteed pension funds (obligatory)	AEGON d.s.s. – ENGPF (Vital)	*22.3.2005*
	Allianz - Slovenska d.s.s. – ENGPF (Progres)	*22.3.2005*
	AXA d.s.s. – ENGPF (Akciovy)	*22.3.2005*
	DSS Postovej banky d.s.s. – ENGPF (Prosperita)	*22.3.2005*
	ING d.s.s. – ENGPF (Dynamika)	*22.3.2005*
	VUB Generali d.s.s. – ENGPF (Profit)	*22.3.2005*
Index nonguaranteed pension funds (optional)	AEGON d.s.s. – INGPF (Index)	*2.4.2012*
	AXA d.s.s. – INGPF (Indexovy)	*2.4.2012*
	DSS Postovej banky d.s.s. – INGPF (Perspektiva)	*2.4.2012*
	ING d.s.s. – INGPF (Index)	*2.4.2012*
	VUB Generali d.s.s. – INGPF (Index)	*2.4.2012*

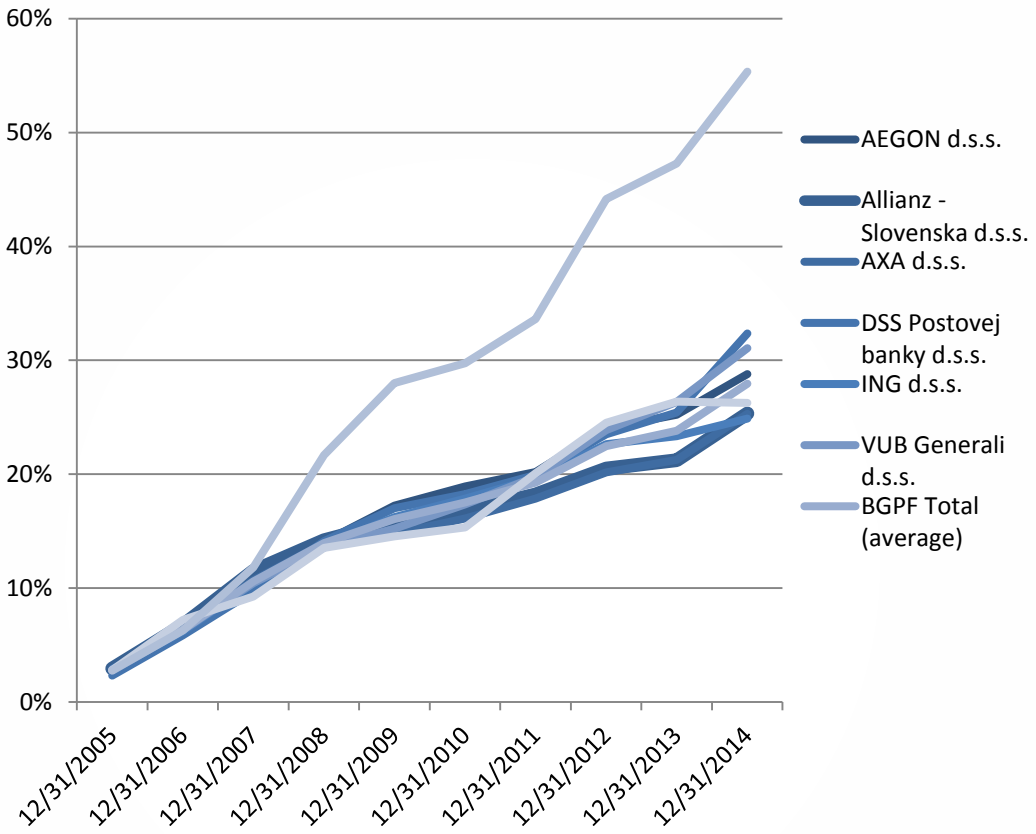
Source: Own elaboration based on www.nbs.sk, 2014

The performance (returns and respective volatility) differs between 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 non-guaranteed pension funds invest a higher portion in equity investments (currently more than 50% of AuM in average). The highest level of equity investments have optional Index non-guaranteed pension funds (nearly 100% of AuM), because their fully passive investment strategy focuses on replication of a benchmark (various equity market index) performance.

The performance of bond guaranteed pension funds on a cumulative basis compared to their respective benchmark (bond benchmark), inflation and average is presented in the graph below.

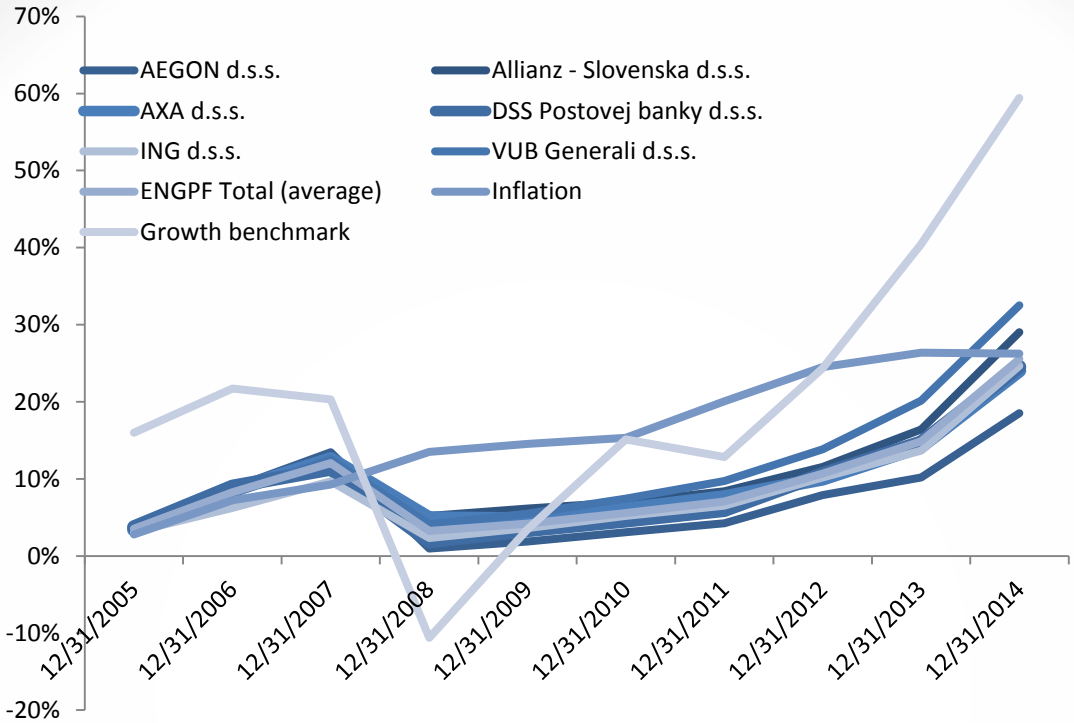
Graph 38. Obligatory Bond Guaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The performance of equity nonguaranteed pension funds on a cumulative basis compared to their respective benchmark (bond benchmark), inflation and average is presented in graph below.

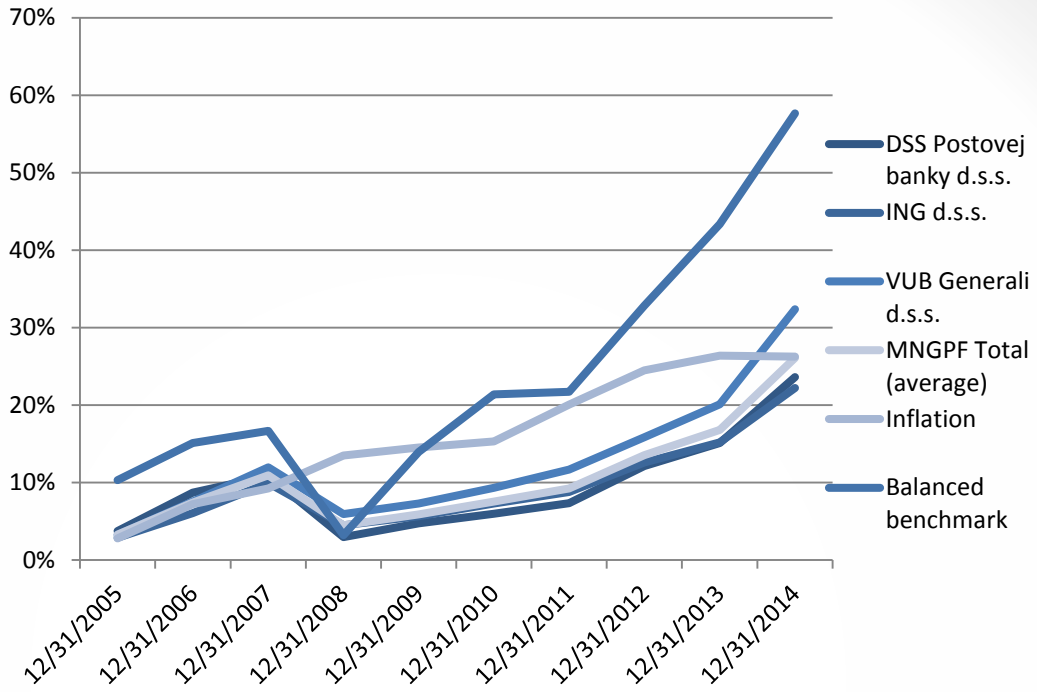
Graph 39. Obligatory Equity Nonguaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The performance of Optional Mixed Nonguaranteed Pension Funds on an annual as well as cumulative basis compared to their respective benchmark (Bond benchmark), inflation and average is presented in the grap below.

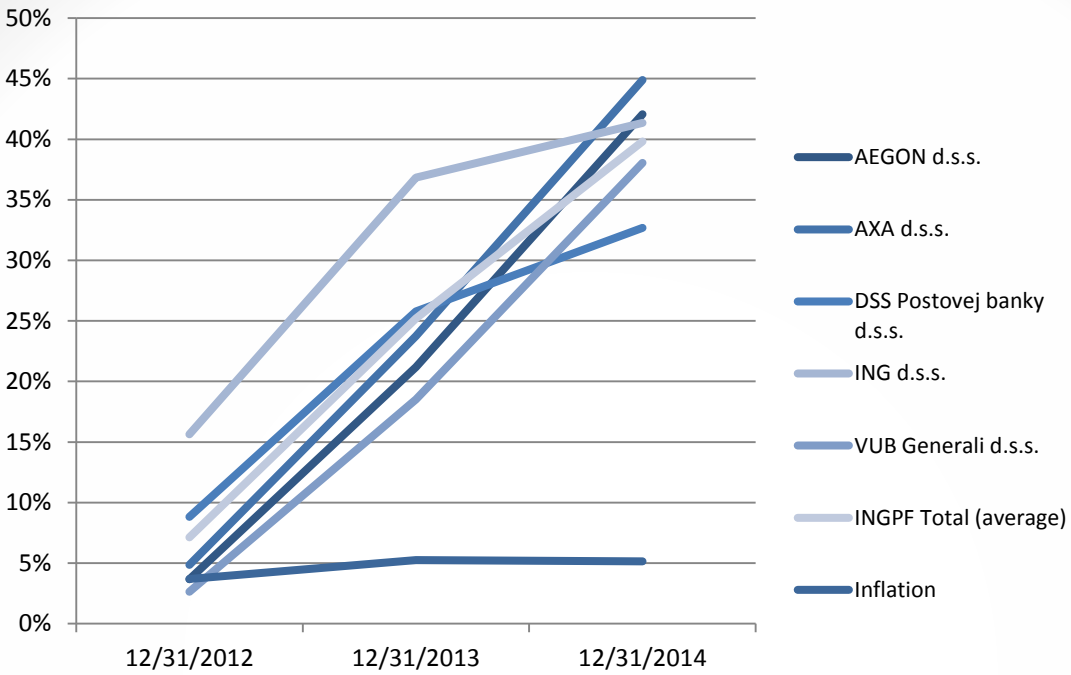
Graph 40. Optional Mixed Nonguaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The performance of Optional Index Nonguaranteed Pension Funds on an annual as well as cumulative basis compared to inflation and average is presented in the graph below.

Graph 41. Optional Index Nonguaranteed Pension Fund – Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

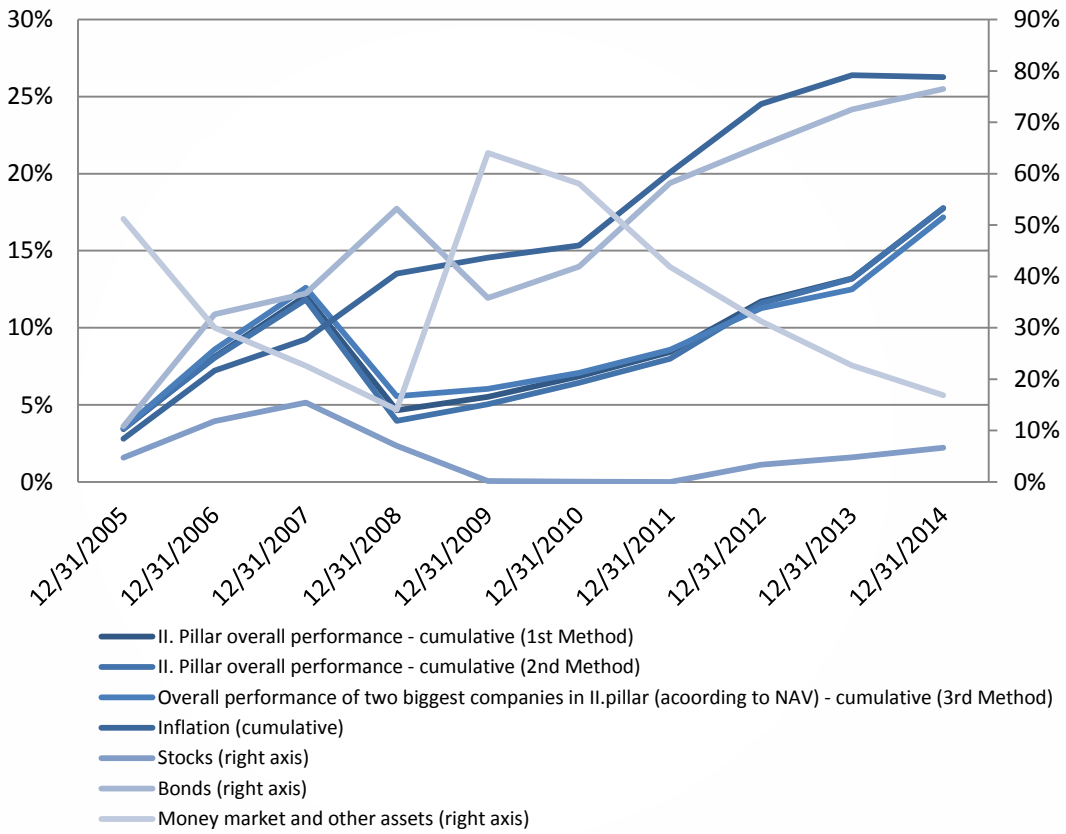
It should be noted that the last two graphs above do not compare the performance of pension funds with a benchmark. The first reason is that, according to the database from manazeruspor.sk (analytical website of Slovak pillar II savers), each index pension fund in pillar II is tracking its respective benchmark very well. The second reason is that each index pension fund has selected different benchmark:

- ING – Eurostoxx50,
- DSS Postovej Banky – MSCI Euro,
- VUB Generali – ACWI,
- AXA and AEGON – MSCI World.

The overall performance and portfolio structure of Slovak pillar II 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. The overall performance of Slovak pillar II was calculated using three methods:

- 1st Method – overall performance calculated using NAV weighted annual return of all pension funds separately,
- 2nd Method – overall performance calculated using NAV weighted average annual return of respective pension fund types,
- 3rd Method – overall performance calculated using the two biggest companies according to NAV.

Graph 42. Overall performance and Portfolio structure of pillar II



Source: Own calculations, 2014 (data as of 31.12.2014)

Nominal as well as real returns of pillar II pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table 135. Nominal and Real Returns of pillar II Pension Funds in Slovakia									
2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
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%
1.65%									
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%
-0.75%									

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

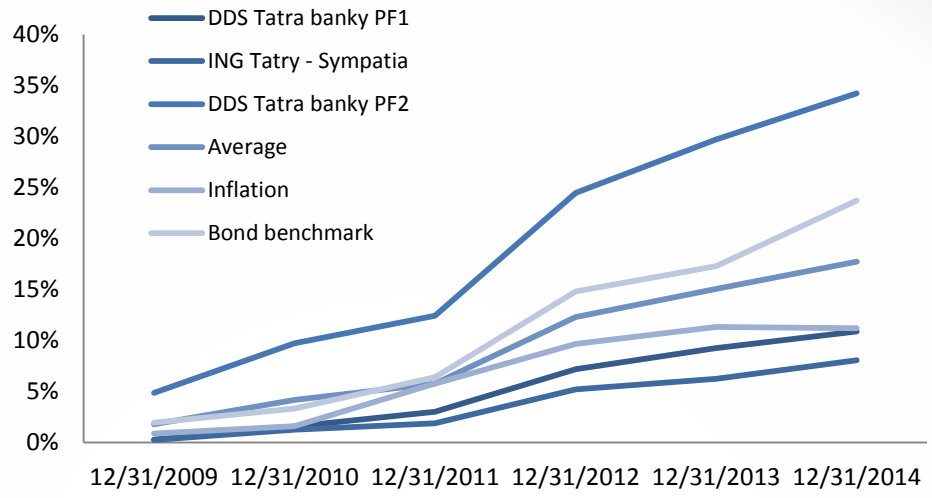
Negative real returns between the years 2008 and 2013 were caused by inappropriate legislative changes that came into effect in July 2009 after stock market turmoil. These changes forced portfolio managers to sell of all equities and hold cash in portfolios.

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 on average) and growth pension funds invest a higher portion in equity investments (currently more than 40% of AuM on average).

The performance of supplementary conservative pension funds on a cumulative basis compared to their respective benchmark (bond benchmark), inflation and average is presented in the graph below.

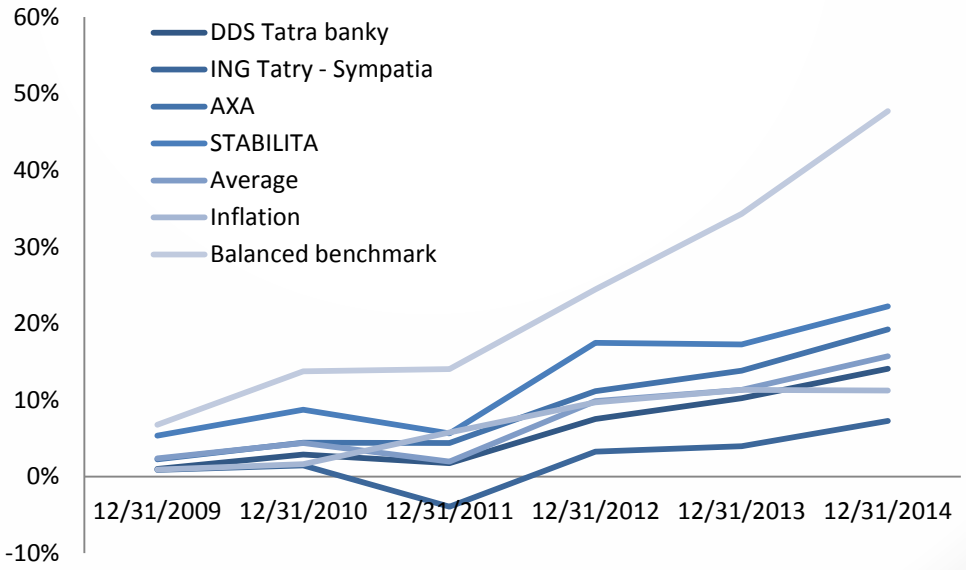
Graph 43. Supplementary Conservative pension funds - Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The performance supplementary balanced pension funds on a cumulative basis compared to their respective benchmarks (bond benchmark), inflation and average is presented in the graph below.

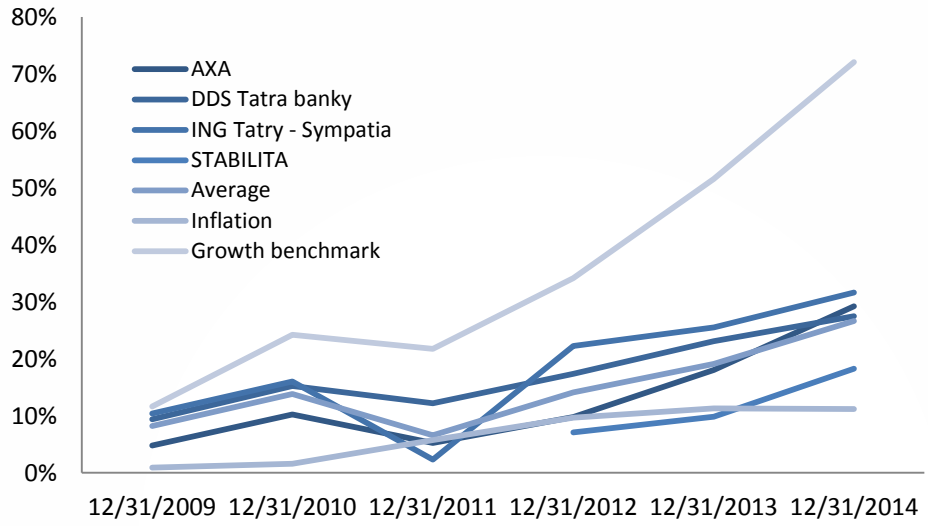
Graph 44. Supplementary Balanced pension funds - Cumulative Performance



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The performance of supplementary growth pension funds on a cumulative basis compared to their respective benchmarks (bond benchmark), inflation and average is presented in the graph below.

Graph 45. Supplementary Growth pension funds - Cumulative Performance

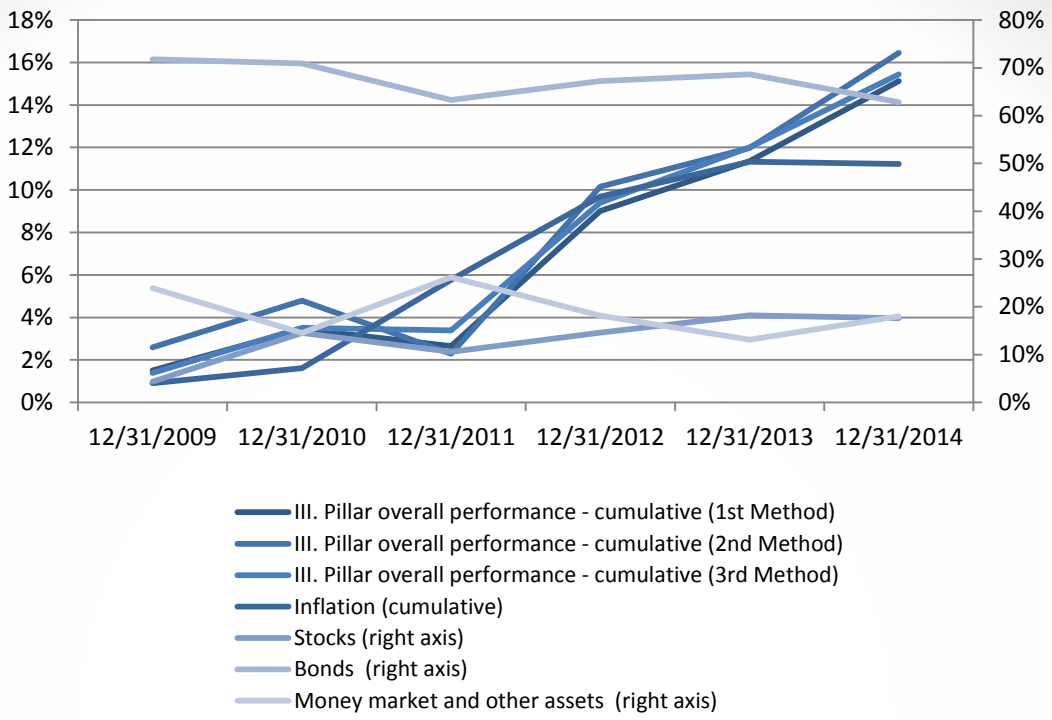


Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

The overall performance and portfolio structure of Slovak pillar III is presented in the graph below. According to this graph, currently more than 60% (less than in Slovak pillar II) of all investments in pillar III pension funds are bond investments. On the other hand, only 17.61% (more than in Slovak pillar II) of all investments are equity investments. The overall performance of Slovak pillar III was also calculated using three methods:

- 1st Method – overall performance calculated using NAV weighted annual return of all pension funds separately,
- 2nd Method – overall performance calculated using NAV weighted average annual return of respective pension fund type,
- 3rd Method – overall performance calculated using the two biggest companies according to NAV.

Graph 46. Overall performance and Portfolio structure of pillar III



Source: Own calculations based on www.nbs.sk data, 2014 (data as of 31.12.2014)

Nominal as well as real returns of supplementary pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table 136. Nominal and Real Returns of Supplementary Pension Funds in Slovakia

2009	2010	2011	2012	2013	2014
Nominal return after charges, before inflation and taxes					
1.51%	1.91%	-0.78%	6.20%	2.15%	3.38%
		2.37%			
Real return after charges and inflation and before taxes					
0.61%	1.21%	-4.88%	2.50%	0.65%	3.48%
		0.56%			

Source: Own calculations based on www.nbs.sk data, 2014 (data at 31.12.2014)

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

The Slovak multi-pillar pension system is not quite favourable to savers. Pillar II suffers from constant changes and significant political risk arising not only from diverging political opinions on the pension system but also by the changes in private pension schemes in neighbouring countries (Poland, Hungary, Czech republic), who effectively diminished (or even destroyed) pillar II schemes in favour of state PAYG schemes.

Even though there have been negative interventions affecting pillar II from 2008 until 2012 (significant investment restrictions, decrease of contributions from 9% to 4%), several positive features have been introduced recently (2012 and 2013) in pillar II. The introduction of passive index pension funds, the decrease of management charges, changes in fee structure resulting in the introduction of performance based fees (success fee with High-Water Mark principles) and decreased regulation of non-guaranteed pension funds. However, the price to pay for these positive changes was the transfer of savers from equity based pension funds into bond pension funds (nearly 90% of savers), which might not be beneficial for all savers, especially younger ones.

Pillar III pension vehicles generally perform poorly, are costly and don't enjoy 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 the pillar III scheme is still ongoing, while there are several different views on how to make pillar III more favorable to savers.

Pension Savings: The Real Return

2015 Edition

Country Case: Spain

Introduction

Household savings, through property and other forms of direct investment, have always been a significant feature of the Spanish economy. Historically, in the absence of a comprehensive welfare system, citizens have had to build capital to provide for major life events such as retirement. The recent development of Spain's welfare system and its capacity to offer comprehensive care has not blunted the Spanish citizen's appetite for saving. According to the Bank of Spain (2011), the savings rate has risen strongly since the beginning of the crisis in 2007, due to increasing expectations of unemployment and hard times. As of the end of first quarter in 2015, the household savings rate was 9.9%, up from of 9.8% in fourth quarter of 2014.

As of fourth quarter 2014, financial assets owned by Spanish households amounted up to €1.99 billion[131]. Table 137 shows that households invested in a wide range of

Table 137. Financial Savings of Spanish Households (non-real estate)

	% of total savings, 2014	% Δ 2014/2013
Bank Deposits	43.7	-3.1
Collective Investments (funds and investment companies)	9.2	1.4
Insurance	11	0.1
Pension Funds	5.6	0.1
Direct Investment	28.3	1.8
Credits	0.7	-0.1
Other	1.5	0.0
TOTAL	100	

Source: 2014 Report on Insurances and Pension Funds, Directorate-General of Insurances and Pension Funds, Spanish Ministry of Economy and Competitiveness

[131] Financial Savings of Spanish Families Q4 2014, Inverco.

financial assets.

According to another source, the 2014 OECD Factbook, in 2012 the financial assets of Spanish households were divided as follows: 48.1% cash and deposits, 3.5% securities other than shares, 23.7% shares other than equity, 6.3% mutual fund shares, 7.5% life insurance reserves and 6.1% pension funds.

The market for professional and individual-based pension schemes was only recently established in Spain. The total capital invested in pension funds as of the end of first quarter in 2015 was €104,416 million, representing the interests of 9,918,433 policyholders (in turn representing over 8 million citizens, as some consumers hold more than one policy).

Pension Vehicles

Pension schemes

When analysing private pension provisions in Spain, a clear distinction should be made between retirement plans and pension plans. Pension plans are complementary to and perfectly aligned with the public pensions system, and heavily promoted by theSpanish public administration through generous tax breaks. Retirement plans are financial products that stem from the initiative of Spanish financial institutions for retirement saving purposes.

Retirement plans cater for people with low income levels. They are flexible since they allow savers to withdraw funds in times of hardship, but at the expense of high withdrawal fees. Pension plan savers cannot draw on their funds until retirement, except under very limited circumstances – defined by the Spanish Pension Plans Law[132] – such as severe illness or unemployment[133]. The recent Law 26/2014 allows participants to withdraw the capital and interests on their pension funds for contributions made over 10 years ago, with contributions from 2015 on (e.g. in 2025). Consequently, retirement plans and pension plans have different degrees of liquidity, risk profile and tax treatment.

[132] Royal Decrees 1/2002, 304/2004 and 681/2014 .
[133] Royal Decree 1129/2009.

Table 138. Private pension providers by market share in %		
1	Pension fund management 'Gestoras' - Insurance firms	32.5
2	Depositories	29.1
3	Pension fund management 'Gestoras' firms	33.4
4	Insurance companies	1.6
5	Other	3.4

Source: Ministry of Economy and Competitiveness

Table 138 above lists the leading providers of private pension plans by market share. When splitting them by type[134], 45% are occupational pension plans, 48% individual ones and 6% associational[135]. Out of all the occupational plans, 70% are DC (defined contribution), 1% DB (defined benefits) and 29% mixed[136].

The Spanish Association for Collective Investments and Pension Funds (INVERCO) established a classification system for individual pension funds by liquidity and risk. Table 139 describes the categories and allocation as a percentage of private pensions as of end 2014.

[134] Ministry of Economy and Competitiveness, 2014.
[135] According to Spanish classification, those pension funds are promoted by associations or workers' unions.
[136] Ministry of Economy and Competitiveness.

Table 139. Pension fund categories and allocation	
Category	**Allocation**
Non-mandatory pillar II Pension Funds for employees	50.06%
Non-mandatory pillar II Pension Fund from associations or worker unions to members	7.05%
Pillar III Pension Funds – Fixed Return, short term – *no variable return assets or derivatives whose underlying asset is not a fixed return asset in portfolio, average asset holding less than 2 years*	5.80%
Pillar III Pension Funds – Fixed Return, long term – *no variable return assets or derivatives whose underlying asset is not a fixed return asset in portfolio, average asset holding more than 2 years*	2.86%
Pillar III Pension Funds – Fixed Return, mixed – *less than 30% of portfolio composed of variable return assets*	10.08%
Pillar III Pension Funds – Variable Return, mixed – *between 30% and 75% of portfolio composed of variable return assets*	6.54%
Pillar III Pension Funds – Variable Return – *over 75% of total portfolio invested in variable return assets*	7.12%
Pillar III Pension Funds – Guaranteed Return Pension Funds – *those funds that count with the guarantee of a certain level of returns provided by a third party*	10.46%

Source: INVERCO

Life Insurance

Life insurance policies are a quite popular savings product in Spain. According to UNESPA, the Spanish Insurance Industry Association, as of the end of first quarter 2015 Spanish insurance companies were managing €203.6 million in savings, of which 80.09% (€163.23 million) corresponded to savings through insurance contracts and 19.91% to pension funds managed by insurers[137]. Life insurance capital is mostly invested in debt securities, as illustrated in the table below.

[137] UNESPA, 2015

Table 140. Life insurance asset allocation, Q4 2014	
	%
Fixed income, public	44.85
Fixed income, private	23.88
Structured products and derivatives	2.44
Credits	1.09
Cash and deposits	13.88
Investment funds	4.88
Variable income	5.26
Real estate	3.71

Source: Directorate-General of Insurance and Pension Funds, 2014

According to the Directorate-General of Insurances and Pension Funds (2012), the distribution of life insurance products primarily takes place through bank branches (76.38%) and exclusive agents (13.45%).

PPA, PIAS and PPSE

PPA (Insured Prevision Plans, "Planes de Prevision Asegurados") and PIAS (Individual Systematic Savings Plans, "Planes Individuales de Ahorro Sistematico") are an important category of financial products used for capital accumulation purposes. They are commonly considered as a type of life insurance. PPA and PIAS are individual long term savings products, which are constituted by periodic payments in order to accumulate capital and obtain a lifetime annuity from the moment the investor reaches a certain age (agreed in the contract),for the rest of his/her life. More specifically, PPAs guarantee a certain level of returns calculated through actuary methods during the whole period of constitution of the capital. In a nutshell, PPAs are pension plans with an insurance component. Unlike pension plans and PPA, which are not redeemable before retirement, it is possible to receive advanced annuity payment from PIAS.

As of the end of first quarter 2015, PIAS amounted to €6.87 million in capital for over 1.3 million savers (a yearly increase of 33.3%) and PPAs amounted to €12.5 million for slightly over 1 million investors[138].

In addition to PPA and PIAS, there are PPSE (Social Entrepreneurial Prevision Plans, "Planes de Prevision Social Empresarial") [139], which are very similar to occupational

[138] UNESPA, 2015

pension plans. Its tax treatment is similar to that of other pension funds; however, they are much more underdeveloped than the two previous categories.

Charges

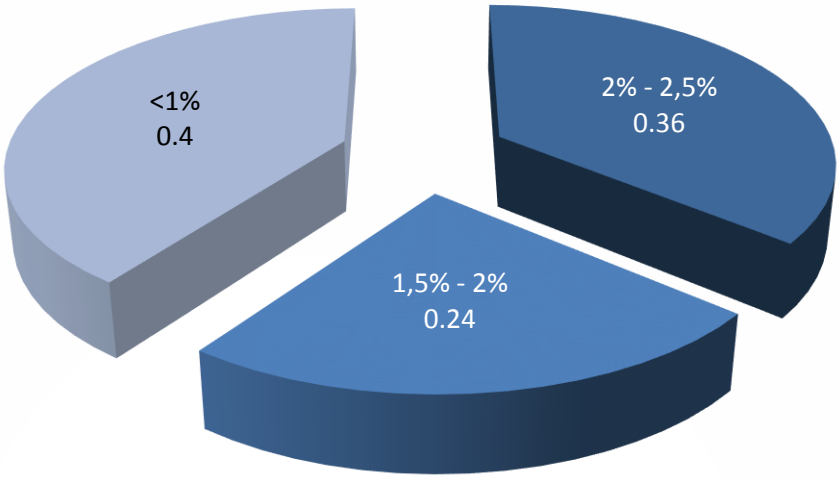
Altought public disclosure of charges related to private pension funds is poor, savers do benefit from some protection under the law which limits management fees. However there is no mention on limits to commissions, which are usually paid out of management fees. Article 84 of the Royal Decree 304/2004 of Pension Plans and Funds[140] established specific limits on maximum fees for pension plan subscribers for depository and management of the pension fund. These fee caps have been recently lowered following the Royal Decree 681/2014 that entered into force in August 2014[141]. The law also allows for variable fees based on performance. In all cases, providers are obliged to respect the following limits:

- Pension fund managers are allowed to charge a maximum of 1.5% (down from the previous 2% level cap in 2004) of the annual value of the managed accounts. This limit has to be respected for both the pension fund as a whole and for the pension plans that compose the pension funds, and individually for each pension fund subscriber.
- Depositories of pension funds can charge a maximum of 0.25% (down from the previous 0.5% cap) of the value of the accounts. This limit has to be respected for each individual pension plan as well as the pension fund as a whole, and individually for each pension fund subscriber.

In as far the distribution fees of pension funds are concerned, Aguirreamalloa, Corres and Fernández (2012) state that inducements (commissions paid by providers to financial advisors) are often presented to consumers as ordinary fees (such as deposit, management, subscription and reimbursement commissions). According to their research, the salespersons (financial advisors) of pension products earn more than portfolio managers do. In 2007, commission rates varied between less than 1 to 2.5% (see chart 4).

[139] According to according to Article 51.4 of the Income Tax Law 35/2006 and Royal Decree 1588/1999 (modified by the Royal Decree 1684/2007).
[140] http://www.boe.es/boe/dias/2004/02/25/pdfs/A08859-08909.pdf
[141] http://www.boe.es/boe/dias/2014/08/02/pdfs/BOE-A-2014-8367.pdf

Chart 4. Commissions charged to pension fund participants in 2007



Source: Aguirreamalloa, J; Corres, L. and Fernández, P. – Pension Funds Returns in Spain 2001-2011, IESE Research document, February 2012

Tables 141 and 142 demonstrate the evolution of management and depository fees for pension funds over the last few years. There is a clear difference in the extent of management fees charged on retail (pillar III) schemes as compared to institutional (pillar II) schemes, to the order of nearly seven to one.

Table 141. Management Charges

	2007	2008	2009	2010	2011
Pillar I	0.16%	0.18%	0.16%	0.17%	0.21%
Pillar II	1.53%	1.65%	1.41%	1.46%	1.52%

Source: Aguirreamalloa, Corres and Hernandez (2011)

This is repeated to a greater extent in depository fees, with a difference between retail and institutional ones of nearly 9 to 1. These differences in fees between retail and institutional accounts illustrate the power of informed bargaining by institutional investors on the pricing of product providers and the high commissions charged by retail distributors.

Table 142. Depository Charges					
	2007	2008	2009	2010	2011
Pillar II	0.04%	0.03%	0.03%	0.03%	0.03%
Pillar III	0.32%	0.23%	0.22%	0.22%	0.20%

Source: Aguirreamalloa, Corres and Hernandez (2011)

According to Aguirreamalloa, Corres and Fernández (2012), managers do not report on their portfolio management policy to pension fund participants. The authors criticised the quality of the information that pension funds provide to participants. They consider that it is insufficient to allow for an informed judgment on whether portfolio manager activity added any value for the pension saver. Aguirreamalloa, Corres and Fernández believe that pension funds have a duty to inform participants of their activities, including the fees they charge – information that is not generally available. They also consider it beneficial for pension funds to inform their clients on the returns that would have been obtained before the portfolio manager activity, to assess the added value of the manager. Aguirreamalloa, Corres and Fernández conclude that most of the activity of pension managers destroys rather than creates value.

Additionally, they are also critical of the secondary effects of the beneficial tax structure on personal pension plans. In their view, the tax structure attracts funds to opaque money losing schemes. These plans offer no ultimate advantage to savers, since the associated costs of explicit and hidden commissions as well as custody and transaction fees outweigh the tax benefits.

Taxation

Pension savers receive favourable tax treatment when they contribute to pension saving products.

Retirement Plans

There are no tax benefits for contributions to retirement plans. At the end of the plan, the investment return will integrate the year's income tax declaration as capital gains.

Life insurance products

Tax benefits for contributions to life insurance products generally ended in 1999. The returns of the accumulated capital will be taxed as any other financial capital gains. If the policyholder dies before maturity of the policy, his/her estate will pay the usual inheritance taxes on the received capital. In some circumstances, it is possible to get tax relief on life insurance policies[142].

PPAs (Insured Provision Plans, "Planes de Prevision Asegurados"[143])

These plans are exempt from capital gains tax and they receive increasingly favourable tax treatment (reductions of the tax base) according to the age of the saver at the beginning of pay-out (see table 143).

Table 143. Tax base reduction on PPAs

Beneficiary	Tax Base Reduction
<50 years	Up to either €10,000 or 30% of savers' income (the smallest amount)
>50 years	Up to either €12,000 or 50% of savers' income (the smallest amount)
Disabled (over 65% disability)	Up to €24,250 (maximum €10,000 for every relative making contribution to disabled beneficiary)
Spouse (up to 8,000 annual income)	Up to €2,000

Source: Spanish Ministry for Taxes

PIAS (Individual Systematic Savings Plans, "Planes Individuales de Ahorro Sistematico")

PIAS also have favourable tax treatment under the Law 35/2006 for income tax. There is a maximum annual deductible limit of €8,000 per year on PIAS. The maximum amount that an investor can accumulate in this plan is €240,000. If these requirements are met and the first contribution to the PIAS was more than 10

[142] For instance, if its purchase was tied to the purchase of a mortgage loan.
[143] Royal Decree 439/2007 established tax benefits for PPAs.
http://www.boe.es/buscar/doc.php?id=BOE-A-2007-6820

years ago, the saver will not pay tax on investment gains. There is no tax deduction for contributions to this savings product.

Upon completion of the investment period in a pension plan, the saver has three options for the use of the accumulated wealth[144]:

- Lump sum: before 2007, a saver taking a lump sum payment would benefit from an additional 40% reduction in tax base for the capital. After 2007, this 40% reduction on the taxable amount can be applied in fewer cases, which were recently reviewed in the Law 26/2014. This dramatic tax rate, to be paid even by people with very low incomes, has effectively discouraged savers from taking lump sum payments.
- Purchase of an annuity: not compulsory. Annuity income is subject to tax, but normally at a much lower rate than for a lump sum payment. The annuity income will be added to any other source of income of the pensioner (public pension, dividends, coupons, etc.). However, there is an extra benefit for annuities derived from insurance-based products (life insurance, PIAS, PPAs, PPSE), which depends on the age at which the saver begins to draw down on the investment[145] (see table 144).
- Mix: a certain amount is received by a lump sum and the other part is constituted through an annuity. Money received is treated as income for taxation purposes.

Table 144. Tax base on insurance annuities

Age of the beneficiary when annuities start	% of the annuity for which to pay income tax
<40 years	40%
40 to 49 years	35%
50 to 59 years	28%
60 to 65 years	24%
66 to 69 years	20%
Over 70 years	8%

Source: Spanish Ministry for Taxes

[144] The end of the investment period will come with retirement age (pension plans, retirement plans) or whenever the saver decides to end the plan (life insurance, PPA, PIAS, PPSE).
[145] http://www.dgsfp.meh.es/gaspar/PPOtrosContratosPIASPrint.pdf

Pension Plans

Investment in private pension funds is the most popular specific pension savings instrument in Spain due to the important tax benefits it provides on income tax (Laws 46/2002 and 62/2003). Such tax benefits are the main reason why people contribute to private pension funds. Indeed, many contributions to private pension plans are made during the period when tax declarations are due (and therefore taxpayers can contribute to their private pension' pots if they intend to pay less income tax).

Every taxpayer younger than 52 years of age can deduct, from their taxable income, up to €8,000 per year of contributions to pension plans. Taxpayers over the age of 52 had a cumulative additional contribution allowance of €1,250 per year, which would top out after 13 years to produce a maximum ceiling on deductible contributions of €24,250 per year. Law 26/2014 recently modified this limit allowing only a yearly deduction of up to €8,000, independent from the age of the taxpayer and with the limit of 30% of labour or entrepreneurial income.

Fund participants in Spain will have to pay income tax when they retire, not only on capital but also on the generated interests. Therefore we can conclude that the tax deduction is not indeed a tax benefit, but rather a tax payment deferral.

The amount of taxes to be paid upon retirement depends on whether the investor prefers to withdraw the lump sum or receive monthly payments until the moment of their death. In this case, annuities will receive the same tax treatment as salary income. This implies that the amount of taxes first deducted and later paid by the fund participant will generally not be the same; the net tax effect will vary from case to case.

Table 145. Income Tax Thresholds

Annual Income	Marginal Tax Rate
< 17,707€	24,75%
17,707 to 33,007€	30%
33,007 to 53,407€	40%
53,407 to 120,000€	45%
120,000 to 175,000€	49%
175,000 to 300,000€	52%[146]

Source: Royal Decree-Law 20/2011 of Urgent Budgetary Measures, 30 December 2011

[146] According to the revision of the tax system by the Spanish Government in December 2011.

For example, assuming capital returns of 3%, the capital generated by €1,000 after 15 years would be €1557, e.g. €557 of interests. The tax on those interests would be €105.83 (assuming returns taxed at 19%).

Table 146. Effects on Taxes on Savings Products	
Net Marginal Tax Effect (for every invested €1000)	**Relative effect of taxes on saving products**
-€ 105.83	-6.8%[147] for 15 years, annually 1.13%[148])
Source: Better Finance Research	

It is possible for subscribers of Spanish pension funds to decide whether, by the age they retire, they receive the lump sum or monthly annuities.

For the purpose of this report, we will assume that the future pensioner is choosing to receive a lump sum by the end of the pension plan. In this case, if the first contribution to the pensions plan was done more than two years ago, he or she will benefit from an extra taxable base reduction of 40%.

Table 147. Spanish Income Tax Formula
Liquidative base = Tax base – Base reductions (e.g. for contribution to pensions fund)
Integer quota = Liquidative base * tax rate (by thresholds)
Liquid quota= Integer quota – Deductions
Liquid quota- Other deductions= Final tax to pay

Source: Law 35/2006 for Income Tax

Retail investors care about the final returns of pension saving products, e.g. the returns on investment products after inflation and taxes and the amount they will get. It is only possible to know the actual returns at the final stage of the pension plan: it is the moment when the net tax effect can be calculated, by actualising and deducting the past tax deductions to the paid taxes. Therefore, investment decisions between pension funds and alternative investment products for retirement are generally made without the required information on final returns delivered by each of the options.

It is however possible to estimate the real profitability of private pension plans versus alternative investment products through a practical example.

[147] 105.83 / 1557 e.g., total tax to pay versus capital plus interests.

[148] $\sqrt[15]{6.8\%}$ = 1.13%

According to the Spanish income tax formula, for every €1,000 invested in a pension plan by an investor over 50 years old, the investor would get (assuming no additional tax reductions at a later stage of the tax calculation) a reduction on investment in a private pensions plan of 50% of €1,000, in this case €500.

Assuming an inflation rate of 2%, we can actualise the tax benefits obtained at the moment the €1,000 was saved.

Table 148. Net nominal and relative tax effect on returns

Annual income	Marginal tax rate	Tax savings	Actualised tax savings after 15yr (2 % inflation rate)	Tax to pay (taxable base = €694.2)	Net marginal tax effect (for every invested €1000)	Relative effect of taxes on pension plans
< €17,707	24.75%	€123.75	€167	€171.80	-€5	-0.5%
€17,707 to €33,007	30%	€150	€202.50	€208.30	-€6	-0.6%
€33,007 to €53,407	40%	€200	€270	€277.70	-€8	-0.7%
€53,407 to €120,000	45%	€225	€303.75	€312.40	-€9	-0.8%
€120,000 to €175,000	49%	€245	€330.75	€340.20	-€9	-0.9%
€175,000 to €300,000	52%	€260	€351	€360.90	-€10	-1.0%

Source: Better Finance Research

As mentioned above, for a given return rate of 3%, the capital, generated by €1,000 after 15 years would be €1,557, e.g. €557 of interests. There is an extra tax benefit through a taxable base reduction by 40% if the capital is recovered as a lump sum[149] e.g. €694.2. In turn, the person should pay taxes (depending on its situation of the tax scale) when withdrawing money from the pension plan.

In order to obtain the marginal net effect, we will deduct the actualised tax benefits from the tax paid when recovering the capital through a lump sum.

[149] This extra tax bonus disappeared as from 1 January 2007. However, it will be maintained for any capital contributions to the pension fund made before 2007. For the purposes of our research, we shall assume as still in place (best scenario).

As shown in table 148, there is an increasingly important negative fiscal incentive to invest in pension funds e.g. the disincentive increases, the higher the income of the investor is when finalising the pension plan.

It would be possible for the investor to somehow "escape" from this burdensome taxation by receiving the pay-out through a lifetime annuity and not as a lump sum; although it would not be possible to benefit from the 40% reduction in the taxable base. Lifetime annuities would be added to any other sources of income (dividends, interests, coupons) and be taxable according to the tax threshold as presented above.

We should also bear in mind that the final payable tax for the saver could potentially be even higher, since:

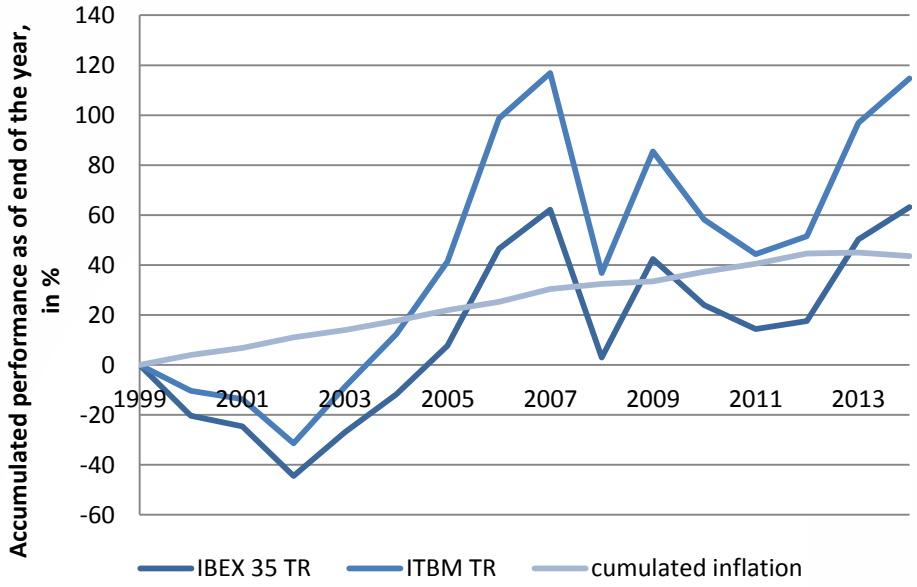
- Due to this very substantial capital accumulation, it is very likely that a higher tax threshold is charged when withdrawing the capital from the pension fund as opposed to investing in the pension funds (e.g. higher tax threshold).
- Net return rates of 1% have been assumed (3% investment returns and 2% inflation). This is not a very realistic assumption, since Spanish pension funds have proven not to succeed in beating inflation rates and protecting the real value of the money of investors.

Spanish capital markets returns

When looking at the returns of the Spanish IBEX 35 "price" index - the most commonly reported proxy by the media for Spanish stocks performance - over the 15-year period from 2000 to 2014, it would appear that the results of the Spanish stock market were mediocre: a -11.7% over this period which in turn makes this an annual average of -1.18%. However, in order to have a more "real" view, it is necessary to look at this index in terms of total returns (i.e. including reinvested dividends): the Spanish large caps performance over the 2000 to 2014 period amounted to +63.14%, which even after deduction of cumulated inflation over the same period (43.52%) still provides very significant positive real returns. Following the same methodology we have been using, when we look at the broader index for Spanish stocks (not only big caps but also mid-caps), the ITBM (Indice Total de la Bolsa de Madrid) total returns, the result is a whopping +114.75% nominal return

(+5.23% annual average), which in annualised real terms almost trebles the performance of the "narrow" IBEX 35 TR index (2.72% vs 0.86%).

Graph 47. Cumulated performance of wide index (IGBM) vs narrow index (IBEX 35) in Spain



We could not find any "all tradable" indexed ETF (exchange traded fund) that replicates the behaviour of the wider Spanish stock index, comprised of 85 listed companies; but only found data for the much narrower IBEX-35 index. In view of all this, it is not strange that households, and even institutional investors, tend to invest predominantly just in blue chips: the product that would allow them to do it at a very low cost with proper diversification and that would be accessible via public markets does not currently exist.

In the case of Spanish sovereign bond markets, the return on annualised terms was of 4.01% (nominal) over this 15-year period, using the Barclays Spain All Maturities sovereign index market prices as a proxy. This also means positive real bond returns over the last 15 years, since annual average inflation was +2,86% over the same period. According to the OECD 2014 Factbook, bonds (as direct investments) have a much lower weight in households' portfolio than shares.

Pension Returns

Private pension products are relatively young in Spain. The obligation to publish information on private pension fund returns entered into force with the publication of the Pension Plans and Funds Regulation, approved by Royal Decree 1684/2007, which transposed the IORP Directive into Spanish law.

According to INVERCO[150], the average annual returns of Spanish pension funds (by category) were as displayed in table 149. Better Finance could not find any consolidated data on the returns of other private pension savings products such as life insurance.

[150] INVERCO, Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones http://www.inverco.es/novedadesEstFPensT.do?id=1206_Junio%202012

Table 151. Returns on Spanish Private Pension Funds (%)																
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2000 - 2014	2000-2014 Average
Non-mandatory 2nd Pillar Pension Fund from associations or worker unions to members																
-	-0.64	-3.72	6.73	5.52	8.39	5.36	2.44	-10.5	9.28	2.01	0	6.94	9.51	6.88	57.4%	3.29%
Non-mandatory 2nd Pillar Pension Funds from firms to employees																
-	-0.1	-3.84	5.61	6.56	9.49	8.16	3.05	-11.1	9.23	0.95	-1.11	8.04	7.7	7.14	59.44%	3.39%
3rd 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	35.58%	2.05%
3rd 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	38.39%	2.19%
3rd Pillar Pension Funds – Fixed returns (mixed)																
-2.2	-2.41	-5.15	3.92	3.15	5.33	3.58	1.32	-8.79	6.05	-1.54	-2.21	5.41	6.11	3.61	15.78%	0.98%
3rd 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	8.88%	0.57%
3rd 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	0.08%	0.01%
3rd Pillar Pension Funds – Guaranteed Capital Pension Funds (either fixed or variable returns)																
-	-	-	-	4.66	4.64	1.44	1.48	-0.68	3.77	-3.96	1.15	5.48	9.41	11.37	45.07%	3.44%
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	32.4%	1.89%
Inflation – CPI Spain. Eurostat																
4	2.7	3.94	2.65	3.22	3.66	2.71	4.15	1.49	0.84	2.82	2.34	2.9	0.3	-1	43.52%	2.44%
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	8.16	7.92	-1.77%	-0.12%
ANNUAL RETURNS. AFTER INFLATION AND AFTER TAXES																
-6.35	-4.84	-8.84	2.27	0.74	3.06	2.02	-2.57	-10.06	6.36	-3.45	-3.6	3.19	7.66	7.42	-9.47%	-0.62%

Better Finance's first edition of the on pensions returns published in 2012 found an aggregate real annualised tax return for Spanish pension funds from 2002 to 2011, before taxes but after inflation, of -9.88% over the last 10 years.

Having extended the period of time considered in our analysis, once the strong bullish stock market behaviour of the very last years has been taken into account as well as the stock markets crash of the early 2000s, the yearly average returns over the last 15 years remain negative after inflation but before taxes, e.g. -0.67%. This is much lower than the real returns of the Spanish capital markets (stocks and bonds) which were very positive over the same period. The level of commissions and fees levied on pension products is one reason for this large underperformance.

Adding the negative impact of taxes to the equation, the final annualised returns for pension plan beneficiaries are reduced to -1.17%. It is interesting to note that 2014 was the first year when negative inflation (deflation) helped drive up real returns by as much as 1%.

Previous research by Aguirreamalloa, Corres and Fernández (2012) considered that, besides high fees, the other main cause for the poor returns of Spanish pension funds was inadequate portfolio composition. OECD data confirms that Spanish funds increasingly weighted their portfolios towards debt assets. While this proved a mixed benefit during the current financial crisis, in the long term weighting towards debt securities will be a substantial impediment to the ability of these funds to generate real returns for their savers.

This trend towards greater debt weighting is mostly noticeable in the life insurance sector. There is anecdotal evidence to suggest that positioning ahead of the Solvency II Directive implementation is the factor driving this trend. As previously mentioned, Solvency II has a low tolerance for volatile assets, such as unlisted or private equity (for such assets, even lower than for other equities). Solvency II obliges insurance companies to conserve shareholder capital by investing in supposedly low volatility debt instruments such as sovereign debt securities, which

historically had relatively low rates of real return in comparison to stock market returns[151].

Conclusion

On average, real returns of pension plans in Spain for the last 15 years have been globally negative despite a very positive performance of Spanish capital markets (stocks and bonds). The situation improved significantly over the last years with the very good performance of the local stock market and low inflation - or even deflation.

This is definitely linked to poor disclosure of information to pension fund participants, according to research by Aguirreamalloa, Corres and Fernández. The legal capping of fees is a key factor explaining why the situation is not even worse.

The taxation regime in Spain encourages personal pension provision, with tax deductibility on contributions and tax exemption throughout the investment period. Pension funds do not pay tax on capital gains or dividends received, nor corporation tax or VAT on management and depository fees. The tax burden of pay-out falls on the saver, usually having to pay much higher marginal rates of income tax if capital is recovered through a lump sum, thus creating an incentive for converting capital into an annuity and be subjected to taxation on a deferred basis. One could argue that the Spanish tax system is more favourable to providers than to participants, in spite of the significant tax breaks that were put in place to push savers into these products.

Finally, in view of the performance of the Spanish stock and bond markets, it seems that pension products could deliver better long-term returns for participants if their asset allocation was modified and if fees were lower.

[151] Royal Decree 304/2004, Articles 69 to 77 establishes the requirements for asset allocation of pension funds in Spain. This Decree prescribes where portfolio managers can invest pension assets. Article 69.5 establishes that pension fund portfolios should be mainly invested in securities and financial instruments traded in regulated markets. Securities and financial instruments traded in non-regulated markets should have a relative low weight in pension fund portfolios. Article 70 provides an exhaustive list of eligible investment instruments. Article 72 establishes very detailed requirements on portfolio allocation for the different types of assets for pension funds, according to investment coherence and diversification criteria. Article 73 establishes liquidity requirements, and Article 75 establishes investment valuation criteria.

Pension Savings: The Real Return

2015 Edition

Country Case: Sweden

Introduction

The Swedish pension system is divided, as in most countries, into three pillars: firstly, the national pension; secondly, occupational pension plans, and finally, pillar III or the private pension pillar.

The Swedish pension system is a combination of mandatory and voluntary components. Table 150 shows how the pension capital is distributed between the different types of providers in the pension system.

Table 150. Average capital managed

Average capital managed (*billions of SEK*)	2009	2010	2011	2012	2013	2014
Income-based pension	7189	7469	7700	7873	8180	8565
Premium pension	340	408	393	471	602	759
Occupational pension	1403	1509	1705	1795	1948	
Private pension	402	423	406	412	433	

Source: the Swedish Pensions Agency

The average pension in Sweden was 16,248 SEK (€1,787.3) per month before taxes in 2012, whereof 11,955 SEK (€1,315) came from the national pension, 3,462 SEK (€380.8) from occupational pensions and 850 SEK (€93.5) derived from private pension savings. The outcome furthermore differed quite significantly between the genders. For women the average total pension was 13,570 SEK (€1,492.7) per month before taxes and for men 19,463 SEK (€2,141) 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[152].

There is no set age at which people must retire, but the national pension can be withdrawn 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

[152] OECD data – household savings

67. 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 private pensions can be withdrawn from the age of 55 onwards.

The new national pension system in Sweden was introduced in 1999. The most important change in the reform was the move 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 their wage before retirement. Following the reform pension benefits consist of the pension savings accumulated during working life before retirement. In this system the pension depends on economic and financial development, which means that it is not possible to know what the amount of a pension will be beforehand. In the new pension system the need for information about pensions is even more important. The occupational pension system 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. The current debate on pensions in Sweden concerns the premium based pension, focusing mainly on the spread on the return on capital, the deduction on private pension savings, the so called balancing of the income based pension system and the pension gap between the genders.

Pillar I: The national pension

The national pension consists of an income-based pension, a premium pension and a guaranteed pension. 18.5% of the salary and other taxable benefits of up to 435,570 SEK (€47,912.7) (7.5 times the income base amount for 2015) per year is contributed to the national PAYG retirement pension[153]. 16% is set-aside for the income pension with the value of pensions following income 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 in the same year. The remaining 2.5% of the salary and other taxable benefits are set-aside to service the premium pension, with the capital being placed in funds. The individual can either choose what fund or funds to place the pension in or, if no choice is made, the

[153] For those earning over 435 570 SEK, the excess salary will not generate additional contributions to the national PAYG pension system. The occupational pension system, on the other hand, does not have a cap; but the contributions will always be made to the occupational pension plan of the participant.

pension will be placed in a default alternative fund. This system is unique to 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[154].

The capital in the income based-system is deposited in the four buffer funds: the first, second, third and fourth national pension funds. 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.

A fee towards the administration of the income based pension system is deducted annually from pension balances by multiplying these balances by an administrative cost factor. This deduction is carried out 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 1% 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 capital. Late 2013/beginning 2014, there were 850 eligible funds registered in the premium pension system, administered by 104 different asset management companies. The premium pension can be withdrawn, in whole or in part, from the age of 61 onwards. The pension is paid out from the proceeds from the sale of the accumulated capital. The individual choice that forms part of the premium pension system furthermore results in a spread on return on the pension capital depending on the choice of fund or funds. Table 161 in the Returns section shows the return on capital in the premium pension system.

[154] Vägval för premiepensionen, Ds 2013:35.

Table 151. Funds in the Premium Pension System in 2013 and Capital Managed 2009–2013, December 31 (billions of SEK)						
Managed capital (*billions of SEK*)	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Equity fund	179	214	159	193	240	295
Mixed funds	12	17	41	51	63	77
Generation funds	38	43	60	71	90	114
Interest funds	21	24	28	24	27	27
AP7Safa/Premium Savings Fund 1	90	110	105	132	182	246
Total	340	408	393	471	602	759

Source: Orange report 2014, p. 21

The third element of the national pension is the guaranteed pension. It is a pension for those who have had little or no income from 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 qualify 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 since the age of 25. Residence in another EU/EEA country is also valid for obtaining a guaranteed pension[155]. In addition to the national pension, pensioners with low pensions may be entitled to a housing supplement.

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 a pension for the employees but an occupational pension plan is mandatory if there is a collective agreement at the workplace. The occupational pension system covers over 90% of the workforce, the self-employed, for example, are excluded from the occupational pension plans and it is mostly the smaller companies in new business sectors that do not have a collective agreement[156]. 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

[155] Orange report 2013, s. 24.
[156] AMF, Tjänstpensionerna i framtiden – betydelse, omfattning och trender, p. 17.

members and the Government Sector Collective Agreement on Pensions PA-03 with 500 000 members[157].

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 do not pay out pensions at all to their employees. These individual pension plans can vary in shape and level but common to all of them is the fact that they often have worse provisions and higher costs compared to the collectively negotiated pension schemes.

Pillar III: Private pensions

Private pension saving is voluntary but it is subsidised 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 cannot be withdrawn before the age of 55. After that the individual can withdraw the money over 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.

[157] Source Statistics Sweden. Pensionsmyndighetens hemsida: www.pensionsmyndigheten.se/tjanstepensionen-thml

Unlike the national pension plan and the occupational pension plans, private pension plans are individual. This results in less transparency both in terms of the products on offer within private pension plans as well as the charges related to these products.

The deduction for private pension savings has been reduced over the years. From 1 January 2015 it was reduced from 12,000 to 1,800 per year, equivalent to SEK 150 (€16.5) in monthly savings. There is a proposal to abolish the deduction completely for private pension savings starting 2016. The motive for this is that the deduction favours high-income earners.

The "*Investeringssparkontot*" (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 savings, 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 related to the the account.

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 accounts 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 rates, as the standard rate earnings are based partially on the government-borrowing rate.

Cash, securities traded on a regulated market or an MTF, as well as 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.

Description of Pension vehicles in Sweden

Occupational pension plans

ITP

The ITP agreement consists of two parts: a defined contribution pension ITP 1 and a 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% of the salary per year, up to a maximum of 7.5 times the income base amount. If the salary exceeds this level, the amount of the contribution is also 30% of the salary above 7.5 times the 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.

SAF-LO

The SAF-LO occupational pension plan is a defined contribution one. 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 SEK 35,563 (€3,911.93). If the salary exceeds this level, the amount of the contribution is also 30% of the salary above SEK 35,563 (€3,911.93). The individual can chose 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.

PA 03

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 times the income base – (defined-benefit), retirement pension on income below 7.5 times the income base 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 times the income base. The individual can choose how the contributions to the individual retirement pension should be placed and managed. The eligible insurance companies for the individual retirement pension for traditional insurance are Alecta, AMF, Folksam liv, KPA, Kåpan, Nordea, Skandia Liv and SPP. 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% of the salary per month to the supplementary retirement pension Kåpan tjänste, managed by Kåpan försäkringsförmedling. Furthermore PA 03 has an element of defined-benefit. It applies to those who earn more than 7.5 times the income base. If the individual earns between 7.5 and 20 times the income base amount, the defined-benefit pension comprises 60 per cent of the pensionable salary on the component of pay that exceeds 7.5 times the income base amount. If the individual earns between 20 and 30 times the income base amount, it comprises 30% of the pensionable salary on the component of pay that exceeds 20 times the income base amount.

KAP-KL

The KAP-KL agreement consists of two parts: a defined contribution pension AKAP-KL and a 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 times the income base amount, the amount increases with 30 % of the salary that exceeds 7.5 times the income base amount up to a maximum of 30 times the income base amount. 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 times the income base amount, 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 times the income base amount. The individual can chose 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. For the unit-linked insurance in KAP-KL they are AMF, Danica, Folksam, Handelsbanken, Länsförsäkringar, Movestic, Nordea, SEB, SPP, Swedbank.

Table 152. Life insurance companies' allocation of assets in % (30 June 2014)							
Company	Bonds	Stocks and shares	Real Estate (1)	Other assetst (2)	Total (million SEK)	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 Gruppförs	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).

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 the majority 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 so-called '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.

Description of Pension vehicles: individual occupational and third pillar pension plans

As said before, disclosure in the occupational pensions system is quite acceptable. 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. 1 out of 22 declares that they charge a percentage fee on deposited premium. The fee is 1% and applies to all deposits under 1,000,000 SEK (€110,000). 18 companies report a yearly flat rate. The average fee is 175.39 SEK (€19.3). The management fee is established as a percentage of the managed capital. 18 out of 22 companies report management fees.

The average fee charged by private pension savings insurance-companies for individual pension accounts (which shall not be confused with the premium pension system) is 0.65% of managed capital. The actual division between schemes can be found in table 153 below. The costs of administration and fund management are deducted from the premium pension capital. However, in this case, the deduction continues after the insured begins to withdraw the pension.

According to the Orange Report (the annual report of the Swedish pension system), the current cost deduction of the premium pension (AP7) capital is 0.41% per year.

However, the costs of the premium pension system are expected to decrease and the average deduction is estimated to remain at 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 of 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%. 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.

Table 153. Deductions for Costs

Deduction for costs (%)	2009	2010	2011	2012	2013
Income based pension	0.0189	0.0343	0.034	0.03	0.0307
Premium pension	0.50	0.48	0.41	0.42	0.41
Cost of administration	0.19	0.16	0.11	0.10	0.10
Funds	0.31	0.32	0.30	0.32	0.31

Source: Orange report 2013[158], p. 40

Tables 154 to 157 shown below list the charges of the existing occupational schemes as part of the collective agreements in Sweden that were defined in the previous section above:

158 https://secure.pensionsmyndigheten.se/download/18.5b66e3d21466213d95937aa5/1404712314199/Orange+Report+2013+english.pdf

Table 154. ITP Traditional insurance and unit linked insurance – costs			
ITP 1	**Charges**	**Costs**	**Guarantee**
Traditional insurance			
Alecta	0.10%	22 506 SEK	Yes
AMF	0.20%	39 279 SEK	Yes
Skandia	0.23%	46 894 SEK	Yes
Folksam	0.17%	36 548 SEK	Yes
Unit linked insurance, the entrance fund			
AMF	0.30%	63 800 SEK	No
Danica	0.18%	60 661 SEK	No
SEB	0.22%	55 753 SEK	No
SPP	0.16%	39 983 SEK	No
Swedbank	0.29%	69 106 SEK	No

Source: Collectum

Table 155. SAF-LO traditional insurance, return on capital and costs		
Traditional insurance	**Set up cost, SEK**	**Annual Cost, %**
Alecta Optimal Pension	115	0.03
AMF Framtid	110	0.03
Folksam Liv (premiegaranti)	70	0.10
Länsförsäkringar Tradliv	84	0.09
Nordea Tillväxtportföljen	80	0.08
Swedbank Traditionell Pension Premiegaranti	80	0.10

Table 156. PA 03 traditional insurance, return on capital and costs			
Traditional insurance	**Set up cost**	**Annual Cost, %**	**Management fee, %**
Alecta Optimal Pension	75	0.12	0.03
AMF Pension	85	0.15	0.03
Folksam Liv (premiegaranti)	85	0.10	0.10
KPA Traditionell Pensionsförsäkring	85	0.13	0.07
Kåpan	12	0.08	0.05
Nordea Tillväxtportföljen	85	0.12	0.08
Skandia Liv	85	0.12	0.08
SPP Liv Premiebestämd, öppen	84	0.20	0.20

Table 157. KAP-KL traditional insurance, return on capital and costs			
Traditional insurance	**Set up cost, SEK**	**Annual Cost, %**	**Management fee, %**
AMF Pension	75	0.15	0.03
Folksam Liv	75	0.12	0.08
KPA Traditionell Pensionsförsäkring	48	0.08	0.07
SPP Liv Premiebestämd, öppen	75	0.00	0.20
Swedbank Traditionell Pension Premiegaranti	75	0.10	0.10

Pillar III

Table 158. 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

- *2 out of 11 providers of Individual pension savings-accounts applies a yearly fee for the account*
- *The average yearly account fee is 400 SEK*

Table 159. Pension savings insurance – Fees	
	Percent of capital managed
Average	0.65%
Lowest	0.40%
Highest	0.80%

Taxation

All pension income in Sweden is taxed as earned income. The rate varies depending on the size of the 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[159]. 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% for incomes between 430,200 SEK (€47,322) and 629,000 SEK[160] (€69,190) and 25% for incomes from 629,000 SEK (€69,190) and above. When it comes to private pension savings there is a tax deduction of 1800 SEK (€198) per year available but the plan is to abolish it in 2016. In order for the deduction to be profitable, the tax that the worker pays when the deduction is being made needs to be higher than what the tax will be when the person withdraws the pension. This means that if you earn above one or two of the thresholds of progressive income tax it can be profitable to save money in the private pension system and use the tax deduction if you know that you will have lower taxes when you withdraw the money. In reality the deduction is a postponement of the tax.

[159] The Swedish earned income tax credit is a refundable tax credit for all individuals aged below 65.
[160] Financial year 2015.

Table 160. Taxation on pension schemes			
Pension vehicle	**National pension**	**Occupational pension**	**Private pension**
Contributions	Non-deductible	Non-deductible	Tax deductible: up to 1,800 SEK (€198) per year.
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

Pension Returns

Premium pension (PPM[161], mandatory)

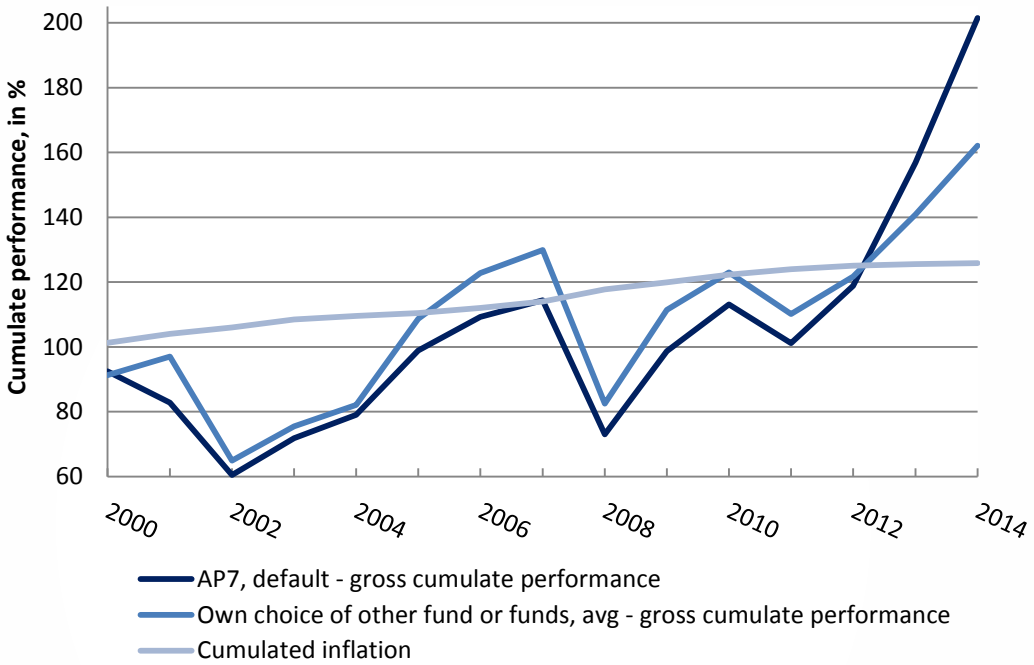
Table 161. Return on capital in premium pension system (AP7 pension fund, 2000-2014, %)		
Year	**AP7 Såfa (default alternative)**	**Own choice of other fund or funds, on average**
2000	-7.50	-8.66
2001	-10.47	6.20
2002	-26.96	-33.01
2003	18.71	16.15
2004	10.11	8.86
2005	25.06	32.29
2006	10.50	12.98
2007	4.68	5.80
2008	-36.17	-36.46
2009	35.15	35.01
2010	14.63	10.31
2011	-10.52	-10.44
2012	17.41	10.51
2013	31.97	15.78
2014	28.49	15.05
Return on average per year	9.40	6.20

Source: AP7

[161] PPM stands for Pensionsmyndigheten (Swedish Pensions Agency). On 1 January 2010, the Swedish Pensions Agency took over the responsibility for all national pensions (defined contribution). AP7 is the default option in the Sweden's PPM defined contribution system. PPM offers a choice of around 800 funds to choose from.

It is for the premium pension that disclosure is best in Sweden, as shown below. Graph 48 below provides an interesting analysis of the performance of the AP7 default option versus the other possible options available to participants:

Graph 48. Cumulate performance of AP7 defauld or own choice/ other funds vs cumulate inflation



Base: 100 in 2000

The default fund is a life cycle fund chosen by 40% of the participants and represents 30% of the assets. More than 80% of the savings are allocated to equities.

Once inflation is deducted, it is very interesting to note that the default option for the premium pension significantly outperforms other choices of funds made by the participant or other available funds. This must certainly be linked to the fact that AP7 is heavily biased towards equities, being probably the other possible option available to the participant with a lower presence of equities in their portfolios. Actually, AP7 for all this period underperformed the other options, except for the last three years when it gained around +80% versus the approximate +40% for other portfolio options.

Graph 49 below shows the growth for each SEK 100 (€11) invested in pension savings. The premium pension index is measured in time-weighted, total returns, and is an average of the different options for premium pensions available on the market. The source for the index on the Stockholm Stock Exchange is Nasdaq OMX, and the World Index of Return on Stocks is taken from Morgan Stanley and converted into SEK. Apparently, the best option for the whole period was to invest pension savings in the Swedish capital market. The growth of pillar I pension savings (inkomstpension, measured by the income index) over-performed the Swedish capital markets performance, though, for the bearish market periods since the year 2000. As far as the premium pension is concerned, it underperformed the Swedish stock market, but over-performed the world equity market once converted in local currency.

Graph 49. Comparison of returns of the PPM versus stock markets since 2000

Base: 100 in 2000
Source: Pensionmyndigheten[162]

Occupational pension schemes

Unfortunately, public information on past performance for Swedish occupational pension schemes is very poor in the sense that it does not go far enough: just a

[162] Orange Report, 2013 page 45
https://secure.pensionsmyndigheten.se/download/18.5b66e3d21466213d95937aa5/1404712314199/Orange+Report+2013+english.pdf

general for the last five years is provided which is not completely up-to-date. This is most unfortunate since participants of these plans, which enjoy such a wide participation of the Swedish population, should have the right to know how well these products perform in the long run, since pension saving certainly is a long term objective.

ITP

Table 162. ITP Traditional insurance and unit linked insurance – return on capital	
ITP 1	**Average return 5 years: 2009-2013**
Traditional insurance	
Alecta	9.04%
AMF	4.91%
Skandia	1.92%
Folksam	5.10%
Unit linked insurance, the entrance fund	
AMF	10.92%
Danica	8.65%
SEB	11.42%
SPP	9.36%
Swedbank	9.72%

Source: Collectum

SAF-LO

Table 163. SAF-LO traditional insurance, return on capital and costs		
Traditional insurance	**Average return 3 years, %**	**Average return 5 years, %**
Alecta Optimal Pension	8.5	1.21
AMF Framtid	6.5	8.4
Folksam Liv (premiegaranti)	3.6	-
Länsförsäkringar Tradliv	3.1	3.1
Nordea Tillväxtportföljen	6.5	8.6
Swedbank Traditionell Pension Premiegaranti	4.0	-

PA 03

Table 164. PA 03 traditional insurance, return on capital and costs		
Traditional insurance	**Average return 3 years**	**Average return 5 years**
Alecta Optimal Pension	8.5	12.1
AMF Pension	6.5	8.4
Folksam Liv (premiegaranti)	3.6	-
KPA Traditionell Pensionsförsäkring	7.0	8.3
Kåpan	7.6	8.9
Nordea Tillväxtportföljen	6.5	8.6
Skandia Liv	5.7	8.5
SPP Liv Premiebestämd, öppen	6.3	7.1

KAP-KL

Table 165. KAP-KL traditional insurance, return on capital and costs		
Traditional insurance	**Average return 3 years, %**	**Average return 5 years, %**
AMF Pension	6.5	8.4
Folksam Liv	7.1	8.0
KPA Traditionell Pensionsförsäkring	7.0	8.3
SPP Liv Premiebestämd, öppen	6.3	7.1
Swedbank Traditionell Pension Premiegaranti	4.0	-

As for the returns on capital for the life insurance sector (or, more concretely, for the real net returns to policyholders) there are no publicly available aggregate figures; but the table below shows a drawdown for the data available for each of the companies active in the Swedish market:

Total return 2001-2013 - Life insurance companies summary

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average '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 Gruppförs		-	-	-	-	-	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 Livförs		-	-	-	-	-	2,4	1,1	2,6	8,2	4,5	4,8	6,4	7,2	6,2
KPA Pensionförs		-	-	-	-	-	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*

Pillar III

With regards to the “Investeringssparkontot” (Investment and savings account - ISK), 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 report to the tax authority. The standard earnings are taxed with a 30% tax.

Conclusion

The Swedish pension system is considered robust and sustainable. The balancing of the income-based system contributes to preserve the system’s debt balance and secures the long-term nature of the system. The premium pension, which is a system unique to Sweden, also contributes to spread the risk within the system and enhance the return on capital by enabling people to place part (even sometimes a big part) of their national pension capital on the stock market, which in the long pays off as illustrated by data covering the period 2000-2014. 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 purely individual, which leads to increased costs and less transparency.

The statistics on performance, fees and taxes in the individual pension savings-area are quite insufficient. Neither 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) for the aggregate Swedish private pension savings due to the

lack of knowledge about the size of managed capital at the time of taxation, change of value and so on.

Finally, we just have to add that the OECD itself did not cover Sweden in its 2012 Pension Outlook report as far as private pension fund returns are concerned, which significantly reduced the range of available information that we could use since, as mentioned below, local Swedish sources for past performance disclosure are not that good, especially for longer term periods.

Pension Savings: The Real Return

2015 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.

Pillar I

Pillar I 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 years old or older. Recently the age limit was increased to beyond 65, in order to make the system viable in the future since, due to the ageing of the population, the costs threaten to become too high. The reason for this is the fact that AOW is a PAYG 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. Moreover, the AOW is partially financed out of 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 or she has lived in the Netherlands and was

aged between 15 and 65 (so someone living in the Netherlands that entire period is entitled to full monthly AOW-allowance as 65-15 = 50 x 2% = 100% of the allowance).

A single person is entitled to a monthly allowance (gross) of €1,111.55. Married couples 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 since pillars II and III, but 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 percent. For the female population, AOW does constitute a larger part of their retirement income, 49%, with the second pillar having a share of 35 %. The reason for this is the fact that females only recently became active on the labor 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.

Pillar II

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 382 at the end of 2013, according to the DNB, the Dutch central bank. The central bank supervises pension funds since 2004. The DNB expects their number to further decline to less than 350 in 2014 and to fall below 300 in the coming years.

Whereas the first pillar, the AOW, is a PAYG 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.

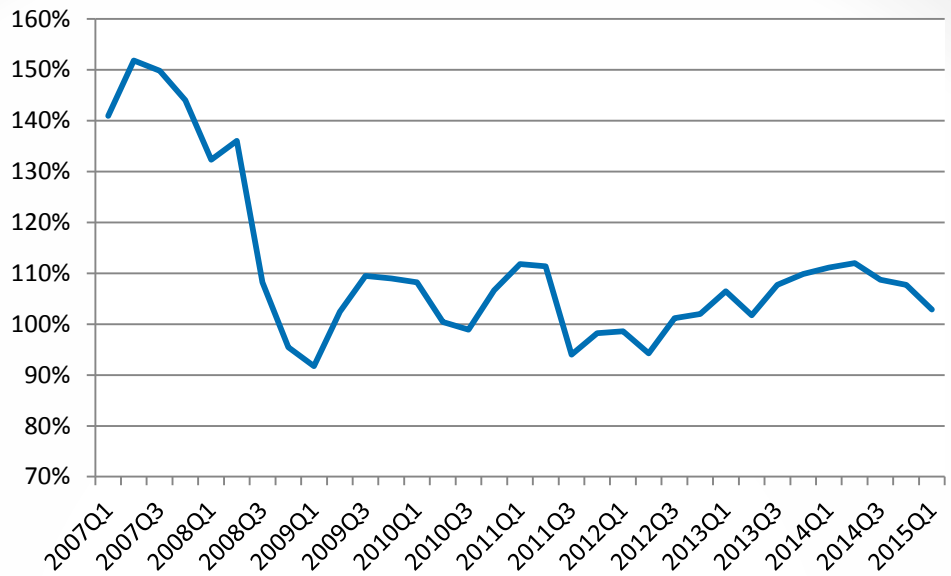
Although enrollment in a second pillar scheme is not compulsory as such, in many cases it in fact is. The reason for this is that if labour unions and employers in the Netherlands decide to set up a pension scheme for a company or a sector, the government can make it mandatory for everyone working in 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 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 or she for example moves to another job in another sector. In that case he or she starts building his or her pension with the pension fund of the new sector or company.

His or 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 as sufficient 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%. 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 a period of three, at the most five, years. It also has to submit contingency plans in case the coverage ratio does not rise above 105 during 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 50. 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 first quarter of 2015 however 75 pension funds did not comply with the rules as they had a coverage ratio below 105. Well over 3 million Dutch were affected; 64% of all those enrolled in penion funds. Additionally, 149 funds were in the 105-130 zone and only 22 reported the coverage ratio of 130 or higher. This was a huge improvement in comparison with for example the first quarter of 2009, at the height of the crisis on financial markets. It can be said that back then the Netherlands went through a severe pension crisis, since 314 pension funds (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 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 carrier and relatively less in the later stage, since the monthly sum paid in is a fixed

percentage of the salary or of the part of the salary relevant for pensions. This percentage is equal for everyone, young and old. Differences in gender or age therefore do not play a role. The same applies to health: medical examination of those about to enroll in a pension fund is prohibited.

As a side-step: this solidarity is increasingly under pressure as many young employees in the Netherlands fear they will end up paying relatively large sums into their pension funds but there will be insufficient funds for a decent income when they retire (due to ageing, which means 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 or her own capital instead of all monthly payments going into one pile of money.

Pillar III

Pillar III is made up of individual pension products sold by insurance companies such as, for example, life insurance. Another product used in the Netherlands is the so-called pensioensparen, a special-purpose savings account aimed at supplementing 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 from 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 pillar II and III. The purchase of various third-pillar products is attractive due to tax benefits associated with them.

Pension vehicles

Pillar II

As mentioned above, 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 euro 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 167. 15 largest pension funds in The Netherlands		
Pension fund	**Sector / company**	**Assets (billion €)***
ABP	Civil service	312.6
Zorg en Welzijn	Medical services	148.8
Metaal en Techniek	Metal	46.9
Bouwnijverheid	Building companies	43.0
Metalelektro	Electrometal sector	32.4
Shell Pensioenfonds	Royal Dutch Shell (oil)	21.2
Pensioenfonds ING	ING Group (financial services)	18.3
Rabobank Pensioenfonds	Rabobank (financial services)	18.1
Philips Pensionfonds	Philips (domestic appliances)	16.2
Pensioenfonds voor de Grafische Bedrijven	Printing sector	14.0
Pensioenfonds van de ABN AMRO Bank N.V.	ABN Amro (financial services)	13.6
Spoorwegpensioenfonds	Dutch Railways (transport)	12.7
Bedrijfstakpensioenfonds voor het Beroepsvervoer over de weg	Road transport sector	12.6
Bedrijfspensioenfonds voor de Landbouw	Agriculture sector	10.7
Bedrijfstakpensioenfonds voor de Detailhandel	Retail sector	10.6

**Assets at the end of 2013 (last year for which data for all pension funds assets was available). As of today, many Dutch pension funds have not published their 2014 report yet.*

Source: Pensioenfund.info

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 a whole 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 €373 billion and 2.8 million people enrolled (those 2.8 million people are entitled to €387 billion, meaning that by far the largest pension fund in the Netherlands has a coverage

ratio below 105 percent) as of 2014. Second, there are corporate pension funds, administrating and operating pension schemes for companies. Finally, there are pension funds for independent professionals, for example medical specialists.

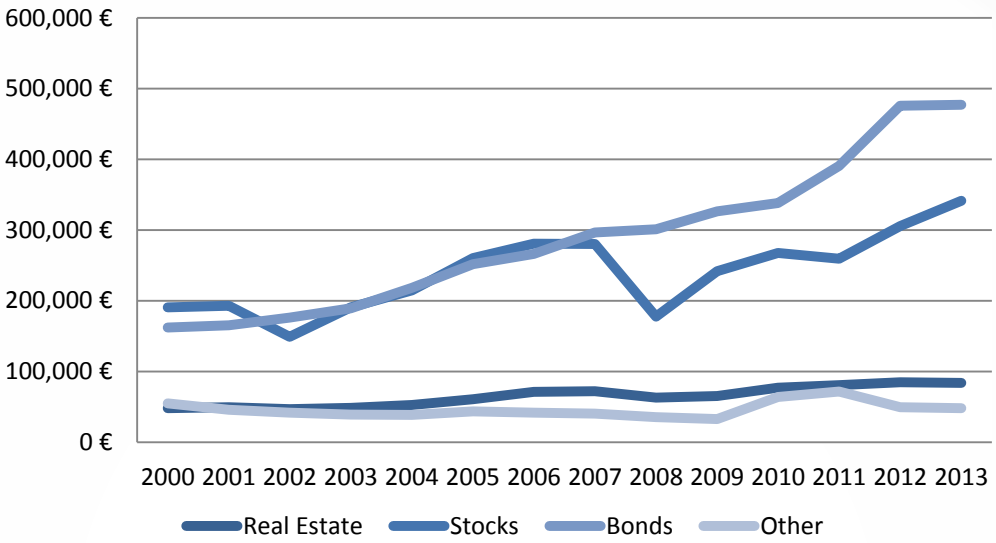
Pension funds are independent entities, i.e. they are strictly separated from the company (if applicable) on whose behalf they administer and run the pension scheme. One of the consequences is that if a company files for bankruptcy, employees know that their pensions are not affected. Situations such as for example in the United States, when a company files for bankruptcy and its personnel loses 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 representatives from the employees (labour unions) and employer(s). Pension funds are by far the most important pillar for the Dutch inhabitants.

By the end of 2014 all Dutch pension funds and insurers had assets worth €1,394.6 billion[163] 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 200%. Another way to illustrate the importance of pension assets to the Dutch is to compare them with the value of total savings[164] (excluding pension savings of pension funds e.g. money managed by separate entities) of the Dutch households[165]. Those amounted to €382.9 billion at the end of 2014 or a little bit more than a quarter of their pension assets. The share of the 15 largest pension funds in total is over 62%. The five largest ones hold 50% of all pension assets in the Netherlands.

By the end of 2014, according to the Dutch central bank, the Dutch pension funds held €1.257.2 billion in assets. The largest part, €773.13 billion was invested in stocks followed by €300.3 billion invested in bonds. The remainder was invested in, among others, real estate or put in savings accounts.

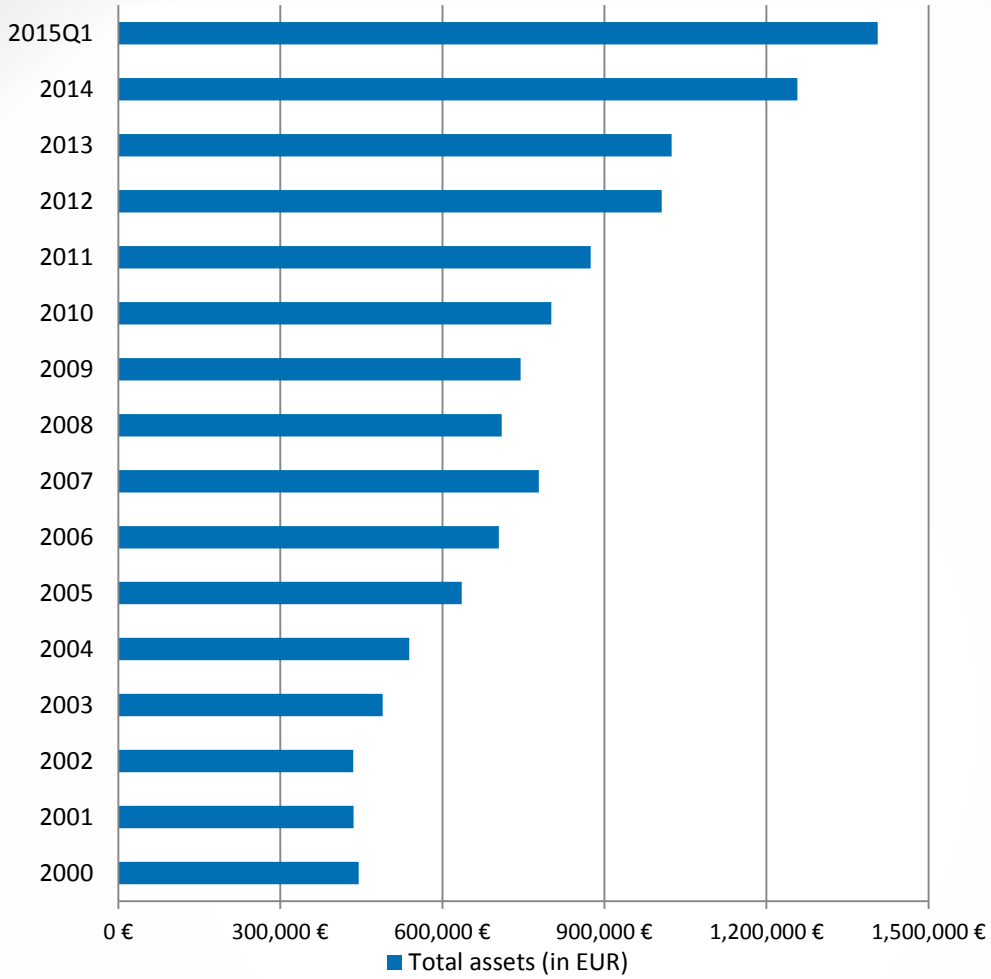
[163] Figures available via http://www.statistics.dnb.nl/huishoudens/index.jsp
[164] Such as for instance money put aside into savings accounts which is not mandatory by the system
[165] OECD data includes pension savings in figures for total household savings

Graph 51. Pension fund assets invested in stocks, bonds, real estate and other assets over time (x million euro)



Source: DNB Dutch central bank

Graph 52. Assets in pension funds as of first quarter of 2015



Source: DNB Dutch central bank

Pillar III

Pillar III is not mandatory and is run by private insurance companies offering various pension-like products aimed at saving for retirement or life insurance. Every employee can choose whether or not to take part in it, sometimes provided he or 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 or 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 or 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, which in 2013 amounted to €27.618. There is a tax benefit involved as 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 or 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 2013 life insurance schemes for example accounted for 13.7% of the accrued pension rights of the Dutch households, 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 to 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 taking [166]. 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.

[166] 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.

Table 168. Pension Fund Charges (% of total assets)

Year	Charges
2007	0.20
2008	0.24
2009	0.19
2010	0.15
2011	0.19
2012	0.21
2013	0.24
2014	0.19 *

** Proxy, based on the change in charges at the largest Dutch pension fund in 2014, as charges for the entire pension funds population was not available*

Source: DNB Dutch Central Bank / own calculations

Calculating the average, we get 0.19% 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 & Peacock[167], researchers put those costs in 2012 for the Dutch pension funds at 0.53% 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% of their assets, with the median being 0.41%[168]. This calculation however is based on a sample of 29 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.

[167] Research report 'LCP Netherlands: Werk in uitvoering bij pensioenfondsen 2012'.
[168] CEM Benchmarking: Algemene Rapportage 2012.

Taxation

Pension funds are exempted from paying company taxes in the Netherlands[169]. The money Dutch employees pay into 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 gets lower 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 the 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. 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 169. 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 or her tax rate is lower when he or she turns 65. By consulting various sources, mainly the historical data from the Dutch Tax Authority, we were able to compute the average tariff applied to the income of retirees for the first three brackets since 2002. We used the tariffs for the first three income brackets, meaning tax tariffs for income up to, over €50,000, or more (depending on the year), for the period 2002 and 2013. In practice these are the tax brackets that applied to the vast majority of the Dutch retirees since Statistic Netherlands reports that the modal (most common) income for a married couple[170] aged 65 and

[169] 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

[170] This includes couples that live together without being married.

older was €46,400 in 2013. 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 – 2013. The average annual tariff thus calculated is 26.9%.

As stated above, 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 applied to the pensions (as stated: 26.9%) and the average tax rate that would have been 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 2002-2013. This average is 39.25%, which means than the average person in the Netherlands enjoys 12.35% point tax advantage on his orher pension scheme due to the fact that pension contributions are tax exempted and only pension income is taxed. At the end of this study 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 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 2014 will be calculated using another method since certain statistics were not available. For example, from the five largest pension funds, only two had published their annual report for the year 2014 as of 25 June 2015. Annual returns will be reported for life insurance companies as well.

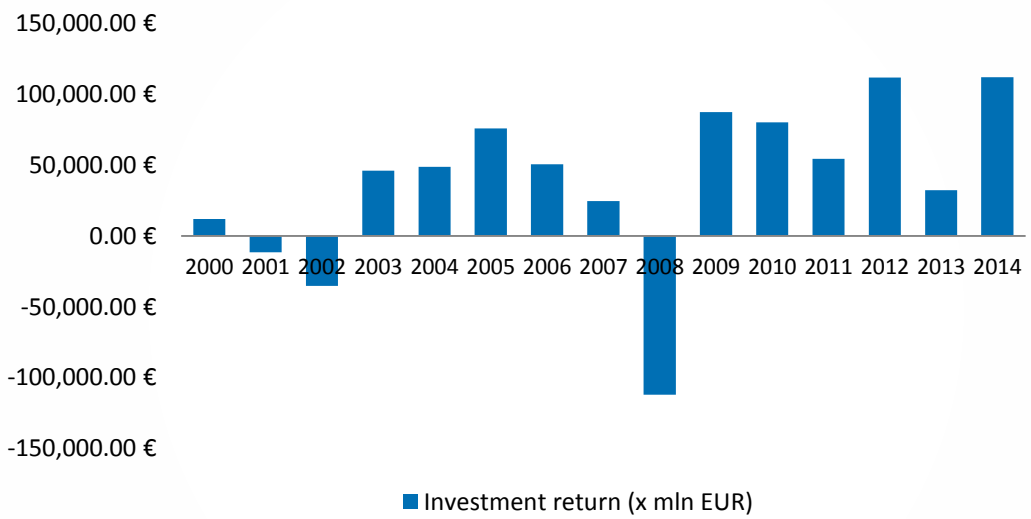
Then we will focus on various charges and fees pension funds must pay. Those costs must be subtracted from the returns as only net return is available for retirement income. In order to calculate the real rate of return, we will deduct the annual inflation in the Netherlands, as reported annually by Statistics Netherlands (CBS). Statistics Netherlands publishes two different inflation measures. One is calculated according to the EU-method (Harmonised Index of Consumer Prices, which is developed in order to be able to compare inflation rates in EU Member States); the other is the Dutch method traditionally used to calculate inflation. Although the latter matters for the annual indexation of Dutch pensions, we will

use the EU-method of calculation of the real rate of return at a later stage in order to make the Dutch results comparable with the results from other European countries[171].

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 onward[172]. The investment results per year (2000-2014, period covered in this study) are shown in the graph below.

Graph 53. Investment return for aggregate pension funds (in million euro)



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 and 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 seen very good returns for Dutch pension funds even though economic growth was slow 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 key interest rates to 0% and employed

[171] 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% to 0,03%.

[172] http://www.statistics.dnb.nl/financieele-instellingen/pensioenfondsen/index.jsp

various rounds of quantitative easing. That 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 used the DNB-figures for absolute returns and total pension fund assets at the end of each reporting year. As a final step, we calculated the average yearly return for all Dutch pension funds for the period 2000 – 2013. At the time of writing data were not available for all Dutch pension funds in 2014. As a proxy we have calculated the investment return of the Dutch pension funds for 2014 as follows.

First we took the investment return in 2014 from the annual report of two of the five largest pension funds in the country (the other three annual reports were not available at the time of writing, end June 2015). The two pension funds we used as a proxy constitute almost 40% of all pension assets in the Netherlands, making them representative for the entire population of pension funds. Second, we calculated the ratio by which the investment returns for those two funds changed compared to the results in 2013. For ABP that ratio was 2.44 (meaning the investment return in 2014 was 2.44 times larger than the one in 2013). For pension fund PMT, the ratio was 4.49. Third, we calculated the average of the two, being 3.47. As a last step we applied this average ratio to the investment return of all pension funds in 2013, i.e. we multiplied the investment return in 2013 by 3.47. This yielded a result that is plausible, since it was almost equal to the investment return in 2012[173]. The results of the calculation for the period 2000 – 2014 are provided in the table below.

[173] Please note that the so calculated investment return for 2014 falls in the middle of the range for the entire period, which can also be seen by comparing the investment return for 2014 with the average; the two differ only slightly.

Table 170. Avg. yearly return all Dutch pension funds	
Year	**Return as percentage of total assets**
2000	2.70
2001	-2.48
2002	-8.12
2003	9.40
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	11.10
2013	3.15
2014	5.80
Average 2000-2014, per year	**4.05**

Source: DNB Dutch Central Bank, own calculations

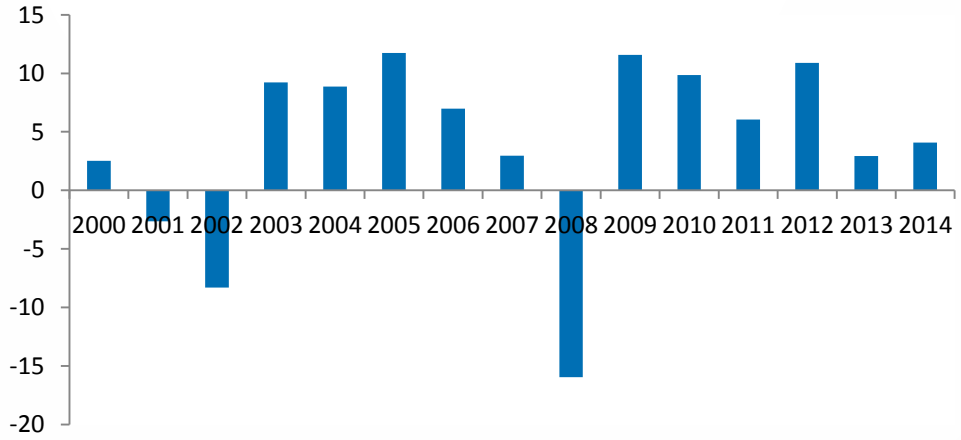
As a check for these outcomes, we took a look at the performance of the civil service pension funds ABP, by far the largest pension fund in the Netherlands. We assumed that, given its size in the Dutch pension fund landscape, ABP results should not differ much from the above calculated average. Its 2013 annual report[174] contains nominal return on investments for 2009 and years after as well as various long-term averages. Between 2009 and 2013, the nominal yearly return at ABP varied from 5.6% in 2013 to 6.6% in 2009. On average, ABP's investments returned 6.1% each year. This differs from the average for all pension funds from 2009, with that average being 9%. However, with ABP being, as mentioned, by far the largest pension fund, its investments are also more diversified than investments at an average pension fund. This should mean, among others, that the volatility of its returns is also relatively low, due to a relatively high diversification. And indeed, one look at the outcomes for ABP and all pension funds does reveal that the return for the whole population does vary more: where ABP returns fall between 5.6 and 6.6%, the return for the whole population varies from 3% in 2013

[174] Available via http://www.abp.nl/images/jaarverslag-abp-2013_tcm160-169506.pdf

to 13% in 2009. When we take a look at the average return of ABP from 1993 to 2013, we see that yearly average return is 5.2%, just a fraction lower than the average for all Dutch pension funds, certainly not deviating a lot.

At this stage, we calculated nominal return on investment in each year between 2000 and 2014. 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 above, we have nominal returns from 2000 to 2013 but charges are only available from 2007 onwards. As we do not have data for the costs before 2007, and given their relative stability for the period 2007 – 2013, we assumed those charges to be the average of those between 2007 and 2013, i.e. 0.19%, and apply that average for the years 2000 to 2006 in order to calculate the nominal return on investment after charges. As of June 25th 2015 the Dutch Central Bank could not provide us with the pension fund statistics in the field of charges for 2014. As a proxy, we used the charges incurred at the largest pension fund by far in the Netherlands: ABP. Its charges fell in 2014 by 22.46% compared with those in 2013. Accordingly, we have reduced the average charge of all pension funds in 2013 by the same degree in order to plug in the charge for 2014. With those assumptions we were able to calculate the nominal return on investments for the Dutch pension funds for the period 2000-2014 after charges and before taxes and inflation. The result is given in the graph below.

Graph 54. Return after charges, before taxes and inflation

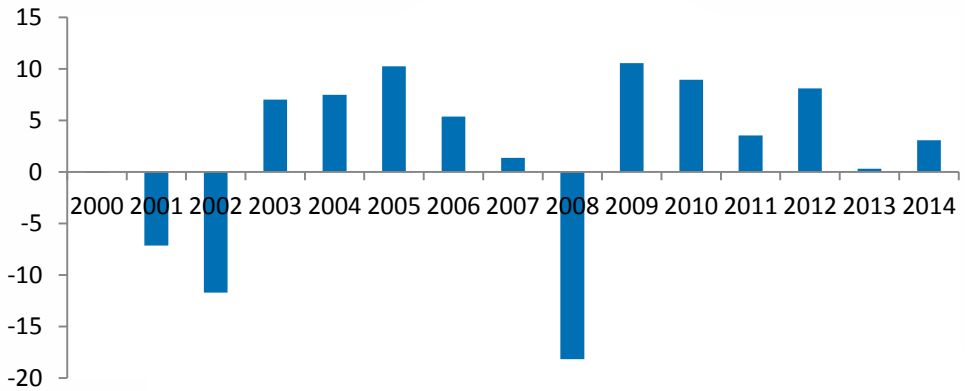


Source: own calculations

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-harmonised method and one on the Dutch method. We will use inflation figures calculated using the EU-harmonised method for the period 2003 and onwards[175] as those are only available since 2003. For the period 2000-2002 we use the inflation data calculated based on the traditional Dutch method[176][177]. When we use the annual inflation data from 2000 and adjust the return after charges for inflation, we get the following outcome:

Graph 55. Return after charges and inflation



Source: Own calculations, Statistics Netherlands

[175] 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,l&VW=T

[176] 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

[177] 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 to change. Therefore, using the Dutch-method based inflation data for 2000 – 2003 is warranted.

The same results presented in a table:

Table 171. Return after charges, taxes and inflation	
Year	**Return after charges, taxes 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	8.10
2013	0.32
2014	4.62
Average 2000-2014	**1.93**

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 2000-2014, the yearly average real return has been 1.93%. 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 were not, or at least not fully, taken on board. However, things are improving fast in this field and we have no reason to assume that those costs that were not (fully) taken on board were such that they would have significantly lowered the real annual return of the Dutch pension funds in the aforementioned period. For example, we 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 2014, as 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 1.93%.

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 were charging much higher costs than the 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 pillar III: 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 the 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 2.6% for 30-year fixed interest rate (average)[178]. 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 pillar III 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. Both sets of statistics are provided by the Dutch central bank[179] with inflation used, as earlier, from Statistics Netherlands, to calculate the real return of life insurance companies. The results are reported in the table below.

The average annual return after charges and taxes, before inflation for life insurance companies in the Netherlands between 2000 and 2014 included, amounts to 1.57%. Average annual inflation rate in the Netherlands in the same period was 2.12%. Therefore, the average real annual return of insurance companies in the Netherlands for the period between 2000 and 2014 was -0.55%.

Putting all those calculations together, we get the following table:

[178] Various interest rates available from website www.homefinance.nl on http://www.homefinance.nl/pensioen/pensioensparen/rentes-pensioensparen-opbouwfase.asp?o=2&t=360

[179] http://www.statistics.dnb.nl/financieele-instellingen/verzekeraars/toezichtgegevens-verzekeraars/index.jsp

Table 172. Average real return of insurance companies in the Netherlands

	Nominal return pension funds (1)	Return insurance companies after charges and taxes (2)	HICP annual inflation rate (3)	Charges pension funds (4)	Real return pension funds (1-3-4)	Real returns insurance companies (2-3)
2000	2.70	3.91	2.6	0.19	-0.09	1.31
2001	-2.48	3.37	4.5	0.19	-7.17	-1.13
2002	-8.12	0.35	3.4	0.19	-11.71	-3.05
2003	9.40	3.64	2.2	0.19	7.01	1.44
2004	9.06	2.79	1.4	0.19	7.47	1.39
2005	11.92	3.46	1.5	0.19	10.23	1.96
2006	7.16	3.95	1.6	0.19	5.37	2.35
2007	3.14	6.9	1.6	0.19	1.35	5.30
2008	-15.76	-6.38	2.2	0.24	-18.17	-8.58
2009	11.73	2.04	1.0	0.19	10.56	1.04
2010	9.98	0.17	0.9	0.15	8.94	-0.73
2011	6.23	-0.44	2.5	0.19	3.55	-2.94
2012	11.1	0.32	2.8	0.21	8.10	-2.48
2013	3.15	2.07	2.6	0.24	0.32	-0.53
2014	5.8	-2.59	1.0	0.18	4.62	-3.59

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 €1.2 billion stashed away for their retirement in their pension vehicles in pillars II and III of the pension system.

Generally, the pension funds that invest the majority of pension contributions tend to provide decent returns after taxes, charges and inflation. For the period considered here, 2000-2014 the average annual real return is 1.93%. The pension vehicles in pillar III, such as life insurance companies, return much less. Indeed, on average they cause a loss of 0.55%. However two things have to be mentioned in order to put this performance in perspective. In the first place, pillar III is relatively small and a relatively small number of individuals are enrolled in it. Seconldy, generally speaking the real return in bad years, such as 2002 and 2008, is much better than the return of pension funds, so one could say that pillar III 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.

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, as in many other European countries, even the supervisors or indeed pension funds themselves are often 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.

All in all, the Dutch enjoy a positive real return on their pension savings, with the non-weighted average being 1.38% (1.93% of pension funds and a loss of 0.55% of pillar III vehicles). The average return from the standpoint of an individual is much higher due to the preferential tax treatment of their contributions. Those 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%. 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 characterised by a large degree of built-in solidarity. However, many young people fear that at 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 in what way 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 in 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

2015 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 in 2015 for a single person amounts to £115.95 (€143.9) 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
- 2.5%

In 2015, it increased by 2.5%.

Employees (and not the self-employed) who earn more than £5,772 (€7,164) 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 will be replaced by a new one for people reaching the State Pension age from 6 April 2016 onwards: A single-tier State pension will replace the basic and additional pensions. The full new State Pension will be no less than £151.25 (€187.7) 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 declined from 12.3 million in 2003 (65% of eligible employees), to 11.7 million in 2013 (58%)[180]. 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 retirement[181]. 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.

[180] Source: Official Statistics on workplace pension participation and saving trends of eligible employees, Department for Work and Pensions, October 2014.
[181] According to the Department for Work and Pensions (2013), 12 million people are not saving enough to ensure an adequate income in retirement.

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. 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.

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, 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.

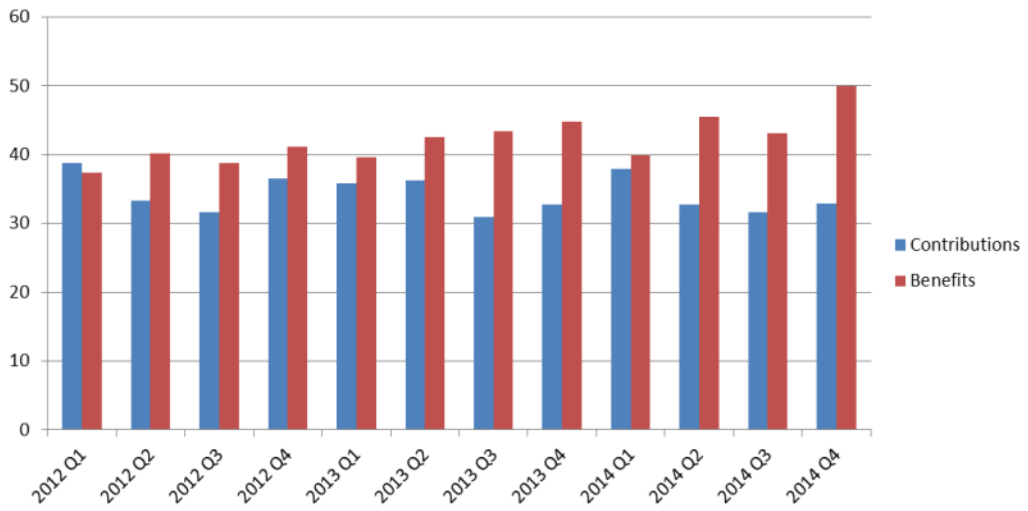
As the retirement system in the United Kingdom is predominantly a pre-funded one, life insurance and pension funds represent the majority of total assets held by UK households.

Table 173. Financial Savings of UK households at the end of 2014 (non-real estate)

	% of total assets	2014/2013 (%)
Currency and bank deposits	24.8	4.1
Investment funds	4.3	36.4
Direct investments (debts products, shares and other equity)	9.8	9.8
Life insurance and annuity entitlements	10.8	3.8
Pension schemes	50.2	20.7
Total	100	13.7

Many occupational and individual pension funds have reached maturity and the gap between benefits and contributions widens.

Graph 56. Contributions and benefits of pension funds in the UK (SA data in £ Bn)



Source: Office for National Statistics. Data includes self-administered pension funds and pension funds managed 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 £4,700 (€5,830.4) 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, namely NOW: Pensions (or just simply NOW), a UK subsidiary of the Danish national pension fund ATP and the so-called “People’s Pension".

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 of more than £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 funds[182]. 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 pot[183]. 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. As a reference, operational expenses of pension funds in the United Kingdom vary between 0.25% and 0.30% of assets.

Table 174. Pension funds in the United Kingdom: Operating expenses (% of total assets)

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
0.264	0.304	0.217	0.239	0.238	0.319	0.262	0.270	0.258	0.219	0.219

Source: OECD

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

[182] Office of Fair Trading (2013).
[183] Department for Work & Pensions (2013,2).

introduced from 6 April 2015 by the Financial Conduct Authority (competent for contract-based workplace pension schemes) and the Department for Work and 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.

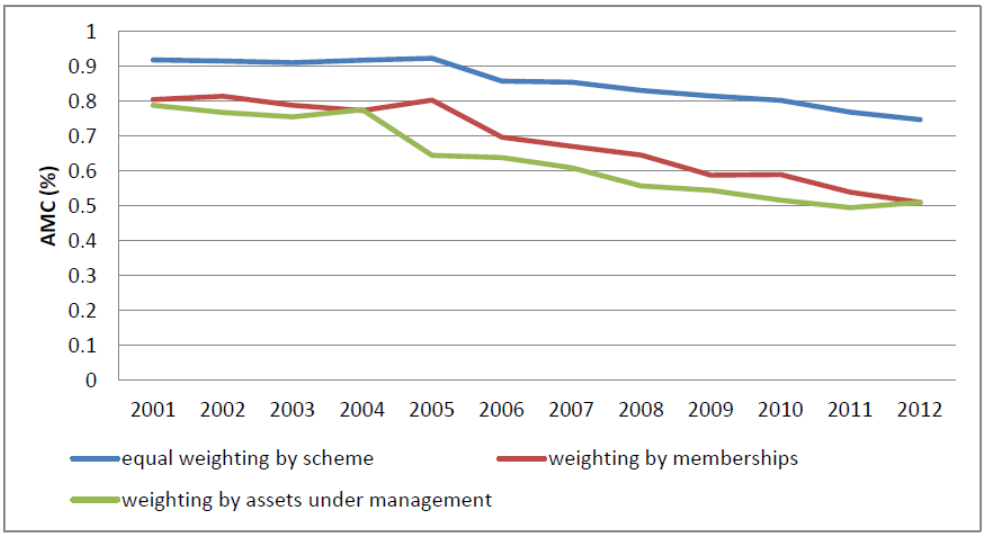
There are various estimations available on the average weight of charges levied on pension funds in the UK.

- Charges are especially high in personal contracts other than Group personal plans. According to Oxera184, 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)185 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 Pensions, average charges were 0.75% in surveyed trust-based schemes and 0.84% in contract-based schemes in 2013. Thus, charges on contract-based schemes are still higher, although they slightly decreased since 2011 (0.95%), while they slightly increased in trust-based schemes (0.71% in 2011).

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.

[184] Oxera (2013).
[185] Association of British Insurers (2012).

Chart 58. Average AMC on schemes set up by new contract-based and bundled trust-based pension providers in each year



Source: OFT, based on data submitted by providers

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 0.69% of the outstanding assets of pension funds in 2013. On average, AMC represented 0.72% of assets over the ten years from 2004 to 2013.

Table 175. Average AMC on schemes set up by existing contract-based and bundled trust-based pension providers in each year (%)

From 2000 to 2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Annual average 2004-2013
0.79	0.77	0.76	0.75	0.73	0.71	0.69	0.67	0.65	0.69	0.72

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 £40,000 (€49,644); whichever is lower. The total contributions of the employee and his employers are taken into account for that purpose. The annual allowance is reduced to £10,000 (€12,411) for individuals who continue to pay in contributions even after having started to withdraw money (cash or annuities) from a pension pot[186].

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 £1.25 million (€1.55 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% up to an income of £31,785 (€39,448), 40% up to £150,000

[186] Since 5 April 2015 this is possible for the "flexi access drawdown funds" and for flexible annuities. More information here: https://www.moneyadviceservice.org.uk/en/articles/flexi-access-drawdown

(€186,165) and 45% above. There are income tax allowances of £10,600 (€ 13,455.66)[187] in favour of taxpayers with an income inferior to £100,000 (€124,110).

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.

Table 176. 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

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 29% in 2013. British pension funds remain among the most exposed to the stock market, either directly or through investment

[187] This amount applies to people born after 6 April, 1938.

funds[188]. 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.

The UK pension funds have suffered relatively little from the crisis of sovereign debts in the euro area; their bond portfolio is mainly composed of British government bonds (61% at the end of 2013) and corporate bonds (33%); foreign government securities have a much lower weight (6%) (Source: Office for National Statistics).

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%.

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:

[188] 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.

Table 177. Case description				
	Tax allowance (£)	Marginal Tax rate	Income tax	Average tax rate
Case 1: An annual income of £10 000	10 600	20%	-	0%
Case 2: An annual income of £20 000	10 600	20%	1 880	9%
Case 3: An annual income of £50 000	10 600	40%	9 403	19%
Case 4: An annual income of £150 000	-	40%	51 523	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:

$$R = \frac{Income + capital\ gains}{(Assets\ at\ year\ end + assets\ at\ begining\ of\ the\ year)/2}$$

Capital gains are estimated using the following formula:

$$CG = Assets\ at\ year\ end - assets\ at\ begining\ of\ the\ year - Net\ investments\ of\ the\ year)$$

Income includes following components:

$$Income\ of\ investment = Rents\ from\ properties + Dividends\ received + Interest\ earned$$

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 2.4% per year in the most favourable case, and 1.2% in the worst case[189].

[189] 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

Table 178. 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	**Real return after charges, after inflation, after tax**	1,7	1,7	1,0	1,0
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					
Avg / Year	5,5	4,8	2,4					

Sources: GAD (nominal returns in 2000), ONS, OFT, DWP, IODS 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 1.7%.

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

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.

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 0.69% in 2013.

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 2013 was positive by 5.5%. When taking into account inflation, charges and taxes, the investment returns are estimated at +1% to +2.4%, depending on the personal tax rate of the retiree.

Bibliography

2014 Report on Insurances and Pension Funds. Directorate-General of Insurance and Pension Funds.

2nd and 3rd Pillar presentation. *http://slideplayer.us/slide/728434/*.

AGGUIRREAMALLOA, J., CORRES, L., & FERNANDEZ, P. (February 2012). *Pension Funds Returns in Spain 2001-2011.* http://www.iese.edu/research/pdfs/DI-0947.pdf: IESE Research Document.

Analytical web for savers in Slovak Pillar II. *http://www.manazeruspor.sk/*.

Annual Survey 2013. (2013). NAPF.

Assembly, N. (2014, January 01). Social Insurance Code. *State Gazette*.

ATP Group Annual Report 2014. *http://www.atp.dk/en/results-and-reports/annual-and-interim-reports/atp-group.*

BOERI, T., BOVENBERG, A., COEURE, B., & ROBERTS, A. *Dealing with New Giants: Rethinking the Role of Pension Funds.* CEPR Geneva Reports on the World Economy.

BOTTAZZI, R., JAPPELLI, T., & PADULA, M. (2009). *Pension Reforms and the Allocation of Retirenment Savings.* Retrieved from mimeo.

CENAR, I. (2010). *The Financial Accounting Image For The Public Benefits Of Retirenment.* Petrosani.

Commission, F. S. (2004). *Ordinance No.19 on setting aside pension reserves.* http://www.fsc.bg/public/upload/files/menu/Naredba-19KFN_pens-rezervi.pdf.

Commission, F. S. (2014). *Social Insurance Market, Statistics.* http://www.fsc.bg/Statistics-and-Analysis-en-523.

Country report ROMANIA by Stefan Ruxandra Cristina. *http://www.efbww.org/pdfs/26%20-%20Romania%20GB.pdf*.

COVIP. (various years). *Annual Report.* http://www.covip.it/.

CSSPP. *http://www.csspp.ro*.

Defined contribution workplace pension market study. (2013). Office for Fair Trading.

Defined contribution workplace pensions: The audit of charges and benefits in legacy schemes. (2014). Independent Project Board.

DEL CAMPO, J., & FERNANDEZ, P. (2010). *Pension Funds in Spain 1994-2009.* http://ssrn.com/abstract=1561522: IESE.

Estonia., R. o. (n.d.). *Funded Pensions Act (2014)*. Retrieved October 15, 2014, from http://www.legaltext.ee

Estonian Tax and Customs Board. *http://www.emta.ee/index.php?id=2*.

Financial and Capital Market Commission. *http://www.fktk.lv/en/*.

Financial Savings of Spanish Households, Q4 2013. *http://www.inverco.es/archivosdb/073-iaff-2013-trimestre-4.pdf*. INVERCO (Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones).

Finanstilsynet - Key Performance Indicators. *https://www.finanstilsynet.dk/en/Tal-og-fakta/Statistik-noegletal-analyser/Noegletal.aspx*.

Framework for the analysis of future pension incomes. (2013). Department for Work and Pensions.

FRUNZARU, V. (2007). *Romanian pension system. An evaluation from the European Perspective.* Economic Publishing House.

GRODUMA, M. (2002). Social insurance in Latvia: Seeking balance between financial stability and equity. *European regional meeting "New and revised approaches to social protection in Europe"*, (p. http://www.issa.int/html/pdf/budapest02/2groduma.pdf). Budapest.

GUARDIANCICH, I. (2009). *Current pension system: first assesment of reform outcomes and output.* http://www.ose.be/files/publication/2010/country_reports_pension/OSE_2010_CRpension_Italy.pdf: European Social Observatory Country Report on Italy.

GUERRA, M. C. (2003). Verso un Sistema Monetario e Bancario Europeo? La disciplina fiscale dei fondi pensione: esperienze nazionali e prospettive per l'Unione europea, Ente per Gli Studi Monetari, Bancari e Finanziari. *Quaderni di Ricerca #57*.

HERNANDEZ, D. G. (2006). Comparison of Costs and Fees in Countries with Private Defined Contribution Pension Systems. *IOPS Working Paper*.

Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2014 r. (2015). Warsaw: KNF.

Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w I połowie 2013 roku. (2013). Warsaw: KNF.

Inflation.eu. *http://www.inflation.eu/*.

Institute, N. S. (2014). *Preliminary Report on the State Social Insurance Budget for the first half of 2014.* http://noi.bg/newsbg/3136-budjet062014doo.

Institutions of Collective Investment and Pension Funds. 2014 Report and Outlook for 2015. *http://www.inverco.es/archivosdb/c90-ahorro-financiero-de-las-familias-iics-y-fp=2014.pdf*. INVERCO (Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones).

Insurers, A. o. (2012). UK Insurance Key Facts.

Landscape and Charges Survey 2013: Charges and quality in defined contribution pension schemes. (2014). Department for Work and Pensions.

Latvia, M. o. (2003). The State Social Insurance System in Latvia. In *Financial Analysis.* Riga.

LEPPIK, L. a. (2006). Pension Reform in Estonia. In E. FULZ, *Pension Reform in the Baltic States.* Budapest.

Manapensija. *http://www.manapensija.lv/en/*.

Mandatory Pensions Law - 2nd pillar. *http://www.privatepensions.ro/Mandatory-Pensions-Law-2nd-pillar-article-2-4-0.htm*.

Ministry of Labour, Social Affairs and Family SR. *http://www.employment.gov.sk/*.

MUNTEAN, L. a. (2011). Deductability of Contributions to Voluntary Private Pensions. In *Annals of the University of Petrosani, Economics 11(4).*

National bank of Slovakia. *http://nbs.sk*.

NOVAC. (2007). The Evolution of Pension Funds on the Romania market. *Review of Management and Economical Engeneering*, pp. Vol. 6, No. 6.

Observatory - Press Release: Investment in Individual Pension Plans (Executive Summary). *http://www.inverco.es/archivosdb/ndp-e-informe-patrimonio-invertido-en-pensiones-por-ccaa-2014-general.pdf*. INVERCO.

Occupational pension schemes year 2000 and followings. (Various years). Government Actuary's Department.

OECD. (2011). *Estonia - Review of the Private Pension Systems.* Retrieved October 26, 2014, from http://www.oecd.org/finance/private-pensions/49498084.pdf

OECD. (2012). *Pensions at a Glace 2012.* OECD Publishing.

OECD. (2013). *Pension Markets in Focus 2013.* Retrieved October 14, 2014, from http://www.oecd.org/finance/PensionMarketsInFocus2013.pdf

OECD. (2015). *Pension Markets in Focus 2014*. Retrieved from http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2014.pdf).

OECD Pension markets in focus, 2013 and 2014. (http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2014.pdf). *http://www.oecd.org/pensions/PensionMarketsInFocus2013.pdf*.

OECD Pensions at a Glance 2011. *http://www.oecd.org/pensions/PensionMarketsInFocus2013.pdf and http://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2014.pdf*.

OECD Pensions at a Glance 2011. *http://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2011_pension_glance-2011-en*.

Ogólne warunki indywidualnego ubezpieczenia emerytalnego nr OWU/PUL0/1/2006. (2006). TUnŻ ING Nationale-Nederlanden Polska S.A.

Ogólne warunki indywidualnego ubezpieczenia na życie związanego z ubezpieczeniowym funduszem kapitałowym IKE PZU Życie. (2007). PZU Zycie S.A.

Ogólne warunki ubezpieczenia na życie z ubezpieczeniowym funduszem kapitałowym IKE OWU IKEM.09.2006, GL ob./2/9/2006. (2006). Generali.

Old age pension saving Act No. 43/2004. *http://www.zakonypreludi.sk/zz/2004-43*.

OORN, K. *Developments in the Estonian Pension System.* Retrieved October 21, 2014, from OECD Private Pension Series No. 5: http://browse.oecdbookshop.org/oecd/pdfs/product/2104011e.pdf

OSTROWSKA, K. (2012). Nowe konta emerytalne (IKZE) w oferice instytucji finansowych. *Rzeczpospolita*.

OSTROWSKA, K. (2013). Oprpcentowanie kont dalej spada. *Rzeczpospolita*.

OXERA. (2013). *Study on the position of savers in private pension products.* Oxera.

PACI, S., CONTALDO, P., FIORENTINO, C., NOCERA, G., SPOTORNO, L., & VALLAQUA, F. (2010). *Pension funds in Italy.* Carefin report: Bocconi University.

Pension Funds Quarterly Report, June 2012, December 2013, December 20. *http://www.dgsfp.mineco.es/sector/documentos/Informes%202014/Informe%20Sector%20Seguros%202014.pdf*. INVERCO (Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones).

Pension Trends, 2013. (2014). Office for National Statistics.

Pensionfundsonline.co.uk. *http://www.pensionfundsonline.co.uk/content/country-profiles/slovakia/109*.

Pensionikeskus. *http://www.pensionikeskus.ee/*.

Pensions Landscape and Charges Survey. (2013). Department for Work and Pensions.

PensionsFundsOnline. *http://www.pensionfundsonline.co.uk/content/country-profiles/latvia/94*.

Policy, A. B. (2014). *Options for Social Security Legislation Reforms.* mimeo.

Pracownicze programy emerytalne w 2012 r. (2013). Warsaw: KNF.

Pracownicze programy emerytalne w 2014 r. (2015). Warsaw: KNF.

Presentation of NBS. *http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/Pensions_PeterPenzes.pdf*.

Press Release: Life insurance manages assets for eur. 203,611 million . (2015, May 10). UNESPA.

Privatepensions.ro. *http://www.privatepensions.ro*.

Project of Virtual pension management company. *http://www.virtualnadss.umb.sk/*.

Public consultation. Better workplace pensions: a consultation on charging. (2013). Department for Work and Pensions.

RAJEVSKA, O. (2013/23). Funded Pillars in the Pension Systems of Estonia, Latvia and Lithuania. *Economics and Business*.

ROSSI, M. (April 2009). Private Saving and Individual Pension Plan Contributions. *Oxford Bulletin of Economics and Statistics*, 253-271, Volume 71, Issue 2.

RUTECKA, J., BIELAWSKA, K., PETRU, R., PIENKOWSKA-KAMIENIECKA, S., SZCZEPANSKI, M., & ZUKOWSKI, M. (2014). Dodatkowy system emerytalny w Polsce – diagnoza i rekomendacje zmian. *Towarzystwo Ekonomistow Polskrich*.

Sebo, J., Sebova, L., Virdzek, T. 2014. Challenges in the Slovak PAYG and DC Schemes. In: Social security systems against the challenges of demographics and market. Poznań: Publishing House of Poznań University of Technology 2014. - ISBN 978-83-7775-344-6

SETTIMO , C., & CANNATA, R. (2007). *Assicurazioni Generali.* Italian Complementary Pension Reform.

Spanish Pension Funds System. (2009, April). *http://www.inverco.es/documentos/publicaciones/documentos/0003_SPA*

NISH%20PENSION%20FUNDS%20SYSTEM/C0_SPANISH%20PENSION%20FUNDS. INVERCO (Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones).

State Social Insurance Agency. *http://www.vsaa.lv/*.

Study on the position of savers in private pension products. (2013). Oxera.

Supplementary pension saving Act No. 650/2004. *http://www.zakonypreludi.sk/zz/2004-650*.

Tabela limitów i opłat nr TLiO/13A/2008. (2008). TUnŻ ING Nationale-Nederlanden Polska S.A.

THE PENSION SYSTEM IN ROMANIA. *http://cef-see.org/pension_reform/Romania.pdf*.

The Romanian Pension Funds' Association – APAPR. *http://www.apapr.ro*.

The Saving Rate in Spain during the economic crisis: The Role of Unemployment and Funding Expectations. (2011, November). *Economic Bulletin of the Bank of Spain*.

TULLIO, J., & PISTAFERRI, L. Tax incentives and the demand for life insurance: evidence from Italy . In *Journal of Public Economics* (pp. 87 (7-8): 1779-1799).

Valsts ieņēmumu dienests. *https://www.vid.gov.lv/default.aspx?hl=2*.

VOLSKIS, E. (2012). *Reforms of Baltic States Pension Systems: Challanges and Benefits.* Retrieved October 10, 2014, from www.ebrd.com/downloads/news/pension-system.pdf

Voluntary Pensions Law - 3rd pillar. *http://www.privatepensions.ro/Voluntary-Pensions-Law-3rd-pillar-article-2-3-0.htm*.

Imprint

Editor and Publisher
The European Federation of Investors and Financial Services Users
Rue du Lombard 76
1000 Brussels
Belgium
info@betterfinance.eu

Coordinators

Michael Klages
Juan Manuel Viver

Contributors

Jean Berthon
Lubomir Christoff
Didier Davydoff
Flavia Fulea
Laetitia Gabaut
Josefine Gunnarsdottir
Arnaud Houdmont
Michael Klages
Nicolas Kortesluoma
Edin Mujagić
Guillaume Prache
Mariacristina Rossi
Joanna Rutecka
Ján Šebo
Filipa Silva
Klaus Struwe
Tomáš Virdzek
Juan Manuel Viver

European Commission

BETTER FINANCE activities are partly funded by the European Commission. Please note that the European Commission is not responsible for any use that may be made of the information provided in this publication.