PENSION SAVINGS
THE REAL RETURN
2018 EDITION

BF BETTER FINANCE

The European Federation of Investors and Financial Services Users
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Pension Savings: The Real Return
2018 Edition

A Research Report by BETTER FINANCE

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Table of Contents

Acronyms

AIF	Alternative Investment Fund
AMC	Annual Management Charges
AuM	Assets under Management
BE	Belgium
BG	Bulgaria
Bln	Billion
BPETR	'Barclay's Pan-European High Yield Total Return' Index
CAC 40	'Cotation Assistée en Continu 40' Index
CMU	Capital Markets Union
DAX 30	'Deutsche Aktieindex 30' Index
DB	Defined Benefit plan
DC	Defined Contribution plan
DE	Germany
DG	Directorate General of the Commission of the European Union
DK	Denmark
DWP	United Kingdom's Governmental Agency Department for Work and Pensions
EBA	European Banking Authority
EE	Estonia
EEE	Exempt-Exempt-Exempt Regime
EET	Exempt-Exempt-Tax Regime
ETF	Exchange-Traded Fund
EIOPA	European Insurance and Occupational Pensions Authority
ES	Spain
ESAs	European Supervisory Authorities
ESMA	European Securities and Markets Authority
EU	European Union
EURIBOR	Euro InterBank Offered Rate
EX	Executive Summary
FR	France
FSMA	Financial Services and Market Authority (Belgium)
FSUG	Financial Services Users Group - European Commission's Expert Group
FTSE 100	The Financial Times Stock Exchange 100 Index

FW	Foreword
GDP	Gross Domestic Product
HICP	Harmonised Indices of Consumer Prices
IBEX 35	Índice Bursátil Español 35 Index
IKZE	'Indywidualne konto zabezpieczenia emerytalnego' – Polish specific Individual pension savings account
IRA	United States specific Individual Retirement Account
IT	Italy
JPM	J&P Morgan Indices
KIID	Key Investor Information Document
LV	Latvia
NAV	Net Asset Value
Mln	Million
MSCI	Morgan Stanley Capital International Indices
NL	Netherlands
OECD	The Organisation for Economic Co-Operation and Development
OFT	United Kingdom's Office for Fair Trading
PAYG	Pay-As-You-Go Principle
PIP	Italian specific 'Individual Investment Plan'
PL	Poland
PRIIP(s)	Packaged Retail and Insurance-Based Investment Products
RO	Romania
S&P	Standard & Poor Indexes
SE	Sweden
SK	Slovakia
SME	Small and Medium-sized Enterprise
SPIVA Scorecard	Standard & Poor Dow Jones' Indices Research Report on Active Management performances
TEE	Tax-Exempt-Exempt Regime
TCR/TER	Total Cost Ratio/ Total Expense Ratio
UCITS	Undertakings for the Collective Investment of Transferable Securities
UK	United Kingdom

Glossary of terms

Accrued benefits* – is the amount of accumulated pension benefits of a pension plan member on the basis of years of service.

Accumulated assets* – is the total value of assets accumulated in a pension fund.

Active member* – is a pension plan member who is making contributions (and/or on behalf of whom contributions are being made) and is accumulating assets.

AIF(s) – or Alternative Investment Funds are a form of collective investment funds under E.U. law that do not require authorization as a UCITS fund.[1]

Annuity* – is a form of financial contract mostly sold by life insurance companies that guarantees a fixed or variable payment of income benefit (monthly, quarterly, half-yearly, or yearly) for the life of a person(s) (the annuitant) or for a specified period of time. It is different than a life insurance contract which provides income to the beneficiary after the death of the insured. An annuity may be bought through instalments or as a single lump sum. Benefits may start immediately or at a pre-defined time in the future or at a specific age.

Annuity rate* – is the present value of a series of payments of unit value per period payable to an individual that is calculated based on factors such as the mortality of the annuitant and the possible investment returns.

Asset allocation* – is the act of investing the pension fund's assets following its investment strategy.

Asset management* – is the act of investing the pension fund's assets following its investment strategy.

Asset manager* – is(are) the individual(s) or entity(ies) endowed with the responsibility to physically invest the pension fund assets. Asset managers may also set out the investment strategy for a pension fund.

Average earnings scheme* – is a scheme where the pension benefits earned for a year depend on how much the member's earnings were for the given year.

Basic state pension* – is a non-earning related pension paid by the State to individuals with a minimum number of service years.

Basis points (bps) – represent the 100th division of 1%.

Benchmark (financial) – is a referential index for a type of security. Its aim is to show, customized for a level and geographic or sectorial focus, the general price or performance of the market for a financial instrument.

Beneficiary* – is an individual who is entitled to a benefit (including the plan member and dependants).

Benefit* – is a payment made to a pension fund member (or dependants) after retirement.

[1] See Article 4(1) of Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010, OJ L 174, 1.7.2011, p. 1–73.

Bonds – are instruments that recognize a debt. Although they deliver the same utility as bank loans, i.e. enabling the temporary transfer of capital from one person to another, with or without a price (interest) attached, bonds can be also be issued by non-financial institutions (States, companies) and by financial non-banking institutions (asset management companies). In essence, bonds are considered more stable (the risk of default is lower) and in theory deliver a lower, but fixed, rate of profit. Nevertheless, Table EX2 of the Executive Summary shows that the aggregated European Bond Index highly overperformed the equity one.

Closed pension funds* – are the funds that support only pension plans that are limited to certain employees. (e.g. those of an employer or group of employers).

Collective investment schemes – are financial products characterised by the pooling of funds (money or asset contributions) of investors and investing the total into different assets (securities) and managed by a common asset manager. Under E.U. law collective investment schemes are regulated under 6 different legal forms: UCITS (see below), the most common for individual investors; AIFs (see above), European Venture Capital funds (EuVECA), European Long-Term Investment Funds (ELTIFs), European Social Entrepreneurship Funds (ESEF) or Money Market Funds.[2]

Contribution* – is a payment made to a pension plan by a plan sponsor or a plan member.

Contribution base* – is the reference salary used to calculate the contribution.

Contribution rate* – is the amount (typically expressed as a percentage of the contribution base) that is needed to be paid into the pension fund.

Contributory pension scheme* – is a pension scheme where both the employer and the members have to pay into the scheme.

Custodian* – is the entity responsible, as a minimum, for holding the pension fund assets and for ensuring their safekeeping.

Defered member* – is a pension plan member that no longer contributes to or accrues benefits from the plan but has not yet begun to receive retirement benefits from that plan.

Deferred pension* – is a pension arrangement in which a portion of an employee's income is paid out at a date after which that income is actually earned.

Defined benefit (DB) occupational pension plans* – are occupational plans other than defined contributions plans. DB plans generally can be classified into one of three main types, "traditional", "mixed" and "hybrid" plans. These are schemes where "the pension payment is defined as a percentage of income and employment career. The employee receives a thus pre-defined pension and does not bear the risk of longevity and the risk of investment. Defined Benefits schemes may be part of an individual employment contract or collective agreement. Pension contributions are usually paid by the employee and the employer".[3]

"Traditional" DB plan* – is a DB plan where benefits are linked through a formula to the members' wages or salaries, length of employment, or other factors.

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[2] See European Commission, 'Investment Funds' (28 August 2018) https://ec.europa.eu/info/business-economy-euro/growth-and-investment/investment-funds_en.

[3] Werner Eichhorst, Maarten Gerard, Michael J. Kendzia, Christine Mayrhruber, Connie Nielsen, Gerhard Runstler, Thomas Url, 'Pension Systems in the EU: Contingent Liabilities and Assets in the Public and Private Sector' EP Directorate General for Internal Policies IP/A/ECON/ST/2010-26.

"Hybrid" DB plan* – is a DB plan where benefits depend on a rate of return credited to contributions, where this rate of return is either specified in the plan rules, independently of the actual return on any supporting assets (e.g. fixed, indexed to a market benchmark, tied to salary or profit growth, etc.), or is calculated with reference to the actual return of any supporting assets and a minimum return guarantee specified in the plan rules.

"Mixed" DB plan* – is a DB plans that has two separate DB and DC components, but which are treated as part of the same plan.

Defined contribution (DC) occupational pension plans* – are occupational pension plans under which the plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions to an ongoing plan in the event of unfavorable plan experience. These are schemes where "the pension payment depends on the level of defined pension contributions, the career and the returns on investments. The employee has to bear the risk of longevity and the risk of investment. Pension contributions can be paid by the employee and/or the employer and/or the state".[4]

Dependency ratio* – are occupational pension plans under which the plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions to an ongoing plan in the event of unfavourable plan experience.

Early retirement* – is a situation when an individual decides to retire earlier later and draw the pension benefits earlier than their normal retirement age.

Economic dependency ratio* – is the division between the number of inactive (dependent) population and the number of active (independent or contributing) population. It ranges from 0% to 100% and it indicates how much of the inactive population's (dependent) consumption is financed from the active population's (independent) contributions.[5] In general, the inactive (dependent) population is represented by children, retired persons and persons living on social benefits.

EET system* – is a form of taxation of pension plans, whereby contributions are exempt, investment income and capital gains of the pension fund are also exempt, and benefits are taxed from personal income taxation.

Equity (or stocks/shares) – are titles of participation to a publicly listed company's economic activity. With regards to other categorizations, an equity is also a security, a financial asset or, under E.U. law, a transferable security.[6]

ETE system* – is a form of taxation whereby contributions are exempt, investment income and capital gains of the pension fund are taxed, and benefits are also exempt from personal income taxation.

ETF(s) – or Exchange-Traded Funds are investment funds that are sold and bought on the market as an individual security (such as shares, bonds). ETFs are structured financial products, containing a

[4] Ibid.
[5] For more detail on the concept, see Elke Loichinger, Bernhard Hammer, Alexia Prskawetz, Michael Freiberger, Joze Sambt, 'Economic Dependency Ratios: Present Situation and Future Scenarios' MS13 Policy Paper on Implications of Population Ageing for Transfer Systems, Working Paper no. 74, 18th December 2014, 3.
[6] Article 4(44) of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, OJ L 173, p. 349–496 (MiFID II).

basket of underlying assets, and are increasingly more used due to the very low management fees that they entail.

Fund member* – is an individual who is either an active (working or contributing, and hence actively accumulating assets) or passive (retired, and hence receiving benefits), or deferred (holding deferred benefits) participant in a pension plan.

Funded pension plans* – are occupational or personal pension plans that accumulate dedicated assets to cover the plan's liabilities.

Funding ratio (funding level) * – is the relative value of a scheme's assets and liabilities, usually expressed as a percentage figure.

Gross rate of return* – is the rate of return of an asset or portfolio over a specified time period, prior to discounting any fees of commissions.

Gross/net replacement rate – is the ratio between the pre-retirement gross or net income and the amount of pension received by a person after retirement. The calculation methodology may differ from source to source as the average working life monthly gross or net income can used to calculate it (divided by the amount of pension) or the past 5 year's average gross income etc. (see below **OECD net replacement rate**).

Group pension funds* – are multi-employer pension funds that pool the assets of pension plans established for related employers.

Hedging and hedge funds – while hedging is a complex financial technique (most often using derivatives) to protect or reduce exposure to risky financial positions or to financial risks (for instance, currency hedging means reducing exposure to the volatility of a certain currency), a hedge fund is an investment pool that uses complex and varying investment techniques to generate profit.

Indexation* – is the method with which pension benefits are adjusted to take into account changes in the cost of living (e.g. prices and/or earnings).

Individual pension plans* – is a pension fund that comprises the assets of a single member and his/her beneficiaries, usually in the form of an individual account.

Industry pension funds* – are funds that pool the assets of pension plans established for unrelated employers who are involved in the same trade or businesses.

Mandatory contribution* – is the level of contribution the member (or an entity on behalf of the member) is required to pay according to scheme rules.

Mandatory occupational plans* – Participation in these plans is mandatory for employers. Employers are obliged by law to participate in a pension plan. Employers must set up (and make contributions to) occupational pension plans which employees will normally be required to join. Where employers are obliged to offer an occupational pension plan, but the employees' membership is on a voluntary basis, these plans are also considered mandatory.

Mandatory personal pension plans* - are personal plans that individuals must join or which are eligible to receive mandatory pension contributions. Individuals may be required to make pension contributions to a pension plan of their choice normally within a certain range of choices or to a specific pension plan.

Mathematical provisions (insurances) – or *mathematical reserves* or *reserves*, are the value of liquid assets set aside by an insurance company that would be needed to cover all current liabilities (payment obligations), determined using actuarial principles.

Minimum pension* – is the minimum level of pension benefits the plan pays out in all circumstances.

Mixed indexation* – is the method with which pension benefits are adjusted taking into account changes in both wages and prices.

Money market instruments – are short-term financial products or positions (contracts) that are characterized by the very high liquidity rate, such as deposits, shor-term loans, repo-agreements and so on.

MTF – multilateral trading facility, is the term used by the revised Markets in Financial Instruments Directive (MiFID II) to designate securities exchanges that are not a regulated market (such as the London Stock Exchange, for example).

Multi-employer pension funds* – are funds that pool the assets of pension plans established by various plan sponsors. There are three types of multi-employer pension funds:

a) for related employers i.e. companies that are financially connected or owned by a single holding group (group pension funds);

b) for unrelated employers who are involved in the same trade or business (industry pension funds);

c) for unrelated employers that may be in different trades or businesses (collective pension funds).

NAV – Net Asset Value, or the amount to which the market capitalisation of a financial product (for this report, pension funds' or insurance funds' holdings) or a share/unit of it arises at a given point. In general, the Net Asset Value is calculated per unit or share of a collective investment scheme using the daily closing market prices for each type of security in the portfolio.

Net rate of return* – is the rate of return of an asset or portfolio over a specified time period, after discounting any fees of commissions.

Normal retirement age* – is the age from which the individual is eligible for pension benefits.

Non-contributory pension scheme* – is a pension scheme where the members do not have to pay into scheme.

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

OECD gross replacement rate - is defined as gross pension entitlement divided by gross pre-retirement earnings. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. This indicator is measured in percentage of pre-retirement earnings by gender.

OECD net replacement rate - is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking into account personal income taxes and social security contributions paid by workers and pensioners. It measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. This indicator is measured in percentage of pre-retirement earnings by gender.

Old-age dependency ratio - defined as the ratio between the total number of elderly persons when they are generally economically inactive (aged 65 and above) and the number of persons of working age.[7] It is a sub-indicator of the economic dependency ratio and focuses on a country's public (state) pension system's reliance on the economically active population's pensions (or social security) contributions. It is a useful indicator to show whether a public (Pillar I) pension scheme is under pressure (when the ratio is high, or the number of retirees and the number of workers tend to be proportionate) or relaxed (when the ratio is low, or the number of retirees and the number of workers tend to be disproportionate). For example, a low old-age dependency ratio is 20%, meaning that 5 working people contribute for one retiree's pension.

Open pension funds* – are funds that support at least one plan with no restriction on membership.

Pension assets* – are all forms of investment with a value associated to a pension plan.

Pension fund administrator* – is(are) the individual(s) ultimately responsible for the operation and oversight of the pension fud.

Pension fund governance* – is the operation and oversight of a pension fund. The governing body is responsible for administration, but may employ other specialists, such as actuaries, custodians, consultants, asset managers and advisers to carry out specific operational tasks or to advise the plan administration or governing body.

Pension fund managing company* – is a type of administrator in the form of a company whose exclusive activity is the administration of pension funds.

Pension funds* – the pool of assets forming an independent legal entity that are bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The plan/fund members have a legal or beneficial right or some other contractual claim against the assets of the pension fund. Pension funds take the form of either a special purpose entity with legal personality (such as a trust, foundation, or corporate entity) or a legally separated fund without legal personality managed by a dedicated provider (pension fund management company) or other financial institution on behalf of the plan/fund members.

Pension insurance contracts* – are insurance contracts that specify pension plans contributions to an insurance undertaking in exchange for which the pension plan benefits will be paid when the members reach a specified retirement age or on earlier exit of members from the plan. Most countries limit the integration of pension plans only into pension funds, as the financial vehicle of the pension plan. Other countries also consider the pension insurance contract as the financial vehicle for pension plans.

Pension plan* – is a legally binding contract having an explicit retirement objective (or – in order to satisfy tax-related conditions or contract provisions – the benefits can not be paid at all or without a significant penalty unless the beneficiary is older than a legally defined retirement age). This contract

[7] See Eurostat definition: http://ec.europa.eu/eurostat/web/products-datasets/product?code=tsdde511.

may be part of a broader employment contract, it may be set forth in the plan rules or documents, or it may be required by law. In addition to having an explicit retirement objective, pension plans may offer additional benefits, such as disability, sickness, and survivors' benefits.

Pension plan sponsor* – is an institution (e.g. company, industry/employment association) that designs, negotiates, and normally helps to administer an occupational pension plan for its employees or members.

Pension regulator* – is a governmental authority with competence over the regulation of pension systems.

Pension supervisor* – is a governmental authority with competence over the supervision of pension systems.

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

Private pension funds* – is a pension fund that is regulated under private sector law.

Private pension plans* – is a pension plan administered by an institution other than general government. Private pension plans may be administered directly by a private sector employer acting as the plan sponsor, a private pension fund or a private sector provider. Private pension plans may complement or substitute for public pension plans. In some countries, these may include plans for public sector workers.

Public pension plans* – are pensions funds that are regulated under public sector law.

Public pension plans* – are the social security and similar statutory programmes administered by the general government (that is central, state, and local governments, as well as other public sector bodies such as social security institutions). Public pension plans have been traditionally PAYG financed, but some OECD countries have partial funding of public pension liabilities or have replaced these plans by private pension plans.

Rate of return* – is the income earned by holding an asset over a specified period.

REIT(s) or Real Estate Investment Trust(s) is the most common acronym and terminology used to designate special purpose investment vehicles (in short, companies) set up to invest and commercialise immovable goods (real estate) or derived assets. Although the term comes from the U.S. legislation, in the E.U. there are many forms of REITs, depending on the country since the REIT regime is not harmonised at E.U. level.

Replacement ratio* – is the ratio of an individual's (or a given population's) (average) pension in a given time period and the (average) income in a given time period.

Service period* – is the length of time an individual has earned rights to a pension benefits.

Single employer pension funds* – are funds that pool the assets of pension plans established by a single sponsor.

Supervisory board* – is(are) the individual(s) responsible for monitoring the governing body of a pension entity.

System dependency ratio* – typically defined as the ratio of those receiving pension benefits to those accruing pension rights.

TEE system* – is a form of taxation of pension plans whereby contributions are taxed, investment income and capital gains of the pension fund are exempt, and benefits are also exempt from personal income taxation.

Trust* – is a legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).

Trustee* – is a legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).

UCITS – or Undertakings for Collective Investment in Transferable Securities, is the legal form under E.U. law for mutual investment funds that are open to pool and invest funds from any individual or institutional investor, and are subject to specific authorisation criteria, investment limits and rules. The advantage of UCITS is the general principle of home-state authorisation and mutual recognition that applies to this kind of financial products, meaning that a UCITS fund established and authorised in one E.U. Member State can be freely distributed in any other Member State without any further formalities (also called *E.U. fund passporting*).

Unfunded pension plans* – are plans that are financed directly from contributions from the plan sponsor or provider and/or the plan participant. Unfunded pension plans are said to be paid on a current disbursement method (also known as the pay as you go, PAYG, method). Unfunded plans may still have associated reserves to cover immediate expenses or smooth contributions within given time periods. Most OECD countries do not allow unfunded private pension plans.

Unprotected pension plan* – is a plan (personal pension plan or occupational defined contribution pension plan) where the pension plan/fund itself or the pension provider does not offer any investment return or benefit guarantees or promises covering the whole plan/fund.

Voluntary contribution – is an extra contribution paid in addition to the mandatory contribution a member can pay to the pension fund in order to increase the future pension benefits.

Voluntary occupational pension plans - The establishment of these plans is voluntary for employers (including those in which there is automatic enrolment as part of an employment contract or where the law requires employees to join plans set up on a voluntary basis by their employers). In some countries, employers can on a voluntary basis establish occupational plans that provide benefits that replace at least partly those of the social security system. These plans are classified as voluntary, even though employers must continue sponsoring these plans in order to be exempted (at least partly) from social security contributions.

Voluntary personal pension plans* – Participation in these plans is voluntary for individuals. By law individuals are not obliged to participate in a pension plan. They are not required to make pension contributions to a pension plan. Voluntary personal plans include those plans that individuals must join if they choose to replace part of their social security benefits with those from personal pension plans.

Wage indexation* – is the method with which pension benefits are adjusted taking into account changes in wages.

Waiting period* – is the length of time an individual must be employed by a particular employer before joining the employer's pension scheme.

Winding-up* – is the termination of a pension scheme by either providing (deferred) annuities for all members or by moving all its assets and liabilities into another scheme.

World Bank multi-pillar model – is the recommended design, developed by the World Bank in 1994, for States that had pension systems inadequately equipped to (currently and forthcoming) sustain a post-retirement income stream for future pensioners and alleviate the old-age poverty risk. Simpler, it is a set of guidelines for States to either enact, reform or gather legislation regulating the state pension and other forms of retirement provisions in a form that would allow an increased workers' participation, enhance efficiency for pension savings products and a better allocation of resources under the principle of solidarity between generations.

The standard design of a robust pension system would rely on five pillars:

a) the non-contributory scheme (pillar 0), through which persons who do not have an income or do not earn enough would have insured a minimum pension when reaching the standard retirement age;

b) the public mandatory, Pay-As-You-Go (PAYG) scheme (**Pillar I**), gathering and redistributing pension contributions from the working population to the retirees, while accumulating pension rights (entitlements) for the future retirees;

c) the mandatory funded and (recommended) privately managed scheme (**Pillar II**), where workers' contributions are directed to their own accumulation accounts in privately managed investment products;

d) the voluntary privately managed retirement products (**Pillar III**), composed of pension savings products to which subscription is universal, contributions and investments are deregulated and tax-incentivised;

e) the non-financial alternative aid scheme (pillar IV), through which the state can offer different forms of retirement support – such as housing or family support. Albeit the abovementioned, the report focuses on the "*main pillars*", i.e. Pillar I, II and III, since they are the most significant (and present everywhere) in the countries that have adopted the multi-pillar model.

Definitions with "*" are taken from OECD's Pensions Glossary - http://www.oecd.org/daf/fin/private-pensions/38356329.pdf.

Contributors

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Pension Savings: The Real Return

2018 Edition

Country Case: Estonia

Estonian Summary

Eesti pensionisüsteem on traditsiooniline Maailmapanga mitme-sambaline (kolm sammast) süsteem, mis põhineb individuaalsetel (personaalsetel) pensionikontodel. 2017. aasta tõi positiivse tulemi mõlemas sambas; sh olid kolmanda samba fondide tulemuseks soliidsed 2,35% reaaltootlust, samal ajal kui teise samba fondid olid napilt positiivsed 0,06% reaaltootlusega.

Rõõmustav oli madalate kuludega passiivsete pensionifondide lisandumine mõlemas sambas. Nende madalate kuludega fondide turuletulek on sundinud valitsemistasusid alandama teisedki teise ja kolmanda samba fondid.

Summary

The Estonian Pension system is a typical World Bank multi-pillar (three pillar) system based on individual (personal) pension savings accounts. The year 2017 saw positive returns for both pillars, even though Pillar III outperformed Pillar II with a solid 2.35% real return vs only slightly positive real returns for Pillar II pension funds of 0.06%.

The highlight was the introduction of low-cost passively managed pension funds into both pillars. Introduction of low-cost competition has forced the providers to further decrease the fees charged in Pillar II as well as Pillar III pension funds.

Introduction

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

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

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

Table EE1. Multi-pillar pension system in Estonia

Pillar I State pension	Pillar II Funded pension	Pillar III Supplementary pension
Mandatory	Mandatory	Voluntary
PAYG	Funded	Funded
Financed by social tax	DC	DC
Benefits Paid via State Pension Insurance Fund	Basic benefit	Complementary benefit
Minimum pension + employment related	Individual pension accounts	Individual pension contracts
Publicly managed by Social Insurance Board (government entity)	Privately managed pension funds	1. Privately managed pension funds 2. Pension insurance

Source: own elaboration, 2018

The basic pension system had an average replacement ratio in 2017, calculated by dividing the average old-age pension with the average salary in Estonia of 33.2%. The coverage ratio of the Pillar I pension comprises nearly 100% of the economically active population. Coverage for Pillar II is nearly 96%, whereas for Pillar III the coverage ratio is close to 17%.

Pillar I – State Pension

The state pension (Pillar I) should guarantee the minimum income necessary for subsistence. It is based on the Pay-As-You-Go 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 which came into force on 1 January 2002. Since then, the act has been amended more than 30 times. Employers pay 33% of the salary of each employee as social tax, 13% of which is for health insurance and 20% (16% in case of participation in Pillar II) is for the pensions of today’s pensioners.

There are two kinds of state pension: the pensions that depend on work contributions (the old-age pension, the pension for work-incapacity and the survivor’s pension) and the national pension.[141] Someone is entitled to the state old-age pension if they have been employed for at least 15 years in Estonia. If the period of employment is shorter, they are not entitled to the old-age state pension and might fall under the national pension system (the national pension was € 175.94 in 2017).

The **national pension** (also called National Pension Rate – NPR) provides a minimum pension for those who are not entitled to a pension that depends on work contributions, provided that they have lived in Estonia for at least five years before applying for a pension. The amount of the national pension as of 1 April 2018 is €189.31 (up from €175.94 on 1 April 2017). Generally, no additional benefits are provided via the state pension scheme.

The old-age pension, for thosewho contributed for 15 years or longer, takes into account a solidarity part (national pension) plus work and salary related part. The old-age pension financed through Pillar I is calculated as a sum of two components:

1. Basic amount (equaling to € 175.94 – national pension);
2. Salary based amount calculated as a multiplication of two factors:
    - Pensionable service period;
    - Insurance contributions.

The basic amount, acting as a first component of the state pension, is aimed at achieving basic solidarity and a minimum pension. The solidarity state pension insurance is represented by the basic amount (base component) of a pension which is equal to all, irrespective of the person's salary.

The factor "pensionable service" period represents the part of state pension which depends on the length of employment (i.e. years of employment and years deemed equal to employment, e.g. raising of children, compulsory military service, etc.) of the pensioner, which entitle him or her to the pension. Period of pensionable service is taken into account up until 31 December 1998. The monetary value of one year of employment in a monthly pension is €6,161 in 2017. This part of the state pension is deemed to diminish in future years (temporary component) as the third component (insurance contributions) will account for a larger portion of the total state pension amount.

The factor "insurance contributions" depends on how much social tax has been paid on the salary of the pensioner since 1 January 1999. The amount of the insurance component is calculated on the basis of the sum of annual factors of pension insurance. An annual factor

[141] The difference is in that both parts are financed by one social security contribution. However, the national pension is a minimum pension and this part depends on the number of working years (regardless the level of salary) and thus incorporates the solidarity principle. The second part depends on the level of salary and thus takes into account how much an individual has paid in contributions during its career compared to the average salary in the country.

shows the ratio of the social tax paid on the person's salary during the calendar year to the social tax paid on the average salary of the state. If social tax is paid on the average salary, the annual factor is 1.0 and its monetary value in a monthly pension is €6,161 in 2017, the same as the pensionable service period component.

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

The solidarity part of the state pension insurance involves the redistribution mechanism of income from the persons with high salaries to the persons with low salaries. However, the base component of a pension is equal to all, irrespective of the person's salary, while the law also procures the minimum amount of the old-age pension irrespective of the paid social tax.

Statutory retirement age is 63 for men and women. However, on 7 April 2010, the Estonian Parliament adopted the Act to amend the State Pension Insurance Act and the related acts, establishing that the general pensionable age of 65 years is to be reached in 2026. The transition period (starting from 2017) applies for people who were born from 1954 to 1960. For the latter, the retirement age will be gradually be increased by 3 months for every year of birth and will reach the age of 65 in 2026. The amendment came into effect on 1 January 2017. Further increases in the retirement age after 2026 are possible based on the increase in life-expectancy.

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

The average monthly old-age pension paid from Pillar I in 2017 was €405.40 (€386 in 2016).

Pillar II – Funded pension

The funded pension and supplementary funded pension puts a person in charge of his or her own future – the amount of his or her pension depends on how much he or she has put aside for retirement during their working life. The funded pension is legislated by the Funded Pensions Act, which came into force on 1 May 2004 and replaced the Funded Pension Act, effective 1 October 2001. The funded pension pillar (Pillar II) started its operation in July 2002.

The funded pension is based on accumulation of assets (savings) – a working person themselves saves for his or her pension, paying 2% of the gross salary to the selected pension fund. In addition to the 2% that is paid by the individual, the state adds 4% out of the current social tax that is paid by the employee and retains 29% (out of 33%). The state pension insurance component of a person who has subscribed to the funded pension is also respectively smaller (for the years when 16% is received for state pension instead of 20%).

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

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

In response to the impact of the financial crisis on the Estonian economy, a temporary change of contributions' regime has been adopted and lowered the amount of new contributions flowing into the mandatory pension funds. Through amendments to the Funded Pensions Act and the Social Tax Act (entered into force on 28 May 2009), temporary changes were adopted in connection with the contributions to pension Pillar II for the years 2009 to 2017. Contributions to a funded pension were suspended in the period from 1 June 2009 to 31 December 2010. Those interested could have continued making contributions to funded pension themselves from 2010 upon request. From 2011, contributions continued in half-volume, i.e. the state contributed 2% and the savers themselves 1%. Customary contributions to Pillar II (2% + 4%) were restored in 2012. To those who voluntarily continued their contributions in 2010 and 2011, the state shall pay an additional 6% during 2014 – 2017 in order to promote personal saving in Pillar II. However, if a saver did not contribute himself in 2010 and 2011 and submitted an application in 2013, they are required to pay voluntary contributions of 3% of his salary during years 2014–2017. If he does, the state will contribute an additional 6% during those 4 years. The prerequisite for these additional state contributions is at least 5% nominal economic growth of the Estonian economy. If this prerequisite is not fulfilled, the state is entitled to postpone the increasing of the contribution rate.

Pillar III – Supplementary pension

The supplementary funded pensions scheme, or Pillar III, is a part of the Estonia pension system and is governed by the same act that governs Pillar II, the Funded Pension Act (Chapter 3 and following).

This scheme has been introduced with the of helping maintain the same standard of living and adding more flexibility in securing a higher and/or stable stream of income after one reaches the age of 55. The state pension and Pillar II pension are estimated to deliver a gross replacement ratio of approximately 45%. Therefore, the supplementary pension has been designed to help achieve a recommended level of 65% gross replacement ratio of an individual´s previous income in order to maintain the established standard of living.

The supplementary pension participation is voluntary all persons, who can decide to save 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 accumulation phase. There is also a possibility to discontinue contributions (as well as to finish the contract).

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

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

Pension Vehicles

Pillar II – Funded pension

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

1. Conservative funds;

2. Balanced funds;
3. Progressive funds; and
4. Aggressive funds.

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

Table EE2. Mandatory Funded pension vehicles market share				
Type of mandatory pension fund	**AuM *(€ mil.)***	**Market share based on AuM**	**Number of participants**	**Market share based on participants**
Conservative funds	223.70	6.16%	43,650	6.60%
Balanced funds	454.07	12.47%	68,144	10.30%
Progressive funds	2,413.75	66.43%	379,230	57.32%
Aggressive funds	542.78	14.94%	170,571	25.78%
TOTAL	**3,633.30**	**100.00**	**661,595**	**100.00%**

Source: own calculations based on pensionikeskus.ee data, 2018 (data as of 31 December 2017)

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

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

The abovementioned 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 the assets into bonds, other fixed-income securities, deposits, investment funds, securities and deposits, and other similar assets. Conservative mandatory pension funds are not allowed to invest in equities and immovables, nor respective investment funds. The conservative strategy focuses on bonds and its objective is the preservation of capital and moderate growth, primarily in short term.

Balanced mandatory pension funds invest in different types of assets under 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 is invested in bonds, money market instruments, deposits, immovables and other assets.

Progressive mandatory pension funds invest in different types of assets from the objective under 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 is invested in bonds, money market instruments, deposits, immovables and other assets.

Aggressive mandatory pension funds introduced in 2010 are eligible to invest the highest portion of the assets into equities. The following quantitative limits on equities are used:

- up to 75% of the funds market value may invest in equity funds, equity and other instruments similar to equity;
- the remaining part of the assets of the fund is invested in bonds, money market instruments, deposits, immovables and other assets.

In Estonia, more than 660,000 people save under the Pillar II funds, which is almost 96% of the economically active population. Almost 80% of them have opted for pension funds with an active investment strategy pursuing more aggressive investment strategies tied with the significantly higher portion of equities in portfolio.

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

Comparing the Pillar II market share development in 2016, more contribution in-flows could be seen in aggressive funds and less into conservative and balanced funds.

Pillar III – Supplementary pension

According to the law, two types of pension vehicles for supplementary pension (Pillar III) are allowed:

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

For the supplementary pension insurance vehicle, two product options are available:

- Pension insurance at a guaranteed interest rate;
- Pension insurance with investment risk (unit-linked).

Considering the size of Pillar III based on the coverage of economically active population, the Estonian Pillar III amounts only about 17% of the economically active population. There are no investment restrictions regarding asset classes for voluntary (supplementary) pension funds.

Table EE3. Supplementary Pension vehicles market share		
Supplementary pension vehicles	**AuM / Reserves *(in €)***	**Market share based on AuM / reserves**
Voluntary pension funds	154,979,066	39.71%
Supplementary pension insurance contract	235,270,000	60.29%
TOTAL	390,249,066	100.00%

Source: own calculations based on pensionikeskus.ee data, 2018 (data as of 31 December 2017)

Charges

Pillar II – Funded pension

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

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

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

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

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

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

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

A comparison table of the most current charges applied by the mandatory pension funds asset management companies and individual fees paid by a saver is presented below. A slight decrease in management fees in 2016 compared to the 2015 can be observed.

Table EE4. Mandatory Pension Funds´ Fees

Fund / Charge type		Management Fee 2015	Management Fee 2016	Management Fee 2017
Conservative funds	Pension Fund LHV XS	0.74%	0.72%	0.63%
	Pension Fund Danske Pension Interest	0.65%	N/A	N/A
	SEB Conservative Pension Fund	0.95%	0.95%	0.49%
	Swedbank Pension Fund K1	0.62%	0.61%	0.29%
	Nordea Pension Fund C	0.85%	0.84%	0.75%
	Pension Fund LHV S	0.98%	0.96%	0.80%
	Tuleva World Bonds Pension Fund	N/A	N/A	0.34%
Balanced funds	Pension Fund LHV M	1.31%	1.28%	1.06%
	Pension Fund Danske Pension 25	1.35%	N/A	N/A
	Swedbank Pension Fund K2	0.97%	0.94%	0.87%
	Nordea Pension Fund B	1.42%	1.40%	1.37%
	SEB Optimal Pension Fund	1.30%	1.30%	1.01%
Progressive funds	Pension Fund Danske Pension 50	1.72%	N/A	N/A
	Pension Fund LHV L	1.64%	1.59%	1.33%
	Nordea Pension Fund A	1.51%	1.50%	1.47%
	SEB Progressive Pension Fund	1.50%	1.50%	1.17%
	Swedbank Pension Fund K3	1.03%	1.00%	0.92%
Aggressive funds	Pension Fund LHV XL	1.64%	1.59%	1.33%
	SEB Energetic Pension Fund	1.70%	1.70%	1.32%
	Swedbank Pension Fund K4	1.03%	1.00%	0.92%
	Nordea Pension Fund A Plus	1.60%	1.56%	1.57%
	Pension Fund LHV Index	N/A	0.39%	0.39%
	SEB Energetic pension fund index	N/A	0.29%	0.29%
	Swedbank Pension fund K90-99 (Life-Cycle Strategy)	N/A	0.49%	0.49%
	Tuleva World Stocks Pension Fund	N/A	N/A	0.34%

Source: Own research based on the terms of pension funds, 2018

The management fee rate and the procedure for its calculation are established in the terms and conditions of the pension fund. The former is expressed as a percentage of the market value of the funds' assets. In order to limit the overall charges applied to the pension funds, there has been a 3% cap on charges introduced on most of the funds. More volatile (aggressive) funds have a higher cap on charges (up to 5% p.a.).

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

Table EE5. Average fees in Estonian mandatory pension funds

Fees/Year	Management fee	Subscription fee	Redemption fee
2002	1.42%	1.50%	1.00%
2003	1.42%	1.50%	1.00%
2004	1.42%	1.50%	1.00%
2005	1.42%	1.50%	1.00%
2006	1.42%	1.50%	1.00%
2007	1.42%	1.50%	1.00%
2008	1.42%	1.50%	1.00%
2009	1.42%	1.50%	1.00%
2010	1.35%	0.00%	1.00%
2011	1.35%	0.00%	1.00%
2012	1.36%	0.00%	1.00%
2013	1.31%	0.00%	1.00%
2014	1.36%	0.00%	1.00%
2015	1.23%	0.00%	1.00%
2016	1.08%	0.00%	1.00%
2017	0.87%	0.00%	0.00%

Source: Own calculations based on data from pensions´ Prospectuses, Terms and Monthly Reports, 2018

Management fees are applied on a periodical basis to the fund's market capitalisation (asset value), which in turn effectively decreases the value of pension fund unit. It should be noted that their effect during the saving cycle is therefore exponential and should be calculated using formulas for compound interest. The depository fee is born by the management company and is not directly charged at the expense of a mandatory pension fund.

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

1. Directing contributions to a new fund – the units of the current fund will be retained and will continue earning in the former fund. After choosing a new fund, your future contributions will be transferred to it, 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.

From 1 January 2011 onward, there is no minimum limit for units upon changing a fund (before 1 January 2011 the minimum requirement was 500 units). Since 1 August 2011, it is possible to transfer to a new pension fund all or only a part (e.g. 25%, 50% or 75%) of the assets collected in the former pension fund.

Other charges include transfer costs, fees directly related to the transactions made on account of the fund and costs related to taking loans on account of the fund (including costs related to repurchase agreements and reverse repurchase agreements and other securities-borrowing transactions). The other charges can be viewed in a standard terminology as a trading and post-trading (clearing) costs except the charges associated with the depository services. However, these charges are not known, as they are neither disclosed nor visible to the general public. The term *Other charges* also includes individual services provided to the savers based on a specific request and should be charged individually to the saver asking for such services. These services typically include: processing an application to recall inherited pension fund units, to transfer inherited pension fund units into the pension account of the inheritor, for a lump sum payment from a pension fund, for a fund pension, to change a fund pension, etc.

Pillar III – Supplementary pension

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

For insurance contracts, no charges are publicly disclosed. The terms and conditions of an insurance contract cover the topic of charges; however, no charges are disclosed; Even if the charges are disclosed, the structure of fees is not transparent enough to allow the calculation of the total cost ratio. In most cases, the insurer is entitled to change contract fees and risk payments unilaterally during the insurance contract validity, with the obligation to inform the policyholder of the changes at least 30 days before such changes become effective. If the policyholder does not agree with the changes, he is entitled to terminate the contract.

The situation is different for a supplementary pension fund. All funds disclose most actual charges, which are presented in the table below. Comparing to the previous years, stagnation of charges can be observed for traditional funds, however the introduction of low-cost index funds came with significantly lower fees.

Table EE6. Supplementary Pension Funds´ Fees				
Fund	**Type of the fee**	**2015**	**2016**	**2017**
LHV Supplementary Pension Fund	Management fee	1.00%	1.00%	1.00%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	0.00%	0.00%	0.00%
	Depositary fee	N/A	N/A	N/A
Nordea Pension Fund Equity 100	Management fee	1.50%	1.50%	1.50%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	1.00%	1.00%
	Depositary fee	0.19%	0.19%	N/A
Nordea Pensionifond Intress Pluss	Management fee	1.20%	1.20%	1.20%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	1.00%	1.00%
	Depositary fee	0.15%	0.15%	N/A
SEB Active Pension Fund	Management fee	1.50%	1.50%	1.50%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	1.00%	1.00%
	Depositary fee	0.10%	0.10%	N/A
SEB Balanced Pension Fund	Management fee	1.00%	1.00%	1.00%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	1.00%	1.00%
	Depositary fee	0.10%	0.10%	N/A
Swedbank Pension Fund V1	Management fee	1.20%	1.20%	1.20%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	0.00%	0.00%
	Depositary fee	N/A	N/A	N/A
Swedbank Pension Fund V2	Management fee	1.30%	1.30%	1.30%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	0.00%	0.00%
	Depositary fee	N/A	N/A	N/A
Swedbank Pension Fund V3	Management fee	1.40%	1.40%	1.40%
	Redemption fee	1.00%	1.00%	1.00%
	Entry fee	1.00%	0.00%	0.00%
	Depositary fee	N/A	N/A	N/A
LHV Pension Fund Index Pluss	Management fee	N/A	0.39%	0.39%
	Redemption fee		0.00%	0.00%
	Entry fee		0.00%	0.00%
	Depositary fee		0.00%	N/A

Source: Own research based on pension funds´ documentation, 2018 (data as of 31/12/2017)

Taxation

Both funded pillars use the "EET" regime for taxation, which basically means that the contributions paid towards the pension schemes are tax-exempt. Returns achieved by respective pension funds are also tax-exempt and the benefits paid out during the retirement are subject to the income tax taxation.

Pillar II – Funded pension

Estonia is applying an EET taxation regime for Pillar II with some specifications (deductions) to the payout taxation regime, where generally the "T" regime is applied.

Taxation of the Fund

Income or profits of the Fund are not subject to 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 from the remuneration paid to a member of the management or supervisory body of a legal person; from the business income of sole proprietors after deductions relating to business and permitted in the Income Tax Act have been made, but annually from an amount not more than 15 times the sum of the minimum monthly wages for the taxable period; in certain cases from the remuneration or fees paid to a natural person on the basis of a contract for services, authorization agreement or another contract under the law of obligations entered into for the provision of services, and
2. the amount added by the state, which equals 4% of the sum of the resident natural person's wages and other remuneration.

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

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

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

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

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

Taxation of successors

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

Pillar III – Supplementary pension

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

I. Resident natural persons have the right to subtract the amounts paid to acquire supplementary fund units from their taxable income. The amount that is deducted may be up to 15% of the income earned in the taxation period, but no more than € 6,000.
II. Income or profits of the Fund are not subject to taxes at the fund level.
III. Payouts from a supplementary pension fund are subject to income tax as follows:
    a) 10% income tax if they are made under any of the following circumstances:
        (i) after the unit holder reaches the age of 55, but not before five years have passed from acquisition of the units;
        (ii) in the event of the unit holder's full and permanent incapacity for work;
        (iii) when the fund is liquidated.
    b) In all other cases, payouts from the fund are subject to income tax valid at the time the payout is made.
IV. Payouts 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 pension

2017 was characterized by the entry of a new player on the market – Tuleva, coupled with an increase in assets under management of passively managed pension funds that have significantly lower fees than actively managed pension funds. There are still five Pillar II private asset managers in Estonia. Scandinavian banks are playing leading roles not only in Estonia, but generally in all Baltic States. The two uncontestable leaders (Swedbank and SEB) absorb 60-70% of the market, with exceptionally strong positions in Estonia.

Five asset managers offer 22 pension plans in Estonia, which is an increase of 2 passively managed pension funds offered by the new player "Tuleva". The pension plans (funds) can be 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;
4. aggressive (investing in stocks mainly).

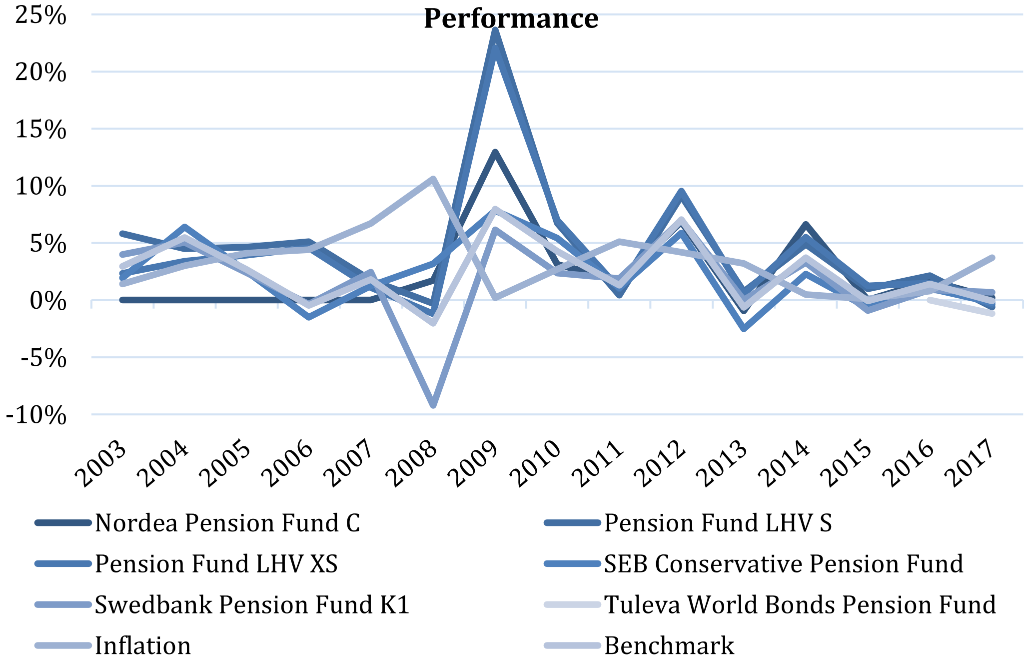
However, newly emerging passively managed index funds in 2016 and 2017 offer exceptionally low fees and one target date fund offers passive life cycle strategy. In Estonia the proportion of stocks in fund portfolios is set in increments of 25% for the four groups (zero; < 25; 25–50; 50–75). The most aggressive funds were introduced only from the year 2009. Also, some players (namely Nordea) only entered the market as of the year 2008.

It should be noted that the performance (returns and respective volatility) is closely tied to the structure of the portfolio and the level of active asset management. Active asset management should be able to lower the overall volatility of the returns while maintaining at least the same level of return as for a passive asset management approach. To which extent this is happening in Estonian mandatory pension funds can be seen in the below graphs presenting the returns (absolute and relative to the respective benchmarks).

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

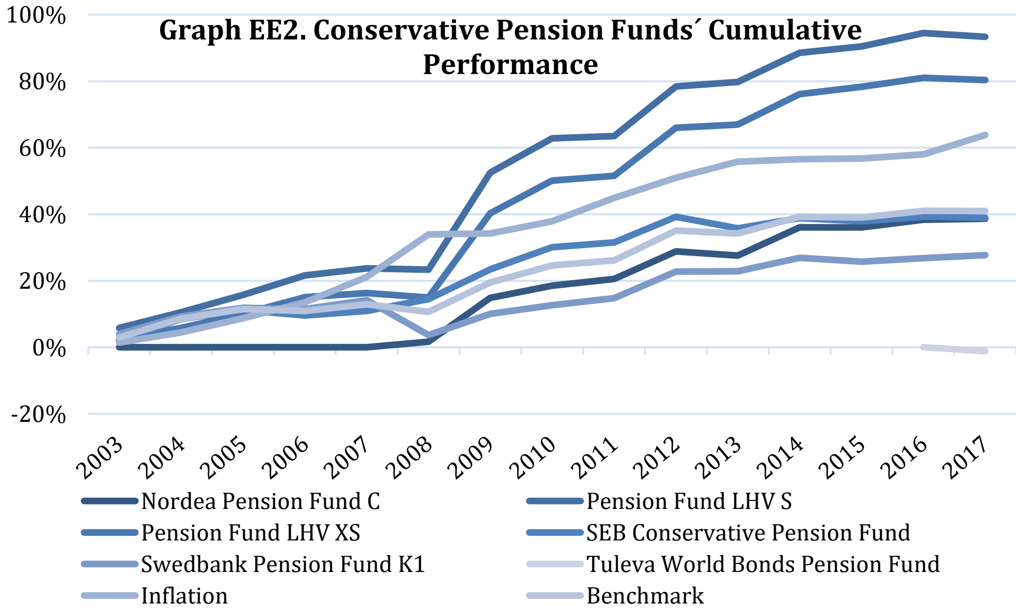
Conservative mandatory pension funds' performance on an annual basisas well as cumulative basis compared to their respective benchmark and inflation is presented in the graphs below.

Graph EE1. Conservative Pension Funds´ Annual Performance



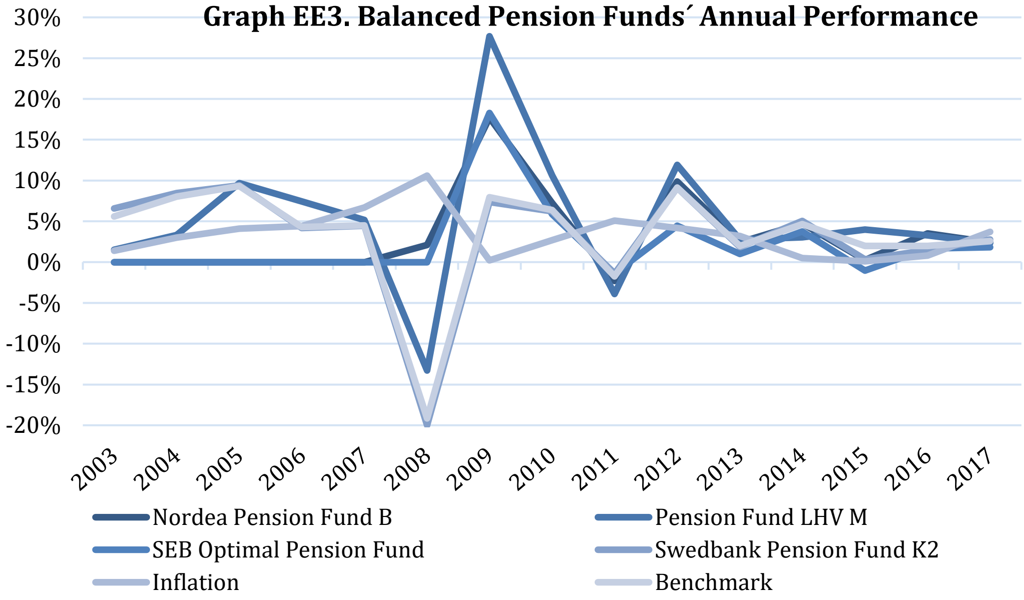
Source: Own calculations based on Pensionikeskus data, 2018

Graph EE2. Conservative Pension Funds´ Cumulative Performance

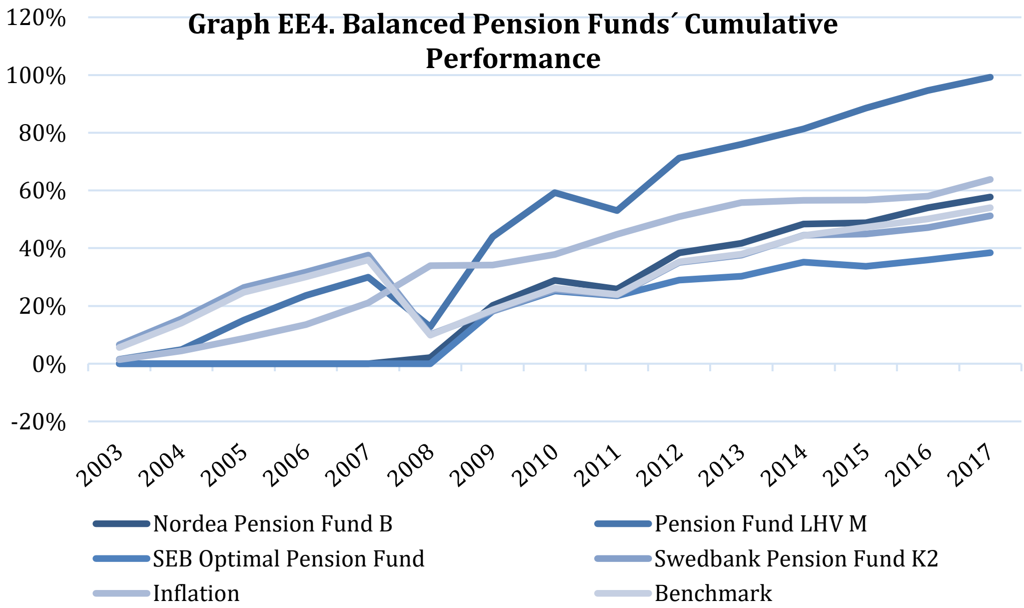


Source: Own calculations based on Pensionikeskus data, 2018

Balanced Mandatory Pension Fund´s performance (annual and cumulative) comparing to the respective benchmark is presented in graphs below.



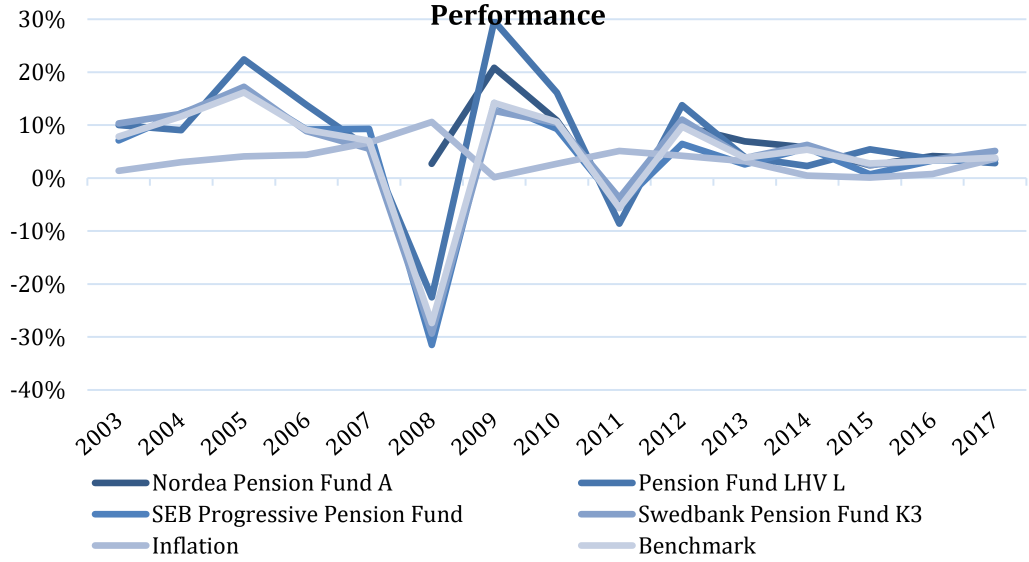
Source: Own calculations based on Pensionikeskus data, 2018



Source: Own calculations based on Pensionikeskus data, 2018

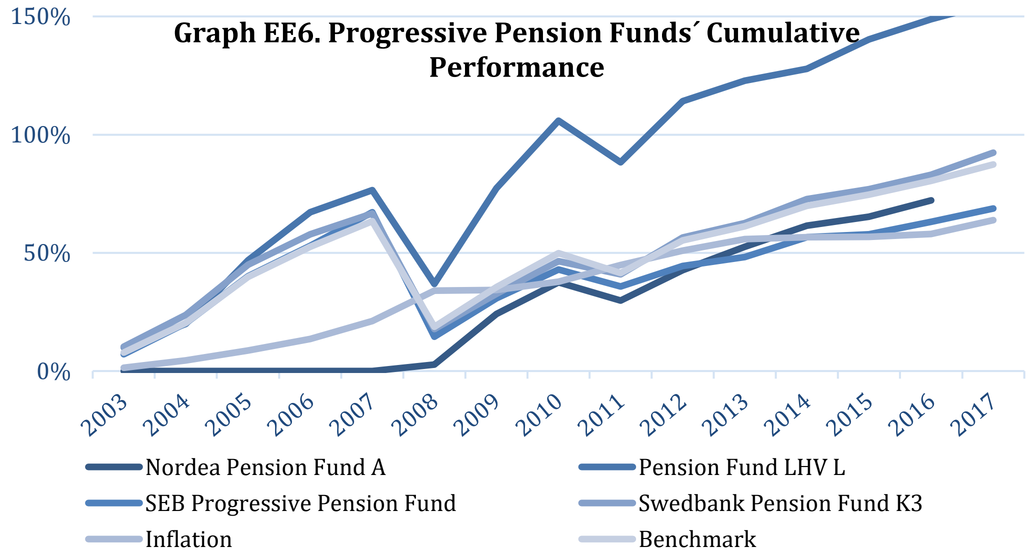
Progressive mandatory pension funds' performance on an annual as well as cumulative basis compared to their respective benchmark is presented in the graphs below.

Graph EE5. Progressive Pension Funds´ Annual Performance



Source: Own calculations based on Pensionikeskus data, 2018

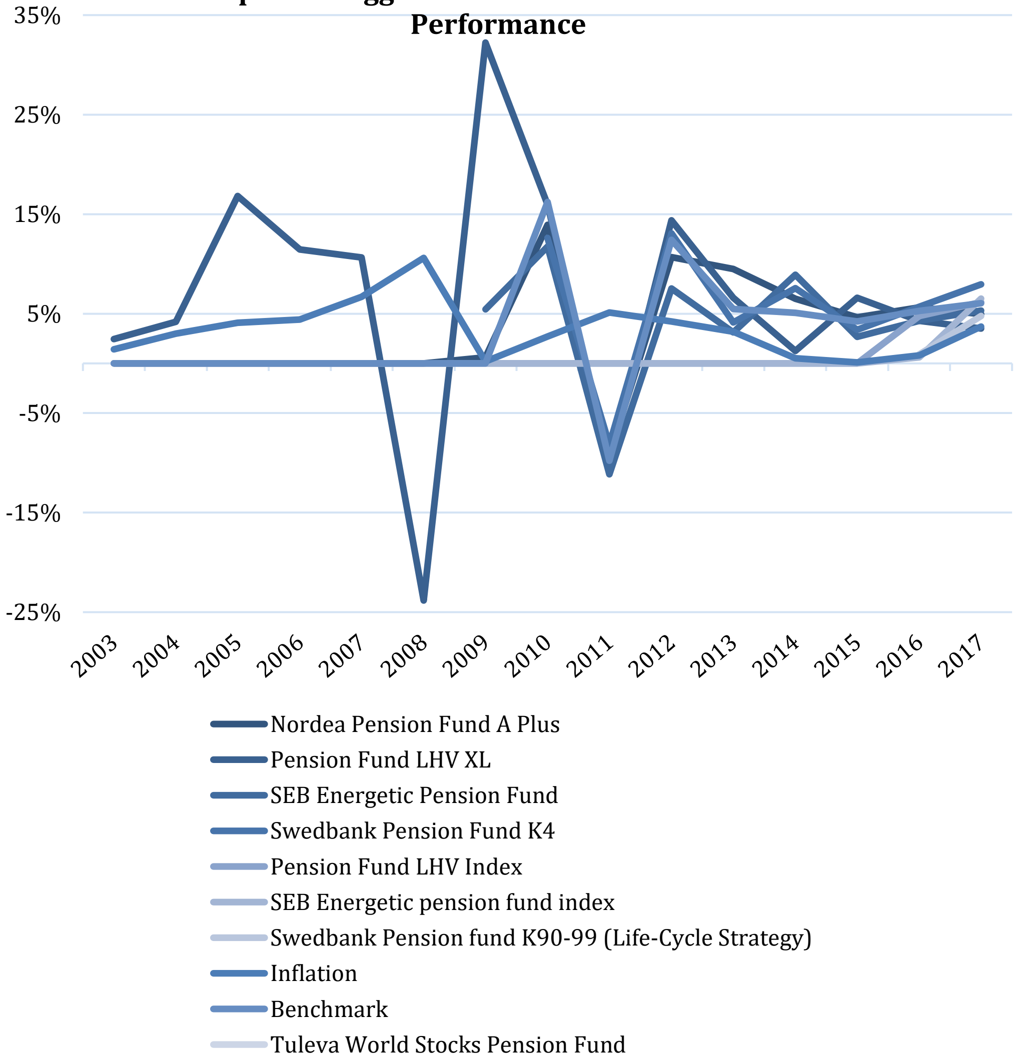
Graph EE6. Progressive Pension Funds´ Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2018

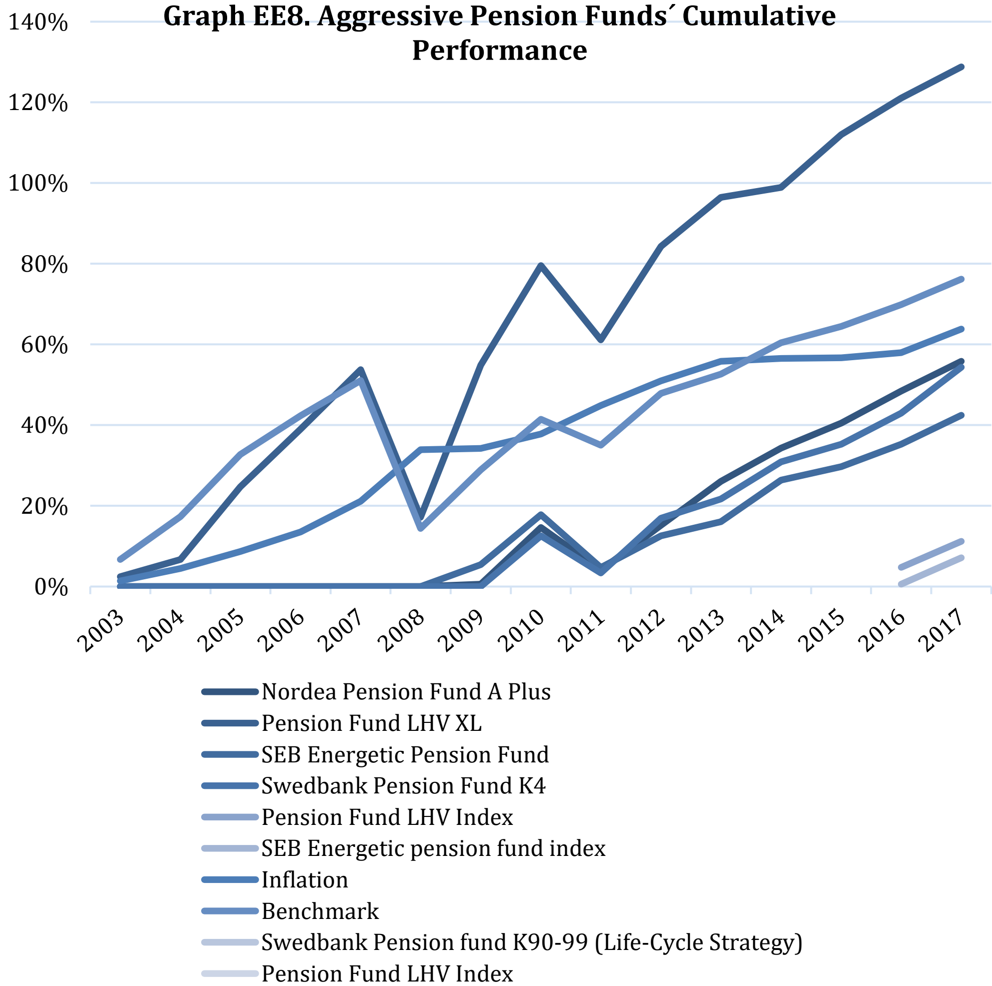
The last group of pension funds with the most volatile investment strategy and the highest share of equity investments (up to 75% of fund portfolio) are the aggressive pension funds. Aggressive mandatory pension funds' performance on an annual basis as well as cumulative basis compared to their respective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

Graph EE7. Aggressive Pension Funds´ Annual Performance



Source: Own calculations based on Pensionikeskus data, 2018

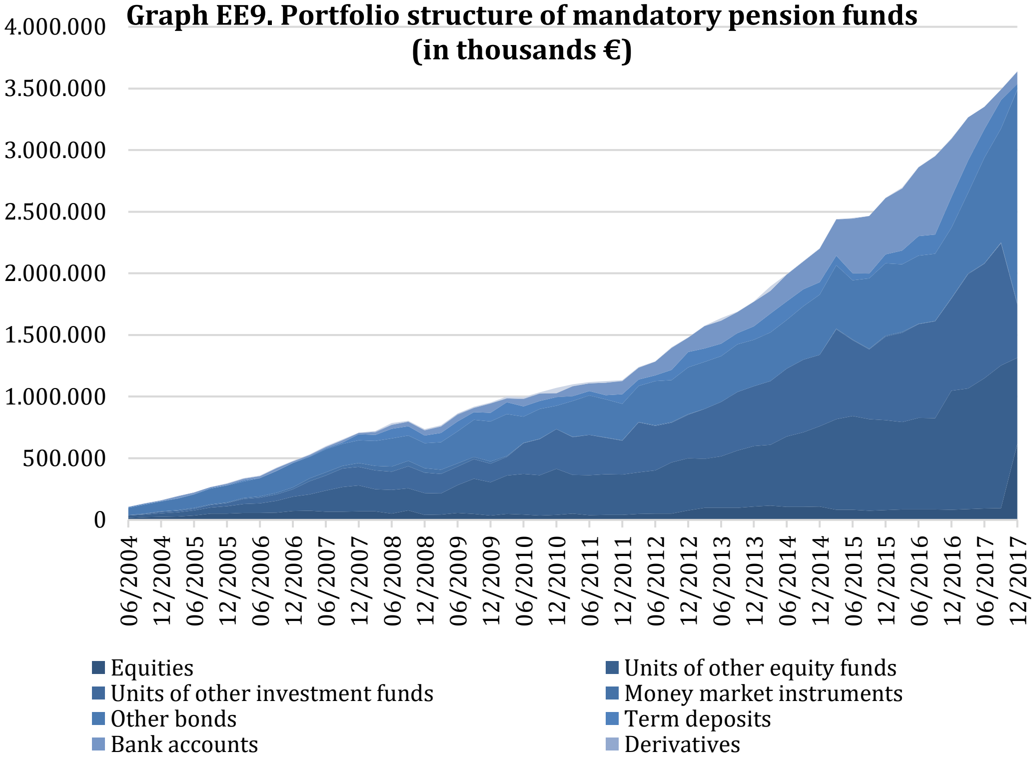
Graph EE8. Aggressive Pension Funds´ Cumulative Performance



Source: Own calculations based on Pensionikeskus data, 2018

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

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



Source: Own calculations, 2018

Analyzing the portfolio structure of mandatory pension funds in Estonia, one trend becomes apparent: replacement of direct investments into bonds and shares with the respective investment into structured products (UCITs) aimed at bond (equity) investments. However, in 2017 the trend has been reversed and direct bond as (well as equity investments) play a dominant role in the portfolio structure of mandatory pension funds.

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

Table EE 7. Nominal and Real Returns of Mandatory Pension Funds in Estonia						
2003		6.84%			5.44%	
2004		10.07%			7.07%	
2005		13.43%			9.33%	
2006		7.40%			3.00%	
2007		6.25%			-0.45%	
2008		-23.43%			-34.03%	
2009		12.52%			12.32%	
2010	**Nominal return after charges, before inflation and taxes**	9.42%	**3.98%**	**Real return after charges and inflation and before taxes**	6.72%	**0.33%**
2011		-4.44%			-9.54%	
2012		9.70%			5.50%	
2013		3.28%			0.08%	
2014		5.10%			4.60%	
2015		2.49%			2.39%	
2016		3.35%			2.55%	
2017		3.76%			0.06%	

Source: Own calculations based on Pensionikeskus data, 2018

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

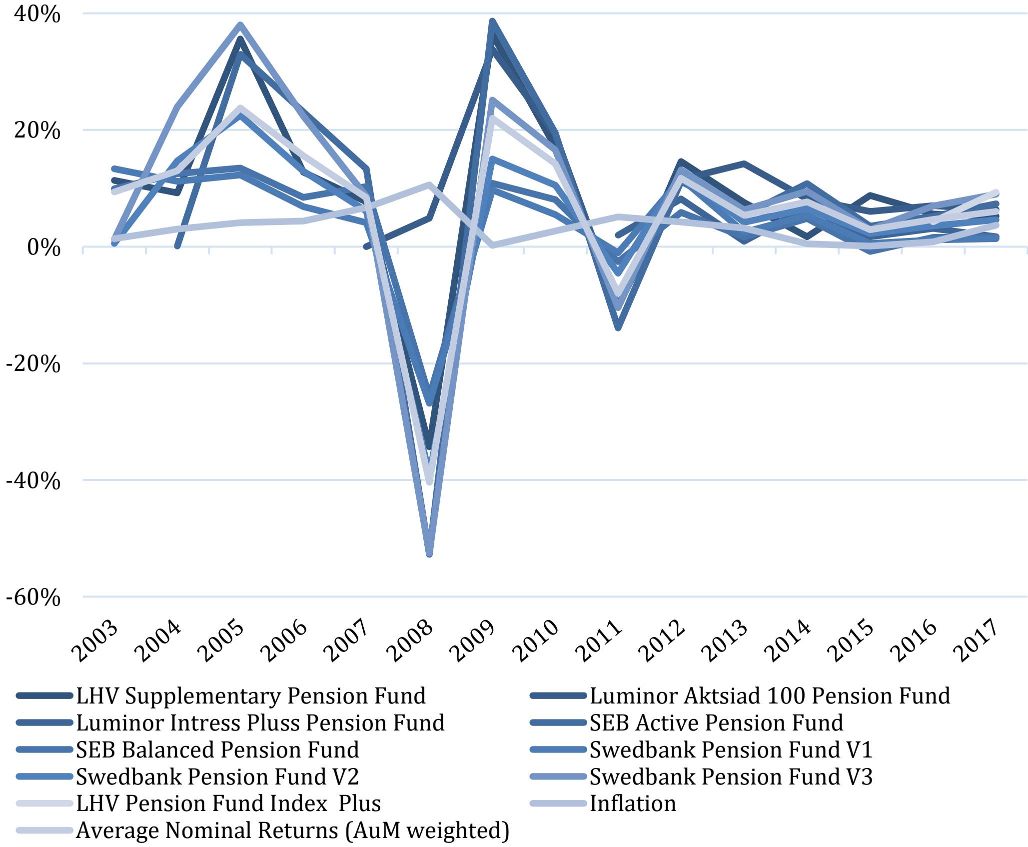
Pillar III – Supplementary pension

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

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

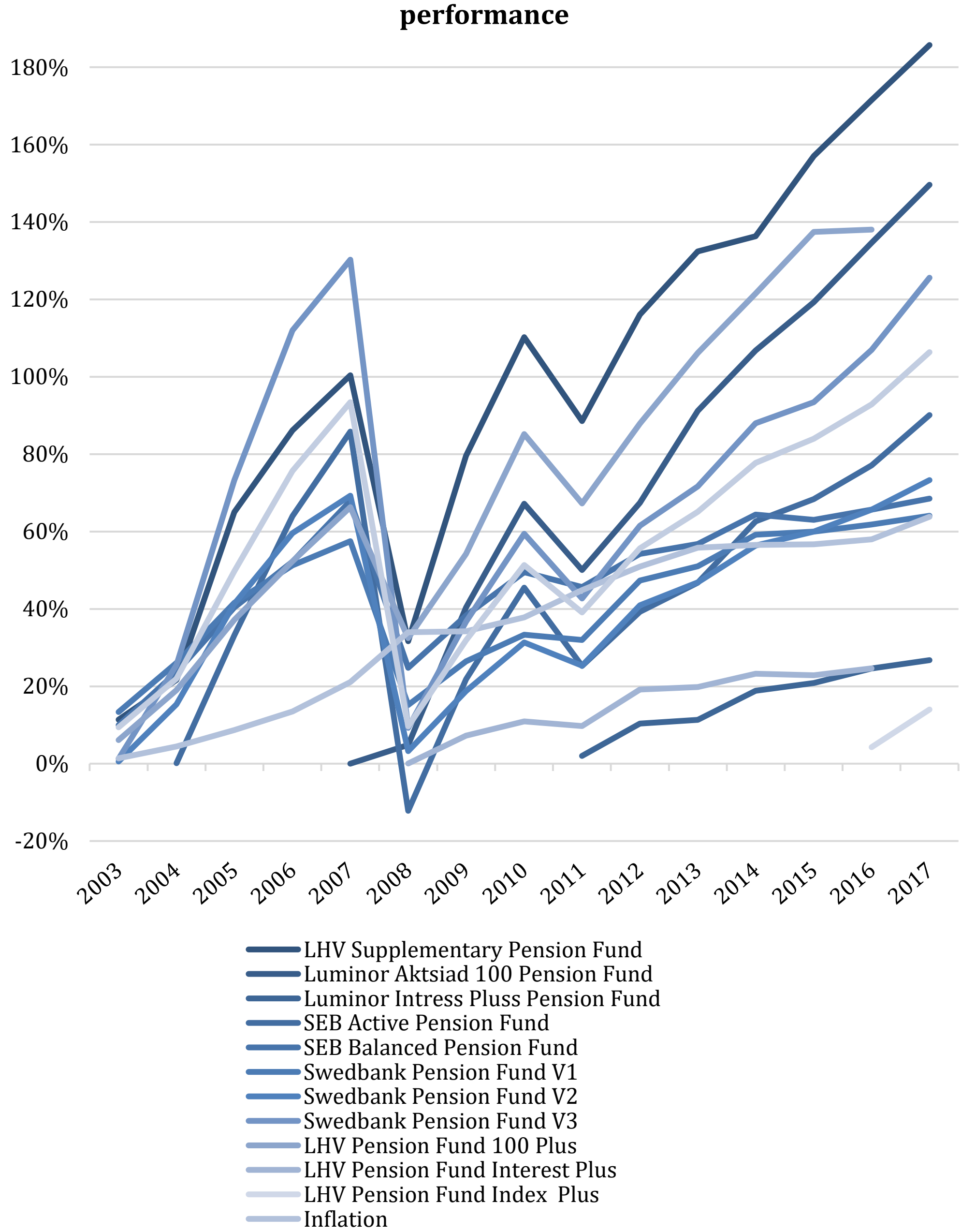
LHV ceased two actively managed funds in 2017 (LHV Pension Fund 100 Plus; LHV Pension Fund Interest Plus) and has continued to offer more competitive (from the fee structure perspective) passively managed fund (LHV Pension Fund Index Plus). The performance of supplementary pension funds on an annual as well as cumulative basis is presented in the graphs below.

Graph EE10. Supplementary pension funds´ annual performance



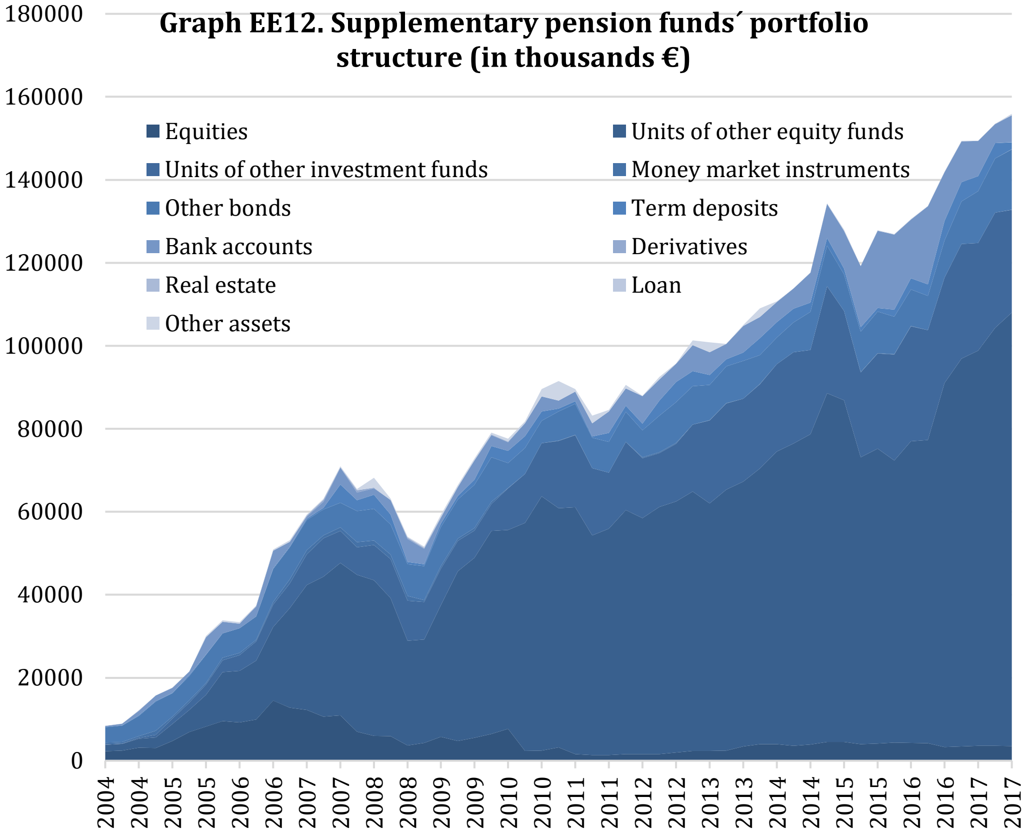
Source: Own calculations based on Pensionikeskus data, 2018

Graph EE11. Supplementary pension funds´ cumulative performance



Source: Own calculations based on Pensionikeskus data, 2018

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



Source: Own calculations, 2018

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

Table EE8. Nominal and Real Returns of Supplementary Pension Funds in Estonia						
2003	**Nominal return after charges, before inflation and taxes**	9.40%	**5.15%**	**Real return after charges and inflation and before taxes**	8.00%	**1.21%**
2004		13.03%			10.03%	
2005		23.78%			19.68%	
2006		15.57%			11.17%	
2007		8.37%			1.67%	
2008		-40.40%			-51.00%	
2009		21.99%			21.79%	
2010		14.21%			11.51%	
2011		-8.00%			-13.10%	
2012		11.76%			7.56%	
2013		5.41%			2.21%	
2014		7.69%			7.19%	
2015		2.93%			2.83%	
2016		4.68%			3.88%	
2017		6.05%			2.35%	

Source: Own calculations based on Pensionikeskus data, 2018

Conclusions

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

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

Concerning the pension funds´ portfolio structure, one trend is clear. Portfolio managers are steadily replacing direct investments into bonds and equities with the structured financial products. Thus, the question of potential future returns when using financial intermediaries should be raised. Most of the pension funds can be seen as passively managed, which raises the question of high fees. A new trend arising in 2016 and continuing in 2017 is the introduction of low-cost index pension funds for both pension schemes, which could bring higher value to the savers due to lower fees compared to the peers.

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

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