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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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: Poland

Streszczenie

Dodatkowy system emerytalny w Polsce, który został wprowadzony w 1999 roku, a następnie był dwukrotnie reformowany (w 2004 oraz 2012 roku), jest nadal w początkowej fazie rozwoju. Obecnie składa się z trzech elementów: 1) pracowniczych programów emerytalnych (PPE), 2) indywidualnych kont emerytalnych (IKE) oraz indywidualnych kont zabezpieczenia emerytalnego (IKZE). Poziom uczestnictwa w grupowych i indywidualnych planach oszczędzania na starość (odpowiednio 2,41%, 5,8% i 4,2%) wskazuje, że bardzo nieliczna część Polaków zdecydowała się na oszczędzanie w oferowanych zinstytucjonalizowanych formach gromadzenia kapitału na starość.

PPE mogą być prowadzone w czterech formach: umowy z funduszem inwestycyjnym; umowy z zakładem ubezpieczeń na życie (grupowe ubezpieczenia na życie z ubezpieczeniowym funduszem kapitałowym); pracowniczego funduszu emerytalnego (PFE) lub zarzadzania zewnętrznego. Na koniec 2017 roku w PPE zgromadzono 12,6 mld zł (3,03 mld €).

IKE i IKZE mogą być oferowane w formie: ubezpieczenia na życie z ubezpieczeniowym funduszem kapitałowym; funduszu inwestycyjnego; rachunku papierów wartościowych w domu maklerskim; rachunku bankowego lub dobrowolnego funduszu emerytalnego (DFE). Aktywa zgromadzone na IKE i IKZE na koniec 2017 roku wyniosły odpowiednio 7,96 mld zł (1,91 mld €) oraz 1,7 mld zł (0,41 mld €).

Pracownicze programy emerytalne (PPE) i indywidualne konta emerytalne (IKE) funkcjonują w reżimie podatkowym TEE (podatek pobierany jest na etapie opłacania składki), podczas gdy w IKZE podatek pobierany jest na etapie wypłaty środków (reżim EET).

W analizowanym okresie (2002-2017) pracownicze fundusze emerytalne (PFE) wypracowały dość wysokie stopy zwrotu sięgające 17,41% w skali roku. Straty pojawiły się jednak w latach 2008, 2011 i 2015 w czasie załamania na rynkach finansowych. Realne stopy zwrotu uwzględniające opłaty potwierdzają osiągnięte w 13 z 16 lat są pozytywne. Średnia realna stopa zwrotu za cały analizowany okres wyniosła 4,27%.

Dobrowolne fundusze emerytalne (DFE) osiągnęły natomiast nadzwyczajne wyniki inwestycyjne w początkowym okresie funkcjonowania, głównie z uwagi na hossę na rynku akcji w pierwszym roku ich działalności. W 2013 roku najlepsze DFE wygenerowały nominalny zysk przekraczający 50%. Wyniki te nie zostały jednak powtórzone w kolejnych latach. W 2014 roku część DFE wykazała straty, które jednak zostały pokryte przez zyski w kolejnych latach. Średnia realna stopa zwrotu z uwzględnieniem opłat za lata 2013-2017 wyniosła 9,02%.

Summary

Starting in 1999, with individual supplementary elements introduced in 2004 and 2012, the Polish supplementary pension market is still in its early stage of operation. Pillar III, which supplements the basic, mandatory pension system, consists of three different elements: 1) employee (occupational) pension programmes (pracownicze programy emerytalne, PPE), 2) individual retirement accounts (indywidualne konta emerytalne, IKE); 3) individual retirement savings accounts (indywidualne konta zabezpieczenia emerytalnego, IKZE). The coverage ratios (2.41%, 5.8% and 4.2% respectively), show that only a small part of Poles decided to secure their future in old-age by joining the occupational pension plan or purchasing individual pension products.

PPE 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 (pracowniczy fundusz emerytalny, PFE) or external management. PPE assets amounted to PLN 12.6 bln (€3.03 bln) at the end of 2017.

IKE and IKZE can operate 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 (dobrowolny fundusz emerytalny, DFE). The total amount of IKE assets amounted to PLN 7.96 billion (€1.91 billion) and IKZE assets amounted to PLN 1.7 billion (€0.41 billion) at the end of 2017.

PPE and IKE operate in TEE tax regime while IKZE is run in EET one.

During the period of 2002-2017 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative results appeared only in the years 2008, 2011 and 2015 when equity markets dropped significantly. After-charges real returns were observed in 13 of 16 years and the average return over the 16-year period is highly positive as well (4.27%).

Voluntary pensions funds (DFE) have obtained extraordinary investment results from their start in 2012. The first years of their operation coincided with the Polish financial market recovery and allowed funds to maximise rates of return from the equity portfolios. The best DFEs reported more than 50% nominal return in 2013. But such returns were impossible to achieve in next years. In 2014, some of DFE even experienced slightly negative returns that were covered by returns in the following years. The average real rate of return after charges in years 2013-2017 amounted to 9.02%.

Introduction

The old-age pension system in Poland was introduced in 1999 as a multi-tier structure consisting with three main elements:

- Pillar I - a mandatory, Pay as You Go (PAYG) system;
- Pillar II - a mandatory PAYG system with a partial opt-out for funded pension funds; and
- Pillar III - voluntary, occupational and individual pension plans.

Table PL1. Multi-pillar pension system in Poland

Pillar I	Pillar II	Pillar III
Mandatory	Mandatory[234]	Voluntary
PAYG	PAYG/Funded (opt-out)	Funded
NDC	NDC/DC (opt-out)	DC
Basic benefit	Basic benefit	Complementary benefit
Publicly managed:	Publicly/Privately managed:	Privately managed:
Social Insurance Institution (ZUS)	Social Insurance Institution (ZUS); in opt-out element: Open Pension Funds (OFEs) Managed by Pension Societies (PTEs)	Pension savings managed by different financial institutions, depending on the product form, organised by an employer or an individual

Source: own elaboration based on: System emerytalny w Polsce, Izba Gospodarcza Towarzystw Emerytalnych, http://www.igte.pl/images/tabela1_system.png

The first part of the system is contributory and is based on a Non-financial 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. Out of the total pension contribution rate, 12.22 p.p. are transferred to Pillar I (underwritten on individual accounts of the insured), and 7.3 p.p. to Pillar II. If a person has not opted out for open pension funds (OFE), the total of 7.3 p.p. is recorded on a sub-account administered

[234] The second pillar is still mandatory, although open pension funds (OFE) have been made voluntary since 2014 (partial opt-out for funded system).

by the Social Insurance Institution (NDC system). If he/she has opted out for the funded element (open pension funds, OFE), 4.38 p.p. are recorded on a sub-account and 2.92 p.p. are allocated to an account in a chosen open pension fund.[235]

Pillar I is managed by the Social Insurance Institution (ZUS), which records quotas of contributions paid for every member on individual insurance accounts. The accounts are indexed every year by the rate of inflation and by the real growth of the social insurance contribution base. The balance of the account (pension rights) is switched into pension benefits when an insured person retires.

Pillar II of the Polish pension system consists of sub-accounts also administered by the Social Insurance Institution (NDC) and possible partial opt-out for open pension funds (*otwarte fundusze emerytalne*, OFE; funded system). An insured person who enters the labour market has the right to choose whether to join an OFE or whether to remain solely in the PAYG system. When the insured chooses to contribute to the OFE, 2.92% of his/her gross salary will be invested on financial markets. If no such decision is taken, his/her total old-age pension contribution will automatically be transferred to Social Insurance Institution (ZUS). This default option resulted in a huge decrease in OFEs´ active participation in the year 2014.

Polish open pension funds are frequently treated as typical private pension plans (OECD 2012) or even employer-arranged pension funds (Oxera 2013) when presented in global private pension funds statistics. Such an assessment is incorrect in the sense that neither the employer nor the employee can decide on the creation of the pension plan. Moreover, the law establishes the contribution level and guarantees minimum pension benefits that are paid together from the whole basic system by the public institution (ZUS). Thus, Polish OFEs are just a mechanism of temporary investing public pension system resources in financial markets (financial vehicles for the accumulation phase).

The statutory retirement age is 60 for women and 65 for men.[236] Prior to retirement the member's assets gathered in OFE (if one opted out for funded element) are transferred to

[235] Two years after the change in 2014 that made OFE's voluntary the insured could again decide about opt-out. In future "the transfer window" will open every four years.

[236] It started to increase in 2013 and was planned to reach 67 for both men and women (in 2020 for men and in 2040 for women) but this reform was cancelled three years later. Hence, since October 2017 the statutory retirement age in Poland is again 60 for women and 65 for men. It may result in a situation where the significant proportion of women will get a minimum pension when retiring at the age of 60. More in: A. Chłoń-Domińczak, P. Strzelecki, 'The minimum pension as an instrument of poverty protection in the defined contribution pension system – an example of Poland' (2013) 12(3) Journal of Pension Economics and Finance.

the sub-account administered by ZUS.[237] Pension benefits from the basic system are calculated in accordance with a Defined Contribution (DC) rule and are paid by Social Insurance Institution (ZUS).

The old-age pension from the basic system (Pillar I+II) depends solely on two components: 1) the insured person's total pension entitlements accumulated during his/her entire career (balance of NDC account and sub-account), and 2) the average life expectancy upon retirement. The gross replacement rate at retirement from the public pension system in Poland is 61.4% (projections for 2016 for an average earner).[238]

Pillar III supplements the basic, mandatory pension system and represents voluntary, additional pension savings. It consists of three different vehicles:

- employees (occupational) pension programmes (pracownicze programy emerytalne, PPE);
- individual retirement accounts (indywidualne konta emerytalne, IKE);
- individual retirement savings accounts (indywidualne konta zabezpieczenia emerytalnego, IKZE).

Pension programmes for employees (pracownicze programy emerytalne, PPE) are plans organised by employers for their employees. PPE settlement happens after an employer agrees with the representatives of the employees on the plan's operational conditions, signs the contract on asset management with a financial institution (or decides to manage assets himself) and registers a programme with the Financial Supervisory Commission (Komisja Nadzoru Finansowego, KNF). The basic contribution (up to 7% of an employee's salary) is financed by the employer but an employee must pay personal income tax on this. Participants to the programme can pay in additional contributions deducted from their net (after-tax) salaries. There is a yearly quota limit for additional contribution amounting to 4.5 times the average wage (PLN 19,993.50 - €4,802.32[239] - in 2018). PPE's returns are exempt from capital gains tax. Benefits are not taxable and can be paid as a lump sum or as a

[237] Money gathered on individual accounts in OFE is systematically transferred to the Social Insurance Institution (ZUS) during 10 years before retirement (before reaching the statutory retirement age).
[238] European Commission, *The 2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)*, Luxembourg, 2018, https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en.
[239] For the conversion of PLN to euros, the report uses the "Euro foreign exchange reference rates" provided by the European Central Bank (the exchange rate used for the data is the one of 2nd January 2018: 1 EUR = PLN 4.1633), http://www.ecb.europa.eu/stats/exchange/eurofxref/shared/pdf/2018/01/20180102.pdf

programmed withdrawal after the saver reaches 60 years. PPEs cover 395,800 employees which represents only 2.41% of the working population in Poland.

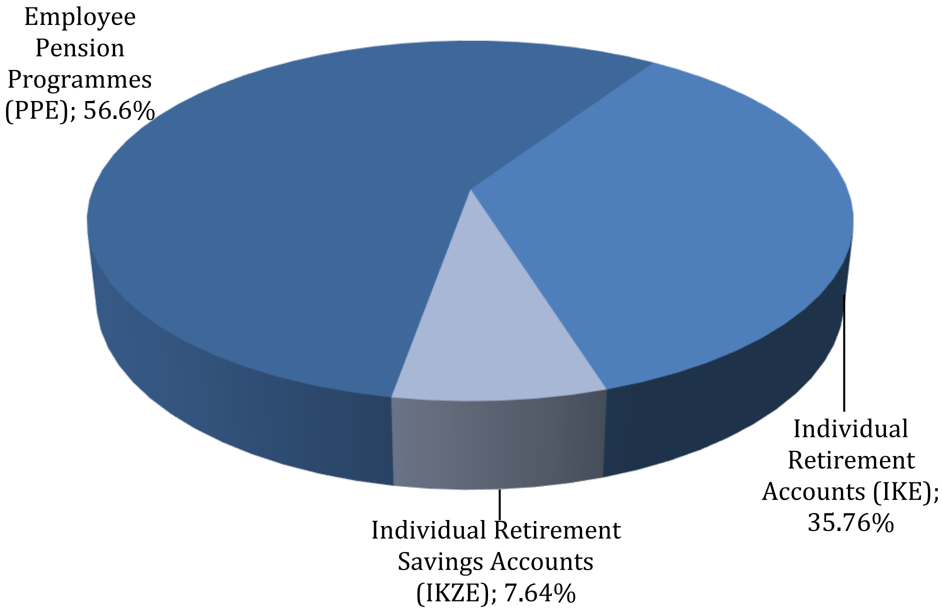
Individual retirement accounts (indywidualne konta emerytalne, IKE) were introduced in 2004, offering people the possibility to save individually for retirement. They are offered by various financial institutions such as asset management companies, life insurers, brokerage houses, banks and pension societies. An individual can only gather money on one retirement account at the time but is free to change the form and the institution during the accumulation phase. Contributions are paid from the net salary with a ceiling of 3 times the average wage (PLN 13,329 - €3,201.55 - in 2018). Returns are exempt from capital gains tax and the benefits are not subject to taxation. When a saver reaches 60 years of age (or 55 years, if he/she is entitled by law to retire early), money is paid in the form of a lump sum or a programmed withdrawal. At the end of 2017 only 951,576 Polish citizens had an individual retirement account (IKE) which represents 5.8% of the working population

Individual retirement 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 personal income tax base. Contributions and returns are exempt from taxation, but the benefits are subject to taxation at a reduced rate. Savings accumulated in IKZE are paid to the individual as a lump sum or via a programmed withdrawal after the saver reaches the age of 65. The limit for IKZE contributions is 120% of the average wage (PLN 5,331.6 - €1,280.62 in 2018). Only about 4.2% of the Polish working population (2017) is covered by this type of supplementary old-age provision.

Table PL2. Architecture of voluntary pension system in Poland (Pillar III) at the end of 2017			
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 in PLN bln (€ bln)	**12.6** **(3.03)**	**7.96** **(1.91)**	**1.7** **(0.41)**

Source: own collaboration based on: *Pracownicze programy emerytalne w 2017 roku*, UKNF, Warszawa 2018, p. 4, https://www.knf.gov.pl/knf/pl/komponenty/img/RAPORT_PPE_w_2017.pdf; *Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku*, UKNF, Warszawa 2018, p. 12 & 25, https://www.knf.gov.pl/knf/pl/komponenty/img/IKE_IKZE_12_2017_61392.pdf

Chart PL1. Market share of Polish voluntary pension system elements by assets under management as of 31 December 2017



Source: own collaboration based on: *Pracownicze programy emerytalne w 2017 roku*, UKNF, Warszawa 2018, p. 4, https://www.knf.gov.pl/knf/pl/komponenty/img/RAPORT_PPE_w_2017.pdf; *Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku*, UKNF, Warszawa 2018, p. 12 & 25, https://www.knf.gov.pl/knf/pl/komponenty/img/IKE_IKZE_12_2017_61392.pdf

Pension Vehicles

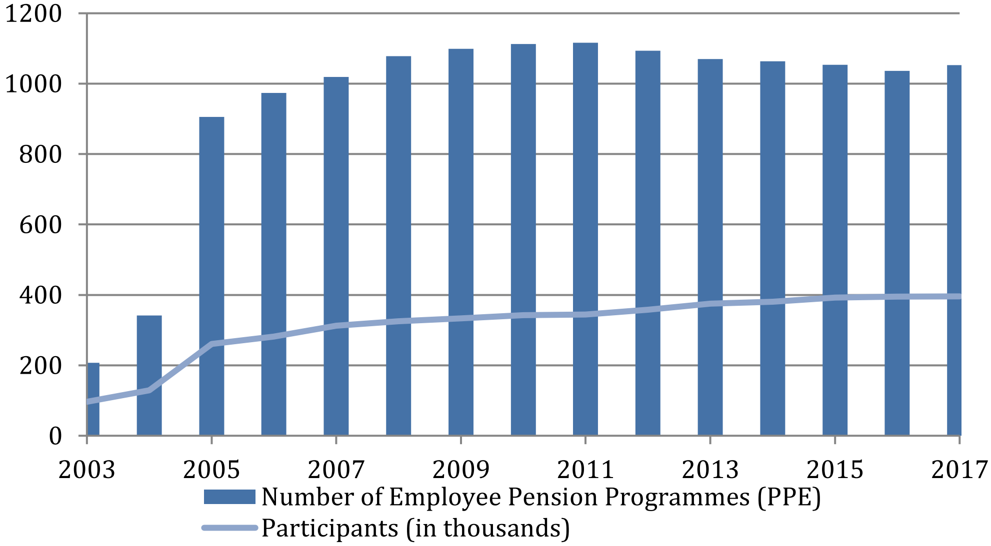
Employee pension programmes

PPEs can be offered in four forms:

- as a contract with an asset management company (investment fund);
- as a contract with a life insurance company (group unit-linked insurance);
- as an employee pension fund run by the employer; or
- through external management.

Employee pension programmes started to operate in 1999. The development of the market was very weak during the first five years of operation. Thereafter, due to changes in PPE law, many group life insurance contracts were transformed into PPEs at the end of 2004 and in 2005. In 2007, the number of programmes reached 1,000, with the size of the market remaining more or less the same since that year. There were 1,053 programmes operating in Poland at the end of 2017 (see Graph PL1 below).

Graph PL1. Number of Employee Pension Programmes and the number of PPE participants in 1999-2017



Source: Pracownicze programy emerytalne w 2017 roku, UKNF, Warszawa 2018, p. 13.

The most popular forms of PPE are group unit-linked life insurances and investment funds. These two forms represent more than 95% of PPEs (see table below). The proportion is lower when taking into consideration the number of participants (90.1%) and the level of assets (84.5% of total PPEs' assets are invested in insurance funds and investment funds).

Table PL3. Number and assets of Employee Pension Programmes (PPE) by form of the programme in 2016					
	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	645	61.2%	27.5%	3,338	26.4%
Investment fund	382	36.3%	63.7%	7,434	58.8%
Employee Pension Fund	26	2.5%	8.8%	1,871	14.8%
Total	**1,053**			**12,644**	

Source: *Pracownicze programy emerytalne w 2017 roku*, UKNF, Warszawa 2018, p. 9-10

The average basic contribution paid in 2017 amounted to PLN 3,827 (€919.22). The average additional contribution financed by the employee amounted to PLN 1,209 (€290.39) on average. PPE assets amounted to PLN 12.6 bln (€3.03 bln) and the average account balance equaled PLN 31,951 (€ 7,674.44) at the end of 2017. No data is available on the average percentage level of contributions paid to the programmes.

Individual Retirement Accounts (IKE)

According to the Polish pensions law (the Individual Pension Accounts Act of 20 April 2004), individual retirement accounts (Indywidualne Konta Emerytalne, IKE) can operate in the form of:

- a unit-linked life insurance contract;
- an investment fund;
- an account in a brokerage house;
- a bank account (savings account); or
- a voluntary pension fund.

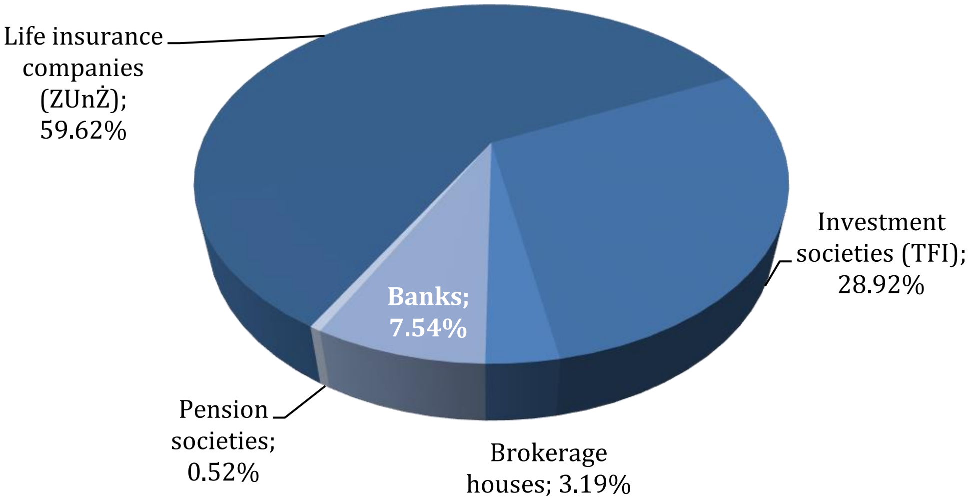
Pension accounts are offered by life insurance companies, investment companies (asset management companies), brokerage houses, banks and pension societies. The most recent pension vehicles are voluntary pension funds that were introduced in 2012 at a time of significant changes in the statutory old-age pension system.

A voluntary pension fund is an entity established with the sole 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. Assets of the funds are separated to guarantee the safety of the system, as well as due to stricter OFEs' investment regulations.

The design of IKE products usually does 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 institutions 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 2018), these two forms of plans represent almost 90% of all IKE accounts.

Chart PL2. Structure of IKE market by number of accounts and type of provider as of 31 December 2016



Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku, UKNF, Warszawa 2018, p. 11, *https://www.knf.gov.pl/knf/pl/komponenty/img/IKE_IKZE_12_2017_61392.pdf*

Table PL4. Number of Individual Retirement Accounts (IKE) by type of the product (2004-2017)						
	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**
2015	573,092	205,494	25,220	53,371	2,548	**859,725**
2016	571,111	236,278	27,615	64,031	3,580	**902,615**
2017	568,518	275,796	30,418	71,922	4,922	**951,576**

Source: *Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku*, UKNF, Warszawa 2018, p.11

IKE holders do not fully use the contribution limit. The average contribution paid from 2004 to 2017 remains permanently below the statutory limit (3 times the average wage). The total amount of IKE assets amounted to PLN 7.96 billion (€1.91 billion) as of 31 December 2017. There were PLN 8.4 thousand (€2,018) gathered on an IKE account on average.

Table PL5. Limits on contributions and average contribution paid into IKE in 2006-2017		
	Contribution limit	Average contribution paid
2006	3.521	2.199
2007	3.697	1.719
2008	4.055	1.561
2009	9.579	1.850
2010	9.579	1.971
2011	10.077	1.982
2012	10.578	2.584
2013	11.139	3.130
2014	11.238	3.440
2015	11.788	3.500
2016	12.165	3.700
2017	12.789	3.800

Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku, UKNF, Warszawa 2018, p.8 & 14

Individual Retirement Savings Accounts (IKZE)

Like individual retirement accounts, the group of IKZE products consists of:

- unit-linked life insurance;
- investment funds;
- bank accounts;
- accounts in brokerage houses; and
- voluntary pension funds.

As this part of the pension system only has a six-year history (started in 2012), the number of participants is still at an unsatisfactory level.

Table PL6. Number of Individual Retirement Savings Accounts (IKZE) by type of the product (2012-2017)

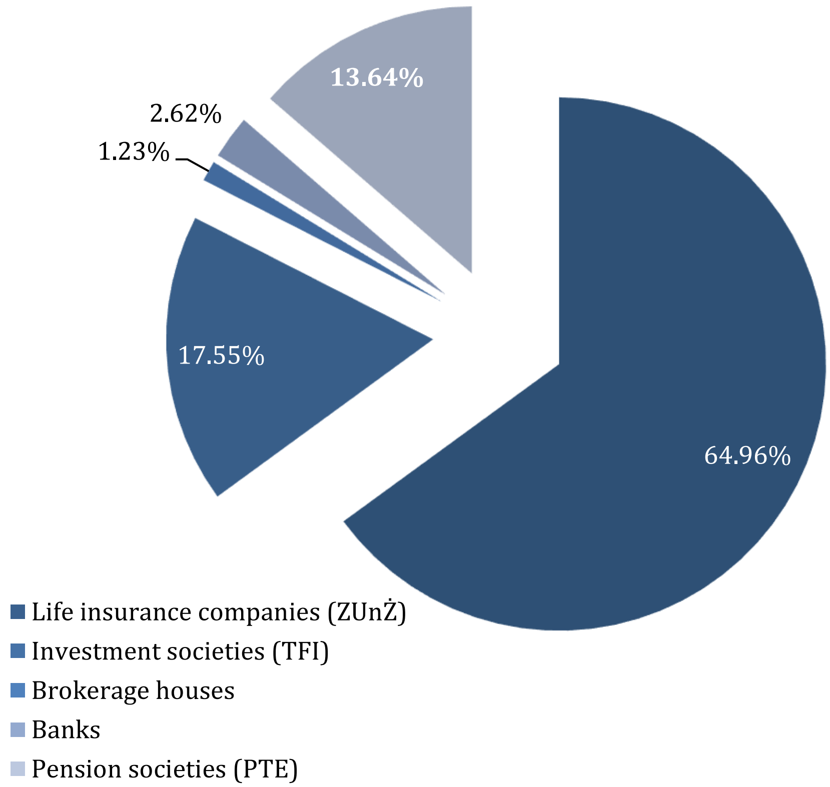
Type of the product	2012	2013	2014	2015	2016	2017
Unit-linked life insurance	363,399	388,699	418,935	442,735	446,054	448,881
Investment fund	5,202	9,565	17,510	54,471	87,510	121,269
Account in the brokerage house	559	1,012	2,797	4,325	6,201	8,478
Bank account	19	33	8,105	13,735	15,585	18,114
Voluntary pension fund	127,642	97,117	80,795	82,294	87,762	94,252
Total	**496,821**	**496,426**	**528,142**	**597,560**	**643,112**	**690,994**

Source: *Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku*, UKNF, Warszawa 2018, p. 23,

By the end of 2017, around 691,000 Poles opened individual retirement savings accounts. As shown on chart PL IV, the IKZE market is dominated by insurance companies that run 65% of the accounts. 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 2017, financial institutions managed funds amounting to PLN 1.7 billion (€0.41 billion). It is worth noting that this capital was raised through contributions in just six years. The rapid growth of IKZE market in terms of coverage and the asset value is expected in the coming years. This growth could happen as a consequence of recent changes in IKZE taxation: a higher flat-rate contribution limit that can be deducted from the tax base and benefit payments subject to a reduced income tax rate.

Chart PL3. Structure of IKZE market by number of accounts and type of provider as of 31 December 2017



Source: Own elaboration based on: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku, UKNF, Warszawa 2018, p. 23

Table PL7. Assets of IKZE (in thousands PLN)

Type of the product	2012	2013	2014	2015	2016	2017
Unit-linked life insurance	36,393	75,117	167,737	281,946	398,589	545,374
Investment fund	7,973	23,371	63,559	193,099	407,884	719,630
Account in the brokerage house	1,673	4,815	14,638	30,268	57,045	93,780
Bank account	40	98	11,624	35,081	66,600	106,702
Voluntary pension fund	6,803	15,805	37,792	79,198	147,972	240,671
Total	**52,882**	**119,206**	**295,350**	**619,592**	**1,078,090**	**1,706,157**

Source: Indywidualne konta emerytalne oraz indywidualne konta zabezpieczenia emerytalnego w 2017 roku, UKNF, Warszawa 2018, p. 25

Charges

The type and level of charges deducted from pension savings depend on the vehicle used and the type of programme. Lower fees are charged for group (collective) provision of an old-age pension organised by employers (PPE). Significant cost differences exist between various product types. Since no comprehensive data regarding the costs of Polish supplementary products is collected or officially published, the information provided below reflects the costs of selected (exemplary) pension products and plans functioning on the Polish market.

Employee Pension Programmes (PPE)

Data on PPE charges is hardly available. The Financial Supervisory Commission does not provide any official statistics on value or the percentage of deductions on assets of employee pension programmes. Some information can be found in the statutes of PPEs, but they describe rather the types of costs charged than the level of deductions. Employers must cover many administrative costs connected with PPE organisation (disclosure of information, collecting employees' declarations, transfer of contributions, etc.). The savings of participants are usually reduced by a management fee that varies from 0.5% p.a. to 4% p.a. of AuM and depend on the investment profile of funds chosen.

The lowest charges are applied to employee pension funds (Pracownicze Fundusze Emerytalne, PFE), which are set up by employers (in-house management of PPE) and managed by employee pension societies. For this type of pension fund, no up-front fee is deducted and a rather low management fee (0.5% - 1% p.a.) applies to assets gathered.

Individual Retirement Accounts (IKE) and Individual Retirement Savings Accounts (IKZE)

The type and level of charges depend on the type of product. There is a management fee for investment funds, voluntary pension funds and unit-linked insurances. In addition, for a unit-linked life insurance, a financial institution can charge an up-front fee, use different "buy and sell" prices for investment units (spread) and deduct other administrative fees from the pension savings accounts (such as conversion fees and fees) for changes in premium allocation in case changes occur more frequently than stipulated in the terms of the contract. Charges that are not connected with asset management and the administration of savings accounts cannot be deducted from IKZE (i.e. life insurance companies cannot deduct the cost of insurance from the retirement account). The accumulation of pension savings through direct investments (accounts in brokerage houses) is subject to fees which depend on the type of transaction and the level of activity on financial markets (trading fees and charges). Banks do not charge any fees for the IKZEs they offer (apart fromof 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 (exemplary) individual retirement savings accounts (IKZE).

Table PL8. 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%;	50% of assets
	Aktywnej Selekcji – Zrównoważonego	3.25%		
	Aktywnej Selekcji Dynamiczny	4.00%	10% - first PLN 6,000, then 6% (with add. insurance)	
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 UFK Pramerica – Pioneer Stabilnego Wzrostu UFK Pramerica – Pioneer Obligacji UFK Pramerica – PKO Akcji 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	2.5% - share funds 1.5% - stable growth funds; 1% - bond funds	None	20% of assets
PZU Życie SA	Stabilnego Wzrostu	4.50%	4% - in first 3 years, 3% - yrs 4-5, 2% - yrs 6-10, 1% - yrs 11+	10% of assets, not less than PLN 50

<u>Source</u>: K. Ostrowska, *Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych,* "Rzeczpospolita", 01.03.2012 r.

Table PL9. 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 LM Strateg	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 Senior	2.50%		
	LM Obligacji	1.50%		
	LM Pieniężny	0.80%		
Pioneer Pekao TFI	Pioneer FIO - subfundusz Pioneer Akcji - Aktywna Selekcja	3.60%	1.50-5.00 % +loyalty programme (20% reduction in fee in 0-4 years, 30% after 4 years, 50% after 6 years, no fee after 8 years)	PLN 100
	Pioneer FIO - subfundusz Pioneer Obligacji Plus	1.60%		
	Pioneer FIO - subfundusz Pioneer Lokacyjny	1.50%		

Source: own elaboration based on informatiom from: K. Ostrowska, *Nowe konta emerytalne (IKZE) w ofercie instytucji finansowych*, "Rzeczpospolita", 01.03.2012 r.

Table PL10. Charges in IKZE offered by Pension Associations (voluntary pension funds)

Institution	Product	Management fee (as % of assets)	Up-front fee	Transfer fee
Allianz Polska PTE	Allianz Polska DFE	max. 2.5%	1.50%	PLN 200
Amplico PTE	MetLife DFE	max 2.5 %	1-2.5%, if the account balance lower than PLN 20,000	15% of assets, min. PLN 300
Generali PTE	Generali DFE	max. 2.6%	25% (min. PLN 200, max. PLN 400) in 1st year, 1.9% in the 2nd year; 1.8% in 3rd year; 1.6% in years 4-9; 0% years 10+	
Nordea PTE	Nordea DFE	1.95% + success fee 15%, if results above benchmark and positive	0-4%, depending on the quota of contribution 0-1% upfront-fee on money transferred from other institution	20% of assets, max. PLN 500
Pocztylion-Arka PTE	DFE Pocztylion Plus	max 2.5%	0-3%, depending on the quota of contribution	10% of assets, min. PLN 100
PTE PZU	DFE PZU	up to 2.99% + success fee max. 20% of the surplus above benchmark	3.4% in first 5 years, 2.9% - yrs 6-10, 2.4% - yrs 11-15, 1.0% - yrs 15+-	10% of assets, PLN 50 at least
ING PTE	Nationale Nederlanden DFE	Max. 2% (1,5% of the surplus above PLN 1 bln AUM) + success fee 15% of the surplus above 8% return	53.4% only from the first contribution (max PLN 80), next contributions: 0%	50% of assets
PKO BP Bankowy PTE	PKO DFE	max 3.5%	50% , but max. PLN 50 in the whole period	10% of assets, min. PLN 36 and max.PLN 200
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: Own elaboration based on www.analizy.pl.

Taxation

Employees' pension programmes (PPE)

Basic contributions financed by employers are subject to personal income tax, which is deducted from the employee's salary. Additional contributions paid by employer from the 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. There is a tax relief for capital gains. Benefits are not taxable ("TEE" regime).

Individual Retirement Savings Accounts (IKZE)

Contributions to IKZE are deductible from the income tax base. In 2012 and 2013 there was an upper limit of contribution amounting to 4% of the person's annual salary in the previous year. Due to the most recent changes in the pension system, the given limit was replaced with a flat-rate limit in 2014. Every individual can pay up to 120% of the average salary into an account. Returns are not subject to taxation, but benefits are taxed with a reduced flat-rate income tax (10%). This part of the supplementary pension system is the only one that follows the EET tax regime.

Pension Returns

Asset allocation

Employee Pension Programmes (PPE)

Polish law does not impose any strict investment limits on voluntary pension savings accounts (IKE, IKZE, most forms of PPE) except for 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 statute of the fund. Since many existing plans offer PPE participants the possibility to invest in funds from a broad group of investment funds operating in the market (not only the funds dedicated exclusively to pension savings), it is impossible to indicate how the portfolios of most PPEs look like.

The tables below present the investment portfolio of employees' pension funds, which are the only types of occupational pension products with official and separate statistics on asset allocation.

Table PL11. Portfolio of employees' pension funds (PFE) in years 2010-2017 (as % of assets)

	2010	2011	2012	2013	2014	2015	2016	2017
Shares	14.19	14.90	19.49	29.86	33.00	34.09	29.62	32.91
Gov. bonds	1.48	2.14	1.53	2.01	1.05	2.27	63.00	64.31
Investment funds units	24.30	33.13	37.53	49.83	61.64	63.64	0	0
Bank deposits	58.78	48.90	40.91	17.91	4.30	0.00	6.70	1.86
Other investments	1.25	0.92	0.54	0.39	0.01	0.00	0.68	0.92
Assets under management (in PLN mln)	**1,543**	**1,559**	**1,873**	**2,039**	**1,75**	**1,797**	**1,767**	**1,857**

Source: own collaboration based on: *Biuletyn Roczny. Rynek PPE 2017*, UKNF, Warszawa 2018.

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. It 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 either which funds create the portfolios of IKE and IKZE holders nor what the rates of returns obtained by this group of savers are.

The only form of IKE and IKZE that is strictly separated from other funds and is dedicated solely to pension savings is a voluntary pension fund. These vehicles started operating in 2012. The table below show the DFE's investment portfolios in years 2014-2017.

Table PL12. Portfolio of voluntary pension funds (DFE) offered as Individual Retirement Saving Accounts (IKZE) and Individual Retirement Accounts (IKE) in 2014-2017, as % of DFE assets

Provider	Year	Shares	Gov. Bonds	Non-gov. Bonds	Other	Assets under management (in PLN mln)	Market share (as % of total DFEs' assets)
Allianz Polska DFE	2014	33.46%	32.43%	21.81%	12.30%	3.72	6.25%
	2015	35.12%	29.39%	28.60%	6.90%	5.60	5.28%
	2016	31.84%	22.54%	37.07%	8.54%	8.30	4.40%
	2017	53.62%	5.86%	34.17%	6.35%	11.90	3.87%
DFE Pekao	2014	43.83%	40.45%	2.86%	12.86%	13.18	22.16%
	2015	52.90%	30.95%	1.93%	14.21%	28.50	26.89%
	2016	57.41%	32.73%	4.78%	5.08%	52.20	27.65%
	2017	50.99%	43.12%	0.19%	5.70%	82.70	26.87%
DFE Pocztylion Plus	2014	24.62%	67.55%	0.00%	7.83%	0.55	0.92%
	2015	26.26%	67.64%	6.11%	0.00%	0.80	0.75%
	2016	34.83%	59.31%	0.00%	5.86%	1.10	0.58%
	2017	35.25%	55.08%	1.70%	7.97%	1.50	0.49%
DFE PZU	2014	66.82%	13.94%	2.40%	16.84%	9.08	15.27%
	2015	73.26%	13.58%	1.45%	11.70%	14.80	13.96%
	2016	74.79%	17.64%	0.77%	6.80%	27.00	14.30%
	2017	72.84%	16.78%	0.42%	9.96%	47.80	15.53%
ING DFE	2014	63.74%	0.00%	12.35%	23.92%	5.92	9.95%
Nordea DFE(D)	2014	37.44%	35.32%	10.44%	16.81%	1.63	2.74%
NN DFE	2015	57.45%	4.49%	10.50%	27.57%	15.20	14.34%
	2016	50.51%	18.75%	6.85%	23.89%	36.70	19.44%
	2017	56.36%	35.58%	0.01%	8.05%	0.30	0.10%
MetLife Amplico DFE	2014	39.46%	40.26%	0.00%	20.27%	19.11	32.13%
	2015	61.24%	32.92%	0.00%	5.84%	24.20	22.83%
	2016	59.60%	32.60%	0.00%	7.80%	28.50	15.10%
	2017	56.99%	22.13%	12.91%	7.97%	73.50	23.88%
PKO DFE	2014	35.29%	53.04%	0.00%	11.67%	6.29	10.57%
	2015	35.84%	51.51%	0.00%	12.65%	16.80	15.85%
	2016	26.26%	58.34%	0.00%	15.40%	34.80	18.43%
	2017	41.48%	48.64%	0.00%	9.88%	56.30	18.29%
Generali DFE	2015	37.44%	48.61%	0.00%	13.95%	0.10	0.09%
	2016	68.60%	29.87%	0.00%	1.53%	0.20	0.11%
	2017	56.36%	35.58%	0.01%	8.05%	0.30	0.10%

Source : http://www.analizy.pl.

Pension returns

The investment efficiency of supplementary pension products is almost impossible to assess due to the 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. But they are not informed neither about their pension accounts real efficiency nor the total cost ratio deducted from their individual retirement accounts. No data concerning the investment efficiency of supplementary pension products is submitted to the Financial Supervisory Commission or published in official statistics.

Due to the shortage of detailed statistics the assessment of the efficiency of pension product investments is possible only for the vehicles dedicated solely to PPE, IKE or IKZE, namely employee pension funds (PFE) and voluntary pension funds (DFE).

As the management fee is deducted from fund assets on a regular basis and the value of a fund unit is calculated based on net assets, the nominal rates of return indicated below take into account the levels of management costs. The only fee that must be included when calculating after-charges returns is the upfront-fee deducted from contributions paid into accounts.

During the period of 2002-2017 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative results appeared only in the years 2008, 2011 and 2015 when equity markets dropped significantly. After-charges real returns observed in 13 of 16 years and the average return in the 16-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 PL13. Nominal and real after-charges returns of Employees Pension Funds in 2002-2017 (in %)

	PFE NESTLÉ POLSKA	PFE SŁONECZNA JESIEŃ	PFE ORANGE POLSKA	PFE UNILEVER POLSKA	PFE "NOWY ŚWIAT"	PFE DIAMENT	Weighted nominal return after charges, before inflation	Inflation (HICP)	Weighted real return after charges and inflation
2002			11,35%		9,76%	-21,05%	7,88%	1,90%	**5,87%**
2003			10,28%		10,44%	8,71%	10,14%	0,70%	**9,37%**
2004	11,25%		12,30%	14,24%	13,64%		12,59%	3,60%	**8,68%**
2005	12,53%		14,82%	12,93%	13,81%		14,50%	2,20%	**12,04%**
2006	12,41%	10,60%	15,40%	13,41%	15,25%		14,99%	1,30%	**13,51%**
2007	5,10%	4,52%	6,10%	5,77%	6,23%		5,94%	2,60%	**3,26%**
2008	-10,10%	-11,33%	-13,54%	-6,34%	-13,86%		-13,14%	4,20%	**-16,64%**
2009	13,33%	14,83%	15,78%	12,74%	17,41%		15,85%	4,00%	**11,39%**
2010	9,98%	9,60%	10,33%	9,75%	10,52%		10,22%	2,70%	**7,32%**
2011	-5,05%	-3,10%	-4,75%	-3,59%	-5,20%		-4,51%	3,90%	**-8,10%**
2012	15,82%	13,60%	14,96%	15,01%	14,15%		14,57%	3,70%	**10,48%**
2013	5,19%	5,21%	3,45%	4,56%	5,71%		4,28%	0,80%	**3,45%**
2014	4,42%		3,91%	4,92%	2,56%		3,65%	0,10%	**3,54%**
2015	-1,24%		-2,74%	-0,97%	-1,35%		-2,31%	-0,70%	**-1,62%**
2016			3,18%	4,88%	3,93%		3,44%	-0,20%	**3,64%**
2017			8,24%	5,87%	8,88%		8,53%	1,60%	**6,83%**
Annual average 2002-2017	**5,84%**	**5,15%**	**6,50%**	**6,45%**	**6,44%**	**-7,36%**	**6,37%**	**2,01%**	**4,27%**

Source: own elaboration based on Eurostat (HICP; 2015=100; [prc_hicp_aind] for Poland) and Dane miesięczne PFE - czerwiec 2018 r., UKNF, Warszawa 2018

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 DFEs reported more than 50% nominal return in 2013. But such returns were impossible to achieve in next years. In 2014, some of DFE even experienced slightly negative returns that were covered by returns in the following years. The average real rate of return after charges in years 2013-2017 amounted to 9.02%.

Table PL14. Nominal and real returns of voluntary pension funds (DFE) in 2013-2017 (in %)

	2013	2014	2015	2016	2017	Annual average 2013-2017
Allianz Polska DFE	7.80	2.03	-0.33	5.81	9.33	**4.87**
DFE Pekao	16.32	1.27	3.26	4.85	6.78	**6.37**
DFE Pocztylion Plus	6.93	-2.22	2.56	3.60	-0.98	**1.93**
DFE PZU	32.75	3.64	9.07	16.19	14.67	**14.86**
NN DFE	59.13	-0.73	16.21	13.26	9.01	**17.78**
MetLife Amplico DFE	56.70	6.09	-1.89	3.76	6.65	**12.54**
PKO DFE	16.87	2.54	-0.88	5.74	8.63	**6.41**
Weighted nominal return before charges and inflation	40.57	3.15	3.90	8.14	8.92	**12.15**
Weighted nominal return after charges*, before inflation	36.94	0.64	1.36	5.49	6.18	**9.36**
Inflation (HICP)	0.80	0.10	-0.70	-0.20	1.60	**0.32**
Weighted real return after charges	35.85	0.53	2.07	5.70	4.51	**9.02**

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

Source: own elaboration based on: www.analizy.pl; Harmonised index of consumer prices (HICP), Eurostat, http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=prc_hicp_aind&lang=en

Table PL15. Nominal and Real Returns of Pillar III pension funds in Poland by product category

A. Employee Pension Funds (PFE)

Year	Weighted nominal return after charges, before inflation	Weighted real return after charges and inflation and before taxes	Average	Value
2000	-	-		
2001	-	-		
2002	7.9%	5.9%		
2003	10.1%	9.4%		
2004	12.6%	8.7%	16-year nominal annual average (2002-2017)	6.37%
2005	14.5%	12.0%		
2006	15.0%	13.5%		
2007	5.9%	3.3%		
2008	-13.1%	-16.6%		
2009	15.8%	11.4%		
2010	10.2%	7.3%		
2011	-4.5%	-8.1%		
2012	14.6%	10.5%		
2013	4.3%	3.5%	16-year real annual average (2002-2017)	4.27%
2014	3.6%	3.5%		
2015	-2.3%	-1.6%		
2016	3.4%	3.6%		
2017	8.5%	6.8%		

B. Voluntary Pension Funds (DFE)

Year	Weighted nominal return after charges, before inflation	Weighted real return after charges and inflation	Average	Value
2000	-	-		
2001	-	-		
2002	-	-		
2003	-	-		
2004	-	-	5-year real annual average (2013-2017)	9.36%
2005	-	-		
2006	-	-		
2007	-	-		
2008	-	-		
2009	-	-		
2010	-	-		
2011	-	-		
2012	-	-		
2013	36.9%	35.8%	5-year nominal annual average (2013-2017)	9.02%
2014	0.6%	0.5%		
2015	1.4%	2.1%		
2016	5.5%	5.7%		
2017	6.2%	4.5%		

Note: "-" means data not available

Source: Tables PL13 and PL14.

Conclusions

Starting in 1999, with individual supplementary elements introduced in 2004 and 2012, the Polish supplementary pension market is still in its early stage of operation. The coverage ratios (2.41%, 5.8% and 4.2% respectively), show that only a tiny part of Poles decided to secure their future in old-age by joining the occupational pension plan or 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 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 must 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 sufficient official statistics 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 due to the fact that supplementary pension savings are reported together with non-pension pots. That 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, with the annual average real return of 4.27%. 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 which are paid to the accounts.

To sum up, the disclosure policy in supplementary pension products in Poland is not savers-oriented. Individuals 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 the lack of any guarantees, this is a huge risk for savers. All this may lead to significant failures on the pension market in its very early stages of development. In the future, some changes in the law should be introduced, such as imposing an obligation on financial institutions to disclose rates of return to pension accounts holders. This would help individuals make well-informed decisions and avoid buying inappropriate retirement products.[240]

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[240] Especially, taking into consideration very limited official information concerning supplementary pension products, as well as the extent of mis-selling of e.g. unit-linked insurances that took place in Poland and the subsequent enforcement action (as the sector’s self-regulation failed) https://uokik.gov.pl/news.php?news_id=12776.

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