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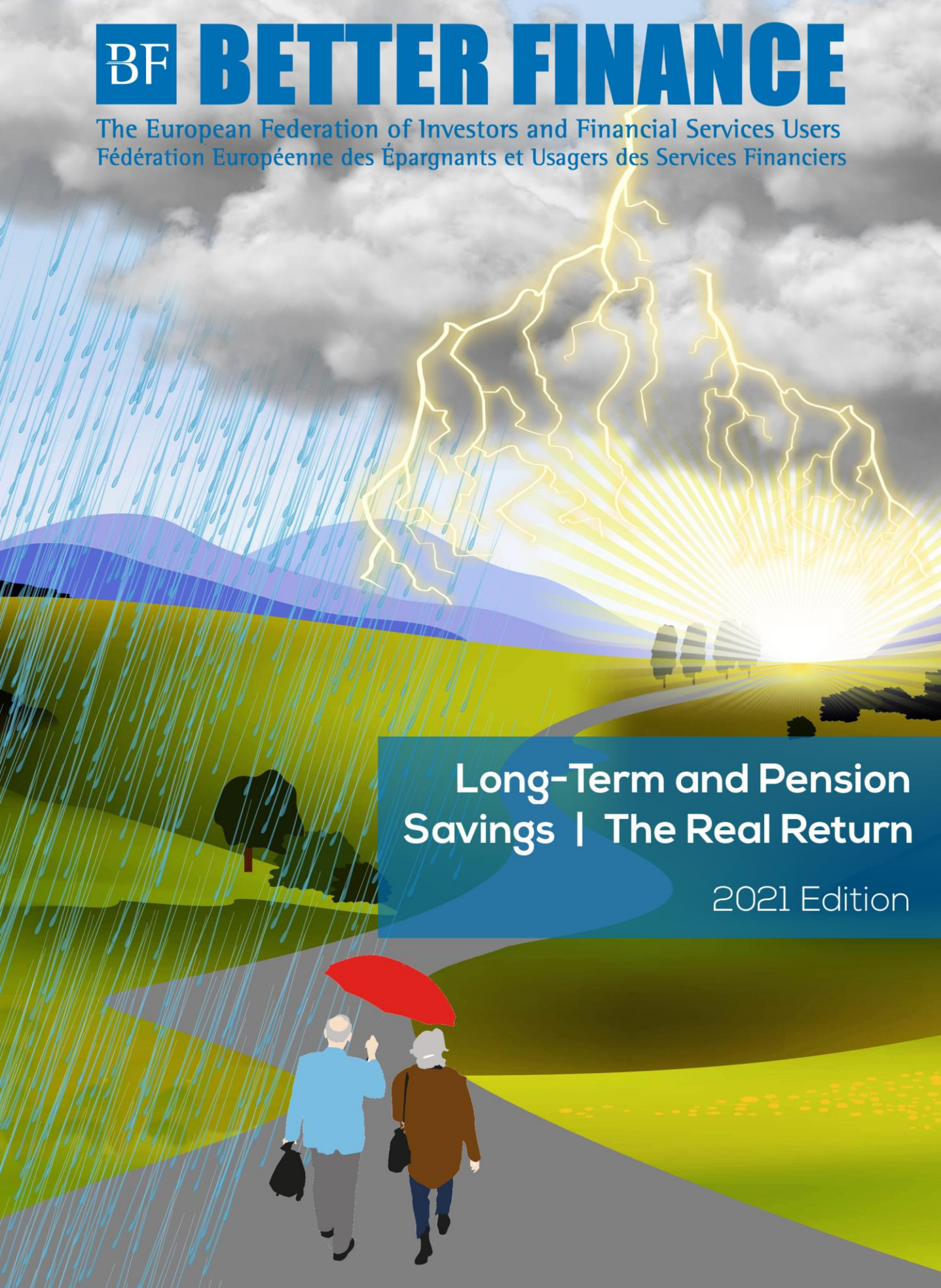

Long-Term and Pension Savings | The Real Return

2021 Edition

Pension Savings: The Real Return

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A Research Report by BETTER FINANCE

COORDINATORS

Aleksandra Mączyńska
Ján Šebo
Ştefan Dragoş Voicu

CONTRIBUTORS

Torben M. Andersen
Edoardo Carlucci
Laetitia Gabaut
Johannes Hagen
Arnaud Houdmont
Matis Joab
Michal Mešťan
Gregoire Naacke
Dayana Nacheva
Yordanka Popova
Guillaume Prache
Joanna Rutecka-Góra
Dr. Thomas Url

REVIEWERS

Ján Šebo
Michal Mešťan
Ştefan Dragoş Voicu

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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.

[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.

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.

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 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.

Deferred 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

[2] See European Commission, 'Investment Funds' (28 August 2019) https://ec.europa.eu/info/business-economy-euro/growth-and-investment/investment-funds_en.

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.

"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 unfavourable 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.

[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.

[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.

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 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).

[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).

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, short-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).

Money-Weighted Returns (MWR) - also referred to as the internal rate of return, is a measurement of performance that takes into account cash flows (contributions) when calculating returns.

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.

Eurostat aggregate replacement rate for pensions refers to median individual pension income of population aged 65-74 relative to median individual earnings from work of population aged 50-59, excluding other social benefits.

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,

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

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 cannot be paid at all or without a significant penalty unless the beneficiary is older than a legally defined retirement age). This contract 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 benefit.

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

Summary Risk Reward Indicator - a measurement developed by the European Securities and Markets Authority (former CESR) to be included in the Key Investor Information Document (KIID) for UCITS (undertakings for collective investment in transferable securities) to reflect the risk profile of a certain fund.

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.

Time-Weighted Returns (TWR) - is the standard method of calculating returns (and performance) of an investment and simply represents the growth/decrease in value without incorporating the distorting effects of cash inflows and outflows (for pensions, that means contributions and

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

Edoardo Carlucci is Research and Policy Officer at Better Finance. He obtained a bachelor's degree in Economics, Finance and Management with Law at Sapienza University of Rome. In 2014, he graduated from the ULB University with a master's degree in European Studies with Economic Specialization. He previously worked in the European Institutions and Civil Society Organizations dealing with various aspects of economic issues and policies such as EU Internal Market, EU Competition Policies, Public Procurement and SMEs.

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

Yordanka Popova, CFC, is a lifestyle financial advisor who helps people articulate and achieve their goals. She is member of the Institute of Financial Consultants and is registered as Investment Advisor by FSC in Bulgaria. Additionally, Yordanka is a junior lecturer in Finance at Sofia University.

Dayana Nacheva is an independent financial planner and a member of the Institute of Certified Financial Consultants (ICFC) in Bulgaria. She also works as a freelance researcher and author of articles on personal finance.

Dr. Torben M. Andersen Torben M. Andersen, Professor Aarhus University and associate research fellow at CEPR, CESifo, IZA and PeRCent. Main research interests: Economics of the welfare state, labour economics, public economics and pension economics. Has published on these topics in well-known international journals and books. Has been extensively involved in policy advice in Denmark, the Nordic countries, OECD, EU Commission and various other contexts. Is member of various boards, and chairman of the Board of Directors, the Danish Pension Fund ATP.

Johannes Hagen is an Assistant Professor in Economics at Jönköping International Business School in Sweden. He graduated from Uppsala University in 2016 and conducts research primarily within the field of public finance with a special interest in retirement behaviour and pensions.

Arnaud Houdmont is Chief Communications Officer at BETTER FINANCE. Prior to his career in communications and research in the heart of Europe, he earned a master's degree in Global Communication from Goldsmith's College and a bachelor's degree in international relations from Sussex University.

Matis Joab, is the Finance Officer at Better Finance. He has a bachelor's degree in Applied Economics and a master's degree in Management from Tallinn University of Technology. After working 6 years in the private sector in Estonia, mostly in Real Estate, he moved to Brussels to become Financial Director of the European Students' Forum (AEGEE), before joining Better Finance at the beginning of 2020.

Aleksandra Mączyńska is the Executive Director of BETTER FINANCE. She is a member of the EC Financial Services User Group (FSUG), the Consumer Policy Advisory Group (CPAG), member or the EU Ecolabelling Board and vice-chair of the EIOPA's Occupational Pensions Stakeholder Group (OPSG). Previously she worked for the Polish consumer and competition watchdog and was an expert on various EU Council Working Parties such as the WP on Financial Services and the WP on Competition.

Michal Mešťan is a Vice-Dean for Development and an Assistant Professor at the Faculty of Economics Matej Bel University in Banská Bystrica. He is also a founder of Talent and Research Centre at the same university. He is a member of the CFA Society Slovakia as a director of University Relations. He holds a doctoral degree (PhD.) In Finance and focuses on financial engineering, pension and individual asset-liability management models. Professionally, he builds robo-advice models oriented on long-term investing.

Grégoire Naacke is Managing Partner at IEM Finance and was appointed in June 2018 as Executive Director of the Observatoire de l'Epargne Européenne (OEE) by the Chairman Jacques de LAROSIÈRE and the members. Before his appointment as Executive Director, Grégoire has already worked for the OEE as Economist for eight years (2002-2010). Grégoire also worked for the World Federation of Exchanges (WFE) as Economist (2011-2015) and Head of Operations (2015-2018). In 2008, Grégoire was a Scientific Advisor for the Centre d'Analyse Stratégique, now France Stratégie (the French Prime Minister's research department). Grégoire graduated with honours from the Postgraduate Research Master "Money Banking and Finance" at the Panthéon-Sorbonne Paris University (Paris I) and completed his thesis ("The Households' Financial Wealth") under the supervision of Professor Christian de BOISSIEU.

Guillaume Prache is the Managing Director of BETTER FINANCE. He is a member of the EIOPA (European Insurance and Occupational Pensions Authority) Insurance and Reinsurance Stakeholder Group (IRSG), and member and former chair of the ESMA (European Securities & Markets Authority) Securities and Markets Stakeholder Group.

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

Ján Šebo is Vice-Dean at Matej Bel University in Slovakia and Consultant at the Institute of Savings and Investment. He is a member of the Financial Services User Group of the European Commission and of the European Insurance and Occupational Pensions Authority's Occupational Pensions Stakeholder Group. He focuses on pension systems' research and professionally consults on the design and implementation of private pension schemes.

Dr. Thomas Url is an economist at the Austrian Institute of Economic Research (WIFO) and lecturer at the University of Vienna. He graduated at the University of Graz and attended the post graduate course in economics at the Institute for Advanced Studies (Vienna). His main research areas are risk management and funded pension systems, European monetary and economic union as well as various topics in applied econometrics.

Ştefan Dragoş Voicu is Senior Research & Policy Officer at BETTER FINANCE, having a thorough background in Romanian and EU law. He specialises in Financial Services Regulation and Capital Markets Research, with a focus on packaged investment products (mutual funds and insurances), retirement provision and market infrastructure. He coordinates four BETTER FINANCE Working Groups on Pensions, Insurances, Packaged Investments and Audit & Reporting.

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Pension Savings: The Real Return

2021 Edition

Executive Summary

With the two of three worst financial meltdowns of the past hundred years occurring in the past 12 years, can our societies rely on financial markets to deliver decent retirement outcomes for millions around the world?"[8]

Despite improvements, real returns of pension savings still struggle to deliver value for money

How much did pension savers earn on average?

The main question this report seeks to answer is: How much was the pension saver left with, on average, after charges and inflation were deducted from his benefits at the end of different periods, compared to the amounts he saved? The aggregate summary return tables show – for occupational/collective ("Pillar II") and voluntary/individual ("Pillar III") pension products - the annual average rate of return on investments in each country based on 5 periods: 1, 3, 7, 10 years and since the start of the available reporting period (differs case by case). These standardised periods eliminate inception and market timing biases, allowing to "purely" compare performances between different pension schemes.

[8] Amin Rajan (Crate Research), 'Coronavirus Crisis Inflicts a Double Blow to Pensions' (FT.com, 15 April 2020) available at: https://www.ft.com/content/bd878891-4f20-46c3-ab23-939162a85d9c.

Aggregate summary return table	Pillar II								
	1 year		3 years		7 years		10 years		max. available *
	2020	2019	2018-2020	2017-2019	2014-2020	2013-2019	2011-2020	2010-2019	
Austria	1.41%*	8,01%	1,23%	1,78%	2,35%	2,53%	1,79%	2,01%	1,48%
Belgium	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Bulgaria	1,41%	2,71%	-1,06%	-0,24%	2,06%	2,59%	1,96%	1,74%	-1,35%
Croatia	-0,29%	8,06%	2,81%	4,68%	4,99%	5,77%	4,10%	4,91%	3,28%
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	4,64%	7,97%	2,10%	0,57%	2,13%	1,65%	1,31%	1,24%	0,67%
France	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Germany	n.a.	3,02%	n.a.	1,77%	n.a.	2,54%	n.a.	2,40%	2,28%
Italy	3,30%	7,30%	1,85%	1,76%	2,81%	3,33%	2,66%	2,57%	0,84%
Latvia	1,94%	8,43%	1,12%	0,77%	1,54%	1,62%	1,45%	1,83%	-0,07%
Lithuania	5,19%	14,92%	4,72%	3,04%	4,07%	4,15%	3,52%	3,65%	1,72%
Netherlan	6,23%	13,00%	5,01%	4,26%	5,79%	5,10%	5,26%	5,42%	2,89%
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	2,59%	5,05%	1,81%	0,61%	2,68%	3,64%	2,95%	3,33%	2,41%
Slovakia	0,45%	5,37%	0,70%	-0,27%	1,50%	1,57%	0,79%	0,74%	-0,03%
Spain	2,10%	7,89%	1,74%	2,14%	2,80%	4,28%	2,94%	2,60%	0,79%
Sweden	6,45%	24,08%	8,23%	9,03%	n.a.	n.a.	n.a.	n.a.	8,32%
UK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: BETTER FINANCE own composition; see methodological explanation box below

Voluntary pension products vary in market share based on the jurisdiction: in some cases, insurance-based products are more prevalent, whereas in some countries pension funds are preferred. The table below shows the average real net returns for supplementary pensions by standardised holding periods.

- *Data for 2020 is estimated. So are the previous 2019 figures, which are now consolidated.*
- *Returns for Bulgaria are time-weighted, and the dataflow is updated compared to the last edition.*
- *In Germany AOPP is used as a proxy for pillar II returns.*
- *For Romania, returns are calculated in EUR and differ from previous editions. See Romanian country case explanations.*
- *For Spain, pillar II returns have been recalculated based on the weighted average between employer-sponsored and associate plans.*

Aggregate summary return table	Pillar III								
	1 year		3 years		7 years		10 years		whole reporting period*
	2020	2019	2018-2020	2017-2019	2014-2020	2013-2019	2011-2020	2010-2019	
Austria	1.82%*	1,2%	1,34%	1,01%	1,70%	1,73%	1,50%	1,51%	2,05%
Belgium	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Bulgaria	1,91%	3%	-0,92%	0,08%	2,57%	3,28%	2,65%	2,48%	0,17%
Croatia	-1,41%	8,57%	2,13%	3,58%	4,57%	5,07%	3,75%	4,58%	3,59%
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	4,51%	13,84%	2,37%	1,64%	3,19%	3,03%	2,04%	2,45%	1,54%
France*	1,30%	2,83%	0,44%	0,46%	1,23%	3,55%	1,23%	2,81%	1,36%
Germany*	2,68%	0,67%	1,30%	0,68%	1,62%	1,53%	1,64%	1,58%	1,51%
Italy	0,03%	6,40%	1,18%	1,22%	2,58%	2,84%	2,49%	1,99%	1,85%
Latvia	2,14%	8,66%	0,82%	0,59%	1,75%	1,94%	1,58%	n.a.	1,58%
Lithuania	4,83%	8,72%	2,29%	1,22%	2,85%	2,93%	1,98%	2,48%	1,05%
Netherlan	1,83%	0,40%	1,39%	1,40%	1,14%	0,97%	0,27%	-0,08%	0,13%
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	0,99%	3,99%	0,35%	-0,41%	1,53%	2,69%	1,91%	2,06%	-0,85%
Slovakia	1,30%	5,68%	0,00%	0,22%	1,00%	0,98%	0,44%	0,37%	0,60%
Spain	0,80%	8,11%	0,86%	1,24%	1,83%	3,25%	2,00%	2,15%	0,32%
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
UK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

*Source: BETTER FINANCE own composition; *whole reporting period differs between countries; for DE, pillar III can be proxied through both Riester and Rurup pensions, the authors chose Riester for the purposes of this graph (Acquisition charges are included and spread over 5 years); for BG, VPF is proxied for pillar III returns and the returns are time-weighted; for FR, pillar III comprises life insurance, corporate savings plans, public employee pension schemes: for AT, the returns for 2020 are estimated, so were the 2019 figures which are now consolidated;*

Unfortunately, due to unavailability of data breakdowns, for some country cases (UK, Netherlands, Belgium, Denmark, Poland, Sweden) we were not able to calculate the annual real average returns by Pillar. Nevertheless, the results by retirement provision vehicle are available in Graphs 18 and Table 20 in the *General Report*.

Note: For a few pension systems analysed in the report, the data available on retirement provision vehicles clearly distinguishes between Pillar II and Pillar III (such as Romania or Slovakia). In other countries, where pension savings products may be used for both Pillars, the categorisation is more difficult since return data is not separated as such. However, for reasons of simplicity and comparability, the authors of the report have put in all the necessary efforts to correctly assign each product according to the pillar it is, or should be, used for.

Taxation

What happens to investment returns after charges and inflation are deducted?

Charges, investment strategies and inflation influence earnings, but the actual sum the pension saver will be able to withdraw and spend at retirement will depend on the *taxation regime*. In other words, when and how much do savers lose of their pensions due to taxes?

The actual taxation rates (in %) are highlighted in Table GR10 and in the *Taxes* sub-section of each individual country case. However, the purpose of the "pillar"-system is to stimulate pension savings by giving tax incentives (exemptions, lower taxes, deductibility, subsidises etc).

The table below shows whether the three pension saving steps (contribution – *what you pay for your pension*; returns – *what your investments earn*; and pay-outs – *what you will withdraw*) are **exempt (E)** or **taxed (T)** in each country under review.

Taxation of pension savings						
	Contributions		Returns		Pay-outs	
	Pillar II	Pillar III	Pillar II	Pillar III	Pillar II	Pillar III
Austria	E	E	E	E	T	T
Belgium	E	E	E	E	T	T
Bulgaria	E	E	E	E	E	E
Croatia	E	E	E	E	T	T
Denmark*	T	T	T	T	T	T
Estonia	E	E	E	E	T	T
France	E	E/T	T	T	T	T
Germany	T	T	E	T	T	T
Italy	E	E	T	T	T	T
Latvia	E	E	E	E	T	T
Lithuania	E	E	E	E	E	E
Netherlands	E	E	E	E	T	T
Poland	T	E/T	E	E	E	E/T
Romania	E	E	E	E	T	T
Slovakia*	E/T	E	E	E	E	T
Spain*	E	E	E	E	T	T
Sweden	E	E	T	T	T	T
UK	E	E	E	E	T	T

**There are rules and exceptions based on the type of pension vehicle. For details, see the relevant country case; Source: BETTER FINANCE own composition*

Pension plan types: defined contribution on top

Who bears the risk of adequate pensions at retirement?

Originally, the level of pension (*benefit*) would be pre-defined by the provider of the pension plan, usually based on a formula that used some standard variables for each saver (income/salary,

inflation, etc). As such, the pension plan provider bears the risk of obtaining the necessary resources (money) to pay out this ***defined benefit*** pension to the saver at retirement age.

Nowadays, most private pension plans (Pillar II and III) use a ***defined contribution*** rule. This means that the saver only knows how much he can pay for his future pension, but the actual amount and income level at retirement will depend on external factors and will be subject to capital market fluctuations, just as any other investment. In other words, the risk of obtaining an adequate pension at retirement depends on the investment decisions made by the saver, where the provider is only obliged to pay-out the ***real net returns***, before tax, earned during the investment period.

Pension scheme type (*who bears the risk?*)				
	Provider (defined benefit)		Saver (defined contribution)	
	Pillar II	Pillar III	Pillar II	Pillar III
Austria	X		X	X
Belgium	X	X	X	X
Bulgaria			X	X
Croatia	X			X
Denmark	X	X	X	X
Estonia			X	X
France	X		X	X
Germany	X		X	X
Italy			X	X
Latvia			X	X
Lithuania			X	X
Netherlands	X		X	X
Poland			X	X
Romania			X	X
Slovakia			X	X
Spain	X		X	X
Sweden	X		X	X
UK	X		X	X

Source: BETTER FINANCE own composition

For more details on how this information unfolds, what factors influence pension savings and how governments tax pension earnings, read the following chapter or the individual country case corresponding to your domicile.

EU Policy Updates

The High-Level Forum on the Future of the Capital Markets Union[9] made three important recommendations[10] for the European Commission to pursue in the area of pensions, to which BETTER FINANCE contributed and fully supported:

- establishing ***national pension dashboards***, which are systems of indicators for EU Member States "*to monitor the state of play in Member States and, where applicable, the progress achieved by Member States with regard to pension sustainability and pension adequacy*";
- establishing ***individual pension tracking systems***, which would be platforms where EU citizens can see all their pensions data (State pension and private pension vehicles) with the purpose of providing "*an overview and an estimate of the future retirement income from different sources*";
- supporting EU Member States in establishing ***auto-enrolment in occupational pension schemes***, which would mean that workers would by default contribute to a pension plan, with the possibility to opt-out (stop contributions) at no cost.

The European Commission (EC) and European Insurance and Occupational Pensions Authority (EIOPA) followed-up on these proposals and have started work towards their implementation. The EC formally initiated the process by mandating EIOPA to gather evidence, data, and technical recommendations on the first two actions while also commissioning a study from a consortium of consultants on best practices in auto-enrolment systems. Consequently, EIOPA published two public consultations requesting:

- technical advice on the development of pension dashboards and the collection of pensions data, which is meant to gather input from stakeholders on where and how to aggregate the necessary information – and what indicators to use – to set up and update the pension dashboards;
- technical advice on pension tracking services, which is meant to collect views from stakeholders on what types of investment products will be aggregated in the tracking service, what and how the estimations of the retirement pot will be made, etc.

BETTER FINANCE, together with the experts that collaborate with the writing of this report, will leverage the long-term experience accumulated through the efforts of publishing this report since 2013 and will provide EIOPA with technical advice on both topics.

[9] A group of experts from EU public authorities, industry, and consumer associations established by the European Commission between November 2019 and May 2020 to brainstorm and make recommendations to improve the regulation and supervision of EU capital markets and create better conditions to invest for EU citizens; see https://ec.europa.eu/info/publications/cmu-high-level-forum_en.

[10] See the Final Report here: https://ec.europa.eu/info/sites/default/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf, Recommendation 11, page 85.

Pension Savings: The Real Return

2021 Edition

Value for Money for Long-term and Pension Savings

For too many editions in a row (since 2013), BETTER FINANCE's annual report on the real returns of long-term and pension savings finds, in many EU jurisdictions, poorly performing retirement saving vehicles (whether pension funds, products, or life-insurances used for pension provision) once fees and inflation are deducted. With a few notable exceptions, such as occupational pension funds in the Netherlands or the AP7 Safa fund in Sweden, the majority of products barely cover for inflation and only a handful come close to a simple, broad capital markets benchmark (50% equity and 50% bonds). Unfortunately, there is also a share – quite high – of products that deliver negative returns, which means that, in hindsight, keeping savings "under the mattress" would have been a more profitable solution.

Considering the impact on economic output generated by the global health pandemic, the strains on public pension systems, the current low interest rate environment, and the shift from defined-benefit to defined-contribution pensions, addressing the pensions time-bomb is long overdue.[11]

While there is no silver bullet to rectify poor pension returns, BETTER FINANCE formulates a set of proposals to define *value for money* for retirement provision investments.

BETTER FINANCE already initiated the debate on *value for money* for retail investment products in November 2019, when it released the joint BETTER FINANCE-CFA Institute report on *Sustainable Value for Money*.[12] The report, gathering the views of investment professionals and retail investors, found, among others, that the duty of care (*to act in the best interests of clients*) should be mandatory for finance professionals and that consumers should be presented with simple and standardised information on cost and past performance.

Moreover, an earlier (2016) report by the CFA Institute found that retail investors have high expectations for finance professionals to generate similar or better returns than those of the benchmark, and that the charges and fees paid must reflect the value of the relationship, but with a level of satisfaction much lower in both regards.[13]

In 2021, the European Insurance and Occupational Pensions Authority (EIOPA) launched a public consultation aimed at gathering stakeholders' views on the proposed framework to assess value for

[11] See BETTER FINANCE's Press Release of 29 November 2017 "*BETTER FINANCE Applauds EU Proposal for a Pan-European Personal Pension (PEPP) to Defuse the Ticking Pensions Time Bomb*", available at: https://betterfinance.eu/wp-content/uploads/publications/PR-_PEPP_INITIATIVE_19072017_01.pdf.

[12] BETTER FINANCE-CFA Institute Report, *Sustainable Value for Money* (2019), p. 6, available at: https://betterfinance.eu/wp-content/uploads/BETTER-FINANCE-CFA-Institute-Report-on-SUSTAINABLE-VALUE-FOR-MONEY-201119_correct.pdf.

[13] CFA Institute, *From Trust to Loyalty: A Global Survey of What Investors Want,* (2016), p. 14. , available at: https://www.cfainstitute.org/-/media/documents/survey/from-trust-to-loyalty.ashx.

money for unit-linked insurance-based investment products.[14] According to EIOPA, value for money would mean that "*the costs and charges are proportionate to the benefits (i.e., investment performance, guarantees, coverage and services) to the identified target market and reasonable taking into account the expenses born by providers and in comparison to other comparable retail solutions on the market*".[15] EIOPA's definition sets a very important milestone as it builds the concept of value for money (VfM) around cost and performance but, very important, not in a vacuum: what retail investors pay for their investments must be comparably better compensated through returns and other product features than other options on the market. On this occasion, BETTER FINANCE put forward several proposals to improve on EIOPA's definition, namely:

- while comparability with "*other solutions on the market*" is a step in the right direction, in many cases the entire peer-group of a product may be poorly performing – as is already the case – which may still leave investors with undesirable outcomes; thus, BETTER FINANCE proposed to replace "*other solutions on the market*" with the market index benchmark, i.e., the underlying investments;
- a product's purpose (objective and investment policy) must be aligned with the concept of value for money;
- the products' costs must be reviewed regularly.

At the same time, inspiration can also be drawn from the practice of the UK Financial Conduct Authority (FCA), which spearheaded (and continues to) retail investor protection in Europe. To begin with, the UK was the first country in Europe to ban commissions, kickbacks, retrocessions (collectively, "inducements") for retail investment services and products. Besides creating a conflict of interests, inducements also increase the cost of investing, which further erodes net returns.[16]

Second, the UK FCA issued a handbook (guidance) for fund managers on how to evaluate and report to clients the value their investment services deliver for the money they are paid. The guidance highlights that fund managers should assess the value of services in light of costs (in general and comparing classes of units), comparable market rates, the quality of the service (also in comparison

[14] The framework takes the form of a supervisory convergence mechanism under the tools of EIOPA and it would be ultimately addressed to national insurance supervisors when evaluation the provision of insurance-based investment products to retail investors.

[15] See the EIOPA Consultation Paper on Addresing Value for Money risk in the European unit-linked market, available at: https://www.eiopa.europa.eu/document-library/consultation/consultation-framework-address-value-money-risk-european-unit-linked_en.

[16] See the BETTER FINANCE Report on the Correlation between Cost and Performance in eu Equity Retail Funds, where we analysed active funds' ability to outperform the market and the impact of fees on mutual fund performance, finding that "*the more you pay, the less you get*" - https://betterfinance.eu/wp-content/uploads/BETTER1.pdf. See also the ESMA Annual Statistical Report Cost and Performance (latest the 2021 edition), highlighting that passive equity funds and UCITS ETFs (which are much cheaper) overperform the more expensive actively managed ones – https://www.esma.europa.eu/sites/default/files/library/esma_50-165-1710_asr_performance_and_costs_of_eu_retail_investment_products.pdf; see also the ESMA Annual Statistical Report on Cost and Performance of 2020, highlighting that more expensive, actively managed funds impact returns and underperform not only their passive and index-tracking peers, but also the benchmark - to passive and ETFs UCITS, ultimately impacting performance" - https://www.esma.europa.eu/sites/default/files/library/esma50-165-1106-asr-performance_and_costs.pdf.

with other services), and performance. The performance must be "*considered over an appropriate timescale having regard to the scheme's investment objectives, policy and strategy*".[17]

Recently, the FCA furthered their efforts in driving value for money in retail investment products by issuing a policy statement on *assessing value for money in workplace pension schemes and pathway investments*.[18] The FCA highlights that managers[19] of occupational pension funds must take into account three key elements in assessing whether they deliver value for money or not:

- costs and charges,
- investment performance, and
- the quality of services,

in comparison "*with other similar propositions on the market*".

At the same time, one must also factor in *pension adequacy* when analysing the returns of retirement provision vehicles. Although there is no unified understanding of pension adequacy, a few sources can give an adequate starting point.

The European Commission builds the concept of pension adequacy (from public pensions) on three pillars: eliminating the risk of poverty in old age, smooth transition from work income to retirement income and the length of retirement.[20] By smooth transition, the European Commission refers to a pensions' ability to replace the working-life income in such a way as to limit the financial impact brought about by this transition. In simpler words, an adequate pension must ensure, at the very least, that pensioners are not in a far worse position than when they were earning work income.

The European Commission also correctly noted that adequacy is achieved if individuals "*can spend a reasonable share of their lives in retirement*".[21]

Other authors define pension adequacy as allowing individuals "*to maintain, to a reasonable degree, their standard of living after retirement*".[22] A World Bank report on adequate pension systems focused, besides the smooth transition between work-life and retirement and poverty in old age, also on smoothing consumption. In short, smoothing consumption over the lifetime of

[17] See the Collective Investment Schemes sourcebook (COLL) rules that require fund managers to carry out a Value Assessment (AoV) at least annually, to report publicly on the conclusions of the AoV, and to appoint independent directors on AFM Boards - https://www.handbook.fca.org.uk/handbook/COLL.pdf.

[18] UK Financial Conduct Authority, *Assessing Value for Money in Workplace Pension Schemes and Pathway Investments: Requirements for IGCs and GAAs* (October 2021) Policy Statement PS21/12, available at: https://www.fca.org.uk/publication/policy/ps21-12.pdf.

[19] Independent Governance Committee (IGC) or Governance Advisory Arrangement (GAA).

[20] European Commission Pension Adequacy Report 2021 (Vol. I), p. 22.

[21] Ibid.

[22] Margherita Borella, Elsa Fornero, *Adequacy of Pension Systems in Europe: An Analysis Based on Comprehensive Replacement Rates* (April 2009), ENEPRI Research Report no. 68, AMI WP 9, available at: https://www.ceps.eu/download/publication/?id=6260&pdf=1837.pdf.

workers means that achieving an adequate level of pensions should not necessitate exaggerated savings during working life.[23]

Therefore, it can be argued that pension adequacy:

- should not be achieved by "saving more and more";
- should not be achieved by extending the work life (starting work earlier and retiring later);
- is achieved if the working income is replaced by a pension that is sufficient to ensure a smooth transition, or maintain the same lifestyle, from work-life to retirement.

Although pension adequacy is mostly aimed at statutory (public) pension systems, we believe that the growing importance of private pension savings in pension provision requires the application of the same "adequacy" standards.

Drawing inspiration from the above practices, but also from the knowledge and empirical findings of 9 editions of this report, BETTER FINANCE formulates the following definition for *Value for Money* in long-term and pension saving products.

Value for Money through design, objective, and governance

A long-term and pension savings product delivers value for money for individual, non-professional savers when:

- The investment objective is clearly defined by the provider in the key disclosures;
- Simple and clear full cost and performance disclosure is made publicly available and is comparable to those of other investment products with similar goals;
- the costs borne by savers are commensurate with the investment objective (e.g., if "active" level fees are charged, then the product must overperform the relevant investment universe over the recommended holding period) and commensurate with other comparable retail solutions on the market (e.g., sometimes index products on offer are ten times more expensive than the equivalent ETF solution);
- there are at least two independent members in the governing body of the product representing investors (can be the fund itself if it has legal personality or the product manufacturer) like in the UK (asset manager level) and in the US (fund level);
- the product's cost and performance must be evaluated, periodically, against the investment objectives of the provider (for example for an active fund charging active level fees, it will be its benchmark or the performance of its investment universe);

[23] Robert Holzman, Richard Hinz, *Old Age Income in the 21st Century* (2005) World Bank, available at: https://openknowledge.worldbank.org/bitstream/handle/10986/7336/32672.pdf?sequence=1&isAllowed=y.

The services provided in relation to the distribution and management of a product that delivers Value for Money should encompass the following:

- the management or governing body should report annually and in a simple and concise manner on how the product delivered Value for Money for its beneficiaries;

SUPERVISION

- supervisory authorities should conduct annual assessments of Value for Money reporting;
- EU supervisory authorities (EIOPA) should use their product intervention powers which should also cover value for money issues.

Pension Savings: The Real Return

2021 Edition

General Report

I. INTRODUCTION

In June 2013, BETTER FINANCE published a research report entitled "Private Pensions: The Real Return"[24] which evaluated the return of private pension products after charges, after inflation ("real" returns) and – where possible – after taxation, in Denmark, France and Spain.

In September 2014, BETTER FINANCE published the second edition of the "Pension Savings: The Real Return"[25] report, which included data updates for the three initial countries covered and new in-depth evaluations of pension savings for five new countries: Belgium, Germany, Italy, Poland and the United Kingdom.

The following editions added 10 more countries to the report and updated the figures for those already included. This year's edition (the ninth in a row) expands the geographic scope once again to include Croatia.

The actual performance of this market is unknown to clients and to public supervisors

This report was built to respond to one of the big problems for the pensions market in the EU: lack of data on real net performances. Since a comprehensive approach to provide this indispensable information to savers is not yet provided by public authorities or other independent bodies, this report aims to improve transparency and comparability on the real returns of long-term and pension savings in Europe. This is in line with the European Commission's current "Action" to improve the transparency of performance and fees in this area (as part of its Capital Markets Union - CMU - Action Plan) and it corresponds with the current tasks the ESAs are undertaking in the area of personal pension products with respect to past performance and cost comparison.

Indeed, apart from the OECD's (the Organisation for Economic Co-operation and Development) report on pensions and EIOPA's (European Insurance and Occupational Pension´s Authority) reports on cost and performance, which covers a part of the private pensions market, the contributors to this research report could not find any other more complete or more recent published

[24] Link for the print version available here: http://www.betterfinance.eu/fileadmin/user_upload/documents/Research_Reports/en/Pension_Study_EN_website.pdf.
[25] Link for the print version available here: http://www.oee.fr/files/betterfinance_pensions_report_2014.pdf.

comprehensive series of net real pension savings returns for such a wide coverage of EU countries and the UK.

The data reported by the OECD[26] are unfortunately quite incomplete:

- At the time of writing, the most recent OECD publication on ***pension funds***' returns, "Pension Funds in Figures 2021", provides only 1-year preliminary data (for 2020) on the real returns of ***pension funds*** in selected OECD and non-OECD countries;[27]
- The OECD "Pension Markets in Focus 2020" covers 15-year returns maximum (until 2019) only for ***pension funds***;[28]
- Although the OECD reports 5-year returns for 23 EU countries, it drops to 16 for 10-year horizons and to 11 for 15-year horizons, ending in 2019;
- A part of occupational pension products, and most - if not all - individual pension products are missing as well, as OECD performance data include only "pension funds" stricto sensu, and exclude all "*pension insurance contracts and funds managed as part of financial institutions (often banks or investment companies), such as the Individual Retirement Accounts (IRAs) in the United States*";
- It is questionable that the OECD was able to capture all expenses borne by pension savers - entry fees for example - because the OECD relies mostly on reporting by national authorities and, typically, this is not something covered by them;
- Finally, OECD figures are all before taxes, except for Italy.

EIOPA's Annual Report on Cost and Performance of 2021 covers only 57% of the unit-linked insurances market and 62% of the profit-participation one, and the personal pensions (insurance-based) part covers only a few (210) products from 14 jurisdictions in the EU. Moreover, and unfortunately, the cost data in EIOPA's report is the Reduction-in-Yield from the PRIIPs KID and only covers the previous 5 years.

In comparison, the present report documents a principal component of, and reason for, the generalised level of distrust of EU citizens in capital markets, namely the frequent poor performance of private pension products, once inflation, charges and (when possible) taxes are deducted from nominal returns, when compared to the relevant capital market benchmarks.

Totalling 17 EU Member States under review (Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Poland, Romania, Slovakia, Spain Sweden and The Netherlands), the BETTER FINANCE research now covers 87% of the EU27 population.[29] It also

[26] Namely the OECD "Pension Markets in Focus 2017" (1, 5 and 10 year data), and the subsequent editions (2018, 2019, 2020), available at: https://www.oecd.org/pensions/private-pensions/pensionmarketsinfocus.htm.
[27] https://www.oecd.org/daf/fin/private-pensions/Pension-Funds-in-Figures-2021.pdf.
[28] https://www.oecd.org/daf/fin/private-pensions/Pension-Markets-in-Focus-2020.pdf.
[29] As of January 1st, 2020 – Eurostat, [demo_gind]' http://appsso.eurostat.ec.europa.eu/nui/show.do.

extends the period of time covered in order to now measure performance over the 21-year period ranging from 2000 to 2020, in as far as data was available.

It is the ambition and challenge of this research initiated by BETTER FINANCE and its partners to collect, analyse and report on the actual past performance of ***all*** long-term and pension savings products.

The net real return[30] of pension saving products should be:

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

We have chosen a period starting from 31 December 1999 because pension savings returns should be measured over a long-term horizon, and because it includes two market upturns (2003-2006 and 2009-2019) and two downturns (post dot com bubble of 2001-2003 and the 2008 financial crisis).

Information on the returns of long term and pension savings is deteriorating

This report shows that it is not an impossible, albeit a very challenging, task for an independent expert centre such as BETTER FINANCE to collect the data necessary for this report since quite a lot of data are simply not available at an aggregate and country level, especially for earlier years. The complexity of the taxation of pension savings in EU countries makes it also extremely difficult to compute after tax returns.

Once more, for 2020 (2021 edition), we find that **the availability and quality of information** on long-term and pension savings returns is actually not improving but on the contrary **deteriorating**:

- ***Insufficient information***: for example the Belgian insurance trade organisation Assuralia no longer reports on the returns of insurance-regulated « Branch 21 » occupational and personal pension products since 2014, and the national supervisor FSMA does not do it either; in Bulgaria, the **necessary data** for Professional Pension Funds (pillar II and III) is no

[30] A limitation of the present report is that it does not take into account real estate as an asset for retirement. The proportion of households owning their residences varies greatly from one country to another. For example, it is especially low in Germany, where a majority of households rent their residences and where home loan and savings contracts have consequently been introduced as the most recent state-subsidised pension savings scheme. For the time being, returns on pension savings are all the more important since a majority of retirees cannot rely on their residential property to ensure a decent minimum standard of life. However, residential property is not necessarily the best asset for retirement: indeed, it is an illiquid asset, and it often does not fit the needs of the elderly in the absence of a broad use of reverse mortgages. The house might become too large or unsuitable in case of dependency. In that case, financial assets might be preferable, on the condition that they provide a good performance.

longer available since 2018; in the UK, the survey conducted by the Department for Statistics has been discontinued and information on the British pension funds stopped at 2017;

- ***Late information***: at the time of printing, still a lot of 2020 return data have not been released by the national trade organisations or other providers. OECD has published preliminary data for December 2020, but on a limited number of jurisdictions and only for pension funds; however, considering that, in many countries, pension funds are not the most popular vehicle, this constitutes a large information gap.
- ***Unchecked information***: the principal source remains the national trade organisations, their methodology is most often not disclosed, return data do not seem to be checked or audited by any independent party, and sometimes they are only based on sample surveys covering just a portion of the products.

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

Moreover, savvy retail savers and EU public authorities must rely on private databases (and divergent methodologies) to learn about some of the costs and performances of "retail" saving products. This is because the PRIIPs Key Information Document (KID) eliminated pre-contractual disclosure of past performance and actual costs for UCITS and requires return and cost estimations instead for all "retail" investment products, including pension products. This severe setback in transparency and comparability is completely inconsistent with the CMU initiative. Four high-level initiatives have struggled to repair this situation, without success: the NextCMU Report, the High-Level Forum Final Report, the ECON CMU Report and the ESAs' draft RTS on PRIIPs Level 2. BETTER FINANCE continues to deplore the content of the PRIIPs KID.

How to achieve pension adequacy?

Public pension authorities typically stress two requisites for pension savings to achieve "pension adequacy":

a) the need to start saving as early as possible;
b) the need to save a significant portion of one's income before retirement activity income: "*to support a reasonable level of income in retirement, 10% - 15% of an average annual salary needs to be saved*".[31]

BETTER FINANCE continues to disagree: saving earlier and more is not enough. A third and even more important factor is the need to deliver positive and decent long-term ***real net*** return (i.e., net of inflation and fees).

[31] World Economic Forum White Paper: 'We'll live to 100 – How can we afford it?' May 2017

A simple example will illustrate why saving "*more and for longer periods*" is not sufficient, and too often even detrimental.

Assuming no inflation, saving 10% of activity income for 30 years (as recommended by Public Authorities, 25-year life expectancy at retirement, gross of fees and taxes) the table below shows that **unless long-term net returns are significantly positive** (in the upper single digits), **saving early and significantly will not provide a decent pension.**

Annual net return	Replacement income
negative 1%	10%
Zero	12%
2%	17%
8%	49%

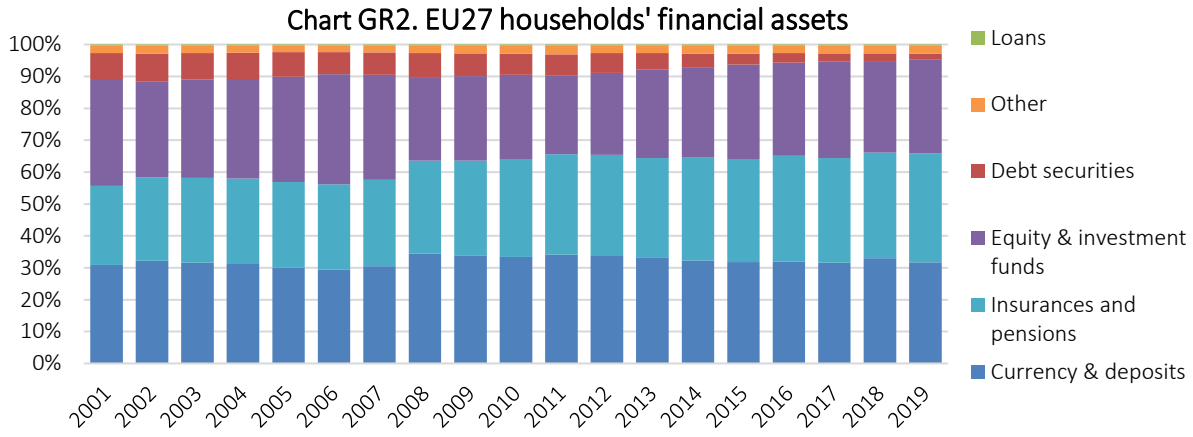
To achieve *pension adequacy*, retirement benefits altogether (State and private pensions) should amount to at least 70%-80% of late working life gross salary.

Nevertheless, this is harder and harder to achieve due to ageing populations, higher pension contributions, longer life expectancy, higher discounting rates etc.

There has been a shift from the full reliance on the public scheme of redistribution (tax-funded defined-benefit) to a more capital markets reliant system, where the main pension income stream should come from private pension products. Pension performances are subject to inflation and to tax, which eat into the retirement pot.

Most pension products recently improved but underperformed

Our findings clearly confirm that capital market performances have unfortunately very little to do with the performances of the actual savings products distributed to EU citizens. This is particularly true for long-term and pension savings. The main reason is the fact that most EU citizens do not invest the majority of their savings directly into capital market products (such as equities and bonds), but into "packaged products" (such as investment funds, life insurance contracts and pension products).



Source: BETTER FINANCE based on Eurostat data; 2020 data not yet available

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

Performance: capital markets are not a proxy for retail investments

One could then argue that insurance and pension products have similar returns to a mixed portfolio of equities and bonds, since those are indeed the main underlying investment components of insurance and pension "packaged" products. However, this is not true since the share of packaged products and debt instruments are dominant in most pension portfolios. Realities such as fees and commissions, portfolio turnover rates, manager's risks, etc., invalidate this approach.

Table GR4 and Graph GR5 below show two striking – but unfortunately not uncommon – real examples of this largely ignored reality: capital market performance is not a valid proxy for retail investment performance and the main reasons for this are the fees and commissions charged directly or indirectly to retail customers. The European Commission itself publicly stressed this fact (see footnote 2 above).

Table GR4. Real case of a Belgian life insurance (branch 23)

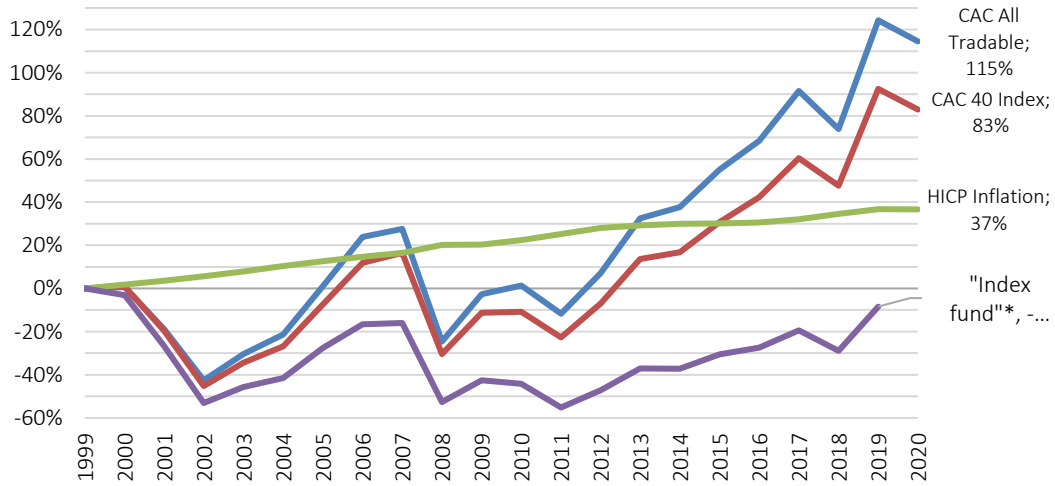
Capital markets vs. Belgian individual pension insurance 2000-2020 performance

Capital markets (benchmark index*) performance	
Nominal performance	275%
Real performance (before tax)	186%
Pension insurance performance (same benchmark)	
Nominal performance	82%
Real performance (before tax)	23%

*Source: BETTER FINANCE own computations based on Morningstar public website; *Benchmark is composed of 50% bonds (LP06TREU) and 50% Barclay's Pan-European Aggregate Bond Index + 50% FTSE WORLD TGR*

The real case of Graph GR5 illustrates a unit-linked life insurance product (Pillar III), in Belgium. The pension product's nominal return amounted to less than a third of its corresponding capital market benchmark's return.

Graph GR5. Real case of French retail equity fund



*Source: BETTER FINANCE research, fund manager; * 2000-2003 simulated*

The real case above illustrates an investment fund domiciled in France, a so-called retail CAC 40 "index" fund[32]. The fund actually underperformed the relevant equity index by 101.4 p.p. after 20 years of existence (loss of -8.4% instead of a +83% profit), with the performance gap fully attributable to fees. The fund has also massively destroyed the real value of its clients' savings, as inflation has been almost twice as high as its nominal performance. It is quite surprising that with such a huge return gap vis-à-vis its benchmark, this fund is still allowed to portray itself as an "index-tracking" one, and that no warning is to be found on the Key Information Document (KIID) of the fund. Unfortunately, the index fund has been sold to another manager and the 2020 performance is no longer relevant.

European Pension returns outlook

The overall mid-term outlook for the adequacy of European pension savings in 2021 is worrying when one analyses it for each of these main return drivers:

a) It is unlikely that the European bond markets will come any closer to the extraordinary returns of the last 20 years (as we are already seeing stagnation or even signs of a downward trend), due to the continuous fall of interest rates, currently at rock-bottom levels; moreover, the global health crisis has already destroyed the record 2019 capital market returns;

[32] Wrapped in an insurance contract as suggested by the distributor.

b) The negative impact of this foreseeable trend in bond returns on pensions' returns will be reinforced by a higher proportion of bonds being taken up in pension products' portfolios in recent years; this is all the more relevant in light of the monetary policy response to the health-generated recession.
c) The transparency of cost disclosures is not improving.
d) While it seemed unlikely that inflation – just like interest rates – would turn into deflation, and the consequences of the "non-conventional" monetary policies of central banks on possible market "bubbles" are still unchartered, currently inflation (with its known devastating impact on the purchasing power of pension income) is surging, hitting record high after record high.
e) Taxes on long-term and pension savings do not show any significant downward trend either.

The pan-European Personal Pension (PEPP) product

In an attempt to revitalise voluntary pension savings, the EU engaged in a project to create an EU quality label for personal retirement products, mainly to enable cross-border workers to save simply and efficiently for retirement. Named the pan-European Personal Pension product (PEPP), it is designed as a voluntary/personal pension product (pillar III), and should be:

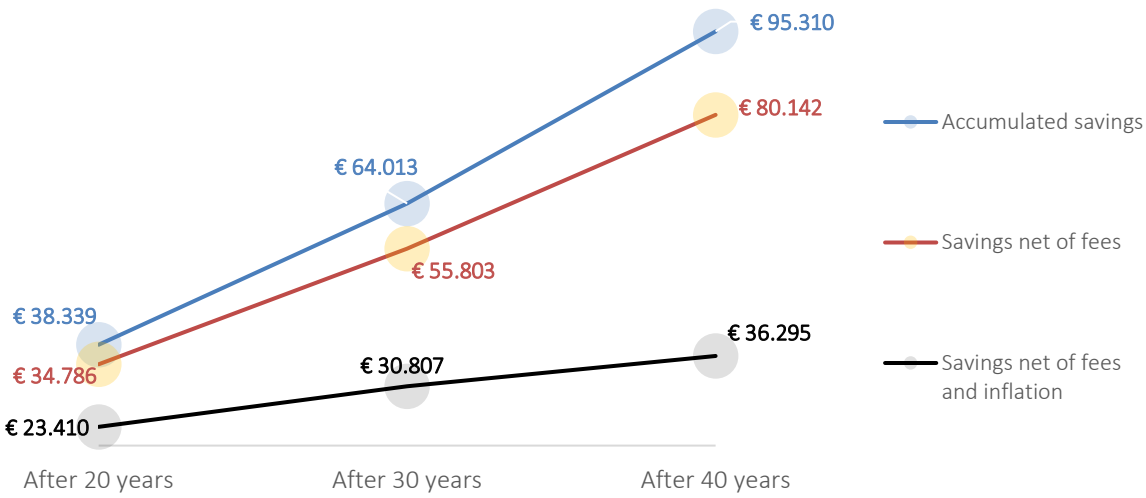
- portable, allowing the PEPP saver to move across Europe and either continue contributing to his PEPP or switch to a new national sub-account without fees;
- simple, transparent and cost-efficient, embedding proper long-term risk-mitigation techniques; and
- benefiting of tax-incentives in a harmonised manner.

The last two objectives have not been attained – yet. First, taxation is still the sovereign competence of EU Member States and found strong opposition from national Governments, although the Commission and European Parliament have asked or recommended it.[33]

Second, EIOPA allowed insurance-based investment products (IBIPs) manufacturers to charge the cost of guarantees separately from the "all inclusive" 1% cap for the basic PEPP.[34] What is more, is that the capital protection is a "scam" enshrined by EU law. The fact that EU savers would be informed that their capital (meaning accumulated contributions) would be protected, but only after the deduction of fees and without taking into account inflation, is highly misleading.[35]

[33] Most recently, the European Parliament's Economic and Monetary Affairs' (ECON) own initiative report on the Further Development of the Capital Markets Union (CMU) does contain a resolution to incentivise and harmonise PEPP tax treatments across the EU; however, at the time of writing, the resolution was not yet final.
[34] See EIOPA Final Regulatory Technical Standards (RTS) supplementing Regulation (EU) 2019/1238 on the PEPP: https://www.eiopa.europa.eu/sites/default/files/publications/eiopa-20-500_pepp_draft_rtss.pdf.
[35] See BETTER FINANCE YouTube Video on the "PEPP Capital Protection SCAM".

Graph GR7. Nominal, net and real capital protection



Source: BETTER FINANCE PEPP Level 2 position paper

Pension products have the longest investment horizon, usually until retirement age, which should imply 35 to 40 years of investments. The cumulative effect of inflation, assuming a modest inflation rate, over 40 years would decrease the value of savings by 56%.

*What is a "**nominal rate**" of return?*

A *nominal* value and rate represent the actual amount of money (or mathematical result) of an investment. *Nominal returns* or profits in *nominal terms* designate the current entitlement from an investment at a certain point in time.

E.g.: A €100 investment that increase by a quarter will have a nominal value of €125 (nominal profit of €25) or a nominal rate of return of 25%.

In finance, rates are mostly expressed in *nominal* and, usually, *gross* terms. This shows the pure profit generated by an investment before fees, commissions, taxes are deducted and before inflation is adjusted for.

Nominal returns can be recalculated into ***real returns*** (see right-hand side) by ***adjusting for inflation***.

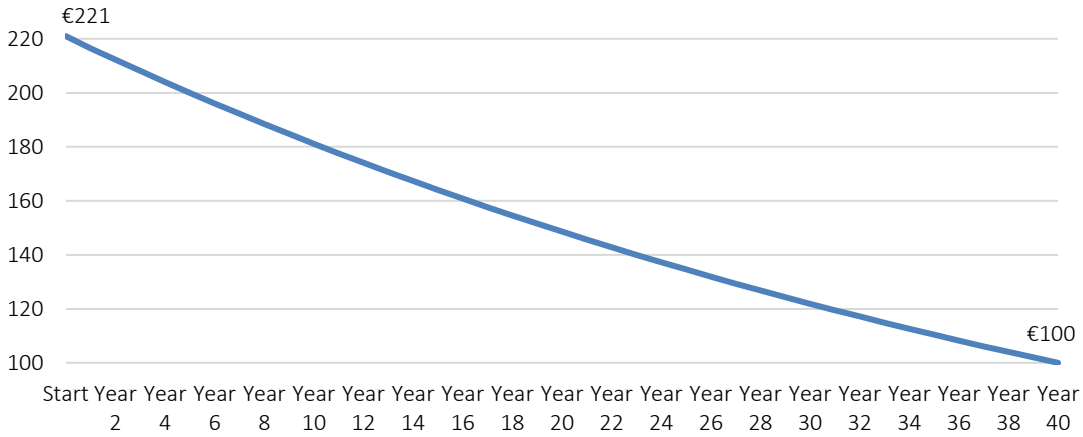
*What is a "**real rate**" of return?*

The ***real*** rate is a nominal rate adjusted by ***inflation***. The real return is a "down to earth" indicator because it factors in the practicality (*reality*) of actually using the money:

- If inflation has been positive, then the *real value* of money will be smaller than the *nominal value*.
- If inflation has been negative, then the *real value* of money will be higher than the *nominal one*.

This is because inflation (or deflation) shows how many goods or services one can buy with the same amount of money at different points in time. Economists call it the *purchasing power* and it calculates whether the same €10 bill earned in 2010 (for instance) can be exchanged for less, the same, or more of the same goods in 2020 (for instance).

Graph GR8. Real value of savings



Source: BETTER FINANCE PEPP Level 2 position paper

BETTER FINANCE highlights and warns about the "money illusion" and how detrimental it is to consider pension savings in nominal terms rather than in **real** terms, i.e., adjusting for inflation.

II. COUNTRY PROFILES

This second part onward analyses each country profile available in this study. Tables GR9 (A and B) include some key indicators of the pension systems in the countries under review in this research report. These indicators, explained below, are representative of the sustainability of a pension system, or otherwise the pressure on State (public) pensions. Our aim is to highlight the importance of additional private pension savings for pension adequacy.

What is old-age dependency ratio?

It is 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:

- when the ratio is low (e.g., Slovakia with 25% or 1 pensioner to 4 workers), it means that the pressure on the state pension is low;
- when the ratio is high (e.g., Italy with 37% or 1 pensioner to less than 3 workers), it means that the burden on PAYG schemes is high, and it can be alleviated through private pension sources.

What is population ageing trend?

An ageing population means that the number of retirees increases relative to the number of workers. This indicator refers to public (PAYG) pensions.

The effect is that the same pension contributions need to pay for a higher number of pensioners, which can make it difficult for the state pension to ensure an adequate level of retirement income stream.

What is the projected old-age dependency ratio?

It shows how the number of pensioners to working people will evolve in time.

If the old-age dependency ratio is now, on average, 1-to-3, by 2050 this level will be for most countries in this Report above 50%. In other words, every state pension will depend on the level of contributions of almost two working-age individuals.

What is the net equity of households?

It represents the value of technical (mathematical) provisions insurance and pension fund providers hold to pay future pension liabilities (entitlements of savers). This indicator is expressed both in nominal terms (in € billion) and as a percentage of the GDP for 2019. Therefore:

• a high value-to-GDP rate of *net equity of households* reflects well established privately funded systems, indicating a lower dependency on state pensions;

• a low value-to-GDP shows either that the private system is relatively new (as in Romania or Bulgaria) or that households do not contribute too much to pension funds and life insurances, relying more on state pensions.

What is the aggregate replacement ratio for pensions?

It represents the ratio between to median individual pension income of population aged 65-74 relative to median individual earnings from work of population aged 50-59, excluding other social benefits.

Note: In the previous editions of this report, the indicator used was *net pension replacement rate* – aggregated by the OECD – which was discontinued in 2019. Thus, the research team replaced it with the *aggregate replacement ratio for pensions* computed by Eurostat.

Table GR9(A). EUROPEAN UNION (EU27) at the end of 2019, except otherwise provided			
Net equity of households in pension funds reserves (in € bln)	4,232	Net equity of households in pension funds reserves as % of GDP	30.30%
Net equity of households in life insurance reserves (in € bln)	5,226	Net equity of households in life insurance reserves as % of GDP	37.40%
Active population (mil.), 2020	214.4	Old-Age dependency ratio, old (% of working population)	32.40%
Population ageing trend (2020-2050)	61%	Projected old-age dependency ratio by 2050	52%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			57%

Source: for both parts, BETTER FINANCE own composition based on OECD, WorldBank, Eurostat data

Table GR9(B). Country Profiles (end 2019, except otherwise provided)			
Austria			
Net equity of households in pension funds reserves (in € bln)	60	Net equity of households in pension funds reserves as % of GDP	15.10 %
Net equity of households in life insurance reserves (in € bln)	83	Net equity of households in life insurance reserves as % of GDP	20.90 %
Active population (mil.), 2020	4.6	Old-Age dependency ratio, old (% of working population), 2020	28.93 %
Population ageing trend (2020-2050)	63%	Projected old-age dependency ratio by 2050	47.20 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			61%
Belgium			
Net equity of households in pension funds reserves (in € bn), 2020	120	Net equity of households in pension funds reserves as % of GDP, 2020	27%

Net equity of households in life insurance reserves (in € bn), 2020	204	Net equity of households in life insurance reserves as % of GDP, 2020	45.20 %
Active population (mil.) 2020	5.1	Old-Age dependency ratio, old (% of working population), 2020	30.22 %
Population ageing trend (2020-2050)	48%	Projected old-age dependency ratio by 2050	44.80 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			46%
Bulgaria			
Net equity of households in pension funds reserves (in € bn)	8	Net equity of households in pension funds reserves as % of GDP	13.20 %
Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	1.30 %
Active population (mil.), 2020	3.2	Old-Age dependency ratio, old (% of working population), 2020	33.62 %
Population ageing trend (2020-2050)	64%	Projected old-age dependency ratio by 2050	55.00 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			34%
Croatia			
Net equity of households in pension funds reserves (in € bn)	15	Net equity of households in pension funds reserves as % of GDP	27.70 %
Net equity of households in life insurance reserves (in € bn)	3	Net equity of households in life insurance reserves as % of GDP	4.70 %
Active population (mil.), 2020	1.8	Old-Age dependency ratio, old (% of working population), 2020	33.10 %
Population ageing trend (2020-2050)	59%	Projected old-age dependency ratio by 2050	52.50 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			39%
Denmark			
Net equity of households in pension funds reserves (in € bn)	212	Net equity of households in pension funds reserves as % of GDP	68.00 %
Net equity of households in life insurance reserves (in € bn)	293	Net equity of households in life insurance reserves as % of GDP	93.90 %
Active population (mil.), 2020	3.0	Old-Age dependency ratio, old (% of working population), 2020	31.73 %
Population ageing trend (2020-2050)	37%	Projected old-age dependency ratio by 2050	43.40 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			45%
Estonia			
Net equity of households in pension funds reserves (in € bn)	5	Net equity of households in pension funds reserves as % of GDP	16.80 %

Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	2%
Active population (mil.), 2020	0.7	Old-Age dependency ratio, old (% of working population), 2020	32.27 %
Population ageing trend (2020-2050)	52%	Projected old-age dependency ratio by 2050	49.10 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			43%
France			
Net equity of households in pension funds reserves (in € bn)	0	Net equity of households in pension funds reserves as % of GDP	0%
Net equity of households in life insurance reserves (in € bn)	2,084	Net equity of households in life insurance reserves as % of GDP	85.90 %
Active population (mil.), 2020	30.0	Age dependency ratio, old (% of working-age population),2020	33.69 %
Population ageing trend (2020-2050)	46%	Projected old-age dependency ratio by 2050	49%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			65%
Germany			
Net equity of households in pension funds reserves (in € bn)	911	Net equity of households in pension funds reserves as % of GDP	26%
Net equity of households in life insurance reserves (in € bn)	1,069	Net equity of households in life insurance reserves as % of GDP	31.00 %
Active population (mil.), 2020	43.4	Old-Age dependency ratio, old (% of working population), 2020	33.70 %
Population ageing trend (2020-2050)	43%	Projected old-age dependency ratio by 2050	48.30 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			44%
Italy			
Net equity of households in pension funds reserves (in € bn)	238	Net equity of households in pension funds reserves as % of GDP	13.30 %
Net equity of households in life insurance reserves (in € bn)	808	Net equity of households in life insurance reserves as % of GDP	45%
Active population (mil.), 2020	25.1	Old-Age dependency ratio, old (% of working population), 2020	36.57 %
Population ageing trend (2020-2050)	68.15 %	Projected old-age dependency ratio by 2050	62%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			73%
Latvia			
Net equity of households in pension funds reserves (in € bn)	5	Net equity of households in pension funds reserves as % of GDP	16.00 %

Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	2.40 %
Active population (mil.), 2020	0.98	Old-Age dependency ratio, old (% of working population), 2020	32.90 %
Population ageing trend (2020-2050)	72%	Projected old-age dependency ratio by 2050	56.70 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			38%
Lithuania			
Net equity of households in pension funds reserves (in € bn)	4	Net equity of households in pension funds reserves as % of GDP	8.30 %
Net equity of households in life insurance reserves (in € bn)	1	Net equity of households in life insurance reserves as % of GDP	2%
Active population (mil.), 2020	1.5	Old-Age dependency ratio, old (% of working population), 2020	32.26 %
Population ageing trend (2020-2050)	75%	Projected old-age dependency ratio by 2050	56.50 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			43%
Netherlands			
Net equity of households in pension funds reserves (in € bn)	1,725	Net equity of households in pension funds reserves as % of GDP*	212.90%
Net equity of households in life insurance reserves (in € bn)	170	Net equity of households in life insurance reserves as % of GDP*	21.00 %
Active population (mil.), 2020	9.4	Old-Age dependency ratio, old (% of working population), 2020	31%
Population ageing trend (2020-2050)	44%	Projected old-age dependency ratio by 2050	45%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			51%
Poland			
Net equity of households in pension funds reserves (in € bn), 2020	40	Net equity of households in pension funds reserves as % of GDP, 2020	7.80 %
Net equity of households in life insurance reserves (in € bn), 2020	15	Net equity of households in life insurance reserves as % of GDP, 2020	3.00 %
Active population (mil.), 2020	18.2	Old-Age dependency ratio, old (% of working population), 2020	28.37 %
Population ageing trend (2020-2050)	84%	Projected old-age dependency ratio by 2050	52.20 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			60%
Romania			
Net equity of households in pension funds reserves (in € bn), 2020	16	Net equity of households in pension funds reserves as % of GDP, 2020	7.40 %

Net equity of households in life insurance reserves (in € bn), 2020	2	Net equity of households in life insurance reserves as % of GDP, 2020	0.90 %
Active population (mil.), 2020	9.0	Old-Age dependency ratio, old (% of working population), 2020	29.47 %
Population ageing trend (2020-2050)	85%	Projected old-age dependency ratio by 2050	54.50 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			41%
Slovakia			
Net equity of households in pension funds reserves (in € bn), 2020	13	Net equity of households in pension funds reserves as % of GDP, 2020	14%
Net equity of households in life insurance reserves (in € bn), 2020	5	Net equity of households in life insurance reserves as % of, 2020	5%
Active population (mil.), 2020	2.7	Old-Age dependency ratio, old (% of working population), 2020	24.65 %
Population ageing trend (2020-2050)	109%	Projected old-age dependency ratio by 2050	51.40 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			53%
Spain			
Net equity of households in pension funds reserves (in € bn), 2020	176	Net equity of households in pension funds reserves as % of GDP, 2020	16%
Net equity of households in life insurance reserves (in € bn), 2020	200	Net equity of households in life insurance reserves as % of GDP, 2020	18%
Active population (mil.), 2020	22.8	Old-Age dependency ratio, old (% of working population), 2020	30.44 %
Population ageing trend (2020-2050)	95%	Projected old-age dependency ratio by 2050	59.50 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2019			70%
Sweden			
Net equity of households in pension funds reserves (in € bn), 2020	531	Net equity of households in pension funds reserves as % of GDP, 2020	107.10%
Net equity of households in life insurance reserves (in € bn), 2020	116	Net equity of households in life insurance reserves as % of GDP, 2020	24%
Active population (mil.), 2020	5.5	Old-Age dependency ratio, old (% of working population), 2020	32.76 %
Population ageing trend (2020-2050)	19.04 %	Projected old-age dependency ratio by 2050	39.00 %
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			55%

United Kingdom			
Net equity of households in pension funds reserves (in € bn)	3,571	Net equity of households in pension funds reserves as % of GDP*	137.20%
Net equity of households in life insurance reserves (in € bn)	830	Net equity of households in life insurance reserves as % of GDP*	31.90%
Active population (mil.), 2020	34.7	Old-Age dependency ratio, old (% of working population), 2020	29.30%
Population ageing trend (2020-2050)	-	Projected old-age dependency ratio by 2050	-
Aggregate replacement ratio for pensions (excl. social benefits), total, 2018			55%

Source: Eurostat; OECD; World Bank; own composition

Table GR10. Funding level of private pension systems

	Pension Funds' assets (2020)		All retirement vehicles' assets (2020)	
	% of GDP	in € mil	% of GDP	in € mil
Austria	7%	24,969	n.a	
Belgium	9%	41,959	37%	169,071
Bulgaria	15%	8,900	15%	8,900
Croatia	35%	16,959	35%	16,959
Denmark	58%	182,588	239%	436,290
Estonia	20%	5,302	20%	5,302
France	3%	58,500	11%	254,241
Germany	8%	269,582	n.a.	
Italy	10%	161,658	13%	209,158
Latvia	2%	610	19%	5,707
Lithuania	10%	4,663	10%	4,663
Netherlands	210%	1,679,386	n.a.	
Poland	6%	32,420	6%	32,420
Romania	7%	16,041	7%	16,041
Slovak Republic	14%	13,195	14%	13,195
Spain	10%	117,359	14%	161,373
Sweden	4%	19,719	95%	468,546
United Kingdom	119%	2,641,370	n.a.	

Source: OECD, 2021

In some countries the level of accumulated assets in pension funds is almost the same as that of the total value of pension vehicles (such as in Italy, Bulgaria or Romania), in others we see that the total amount of funded retirement products is up to four times higher than the amount for pension funds (Denmark – 219% of GDP).

III. RETURN ATTRIBUTION

Pension returns drivers

This report seeks to explain the (often poor) performance of pension vehicles, especially when compared to capital market returns. The underperformance (compared to a benchmark) of most pension vehicles can be explained by several return *drivers*:

- **inflation**, which over a full contribution period (40 years) at a modest rate can erode even more than 50% of nominal returns,
- pension portfolios' **asset allocation** and **performance**,
- the **asset managers' skills** in terms of picking securities and market timing,
- the **investment charges** deducted by asset managers and other financial intermediaries, to a great extent from net real returns of private pensions,
- ultimately by the **tax** burden.

These return drivers are analysed separately in the following sections.

Inflation

As explained in the previous section, inflation is a measurement for the *purchasing power of money* over time: positive inflation rate means that the ***real value*** of our money decreases over time; negative inflation rate means that the ***real value*** of our money increases.

For several of the countries analysed in this research report, inflation rates were significant and consequently had a severe impact on returns in real terms over the periods in review. One has to keep in mind that even for those countries with moderate inflation, the compound effect over long periods, as applicable to the case of retirement savings, can lead to considerable losses in purchasing power.

Table GR11(A). Inflation in Eurozone Member States (in %)											
Year	AUSTRIA	BELGIUM	ESTONIA	FRANCE	GERMANY	ITALY	LATVIA	LITHUANIA	NETHERLANDS	SLOVAKIA	SPAIN
2000	1.8%	3.0%	5.0%	1.8%	2.2%	2.7%	1.7%	1.7%	2.9%	8.4%	4.0%
2001	1.8%	1.9%	4.2%	1.5%	1.4%	2.3%	3.2%	2.0%	5.1%	6.7%	2.5%
2002	1.7%	1.3%	2.7%	2.2%	1.1%	3.0%	1.5%	-0.9%	3.2%	3.2%	4.0%
2003	1.3%	1.6%	1.2%	2.4%	1.1%	2.5%	3.6%	-1.3%	1.6%	9.4%	2.7%
2004	2.5%	2.0%	4.8%	2.2%	2.3%	2.3%	7.3%	2.8%	1.3%	5.9%	3.3%
2005	1.5%	2.8%	3.7%	1.8%	2.1%	2.0%	7.1%	3.0%	2.0%	3.8%	3.7%
2006	1.6%	2.1%	5.1%	1.7%	1.4%	2.1%	6.7%	4.6%	1.7%	3.7%	2.7%
2007	3.5%	3.1%	9.7%	2.8%	3.1%	2.8%	14.0%	8.2%	1.6%	2.5%	4.3%
2008	1.5%	2.7%	7.5%	1.2%	1.1%	2.4%	10.4%	8.5%	1.7%	3.5%	1.4%
2009	1.1%	0.3%	-1.9%	1.0%	0.9%	1.1%	-1.4%	1.2%	0.7%	0.0%	0.9%
2010	2.2%	3.4%	5.4%	2.0%	1.8%	2.1%	2.4%	3.6%	1.8%	1.3%	2.9%
2011	3.4%	3.2%	4.1%	2.7%	2.2%	3.7%	3.9%	3.5%	2.5%	4.6%	2.3%
2012	2.9%	2.1%	3.6%	1.5%	2.1%	2.6%	1.6%	2.9%	3.4%	3.4%	3.0%
2013	2.0%	1.2%	2.0%	0.8%	1.2%	0.6%	-0.4%	0.5%	1.4%	0.4%	0.3%
2014	0.8%	-0.4%	0.1%	0.1%	0.1%	0.0%	0.3%	-0.1%	-0.1%	-0.1%	-1.1%
2015	1.1%	1.5%	-0.2%	0.3%	0.2%	0.1%	0.4%	-0.2%	0.5%	-0.5%	-0.1%
2016	1.6%	2.2%	2.4%	0.8%	1.6%	0.5%	2.1%	2.0%	0.7%	0.2%	1.4%
2017	2.3%	2.1%	3.8%	1.2%	1.5%	1.0%	2.2%	3.8%	1.2%	2.0%	1.2%
2018	1.7%	2.2%	3.3%	1.9%	1.7%	1.2%	2.5%	1.8%	1.8%	1.9%	1.2%
2019	1.8%	0.9%	1.8%	1.6%	1.5%	0.5%	2.1%	2.7%	2.8%	3.2%	0.8%
2020	1.0%	0.4%	-0.9%	0.03%	-0.7%	-0.3%	-0.5%	-0.1%	0.9%	1.8%	-0.6%
AVG	1.9%	1.9%	3.2%	1.5%	1.4%	1.7%	3.3%	2.4%	1.8%	3.1%	1.9%

Source: BETTER FINANCE own composition based on Eurostat data

Table GR11(B). Inflation in non-Eurozone Member States (in %)							
Year	BULGARIA	CROATIA	DENMARK	POLAND	ROMANIA	SWEDEN	UK
2000	11.3%	5.9%	2.4%	8.4%	40.7%	1.3%	0.8%
2001	4.8%	2.4%	2.0%	3.5%	30.3%	3.2%	1.1%
2002	3.8%	2.8%	2.6%	0.8%	17.8%	1.7%	1.6%
2003	5.6%	2.2%	1.2%	1.7%	14.2%	1.8%	1.3%
2004	4.0%	2.0%	1.0%	4.3%	9.3%	0.9%	1.6%
2005	7.4%	4.0%	2.3%	0.8%	8.7%	1.2%	1.9%
2006	6.1%	2.1%	1.6%	1.4%	4.9%	1.5%	3.0%
2007	11.6%	5.4%	2.4%	4.3%	6.7%	2.5%	2.1%
2008	7.2%	2.8%	2.5%	3.3%	6.4%	2.1%	3.0%
2009	1.6%	1.8%	1.1%	3.9%	4.7%	2.8%	2.9%
2010	4.4%	1.7%	2.8%	2.9%	7.9%	2.1%	3.6%
2011	2.0%	2.1%	2.4%	4.6%	3.2%	0.4%	4.3%
2012	2.8%	4.4%	1.9%	2.1%	4.6%	1.0%	2.6%
2013	-0.9%	0.5%	0.5%	0.6%	1.3%	0.4%	2.0%
2014	-2.0%	-0.1%	0.1%	-0.7%	1.0%	0.3%	0.5%
2015	-0.9%	-0.3%	0.3%	-0.4%	-0.7%	0.7%	0.2%
2016	-0.5%	0.7%	0.3%	0.9%	-0.1%	1.7%	1.6%
2017	1.8%	1.3%	0.8%	1.7%	2.6%	1.7%	2.9%
2018	2.3%	1.0%	0.7%	0.9%	3.0%	2.2%	2.1%
2019	3.1%	1.3%	0.8%	3.0%	4.0%	1.7%	1.3%
2020	0.02%	-0.3%	0.4%	3.4%	1.8%	0.6%	-
AVG	3.5%	2.1%	1.4%	2.4%	7.8%	1.5%	-

Source: BETTER FINANCE own composition based on Eurostat data

Table GR11(C). EU27 inflation					
2000	2001	2002	2003	2004	2005
4.0%	3.0%	2.5%	2.2%	2.6%	2.4%
2006	2007	2008	2009	2010	2011
2.1%	3.4%	2.0%	1.3%	2.5%	2.8%
2012	2013	2014	2015	2016	2017
2.3%	0.8%	-0.2%	0.2%	1.1%	1.4%
2018	2019	2020	AVG		
1.6%	1.6%	0.2%	1.9%		

Source: Eurostat HICP monthly index (2015=100, prc_hicp_aind), annual averages (AAVG) are calculated by BETTER FINANCE.

Why is inflation calculated per country/region?

Inflation is a relative term and depends on the "area" where one lives.

e.g.: €10 earned in 2010 will be worth more in 2020 in Germany than in Austria.

In 2020, we can observe deflation (negative inflation) in several countries, which means that the purchasing power of the currency increased over the course of the year. This is the case for Estonia, Germany, Italy, Latvia, Lithuania, Spain, and Croatia. With a few exceptions, the other countries in scope have recorded very low inflation rates. This can be attributed to decreasing prices of consumer goods and services, but also to lower economic output and pressure on the labour market. From a central bank's point of view, deflation can be alarming as it reveals an undesired state of the economy. At the same time, deflation slightly increases real returns. In real terms, a 5% nominal return in 2020 actually means 5.53% given a deflation of -0.5%.

Aiming to maintain inflation rates below, but close to, 2%, the European Central Bank undertook considerable monetary policy efforts to bring the rates back to the desired levels.

Table GR12. Public sector deficit and debt (in %)

	Public Sector Deficit as a % of GDP						Public Debt as a % of GDP					
	2015	2016	2017	2018	2019	2020	2015	2016	2017	2018	2019	2020
EU	-1.9	-1.4	-0.8	-0.4	-0.5	-6.9	84.8	84.0	81.5	79.5	77.5	90.7
Austria	-1.0	-1.5	-0.8	0.2	0.6	-8.9	84.9	82.8	78.5	74	70.5	83.9
Belgium	-2.4	-2.4	-0.7	-0.8	-1.9	-9.4	105.2	105.0	102.0	99.8	98.1	114.1
Bulgaria	-1.7	0.2	1.2	2.0	2.1	-3.4	26.0	29.3	25.3	22.3	20.2	25
Croatia	-3.5	-0.9	0.8	0.2	0.3	-7.4	84.3	80.8	77.6	74.3	72.8	88.7
Denmark	-1.2	0.1	1.8	0.7	3.8	-1.1	39.8	37.2	35.9	34	33.3	42.2
Estonia	0.1	-0.4	-0.7	-0.6	0.1	-4.9	10.0	9.9	9.1	8.2	8.4	18.2
France	-3.6	-3.6	-3.0	-2.3	-3.1	-9.2	95.6	98.0	98.3	98	97.6	115.7
Germany	1.0	1.2	1.4	1.8	1.5	-4.2	72.3	69.3	65.1	61.8	59.7	69.8
Italy	-2.6	-2.4	-2.4	-2.2	-1.6	-9.5	135.3	134.8	134.1	134.4	134.6	155.8
Latvia	-1.4	0.2	-0.8	-0.8	-0.6	-4.5	37.1	40.4	39.0	37.1	37	43.5
Lithuania	-0.3	0.2	0.5	0.6	0.5	-7.4	42.5	39.7	39.1	33.7	35.9	47.3
Netherlands	-2.1	0.0	1.3	1.4	1.8	-4.3	64.7	61.9	56.9	52.4	48.7	54.5
Poland	-2.6	-2.4	-1.5	-0.2	-0.7	-7	51.3	54.2	50.6	48.8	45.6	57.5
Romania	-0.6	-2.6	-2.6	-2.9	-4.4	-9.2	37.8	37.3	35.1	34.7	35.3	47.3
Slovakia	-2.7	-2.6	-1.0	-1.0	-1.3	-6.2	51.9	52.4	51.5	49.6	48.2	60.6
Spain	-5.2	-4.3	-3.0	-2.5	-2.9	-11	99.3	99.2	98.6	97.4	95.5	120
Sweden	0.0	1.0	1.4	0.8	0.6	-3.1	43.7	42.3	40.7	38.9	35	39.9
UK	-4.6	-3.3	-2.5	-2.2	-2.1	-	86.9	86.8	86.2	85.7	85.4	-

Source: Eurostat: (1) Public Sector Deficit as a % of GDP; (2) Public Debt as a % GDP

In 2020, public spending on healthcare and economic support (due to the COVID-lockdowns) have put strains on state coffers. All countries analysed have recorded deficits, ranging from 1.1% of GDP (Denmark) to 11% of GDP (Spain). As such, public debt has increased everywhere: at EU27 level,

public debt increased by 13.2 p.p., and in the countries analysed the public debt increase ranges between 4.8 p.p. (Bulgaria) to 24.5 p.p. (Spain).

We recall the two criteria concerning public deficit and debt deriving from the Maastricht Treaty, i.e., EU countries should not exceed:

- *"-3% ratio of the planned or actual government deficit to gross domestic product at market prices"*;[36]
- *"60% for the ratio of government debt to gross domestic product at market prices"*.[37]

In this light, more than half of the countries analysed are still under the 60% threshold and 16 out of the 17 have exceeded the 3% deficit threshold. Data for the UK is no longer available from Eurostat, so it was excluded from the analysis.

Asset Allocation

There are striking differences between the asset allocation of pension funds across countries and products.

Equities dominate only in Poland and Lithuania, being the only two jurisdictions where pension funds are more than 50% invested in shares. Bonds are the main portfolio component in 8 out of 10 countries, and at least 40% in another 6 countries. In the UK, Germany, Spain and Slovakia at least a third of the capital is invested in collective investment scheme units or other instruments; cash and deposits are marginally used, mostly for short-term liquidity purposes.

The average portfolio composition remained almost constant, with a slight shift from liquidity and bonds to collective investment schemes (11% in 2015 to 15% in 2020) across the jurisdictions analysed in this report.

The decrease in government bond interest rates since 1999 have had a positive impact on outstanding assets, especially in countries where this asset class dominates, but it reduces the capacity to provide a good remuneration on new investment flows. The downside, starting in 2019, is that yields for sovereign bonds have started to turn negative.

In this edition we also continue to observe striking differences between pension funds' asset allocations across European countries as shown by the following table:[38]

[36] Article 1 of the Protocol No. 12 on the excessive deficit procedure of the Treaty on European Union, OJ C 115, 9.5.2008, p. 279–280.
[37] Ibid.
[38] We could not find any available data for France.

Table GR13(A). Pension funds' asset allocation, [2020, in % of total assets]					
Country	Year	Cash and deposits	Bills and bonds	Equities	Other
Austria	2005	3%	53%	37%	4%
	2016	9%	46%	33%	12%
	2017	7%	44%	35%	13%
	2018	8%	45%	33%	14%
	2019	7%	43%	34%	16%
	2020	2%	32%	29%	37%
Belgium	2005	2%	6%	9%	78%
	2010	7%	43%	38%	13%
	2015	4%	44%	42%	10%
	2016	*N/A*	*N/A*	*N/A*	*N/A*
	2017	5%	45%	43%	7%
	2018	6%	47%	41%	5%
	2019	2%	40%	42%	15%
	2020	3%	46%	38%	13%
Bulgaria	2015	12%	65%	19%	4%
	2016	16%	63%	17%	4%
	2017	6%	61%	17%	16%
	2018	9%	57%	17%	17%
	2019	8%	66%	12%	14%
	2020	8%	61%	12%	19%
Croatia	2015	3%	73%	24%	0%
	2016	5%	72%	22%	1%
	2017	4%	73%	22%	0%
	2018	6%	72%	21%	1%
	2019	2%	72%	25%	1%
	2020	4%	69%	26%	1%
Denmark	2005	1%	50%	26%	21%
	2010	3%	42%	5%	50%
	2015	0%	63%	18%	19%
	2016	0%	62%	17%	21%
	2017	1%	59%	19%	21%
	2018	0%	59%	21%	19%
	2019	0%	59%	21%	19%
	2020	0%	52%	21%	27%
Estonia	2010	9%	17%	4%	69%
	2015	20%	48%	31%	0%
	2016	23%	43%	34%	0%
	2017	4%	59%	36%	0%
	2018	3%	62%	34%	1%
	2019	4%	56%	40%	0%
	2020	3%	48%	49%	0%
France	2020	2%	68%	12%	18%

Germany	2005	3%	31%	35%	2%
	2010	2%	46%	5%	46%
	2015	4%	54%	5%	38%
	2016	4%	51%	6%	39%
	2017	4%	50%	6%	40%
	2018	4%	49%	5%	41%
	2019	4%	47%	6%	43%
	2020	3%	46%	7%	44%
Italy	2005	5%	37%	10%	17%
	2010	6%	47%	11%	36%
	2015	4%	50%	20%	27%
	2016	4%	49%	20%	26%
	2017	6%	45%	21%	28%
	2018	6%	45%	19%	30%
	2019	6%	45%	21%	28%
	2020	6%	44%	23%	28%
Latvia	2015	19%	46%	35%	1%
	2016	12%	61%	23%	4%
	2017	10%	57%	29%	4%
	2018	6%	42%	51%	1%
	2019	8%	59%	31%	2%
	2020	10%	56%	31%	3%
Lithuania	2015	9%	51%	38%	2%
	2016	9%	46%	41%	1%
	2017	5%	46%	46%	2%
	2018	7%	47%	44%	2%
	2019	2%	20%	75%	3%
	2020	2%	21%	74%	3%
NL*	2005	2%	41%	46%	4%
	2010	4%	56%	20%	20%
	2015	3%	46%	38%	13%
	2016	2%	45%	39%	14%
	2017	3%	48%	46%	2%
	2018	3%	51%	44%	2%
	2019	3%	50%	46%	0%
	2020	3%	52%	45%	0%
Poland	2005	4%	63%	32%	0%
	2010	3%	59%	36%	1%
	2015	7%	10%	82%	0%
	2016	7%	9%	83%	1%
	2017	6%	9%	85%	0%
	2018	6%	9%	85%	0%
	2019	7%	10%	82%	0%
	2020	4%	11%	85%	0%

Romania	2010	7%	80%	12%	0%
	2015	5%	73%	22%	0%
	2016	7%	71%	22%	0%
	2017	9%	68%	23%	0%
	2018	8%	72%	20%	0%
	2019	4%	71%	25%	0%
	2020	1%	74%	25%	0%
Slovakia	2005	78%	11%	7%	4%
	2010	27%	71%	1%	0%
	2015	17%	78%	2%	2%
	2016	12%	80%	3%	5%
	2017	12%	58%	2%	28%
	2018	11%	58%	2%	28%
	2019	11%	57%	3%	30%
	2020	5%	59%	3%	33%
Spain	2005	5%	58%	19%	18%
	2010	19%	58%	12%	11%
	2015	17%	62%	11%	9%
	2016	15%	64%	14%	7%
	2017	11%	47%	13%	28%
	2018	10%	48%	13%	29%
	2019	8%	44%	14%	33%
	2020	9%	44%	14%	34%
Sweden	2005	1%	58%	34%	7%
	2010	N/A	N/A	N/A	N/A
	2015	2%	67%	18%	13%
	2016	N/A	N/A	N/A	N/A
	2017	N/A	N/A	N/A	N/A
	2018	N/A	N/A	N/A	N/A
	2019	2%	45%	24%	29%
	2020	2%	42%	26%	30%
UK	2005	3%	19%	39%	27%
	2010	N/A	N/A	N/A	N/A
	2015	2%	34%	20%	43%
	2016	4%	43%	22%	31%
	2017	2%	28%	13%	57%
	2018	2%	30%	9%	59%
	2019	2%	30%	9%	59%
	2020	2%	45%	26%	27%
AVG 2020		**4%**	**48%**	**30%**	**18%**

Sources: OECD Pension Funds in Figures Preliminary Data 2021;

The asset allocation data in this table include both direct investments in cash and deposits, bills and bonds (both sovereign and corporate), equities and indirect investments through collective investment schemes (investment funds such as UCITS[39] or AIF[40]) and other assets, such as loans, land and buildings, real estate investment trusts (REITS), hedge funds, derivatives, commodities and precious metals, insurance contracts, money market instruments, private equity funds and other structured (unallocated) products. Data for the asset allocation in collective investment schemes is not available for all jurisdictions and all years.

On average in 2020 as well, most pension funds employed a conservative/defensive investment strategy, investing more than half (51%) of the capital in debt securities (bills and bonds). Equities are the second largest position with an average of 28%.

However, there are significant deviations from the average:

- In countries such as Germany, Spain or Slovakia, the equity allocation is of small significance (7%, 14%, and 3%);
- In countries such as Poland and Lithuania, most assets are invested in equity (74% and 85%).

Table GR13(B). Evolution of average asset allocation in pension funds				
	Cash & Deposits	Bills & bonds	Equity	Other (incl. CIS)
2015	8%	54%	27%	11%
2016	9%	54%	26%	11%
2017	6%	50%	29%	15%
2018	6%	50%	29%	16%
2019	5%	48%	30%	17%
2020	4%	48%	30%	18%
2015-2020	6%	51%	28%	15%

Source: own computations based on Table GR13(A).

So far, we were not able to obtain information on ESG-factored investments to correspond to the current reporting standards.

Asset performance

Concerning the recent ***positive capital markets returns (1999 – 2020)***, equity markets managed to rebound well above the February 2020 level by the time of writing this report. Since the beginning of the 21st century, capital market returns have been positive (moderately for equities while strongly for bonds):

[39] "UCITS" stands for Undertakings for Collective Investment in Transferable Securities, which is the most common legal form mutual funds in the EU take, in particular because of the *passporting rights*.
[40] "AIFs" stand for Alternative Investment Funds, which are all the non-UCITS funds.

- Over the last 20 years, on a nominal basis (before taking inflation into account), world stock markets have grown in value (in €) by 151%,[41] where the US stock market has grown by 176%[42] and the European ones by 74% in the last 21 years;[43]
- On a real basis (net of inflation), European stock markets (MSCI Europe NR) returned to positive cumulated performances by 2013, and once again reached significant levels by 2017 (+32%) and reached +17.4% in 2019.

Equity markets

Equity returns are more volatile in the short-term and hence need to be observed with a long-term perspective in mind. The real return calculations in this report date back to 31/12/1999 at the earliest, so we take a look at how equity markets performed over that same period. Overall, the 21st century began with one of the most severe bear markets in history and faced, in conjunction with the downward cycle of 2007-2008, two longer-lasting upward cycles from 2003-2006 and 2009-2019. Data in the table below is calculated based on gross performances (***nominal return***), then adjusted by inflation (***real return***).

Table GR14. Historical Returns on Equity Markets, yearly average

Country	Period	Nominal Return	Real return
Austria	(2000-2020)	3.2%	1.25%
Belgium	(2000-2020)	0.44%	-1.60%
Bulgaria	(2006-2020)	-9.10%	-3.61%
Croatia	(2003-2020)	5.24%	2.75%
Denmark	(2000-2020)	10.78%	9.20%
Estonia	(2000-2020)	11.95%	7.90%
Europe (EU27)	(2000-2020)	0.25%	-1.74%
France	(2000-2020)	-0.30%	-1.85%
Germany	(2000-2020)	3.29%	1.84%
Italy	(2000-2020)	-3.05%	-4.89%
Latvia	(2001-2020)	10.45%	6.12%
Lithuania	(2001-2020)	12.0%	8.6%
Netherlands	(2000-2020)	-0.34%	-2.4%
Poland	(2000-2020)	5.16%	2.5%
Romania	(2000-2020)	10.58%	1.06%
Slovakia	(2000-2020)	7.40%	4.42%
Spain	(2000-2020)	-0.91%	-2.96%
Sweden	(2000-2020)	1.43%	-0.20%

Sources: MSCI, Yahoo! Finance; Investing.com; NASDAQ Baltic; Bucharest Stock Exchange; GPW

Since not all equity indexes have the same coverage or data availability, it is difficult to perfectly compare the performances of the national equity markets. Most of the equity indices recorded negative nominal returns in 2020, ranging between -14.67% to -3.19%; the rest delivered positive

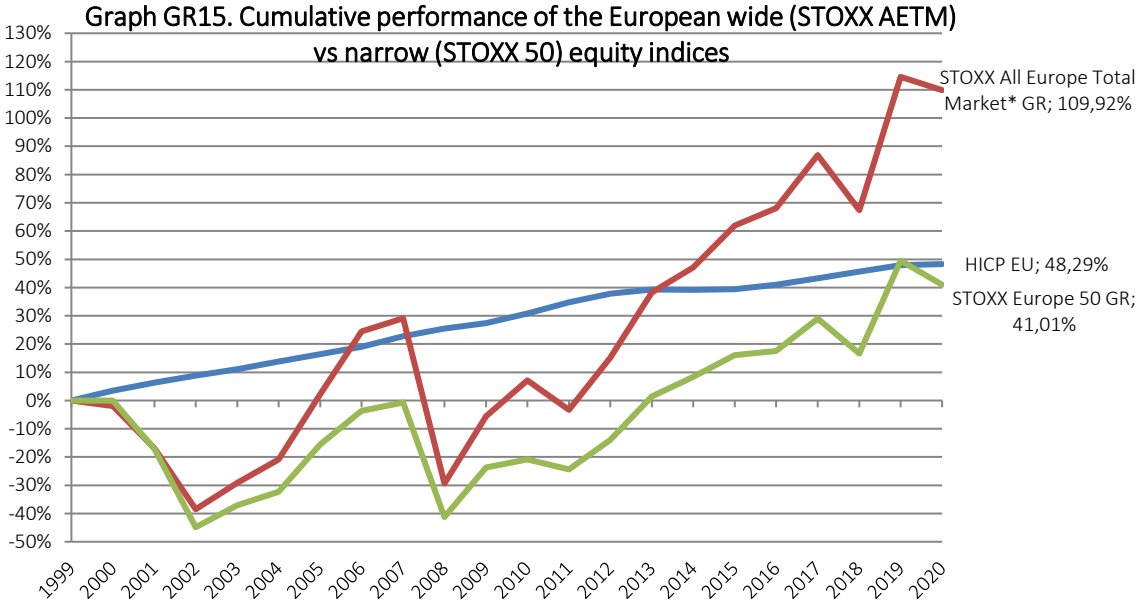
[41] As measured by the MSCI All Country World Index (ACWI) Net Returns denominated in €.
[42] As measured by the MSCI USA Net Returns Index, calculated in €.
[43] As measured by the MSCI Europe Net Returns Index, denominated in €.

nominal returns ranging between 0.03% and 32.44%. In real net terms, due to predominant deflation, 2020 returns improved slightly. On average, the real returns for the equity markets listed in Table GR14 above are 2.34 p.p. lower than the nominal returns over their respective time periods.

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

The following graph shows a comparison of the broad STOXX All Europe Total Market index which includes 1,793 European stocks (as of 2 September 2020)[44] and the much narrower Stoxx Europe 50.

Graph GR15. Cumulative performance of the European wide (STOXX AETM) vs narrow (STOXX 50) equity indices



Source: BETTER FINANCE; Eurostat; STOXX

At European level, the difference at the end of our 21-year period is an astonishing 69% in favour of the broader stock market index in nominal terms. And whereas the performance of the narrow index (29% nominal) was heavily outmatched by inflation (39%) over the last 18 years, the broader European stock market recorded a positive real performance with a cumulated gain of 34%.

[44] https://www.stoxx.com/index-details?symbol=TE1P. There was no data available for year of 2000. The performance of the narrower MSCI Europe TR (Net) index (435 components as of 02 September 2020) for that year was taken as a proxy instead.

Government bond markets

As already mentioned above, it is important to note that a decrease in interest rates translates into an increase in the mark-to-market value of bonds which had a positive impact on outstanding debt assets of pension funds. On the other hand, the capacity to provide good remuneration through new bond issuances is hereby reduced.

The following table indicates the returns of thirteen major European bond markets for the period 2000-2019.

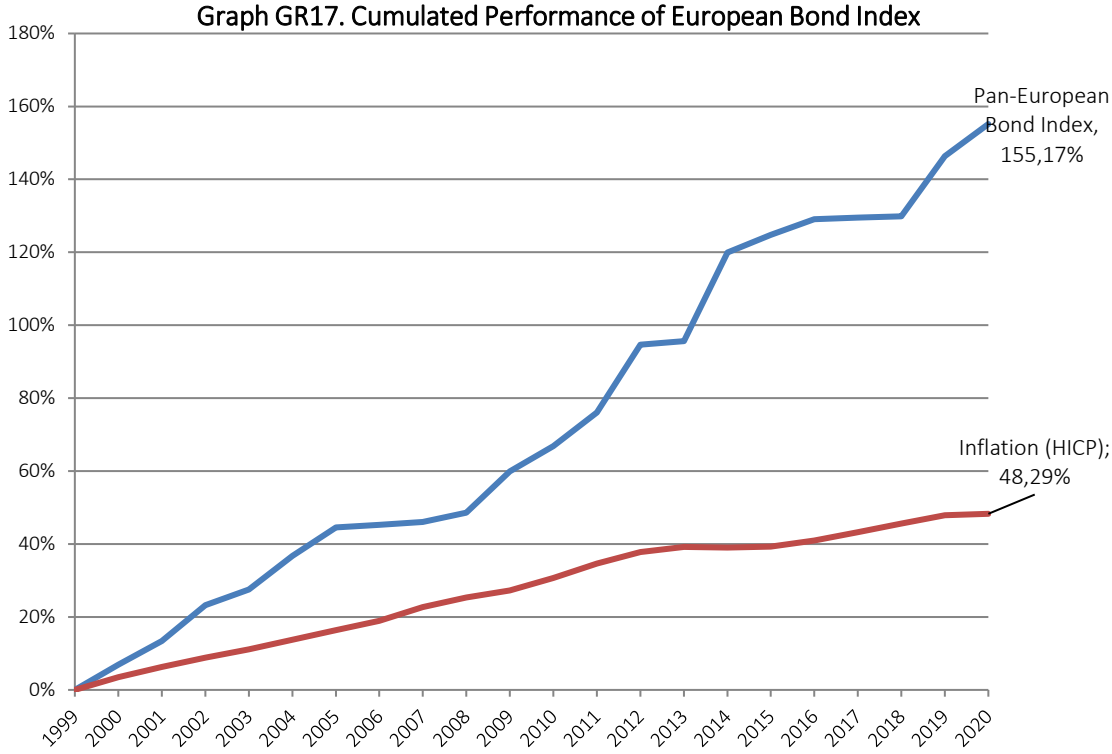
Table GR16. Historical Returns on Bond Markets, yearly average			
Country	Year	Nominal Return	Real Return
Belgium	(2008-2019)	5.15%	3.35%
Croatia	(2009-2019)	6.03%	4.76%
Denmark	(2008-2019)	4.70%	3.54%
Germany	(2008-2019)	4.15%	2.82%
Spain	(2008-2019)	5.47%	4.24%
France	(2008-2019)	4.70%	3.43%
Italy	(2008-2019)	5.33%	3.99%
Lithuania	(2008-2019)	-	-
Netherlands	(2008-2019)	4.47%	2.92%
Romania	(2008-2019)	-	-
Slovakia	(2008-2019)	-	-
Sweden	(2008-2019)	2.98%	1.54%
UK	(2008-2019)	4.52%	2.23%
EMU	(2008-2019)	4.65%	3.31%

Sources: Morningstar Direct, Eurostat HICP annual average

The European government bond markets all showed steady nominal average returns over the past 10 years, ranging between 6.03% (Croatia) and 2.98% (Sweden). Real average returns ranged even closer together, with the highest in Croatia at 4.76% and Sweden and UK at the lower margin.

The following graph shows the long-term cumulated returns of European bonds as a whole - that is both government and corporate bonds - as measured by the Barclays Pan-European TR index:

Graph GR17. Cumulated Performance of European Bond Index



Source: Eurostat; Bloomberg website; own computations

Over the last 20 years, European bonds as a whole enjoyed a very positive nominal return which was significantly higher than the return of European equities. It is difficult to foresee a continuation of this past trend given the negative interest rates reached today. However, in 2019 this index grew from 129.86% to 146% in nominal terms. Overall, the real cumulative growth of the broad bond index was of 166.2%.

What are "***equities***"?

Equities, also referred to as *shares* or *stocks*, represent a certificate of ownership over a certain part of a company or undertaking.

Equity gives the *shareholder* the right to benefit of profits (through dividends) and the obligation to support loses, proportionally to his "ownership share" over the company. At the same time, it allows the *shareholder* to take part in the decision-making process of the company.

The value of a share is primarily determined by its growth potential, coupled with the amount and frequency of *dividend* payments: see here the BETTER FINANCE video about *Investing in Shares*.[45]

If the company is going well, the ***share price goes up***.

What are "***bonds***"?

Bonds, commonly referred to as *debt* or *fixed income securities*, represent a very liquid, easily fungible, and transferable **loan**.

The borrower issues the *bond*, which has a *principal* amount (sum to be repaid), a maturity (repayment date) and *coupon* (interest rate).

Bonds are used because they facilitate a very fast financing channel for borrowers (instead of making a loan contract with each lender) and a less risky source of investment return for lenders.

The price of a bond is primarily determined by the *credit rating* of the issuer, the *principal amount* and the *maturity*.

If the issuer is doing good, then the ***bond price goes down***.

Graph GR15 shows that this period has indeed been particularly favourable to bonds as an asset class as illustrated by the considerable outperformance of European inflation over time.

Portfolio Manager / Advisor Competence

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

The Standard & Poor's annual "SPIVA" report measures the proportion of active funds that have beaten their benchmark. The results from the latest SPIVA Europe Scorecard for year-end 2016 are shown in the following table:

[45] Link also here: https://www.youtube.com/watch?v=bhYW-YnbEmc.

Table GR18. Percentage of European Equity Funds Beating their Benchmarks					
Fund Category	Comparison Index	1-year (2020)	3-year (2018-2020)	5-year (2016-2020)	10-year (2011-2020)
Funds denominated in Euro (€)					
Europe Equity	S&P Europe 350	63	30	25	14
Eurozone Equity	S&P Eurozone BMI	42	21	13	8
France Equity	S&P France BMI	66	9	14	8
Germany Equity	S&P Germany BMI	54	35	26	20
Italy Equity	S&P Italy BMI	45	12	18	20
Spain Equity	S&P Spain BMI	38	22	26	17
Netherlands Equity	S&P Netherlands BMI	17	0	0	0
Funds denominated in local currencies					
U.K. Equity	S&P United Kingdom BMI	80	66	44	35
Denmark Equity	S&P Denmark BMI	32	11	47	15
Poland Equity	S&P Poland BMI	94	68	39	37
Sweden Equity	S&P Sweden BMI	52	35	31	19

Source: BETTER FINANCE own computation based on S&P SPIVA Scorecard Year-End 2020 (*https://www.spglobal.com/spdji/en/documents/spiva/spiva-europe-year-end-2020.pdf*); *Outperformance is based on equal-weighted fund counts. Index performance based on total return.*

The latest findings for 2020 once again reveal that the large majority of funds do not outperform their respective benchmarks over the past 10 years. For funds investing in European equities, only 14% were able to outperform their benchmark, the S&P Europe 350. The worst results on a country basis were recorded for funds investing in the Netherlands equity where already since 2016 funds haven't overperformed the Dutch broad market index (S&P Netherlands BMI), as well Eurozone and France where only 9% and 10% of the equity funds delivered a cumulative profit over the past 10 years above that of their benchmark.

For retirement savings products, consistent positive long-term returns are of particular importance. However definitive conclusions cannot be drawn from these calculations because they relate to a period that is too short, including no more than two cyclical periods: equity markets fell sharply in 2008 and 2009, then they recovered progressively until the end of 2019, with short sub-periods of decline in most countries, as was the case again in 2020. Prior research found that investment funds tend to outperform their benchmarks in a bearish market while they underperform in a bullish market.[46]

For a longer time-horizon and especially in the case of retirement savings, a study[47] provides relevant results for UK personal pension funds operated by 35 providers over a 30-year period (1980-2009). Big personal pension fund providers performed better than their prospectus benchmarks, but underperformed treasury bills over the period of a fund's lifespan. Similarly, specialisation of portfolio managers in the investment universe is shown to deliver superior average

[46] IODS (2014): Study on the Performance and Efficiency of the EU Asset Management Industry, a study for the European Commission (Internal Market and Services DG) and the Financial Services User Group (FSUG), August 2014

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

annual returns but does not show superior long-term performances. More generally, they found that short-term performances based on arithmetic annual averages are not relevant indicators of the long-term performance calculated as geometric compounded returns similar to the methodology used in the present study. The authors also showed that younger funds perform better than older ones, which are under lower competitive pressure given the cost of leaving a fund to join a better performing one.

A research report published by BETTER FINANCE in 2019 analysed the drivers of over- or underperformance of the comparison or benchmark index of EU Equity Retail Investment funds domiciled in France, Belgium and Luxemburg. While only 2 funds out of 2,086 managed to consistently deliver overperformance over 10 years between 2008-2017, the rest that managed to beat their respective markets seem to have done so by coincidence or luck. [48]

In attempting to give an explanation for the latter, the analysis deployed showed that fees are the most negative factor for fund (over)performance or – in other words – "*the more you pay, the less you get*".[49] More information on fees and charges is given in the following section.

IV. INVESTMENT CHARGES

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

Findings of the initial study by BETTER FINANCE on the opacity and weight of charges did not change dramatically over the successive research reports. Generally speaking, charges are heavier on personal pension products than on occupational pension funds, as employers are in better position to negotiate with competing providers than individuals are.

To tackle this complexity, some pension providers - for example, some auto-enrolment schemes in the United Kingdom – set up fixed costs per member, but this penalises low paid workers.

Following the OFT study, the Department for Work and Pensions issued a regulation which took effect on 6 April 2015[50]. The default schemes used by employers to meet their automatic enrolment duties are subject to a 0.75% cap on AMCs. The cap applies to most charges, excluding transaction costs. Moreover, an audit was conducted on schemes being "at risk of being poor value for money". It found that about one third of surveyed schemes had AMCs superior to 1% and that a significant

[48] BETTER FINANCE, *Study on the Correlation between Cost and Performance of EU Equity Retail Funds* (June 2019) https://betterfinance.eu/wp-content/uploads/BETTER1.pdf.
[49] Press Release, "New research by BETTER FINANCE on the Correlation between Costs and Performance of EU Retail Equity Funds without a doubt establishes a negative correlation between returns and fees" https://betterfinance.eu/publication/the-more-you-pay-the-less-you-are-likely-to-get/.
[50] https://www.legislation.gov.uk/ukpga/2015/8/contents/enacted

number of savers would have to pay exit fees superior to 10% in case they wanted to switch to a better performing fund. Moreover, starting from October 2017, existing early exit charges in occupational pension schemes cannot exceed 1% of the member's benefits and no new early exit charges can be imposed on members who joined that scheme after 10 October 2017.

V. Taxation

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

One of the key elements of a pension system, as designed by the World Bank's conceptual framework of 1994,[51] is to incentivise savings and private investments by giving fiscal advantages, either as deferred taxation, exemptions, or tax reductions.

Pension taxation concerns three stages: contributions, investment returns and payments (benefit drawdowns).

The general model applied to pension products is usually deferred taxation: contributions are deducted from the taxable income and pensions (pay-outs) are taxed within the framework of income tax or, usually, at a more favourable rate. Some countries are currently in the middle of a transitional phase comprising proportionate deferred taxation which will lead to entire deferred taxation in the future.

The so-called EET regime, "*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*"[52], is predominant in the countries covered by this research report. There are only a few exceptions, like in Poland, where the reverse rule is applied: contributions are paid from the taxable income while pensions are tax-free (the only exception from the TEE regime are IKZEs – individual pension savings accounts). Pensions in Denmark are taxed at all three stages with contributions to occupational pensions being partially deductible as the only exception. Furthermore, in Bulgaria and for the funded pensions in Slovakia, one can even observe EEE regimes with no pension taxation at all within defined tax exemption limits. In other countries, such as France or Poland, specific conditions apply in order to be tax-exempt or not.

[51] World Bank, 'Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth' (1994) 10, http://documents.worldbank.org/curated/en/973571468174557899/pdf/multi-page.pdf.
[52] OECD definition: https://stats.oecd.org/glossary/detail.asp?ID=5225

Usually, the accumulated capital can be withdrawn by the saver as a lump sum at retirement age, at least partially. Our calculations of returns net of taxation (where available) are based on the most favourable taxation case and assume that the saver withdraws the maximum lump sum possible.

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

An overview of the main taxation rules applied on a country basis can be found in the following table:

Table GR19. Overview of Main Taxation Rules Applied in the Country Reports

Austria	● **EET regime** – generally, only payments are taxed; o direct commitments, occupational pension funds and group insurance have tax-exempt contributions, tax-exempt capital accumulation, and (income) taxed benefits; o life insurance contributions are subject to insurance tax (4%), investment returns are exempt, and payments are taxed ("TET" regime); o premium subsidised products carry a premium based on the contribution, the capital accumulation phase is tax-exempt, and benefits are also tax free if they are converted into an annuity ("TEE" regime).
Belgium	● **EET regime** - only withdrawals/payments are taxed; o Contributions are tax deductible up to prescribed limits; o Employees pay generally 2% solidarity tax and 3.55% INAMI tax on benefits; o Pillar II: Taxation in pay-out phase depending on origin of contribution, local taxes to be added; o Pillar III: Taxation in pay-out phase at the age of 60, local taxes to be added.
Bulgaria	● **EEE regime**; o Annual contributions of up to 10% of annual taxable income is tax free;
Croatia	● **EET regime** Contributions and investment income are tax-exempt, whereas benefits are taxed. The tax allowance for pensioners is 1.7 times higher than for employees, meaning that pensions are only modestly taxed.
Denmark	● **TTT regime** (combination of ETT and TTE); o Annuities, periodic instalments, and lump-sum pensions under the form of *kapitalpension* are income tax deferred and follow an ETT regime; o Lump-sum pensions under the form of *alderopsparing* are taxed TTE;
Estonia	● **EET regime for taxation**: o Contributions paid towards the pension schemes are tax-exempt. o Returns achieved by respective pension funds are tax-exempt. o Benefits paid out during the retirement are subject to the income tax taxation.

France	● **ETT regime**; o PERP, Prefon, Corem, CRH contributions are income tax deductible; o Contributions to some DC pension plans (PERCO and PERP) are income tax deductible but no deductibility from social levies. No tax deductibility for life insurance contracts; o taxation of employers' contributions to corporate savings plans (PEE and PERCO) and defined contribution plans ("Article 83") increased from 8% to 20%. o the minimum tax rate on life insurance income is now 23% o pay-outs are taxed in the retirement phase (sometimes with tax reductions).
Germany	● **EET regime**, taxation divides retirement savings into three groups: o Statutory pension insurance and the Rürup pension: deferred taxation; contributions up to a deduction cap are exempted from taxation and generally subject to tax in its entirety during the pay-out phase. o Standard pension insurance or life insurance products: contributions to the products come from taxed income; benefits are taxed at the personal income tax rate on the corresponding earnings in the retirement phase o Occupational pensions and the Riester pension: deferred taxation; contributions up to a deduction cap are exempted from taxation and generally subject to tax in its entirety during the pay-out phase.
Italy	● **ETT regime**, contributions are tax deductible up to prescribed limits; o Accruals are taxed at 20% (12.5% on income derived from public bonds) in the capital accumulation phase; o Taxation in the pay-out phase varies from 9-15%.
Latvia	● **EET regime;** o Pillar II – Contributions are personal income tax deductible item and therefore the contributions are not subject to additional personal taxation; Income or profits of the fund are not subject to Latvian corporate income tax at the fund level; a general principle for all investment and savings-based schemes to levy the income taxation on the final beneficiary. o Pillar III – Voluntary private pensions are generally taxed as Pillar II, however there are deduction limits in the contribution phase: payments (contributions) made to funds shall be deducted from the sum amount of annual taxable income, provided that such payments do not exceed 10 % of the person's annual taxable income.
Lithuania	● **EEE regime**; o Employee contributions are tax-deductible even if they are higher than required; for pillar III, there is a tax-refund policy during the contribution phase, which means that the contributions of up to 25% of gross earnings, the income tax (15%) is returned;
Poland	● **TEE regime** for Employees Pension Programs (PPE) and Individual Retirement Accounts (IKE); **EET** for Individual Retirement Savings Accounts (IKZE); o benefits are taxed with a reduced flat-rate income tax (10%)

Romania	● **EET regime** applies for both mandatory and voluntary pensions; o for funded pensions (Pillar II), pension benefits paid out during retirement will be subject to a personal income tax (10% tax rate) above a certain level (€460 in 2018); the social security contributions have been removed as of 2018 and are supported completely from the consolidated state budget. o for voluntary private pensions (Pillar III), contributions are tax deductible up to a deduction limit, investment income is tax exempted, and benefits are subject to the personal income tax.
Slovakia	● Funded pensions are usually not taxed (EEE regime); ● Supplementary pensions follow the EET regime with several exceptions and specifications.
Spain	● EET regime, contributions are tax deductible up to prescribed limits; ● No taxation in the capital accumulation phase; ● Pay-outs are taxed differently depending on whether they take the form of an annuity or the form of a lump sum payment.
Sweden	● **EET regime** for public pensions; **ETT regime** for private pensions; o Employers can partially deduct contributions to the second pillar; returns are subject to an annual standard rate tax based on the value of the account and the government-borrowing rate o Investment return is subject to tax rate on standard earnings at 15%; o in Pillar III, until 2016 there was a tax deduction of SEK 1,800 per year available; returns are subject to an annual standard rate tax based on the value of the account and the government-borrowing rate
Netherlands	● EET regime; ● Contributions paid into pension funds are tax deductible; ● Taxation is applied in the pay-out phase at the personal income tax rate.
UK	● EET regime; ● Allowances and tax relief on contributions with test against lifetime allowance ● Pay-outs are taxed as income, there are three marginal rates in the UK at the moment.

Source: BETTER FINANCE own composition

VI. RETURNS OVERVIEW

The BETTER FINANCE report now reaches 21 years (or maximum available) of performance disclosure for some retirement provision products. Unfortunately, in the long run, real returns were on average quite low and below those of capital markets (equities and bonds). In the context of negative interest rates and decreasing yields on capital markets, the pensions outlook looks grim.

One has to keep in mind that the diversity of the European pension landscape and the lack of available data complicate the drawing of straightforward conclusions. Although the aim of

comparability would be to present all results in a harmonised manner (either Pillar II vs Pillar III or on product categories - investment funds vs insurance products), complete data for all is not reported, neither the maximum periods available, nor are the concepts (Pillars, occupational vs supplementary plans) so common in all EU Member States. Therefore, for ease of reference, the names of the pension vehicles have been used in Graphs 18 (A, B and C) and Table 19 as presented in each individual country case.

Out of the 15 pension vehicles on which we report performances over at least 18 years (Graph 18(A)):

- only one so far remains on the negative side (-0.66%, French unit-linked life insurances);
- the majority (8) reported less than 1.5% real net return per year, equalling less than 35% pre-tax profits over the past 20 years.

Considering that an EU capital markets-representative benchmark (50% European Equities – 50% European bonds) recorded 72% real profits before taxes (2.69% p.a.), the 2020 data update shows few product categories overperforming this broad market benchmark.

On shorter reporting time frames (Graphs 18(B) and (C)) performances were much higher, but this may be due to the fact that some products did not pass through the same crises as the long-term ones (Graph 18(A)) did.

In general, we could observe significant performance differences in each country case, either between pillars or between types of pension vehicles:

- in Romania, Pillar II mandatory pension funds massively overperformed Pillar III pensions;
- in Austria, pension insurances overperformed pension funds by almost 17 percentage points;
- in Italy, both PIP-products have turned positive: PIP with profits had positive returns over the past 13 years (1.36%) unit-linked PIP recorded an average gain of 2.23%; and
- in France, where capital guaranteed insurance products gained 1.6% p.a. and unit-linked insurance lost -0.7% p.a.

These poor or even negative real returns have led public authorities in some Member States to take measures in order to ensure transparency and cap the fees charged by certain pension providers (in countries such as the UK, Romania and Latvia). The issue is crucial, especially in countries like the United Kingdom where the standard of living of retirees is heavily dependent on pre-funded pension schemes. The following tables detail the long-term real returns of the main long-term and pension saving product categories in the 17 European countries analysed. The categorisation in Graphs GR18(A), (B), (C) AND (D) is by the starting reporting year available in this report.

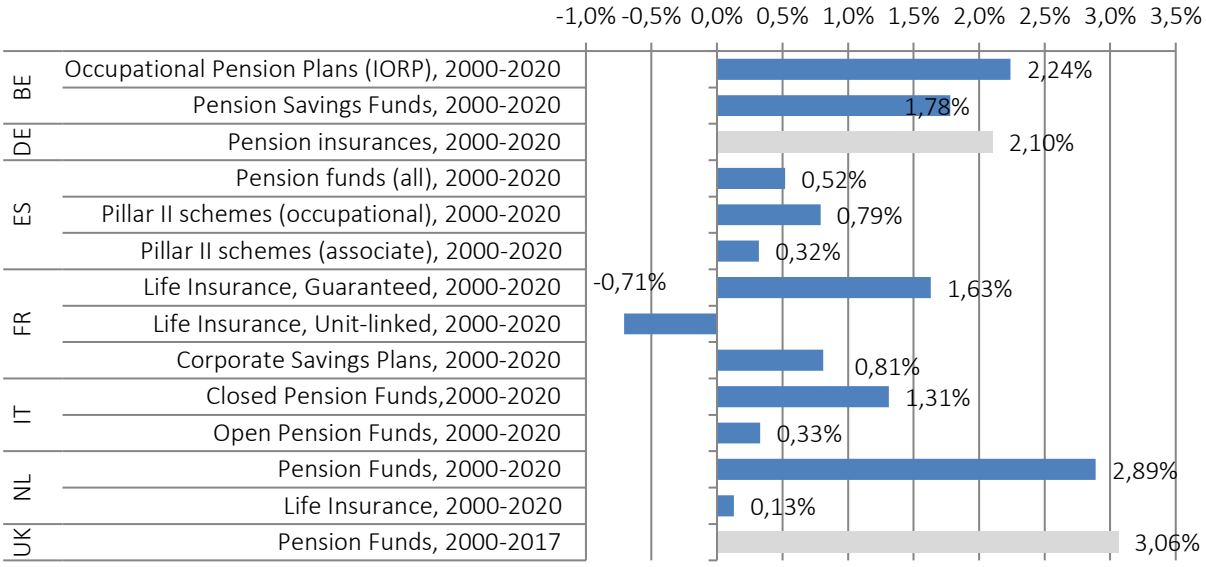
In Italy, an ambitious reform was implemented (as of 2011) by Minister Elsa Fornero under the Monti government in order to secure the public PAYG system, despite very unfavourable demographic trends. As such, the poor returns of the personal pension plans will have a limited

impact on the replacement rates of retirees' income, the downside being the heavier reliance on the public pension scheme.

By contrast, pensions in the UK are more heavily dependent on pre-funded schemes. As such, the total value of pension assets as % of the 2018 GDP reached 105%, which is modest compared to the Netherlands or Denmark, but four times higher than the average (pension fund assets 25% of GDP) in the 17 countries in scope of this Report. The Government has implemented "auto-enrolment" to extend the benefits of pension funds to most employees. There, the excessive charges borne by pension fund members have led public authorities to take measures in order to improve transparency and to limit the fees charged by pension providers.

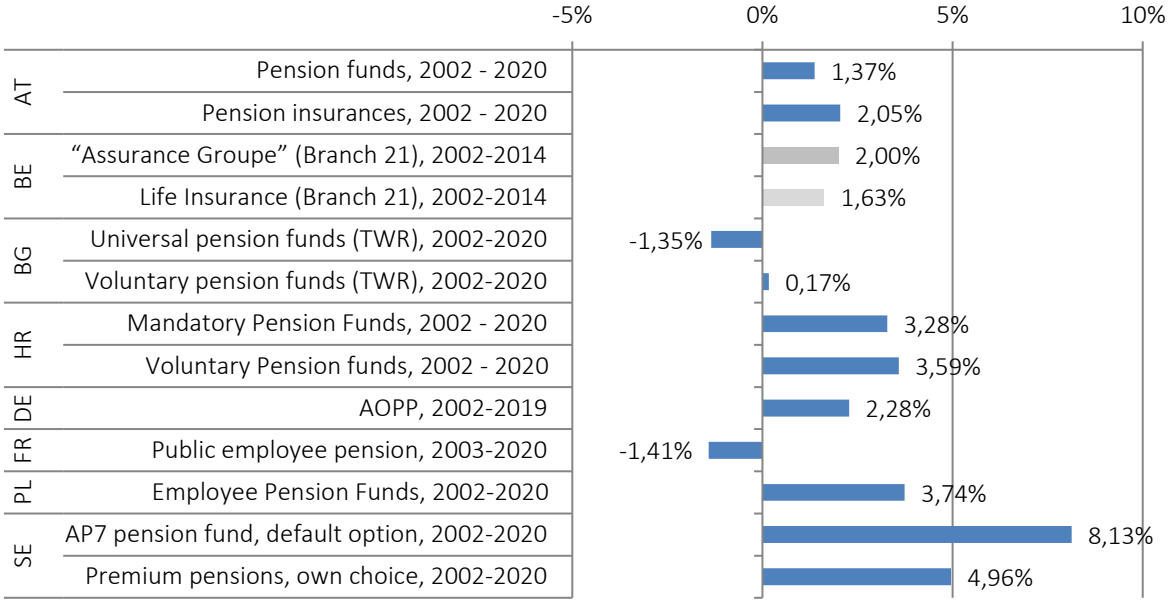
Note: In Bulgaria, data on professional pension funds (occupational and voluntary) was no longer available for the 2018 update. The data reported in these graphs and tables is time-weighted returns.

Graph GR19(A). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - FROM 2000/01



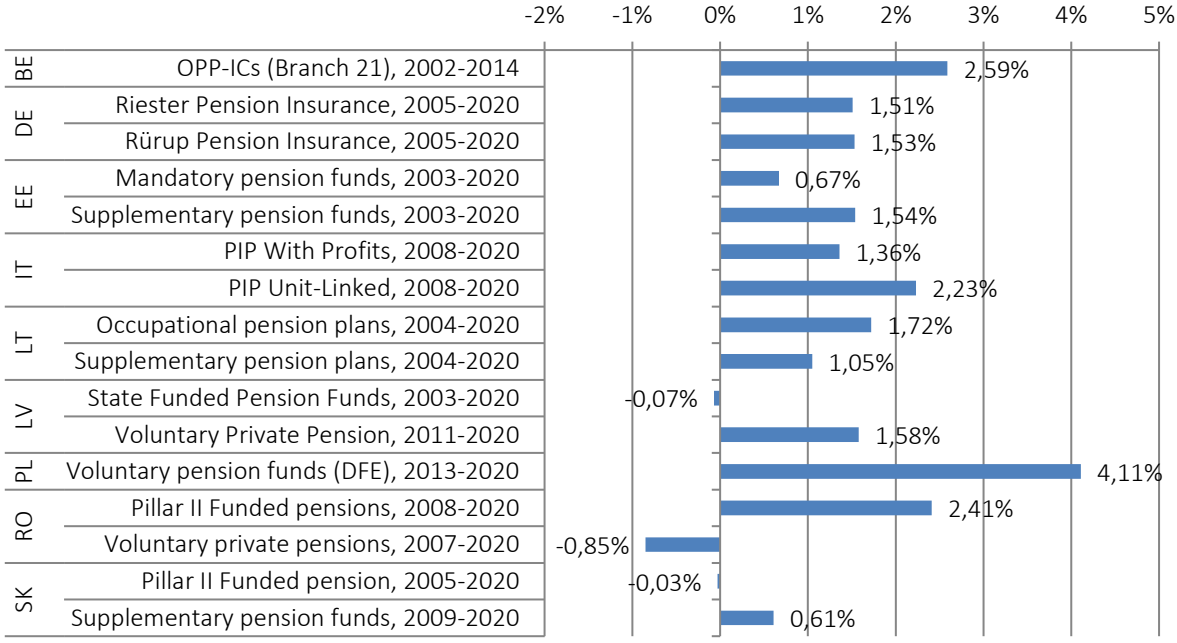
*Source: BETTER FINANCE Research (Table 20); * Net of taxes, charges and inflation*

Graph GR19(B). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - FROM 2002



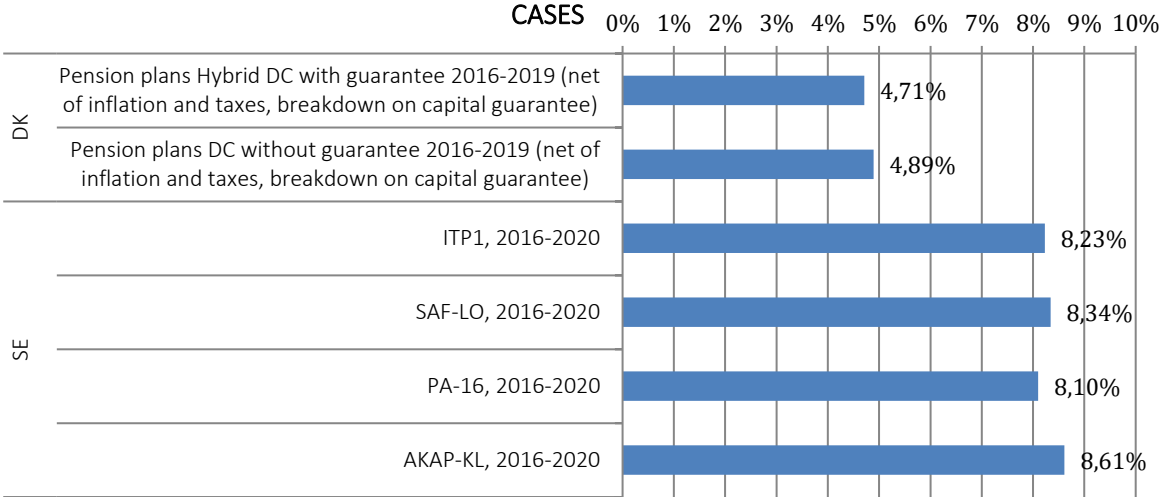
*Source: BETTER FINANCE Research (Table 20); * Gross of fees*

Graph GR19(C). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - LATER STARTING DATES



Source: BETTER FINANCE Research, Table 20

Graph GR19(D). ANNUALISED REAL RETURNS OF PENSION SAVINGS - SPECIFIC CASES



Source: Graph 20

The following table groups the pension vehicles available and reported on by country, and presents the average returns on the entire available reporting period.

Table GR20. Yearly Real Returns of Private Pension Products	
Austria	Pension funds, 2002- 2020: +1.37% Life-insurances, 2002-2020: +2.05%
Belgium	Pension Funds (IORP [1]), 2000-2020: +2.24% "Assurance Groupe" (Branch 21), 2002-2014: + 2.00% Pension Savings Funds, 2000-2020: +1.78% Life Insurance, Guaranteed, 2002-2014: +1.63% OPP-ICs (Branch 21), 2002-2014: + 2.59%
Bulgaria	Universal Pension Funds (TWR), 2002-2020: -1.35% Voluntary Pension Funds (TWR), 2004-2020: 0.17%
Croatia	Mandatory Pension Funds, 2002–2020: +3.28% Voluntary Pension funds, 2002-2020: +3.59%
Denmark (after tax)	Pension plans Hybrid DC with guarantee 2016-2019: +4.71% Pension plans DC without guarantee 2016-2019: +4.89%
Estonia	Mandatory Pension Funds, 2003-2020: 0.67% Supplementary Pension Funds, 2003-2020: +1.54%
France	Life Insurance, Capital guaranteed, 2000-2020: 1.6% Life Insurance, Unit-linked, 2000-2020: -0.71% Corporate savings plans, 2000-2020: +0.81%

Germany	A.O.P.P.[1], 2002-2019: +2.28% Riester Pension Insurance, 2005-2020: +1.51% Rürup Pension Insurance, 2005-2020: +1.53% Pension Insurances, 2000-2020: +2.10%
Italy	Closed Pension Funds, 2000-2020: +1.31% Open Pension Funds, 2000-2020: +0.33% PIP with Profits, 2008-2020: +1.36% PIP Unit-Linked, 2008-2020: +2.23%
Latvia	State Funded Pension Funds, 2003-2020: -0.07% Voluntary Private Pension, 2011-2020: +1.58%
Lithuania	Occupational pensions 2004-2020: +1.72% Supplementary pensions 2004-2020: +1.05%
Poland	Employee Pension Funds, 2002-2020: +3.74% Voluntary Pension Funds, 2013-2020: +4.11%
Romania	Pillar II Funded Pensions, 2008-2020: +2.41% Voluntary Pension Funds, 2007-2020: -0.85%
Slovakia	Pillar II Pension Funds, 2005-2020: -0.03% Supplementary Pension Funds, 2008-2020: +0.60%
Spain	Pension Funds (all), 2000-2020: +0.52% Individual plans (agg.), 2000-2020: +0.32% Pillar II schemes (occupational), 2000-2020: +0.89% Pillar II schemes (associate). 2000-2020: +1.07%
Sweden	AP7 fund, default option: 2000-2020: +6.95% Premium pension, other funds: 2000-2020: +4.18% ITP1, 2016-2020: +8.23% SAF-LO, 2016-2020: +8.34% PA-16, 2016-2020: +8.10% AKAP-KL, 2016-2020: +8.61%
The Netherlands	Pension Funds, 2000 - 2020: +2.89% Life Insurance, 2000 - 2020: +0.13%
UK	Pension Funds, 2000-2017: +3.06%

**After tax*

Source: Own Research, Better Finance Research

Occupational pension funds as per the definition and scope of the EU "Institutions for Occupational Retirement Provision Directive" (IORP); [1] A.O.P.P. stands for Autonomous Occupational Pension Funds.

[1] The returns on private pension products in Denmark cannot be calculated on average since the Danish Supervisory Authority started to report the returns for two categories: hybrid defined-contribution (DC) with guarantee and defined-contribution (DC) with no guarantee. Therefore, averages as of 2016 cannot be calculated.

Pension Savings: The Real Return

2021 Edition

Country Case: The Netherlands

Samenvating

In veel opzichten bevinden de Nederlanders zich in een benijdenswaardige positie wat hun pensioenen betreft. Het Nederlandse pensioenstelsel staat, naast het Deense, voor het derde jaar op rij op de hoogste plaats in de Mercer CFA Institute Global Pensions Index, en wordt omschreven als "een eersteklas en robuust pensioeninkomenstelsel dat goede uitkeringen biedt, duurzaam is en een hoge mate van integriteit heeft". Toch presteert het particuliere pensioenstelsel in Nederland beter met zijn fondsen dan de verzekeringen - de vergelijking van het reële nettorendement over 21 jaar tussen bedrijfspensioenfondsen en levensverzekeringen van de derde pijler spreekt voor zich: 2,83% tegenover 0,13%. Het vertrouwen van Nederlandse werknemers in de toereikendheid van hun pensioen is de afgelopen 10 jaar echter gedaald van 75% (vertrouwen dat hun pensioen toereikend zal zijn om hun levensstijl bij pensionering voort te zetten) tot 66%. Met name in het licht van de geleidelijke verschuiving van Defined-Benefit (DB) regelingen, gebaseerd op het laatste salaris van de werkenden, naar een Collectief Defined-Contribution (DC) systeem "zullen pensioenuitkeringsgaranties (...) komen te vervallen".

Een andere belangrijke reden waarom een grote meerderheid van de Nederlanders zich zorgen maakt over hun pensioeninkomen is het feit dat de wereldwijd historisch lage rente het Nederlandse pensioenstelsel relatief gezien meer schade toebrengt dan het pensioenstelsel van andere landen. Dit heeft niet alleen te maken met het feit dat Nederlanders over één van de grootste pensioenreserves ter wereld beschikken, maar ook met het feit dat De Nederlandsche Bank (DNB), de nationale pensioentoezichthouder, een van de voorzichtigste en daardoor laagste disconteringsvoeten ter wereld hanteert voor de berekening van pensioenverplichtingen. Dit dwingt Nederlandse pensioenfondsen om meer dan de helft (52%) van hun vermogen in obligaties te beleggen. Obligaties stijgen sterk in waarde (zij het minder sterk dan de pensioenverplichtingen) wanneer de rente daalt, maar hebben de afgelopen jaren zeer lage reële dividenden opgeleverd. Door de strenge regelgeving worden Nederlandse pensioenfondsen ontmoedigd om in te spelen op de stijgende waarde van obligaties. In plaats daarvan zijn zij uit overwegingen van toekomstige voorzichtigheid verplicht deze laag renderende activa aan te houden.

Uit een recente studie van het Thinking Ahead Institute naar het wereldwijde pensioenvermogen blijkt dat gemiddeld 27% van het pensioenfondsvermogen in de wereld in obligaties is belegd. In Nederland was dit percentage eind 2020 bijna het dubbele: 52%. Dit percentage is sinds 2011 niet meer onder de 50% gezakt. Toch biedt het Nederlandse pensioenstelsel met drie pijlers (of three-

tier) ieder individu ruime mogelijkheden om zijn/haar pensioeninkomen te verhogen. Hoe waar dat ook moge zijn, uiteindelijk komt het allemaal neer op de allesbepalende vraag van het reële rendement. Verdienen de Nederlandse pensioenfondsen genoeg om de Nederlandse gepensioneerden in de toekomst een behoorlijk inkomen te bieden? Deze vraag is voor Nederlandse pensioenfondsen en beleidsmakers in 2020 nog steeds van centraal belang, ondanks de overvloedige rendementen (meer dan 16% nominaal) die pensioenfondsen dat jaar behaalden. De reden hiervoor is dat ook de pensioenverplichtingen in hoog tempo bleven stijgen, waardoor de financiële positie van pensioenfondsen op lange termijn precair bleef.

Mede om hieraan tegemoet te komen, hebben Nederlandse beleidsmakers, vakorganisaties en vakbonden in juni 2020 besloten (ter nadere uitwerking van een akkoord dat zij een jaar eerder hadden gesloten) om het Nederlandse pensioenstelsel zodanig te hervormen dat in de tweede pijler (zie hieronder) toegezegde-bijdrageregelingen (DC) dominant worden. Hierdoor zullen pensioenuitvoerders meer kunnen beleggen in risicovollere activa met een potentieel hoger rendement, maar zal de variabiliteit van de pensioenuitkomsten en de kans op aanzienlijke verliezen waarschijnlijk toenemen. Het zal ook de vraag doen rijzen of de pensioenbijdragen op een voldoende voorzichtig niveau zullen blijven om aanvaardbare pensioenresultaten te waarborgen.

In dit rapport geven wij een overzicht van het Nederlandse pensioenstelsel, kijken wij naar de jaarlijkse rendementen op beleggingen van pensioenfondsen en berekenen wij het reële rendement, waarbij het nominale rendement wordt gecorrigeerd voor diverse kosten, belastingen en inflatie.

Summary

In many ways, the Dutch are in an enviable position as far as their pensions are concerned. The Dutch pension system, next to the Danish one, ranked for the third year in a row highest in the Mercer CFA Institute Global Pensions Index,[280] being described as "*a first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity*". Nevertheless, while the private retirement system in the Netherlands outperforms with its funds, insurances lag behind – the 21-year real net return comparison between occupational pension funds and pillar III life insurances speaks for itself: 2.83% vs 0.13%. However, Dutch workers' trust in the adequacy of their pensions has been decreasing from 75% (trusting that their pension will be sufficient to continue their lifestyle at retirement) to 66% in the last 10 years.[281] Particularly, in light of the gradual shift from Defined-Benefit (DB) plans, based on the last salary of

[280] Mercer CFA Institute Global Pensions Index, 2020, available at: https://www.mercer.com.au/content/dam/mercer/attachments/private/asia-pacific/australia/campaigns/mcgpi-2020/MCGPI-2020-full-report-1.pdf, p. 5.

[281] Frank van Alphen, 'Dutch Workers Expect Lower Pensions in DC System' (IPE.com, 29 June 2021), accessed 7 October 2021, available at: https://www.ipe.com/news/dutch-workers-expect-lower-pensions-in-dc-system/10053757.article.

the worked, to a Collective Defined-Contribution (DC) system "*pension benefit guarantees* (…) *will be abandoned*".[282]

Another important reason why a large majority of the Dutch worry about their retirement income is the fact that the historically low interest rates worldwide are causing, relatively speaking, more harm to the Dutch pension system than to other countries' pension systems. This is due not only to the fact that the Dutch boast one of the world's largest pension reserves, but also to the fact that the Dutch central bank (DNB), the national pension supervisor, applies one of the world's most prudent and therefore lowest discount rates for the calculation of pension liabilities. This forces Dutch pension funds to invest more than half (52%) of their assets in bonds. Bonds rise sharply in value (although less so than the pension liabilities) when interest rates drop but have yielded very low actual dividends over the past several years. Due to the strict regulatory regime, Dutch pension funds are discouraged to cash in on rising values of bonds. Instead, they are obliged to retain these low-yielding assets for reasons of future prudence.

A recent study on global pension assets, by the Thinking Ahead Institute,[283] showed that on average 27% of pension fund assets in the world are invested in bonds. In the Netherlands the percentage was almost double that at the end of 2020: 52%. This percentage has not fallen below 50% since 2011. Still, the Dutch three-pillar (or three-tier) pension system does provide every individual with ample opportunity to increase his/her retirement income. True as that might be, at the end of the day it all boils down to the all-important question of real return. Are Dutch pension funds earning enough to provide a decent income to Dutch retirees in the future? This question retained it's central relevance to Dutch pension funds and policymakers in 2020, despite the copious returns (exceeding 16% in nominal terms) that pension funds achieved that year. The reason for this is the fact that pension liabilities continued to rise at great rates too, ensuring that the long-term financial position of pension funds remained precarious.

In part to address that concern, Dutch policymakers, trade organizations and unions resolved in June 2020 (further elaborating an accord they struck a year earlier) to reform the Dutch pension system so that in Pillar II (see below) defined-contribution (DC) schemes become dominant. This will allow pension providers to invest more in riskier assets with the potential of higher yields but will likely increase the variability of pension outcomes and the potential for significant losses. It will also raise the question whether pension contributions will retain prudent enough levels to ensure acceptable pension outcomes.

[282] Ed Westerhout, Eduard Ponds, Peter Zwaneveld, *Completing Dutch Pension Reform* (August 2021) CPB Netherlands Bureau for Economic Policy Analysis, available at: https://www.cpb.nl/sites/default/files/omnidownload/CPB-Background-Document-Completing-Dutch-pension-reform.pdf.
[283] https://www.willistowerswatson.com/en/insights/2018/02/global-pension-assets-study-2018.

In this report we will provide an outline of the Dutch pension system, take a look at the annual returns on investment of pension funds and calculate the real return, adjusting the nominal return for various charges, taxes and inflation.

Introduction

The Dutch pension system rests on three pillars, which will be described in what follows:

- Pillar I – the contributory scheme that provides the Dutch state pension, organised as a social insurance system and implementing the Pay-As-You-Go (PAYG) principle;
- Pillar II – fully funded, mostly tax-exempted and (for now) mostly defined-benefit (DB) pension schemes comprising investment funds and life insurance contracts, for which participation is mandatory in sectors in which representative trade associations that cover more than half of the sector have agreed a specific sector-wide scheme with relevant labour unions, which by law then become mandatory for the entire sector at hand. In practice this means that most sectors of the economy are covered by these (sector-specific) mandatory schemes;
- Pillar III – composed of pre- and post-retirement fully funded and completely defined-benefit (DB) pension saving products, for which participation is voluntary.

Table NL1. The Dutch pension system

Pillar	Characteristics	Coverage	Replacement ratio
Pillar I	PAYG, DB, social insurance, taxed as income on pay out	100%	According to OECD, for both men and women: 71% (gross) and 80% (net) in 2019,[284] while the Eurostat aggregate replacement rate is 51% for 2020.[285]
Pillar II	Funded by the employer and employee, (mostly) DB, investment plan, contributions tax exempted, return on investment tax exempted, pay-out taxed at progressive income tax rates	Approx. 87% coverage[286]	
Pillar III	Funded by individual, DC, contributions subject to a limit, contributions tax exempted, pay-out taxed at progressive income tax rates	n.a.	

Source: BETTER FINANCE own composition; OECD data

[284] OECD Data, Gross and Net pension replacement rates (2018) available here: https://data.oecd.org/pension/gross-pension-replacement-rates.htm#indicator-chart.
[285] See Table GR9 in the General Report.
[286] Ed Westerhout, Eduard Ponds, Peter Zwaneveld, *Completing Dutch Pension Reform* (August 2021) CPB Netherlands Bureau for Economic Policy Analysis, available at: https://www.cpb.nl/sites/default/files/omnidownload/CPB-Background-Document-Completing-Dutch-pension-reform.pdf, p. 7.

Summary Return Table - Pensions in the Netherlands					
	1 year	3 years	7 years	10 years	whole reporting period
	2020	2018-2020	2014-2020	2011-2020	2000-2020
Pension funds	6.23%	5.01%	6.99%	6.86%	2.89%
Life insurances	1.83%	1.39%	1.14%	0.27%	0.13%

Source: own computations based on Table NL15

Pillar I

Pillar I is a social insurance scheme and consists of the Dutch state pension, called AOW (*Algemene Ouderdomswet* or General Old-Age Law). It provides a lifelong state pension for all elderly inhabitants of the Netherlands, regardless of their nationality and employment history. For a long time, 'elderly' (for the purpose of this law) meant 65 years or older. Recently the age was increased beyond 65 (66 to 71 depending on date of birth, with a 'transition age' of retirement between 66 and 67 for people who reach those ages over the next few years), mainly to maintain the system's viability in the future as, due to ageing, the costs threaten to reach unsustainable levels. While the original intention was to raise the "AOW-age" continually on a par with life expectancy, the recently concluded Pension Accord between government, trade organizations and labour unions, on an 8-month increase for every full year that life expectancy rises. The rationale behind raising the age at which citizens start receiving these pensions is that AOW is a pay-as-you-go (PAYG) system: this part of the retirement income is financed by those in the workforce at that particular moment in time. In 2019 the "AOW-age" was 66 plus 4 months. It will remain that way until 2022.[287] Each person between 16 and 66 years of age, either working, self-employed or on benefits, contributes to the AOW-financing via a deduction (social premium) on the salary or benefit. In addition, the AOW is partially financed by taxes collected by the government every year. Every inhabitant of the Netherlands is automatically enrolled in the AOW-system in such a way that he or she is entitled to 2% of the maximum monthly allowance for each year he/she has lived in the Netherlands between the ages of 16 and 66 (so someone living in the Netherlands that entire period is entitled to a full monthly AOW-allowance as 66-16 = 50 x 2% = 100% of the allowance).

A single person is entitled to a monthly allowance (gross) of €1,228.22. People who are married, or couples living together, receive (gross) €843.78 per month each. In addition, 8% of the monthly allowance is set aside by the Government to be paid out in May as a holiday allowance. Typically, women are more dependent than men on Pillar I, the AOW, due to the fact that in the past and to some extent still in the present, women are employed less often than men, less often have full-time jobs and generally have lower incomes.

[287] https://www.rijksoverheid.nl/onderwerpen/pensioen/toekomst-pensioenstelsel/aow-leeftijd-stijgt-minder-snel.

Pillar II

Pillar II is a system of collective pension schemes operated by pension funds, entities which are legally independent from their (often corporate) sponsors, or by insurance companies. Little over a decade ago, there were over 1,000 pension funds operating in the Netherlands. Over the years, several of these pension funds merged or were liquidated (with their assets and liabilities transferred to other pension funds or insurance companies). As a consequence, the number of pension funds (active and dormant) under supervision (DNB) declined to 220 by the end of 2019 and 208 in 2020.[288] It is expected that the number of active pension funds will further decline in the years to come.

Whereas Pillar I (AOW) is a PAYG scheme, the Pillar II is financed by capital funding. Each person enrolled in a pension fund contributes directly or indirectly to it (with the employer paying the lion's share contribution, often 50% to 70%). This money is subsequently invested in order to fund retirement pay-outs.

Although enrolment in a Pillar II scheme is not compulsory as such, in many cases it in fact is. The reason for this is that if labour unions and employers in the Netherlands decide to set up a pension scheme for a company or a sector, the government can make enrolment mandatory for everyone working in that company or sector. In practice this means that almost every working person is enrolled in a pension scheme. The government makes it mandatory in order to achieve economies of scale that, in turn, makes it possible for pension funds to operate more efficiently in terms of costs and fees. In addition, mandatory sectoral enrolment prevents a 'race to the bottom' in paid pension premiums - an expensive but notoriously oblique wage element - through labour cost competition between rival companies. In practice, more than 90% of Dutch employees are enrolled in one or more pension funds.[289] An employee can be enrolled in more than one pension fund if he/she, for example, moves to another job in another sector. In such cases he/she starts building his/her pension with the pension fund of the new sector or company. The old pension capital can be left in the former pension fund or subject to specific rules, transferred to the new pension fund. By law, pension funds are currently required to maintain a funding ratio of at least 105% (approximately) and even larger reserves are required to allow for increases of pensions in line with inflation. According to the provisions of the recent Pension Accord, which will go into effect, these mandated reserves will be scrapped in favour of more flexible pension results.

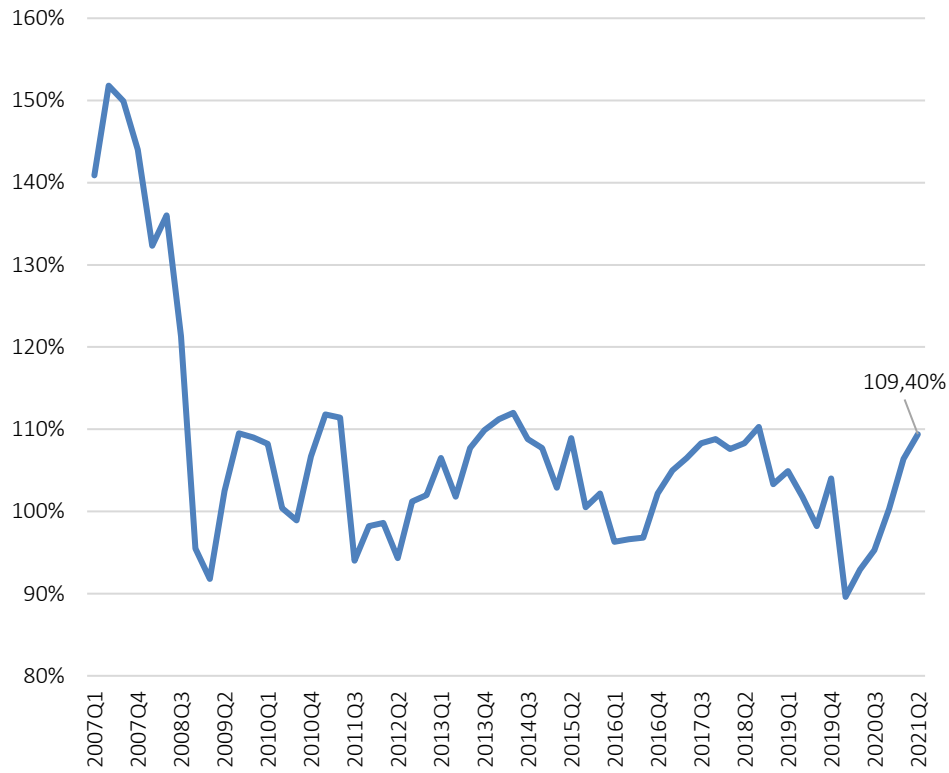
Under the still current system, the "coverage ratio" ("dekkingsgraad" in Dutch) or funding ratio is calculated by discounting the future pension liabilities (i.e., future nominal retirement outflows) with the use of an interest rate curve mandated and regularly updated by the Dutch Central Bank. The current value of pension liabilities up to 20 years in the future are determined by using the

[288] Based on data from the Dutch Central Bank (https://statistiek.dnb.nl/downloads/index.aspx#/details/onder-toezicht-staande-pensioenfondsen-jaar/dataset/fd267edd-3135-4628-8313-85e968197b57/resource/12ac9dff-d047-4803-9fa4-9d31373e9ac0).

[289] Statistics Netherlands (CBS), *Pensioenaansprakenstatistiek 2015. Verantwoording en de eerste resultaten*.

actual market-based interest swap curve. The discount interest rates for periods from 20 years onwards are calculated by the Dutch central bank. The interest rates calculated in this way are called Ultimate Forward Rates (UFR) and the Dutch Central Bank imposes a UFR on Dutch pension funds that is more 'prudent' than the European UFR determined by EIOPA. Prior to 2015, this UFR was fixed at 4.2%. Starting from mid July 2015, the UFR is a 120-month moving average of the 20-year forward rate which, in effect, means that it is much lower than the 4.2% used previously. Hence, the funding ratio of the Dutch pension funds fell. The UFR has been lowered even further as of June 2019 to mirror more closely the trend of falling market rates. The lower the interest rates on financial markets, and hence the UFR, the higher the value of future liabilities and the greater the chance that the required coverage ratio (in Dutch "*dekkingsgraad*") falls below 105%. When the coverage ratio falls below this threshold, a pension fund is required to submit a plan detailing how to restore it to above 105% within a period of five years. It must also submit contingency plans in case recovery remains elusive. Failure to recover to the 105% threshold means that pensions must be lowered within the current regime. Furthermore, indexation by pension funds is not allowed if the funding ratio is lower than 110% and only fully allowed when the funding ratio has reached the level of a fund-specific "sustainable indexation funding ratio" (*toekomstbestendige indexatie dekkingsgraad*), which usually falls somewhere between 120% and 130%. These indexation-constraining regulations are designed to minimize the risk of future insolvency, thereby protected younger members within pension funds from the risk of large pension cuts in the future. However, these regulations are very controversial – both politically and among Dutch pension experts/professionals – as large financial "buffers" have to be maintained to the detriment of current pensioners. Under the newly agreed Pension Accord pensions will be raised *and* lowered more quickly, although some buffers will still be mandated.

Graph NL2. Average funding ratio's of Dutch pension funds



Source: Own composition based on DNB data

Pillar III

Pillar III is made up of individual pension products sold by insurance companies. Life insurance is one example. Another product used in the Netherlands is the so-called "*pensioensparen*", a special-purpose savings account, with the purpose of accumulating supplementary income after retirement. Anyone in the Netherlands can enrol in this pillar, either to save for retirement (there are those who do not fall in Pillar II scheme described above, for example entrepreneurs or those working in a sector or a company without a pension fund of its own) or to supplement the retirement income from Pillar I and II. Purchasing Pillar III products is attractive due to particular tax benefits associated with them.

According to a recent OECD report on pensions, the net replacement ratio (the ratio of earnings after and just before retirement) in the Netherlands stood at 80% for the average income earner in 2018. This replacement ratio differs little between income groups in the Netherlands, in contrast to most other OECD countries.[290] Other research suggests that the retirement income from Pillar I

[290] OECD, *Pensions at a Glance 2019. OECD and G20 Indicators*.

and II, on average, equals 70% of the average income before retirement. However, data from Eurostat on the aggregate replacement ratio for pensions is much lower, at 56%. Statistics Netherlands paints a similar picture for 2014 (the most recent year it provides such data on). When we take into account the third pillar and various other assets, such as savings and the excess value of one's own home (i.e., value of the home minus mortgage) and adjust for the fact that the income tax for retired persons in the Netherlands is lower than tax before retirement, we get the average net replacement ratio of 105%.[291]

Pension vehicles

Second pillar

Note on Premium Pension Institutions (PPIs): *Premium Pension Institutions are not analysed separately in this report (in particular under Pension Returns). According to the leading Dutch outlet for pension-related news* (PensioenPro)*, which based it's figures on DNB sources, there were 861,199 workers enrolled in PPIs (out of some 13 million enrolled in pension funds) at the end of 2019 and the schemes had invested assets of some 12.1 billion EUR (total AuM of Dutch pension funds is around 1,554 billion EUR).[292] This share is small because it is only offered by firms that do not have their own or sectoral pension arrangement (if there is one, it is mandatory to enrol and almost every sector has its pension scheme). In practice, this means that such schemes are generally limited to small- and medium-sized enterprises is certain sectors. Nevertheless, PPIs have been growing fast over recent years so may play a bigger role in the future.*

The Dutch private pension system is dominated by pension funds. However, their number has declined greatly in recent decades and this consolidation is expected to continue in the future. Some of the funds are financial giants, with millions of people enrolled and hundreds of billions of euros in assets, while others several thousand participants and several hundred million euros under management. In the table below, we provide some statistics for the 5 largest pension funds in the Netherlands.

Table NL3. Largest Pension Funds in the Netherlands

Pension fund	Sector / company	Assets (€ bln)*
ABP	Civil service	572.10
Zorg en Welzijn	Medical services	291.70
Metaal en Techniek	Metal	110.50
Bouwnijverheid	Building companies	103.30
Metalelektro	Electrometal sector	68.30

Source: The 2020 annual reports of these 5 largest pension funds.

[291] https://www.netspar.nl/assets/uploads/Netspar-Design-Paper-68-WEB.pdf and https://opendata.cbs.nl/statline/#/CBS/nl/dataset/71763ned/table?ts=1567116265753.
[292] https://www.befrank.nl/assets/2020/05/20200514-PensioenPro-Overzicht-PPI-markt-2020.pdf

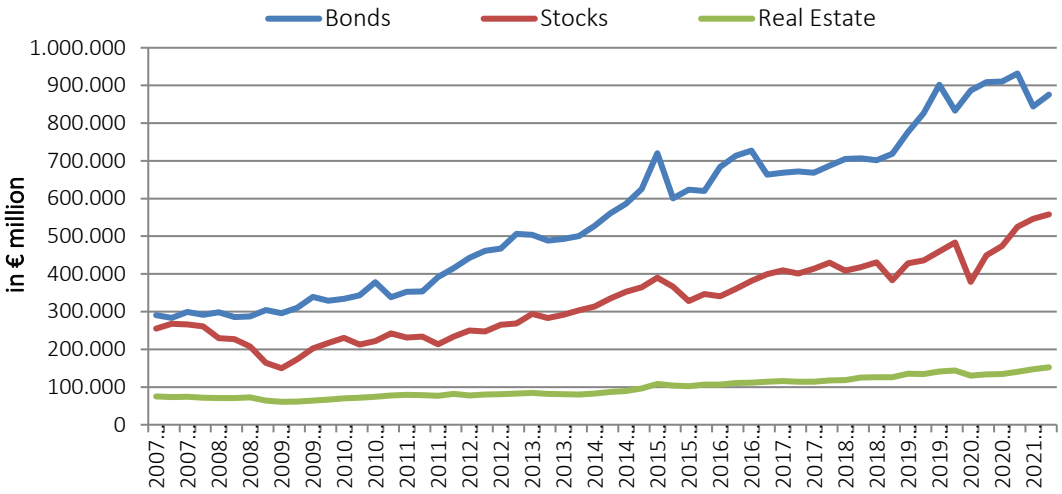
There are four kinds of pension funds in the Netherlands. First, there are the industry-wide pension funds. Those administer and operate the pensions for an entire sector, such as food companies or civil service. The civil service pension fund, ABP, is by far the largest in the country (and one of the world's largest) with assets worth over half a trillion euros at the end of 2019 and around 3 million people enrolled. Secondly, there are corporate pension funds, administrating and operating pension schemes for (often) major corporations. Thirdly, there are several pension funds for independent professionals, such as medical specialists. Finally, there are the relatively new General Pension Funds, which are allowed to ringfence and can incorporate several (former) corporate pension funds under a single administrative umbrella to achieve economies of scale and improve governance.

Pension funds are independent entities, i.e., they are strictly separated from the company (if applicable) on whose behalf they administer and run the pension scheme. One of the consequences is that if a company files for bankruptcy, employees know that their pensions are not affected.

By the end of 2020, Dutch pension funds in Pillar II had assets worth €1,679.4 billion in total, rising again to €1,724.8 billion by the second quarter of 2021, representing a 8% and, respectively, 3% increase. Although last year's turmoil due to COVID-19 restrictions caused losses in the first and second quarters, stock markets caught up and were, again, the main driving force behind this increase. Dutch gross domestic product in 2019 was approximately €810 billion, so that assets of the pension funds were valued at over 210% of Dutch GDP.[293] The five largest Dutch pension funds combined managed 68% of these assets.

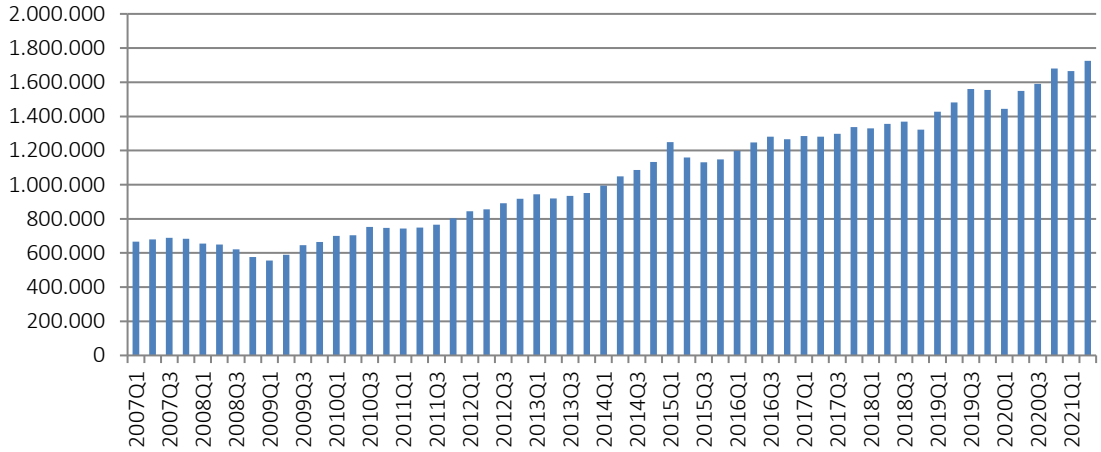
[293] Eurostat lists Dutch GDP in 2020 as €795.9 billion (https://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tec00001&language=en).

Graph NL4. Pension fund assets invested in stocks, bonds, real estate and other assets over time (in € million)



Source: own computations based on DNB Dutch Central Bank

Graph NL5. Pension funds' assets



Source: Own calculations based on DNB Dutch Central Bank

Third pillar

The third pillar is not mandatory and is run by private insurance companies offering various pension-like products such as life insurance. Every employee can choose whether or not to take part in it, sometimes provided he/she fulfils the conditions to enrol as stated by the law. The most important condition in order to benefit from tax benefits associated with these products is that one has to have a shortfall in his/her pension (called *pensioentekort* in Dutch). There is an annual maximum amount any Dutch inhabitant can pay in towards his/her retirement income. This maximum,

determined by the Dutch tax authority on an annual basis, ensures an acceptable retirement income. If for any reason contributions fall under the maximum amount allowed, the contributor is considered to have a pension shortfall and can deposit the amount equal to the difference between the maximum allowed retirement contribution and the paid contributions into a savings account for retirement income. There is a tax benefit involved since contributions can be deducted from the taxable income, effectively reducing the income tax one has to pay. Moreover, the pay-off upon retirement is taxed at a lower tax rate than the current income. Once a pension shortfall has been identified, and the decision has been taken to deposit the difference on a special-purpose savings account, the deposit(s) cannot be withdrawn before retirement.

The share of those third-pillar products in the retirement mix of the Dutch households is relatively low. According to Statistics Netherlands, Pillar III products only account for 6% of the accrued pension rights of Dutch households. By comparison, Pillar I accounts for around 54% with Pillar II assuming a share of 40%.

Charges

Obviously, in order to make money, pension funds and insurance companies must spend money, i.e., there are various fees and other costs involved with investing their assets on the financial markets.

However, information on these costs was difficult to obtain and where available, they must still be interpreted with a great deal of caution. For example, even the Dutch central bank stated in an article from May 2014 that 'there are reasons to believe that not all costs are reported'. The reason is not that the pension funds do not want to report them, but rather that even they are not able to determine them. For example, some companies investing assets of pension funds do not report all costs separately, because it is not in their interest to do so. The Dutch financial markets supervisor (*Autoriteit van Financiële Markten*, AFM) has called upon these companies to disclose all costs. Another difficulty is that information on transaction costs, i.e., costs associated with transactions in the financial markets such as purchase or sale of stocks and bonds or shares in investment funds for example, is not always available.

The consequence is that in previous years when DNB asked the Dutch pension funds to provide the supervisor with, among others, an analysis and details of all the costs they incur, 70 pension funds were not able to report all costs associated with their investments. According to the AFM, 'readers of annual reports are not able to get a clear picture of the relationship between costs, returns and risks pension funds are taking[294]. Just to illustrate how important costs are in the big picture:

[294] Research report by AFM on information on various charges pension funds incur and how they report those in their annual reports, entitled 'Op naar een evenwichtige verantwoording over deze kosten in jaarverslagen van pensioenfondsen', July 2014

according to the AFM, lowering costs by a 0.1 percentage point (pp) leads to a 3 pp higher retirement income in the medium-term (25 years).

During the last five years, much effort has gone into making sure all costs are accounted for. Since 2015, the Dutch central bank has published the total charges, including transaction costs, for individual pension funds under its supervision. For the years, 2017, 2018 and 2019 we have used the data that The Pension Rating Agency (TPRA) has collected from the annual reports of more than 65% of Dutch pension funds, as the data in annual reports has all been validated by an accountant, whereas the data pension funds provide to the Dutch central bank are often provisional and not always readily comparable from one pension fund to the other. The utilized dataset includes all Dutch sectoral pension funds and all of the largest corporate pension funds in the country. The latest 3-year average charge is close to 54 basis points. For 2020, as the TPRA ceased to exist and the aggregated data (from public sources) was no longer available, the research team gathered one by one the costs of the 40 largest occupational pension funds in the Netherlands, representing 80% of pillar II in terms of Assets under Management. The costs (management costs and transaction costs) were calculated as a simple average and amount to 0.45%.

Table NL6. Pension fund charges (% of total assets)	
Year	Charges
2007	0.20%
2008	0.24%
2009	0.19%
2010	0.15%
2011	0.19%
2012	0.21%
2013	0.23%
2014	0.17%
2015	0.50%
2016	0.50%
2017*	0.55%
2018*	0.52%
2019*	0.54%
2020**	0.45%

** Weighted average of the total investment costs (including direct and indirect costs, transaction costs and performance fees) as % of average AuM reported by 172 pension funds for 2017, 174 pension funds for 2018 and 143 for 2019. The average AuM (belegd vermogen voor risico fonds) over the course of a year was estimated by taking the average between the AuM at the start and end of the year; ** average cost from the Annual Reports of the 40 largest pension funds by average invested capital (gemmiddeld vermogen, both risico fonds and risico deelnemers) representing 80% of the AuM in Pillar II.*

Source: DNB Dutch Central Bank / TPRA data derived from annual reports of pension funds / BETTER FINANCE own calculations

We would like to remark that the real annual return in the years prior to 2015 is most likely lower than calculated, given the fact that the new data sets shows that total charges were significantly higher than in previous years. In 2019 average charges were 0.54% of total assets, more than double the charges the central bank reported for 2014 and previous years. Another indicator is some sporadically conducted research on total charges undertaken in previous years. For example, in

2012 researchers at consultancy bureau Lane, Clark & Peacock put those costs for the Dutch pension funds at 0.53% of their assets. CME Benchmarking, a Canadian global benchmarking company, calculated that the average cost of the Dutch pension funds in 2012 amounted to, on average, 0.44% of their assets, with the median being 0.41%. There are several reasons to assume that the levels of total charges, including transaction costs, prior to 2015 were higher still, higher in fact than the current level of 0,54%. Transaction costs are notoriously ambiguous and difficult to account for. In recent years, presumably, some progress has been made to account for these costs more fully as pension funds and Dutch regulators have focused heavily on making these costs more transparent. Furthermore, Dutch pension funds have invested more in bonds over the last decade and these investments generally incur lower costs. Lastly, pension funds have largely eliminated the payment of performance fees from their contracts with asset managers, which has served to lower costs.

Taxation

Pension funds are exempted from company taxes in the Netherlands[295]. The money Dutch employees pay into their pension funds during their working life is deducted from their gross income and therefore not taxed. In this sense, they enjoy a tax subsidy as their taxable income decreases and, hence, they fall into a lower tax bracket. As stated, pension funds then invest these funds in order to be able to pay an income upon reaching retirement age. The returns, i.e. the increase in pension rights, is not taxed either. When the Dutch reach retirement, however, their pension is subject to the personal income tax rates in the pay-out phase. This so-called deferred taxing of pensions means that the Dutch get another tax benefit as tax rates are lower for retirees than taxes on non-retiree income.

In the Netherlands, income is taxed at various rates, progressively relative to the level of income. The tax rates are lower for those aged 66 and older. Just as an example, in the table below, we provide the tax rates for the persons older and younger than 66 years of age in 2021, as provided by the Dutch Tax Authority.

In short, contributions to pension savings products are exempt from tax, investment returns are also exempt, but investment pay-outs are subject to income tax, thus rendering an "EET" taxation regime.

Table NL7. Income tax brackets for various age cohorts		
Income bracket / age	Younger than 66	66 and older
€0 – €35,130	37.10%	35.61% or 19.10%
€20,384 – €34,300*	37.10%	37.10%
€34,301* – €68,507	37.10%	37.10%
over €68,508	49.50%	49.50%

[295] Article 3 of the law, available via (in Dutch) http://www.rijksoverheid.nl/documenten-en-publicaties/besluiten/2009/12/15/vennootschapsbelasting-subjectieve-vrijstellingen-artikel-5.html.

Source: Dutch Tax Authority

This means that the tax deferral of pensions constitutes an advantage to an individual, as his/her tax rate is lower when he/she turns 66. The average tax tariff in 2020 for those age 66 and older was 37.10%. We have used the tariffs for the first three brackets on income tax as these are the tax brackets that apply to the vast majority of Dutch retirees in practice (the fourth and highest bracket only applies to income over €68,508 which is almost twice the modal income level in The Netherlands).

As stated earlier, contributions towards pensions are deducted from the gross income. In order to calculate the net tax advantage, we have to compare the average tax rate applied to pensions (as stated: 37.10%) and the average tax rate that would have applied if contributions towards pension income was not tax exempt. We can estimate this average tax rate by computing the average of the first three brackets for people younger than 66 years of age. The second and third bracket are the same for this age group but are counted separately to establish an average comparable to the average rate for people aged over 66. The gap between the two averages can be seen as a tax advantage for the older group. The average for those younger than 66 years of age in 2019 was 37.10% which means that the average person in the Netherlands enjoys nearly a 12pp tax advantage on his/her pension scheme due to pension contributions being tax exempt and only pension income is taxed.

Pension returns

As stated, the pensions Dutch employees receive upon reaching the statutory retirement age depend on their pension funds achieving enough return on their investments. We will report nominal annual, aggregate returns for all Dutch pension funds from 2000 onwards. This is done by using the statistics available at the Dutch central bank, which supervises pension funds and insurance companies. Annual returns will be reported for life insurance companies as well.

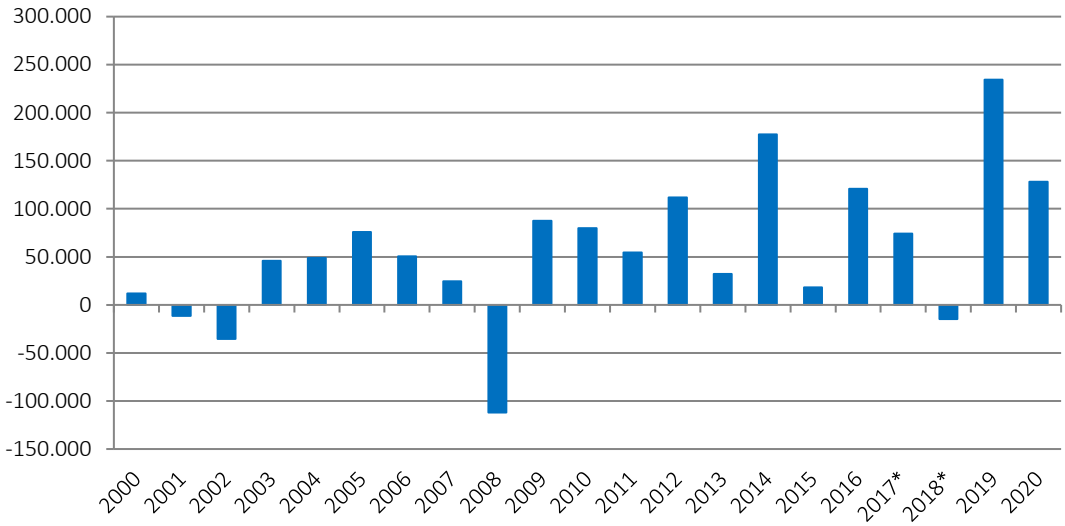
We will then focus on various charges and fees pension funds must pay. These costs must be subtracted from the returns, as only net return is available for retirement income. In order to establish the real rate of return, we will control for the annual inflation in the Netherlands (Harmonized Index of Consumer Prices).

Pension funds

The Dutch supervisor of pension funds, the Dutch central bank, provides investment return figures, in billion euros, for aggregate pension funds[296] and also the quarterly return data for DB and DC pension funds. Occupational pension funds' average return can either be calculated as the ratio between the total investment results and AuM or as a weighted average – by quarter – of returns reported by the DNB. The results are the same.

[296] http://www.statistics.dnb.nl/financieele-instellingen/pensioenfondsen/index.jsp

Graph NL8. Investment returns of Dutch pension funds (in € million)



Source: DNB Dutch Central Bank

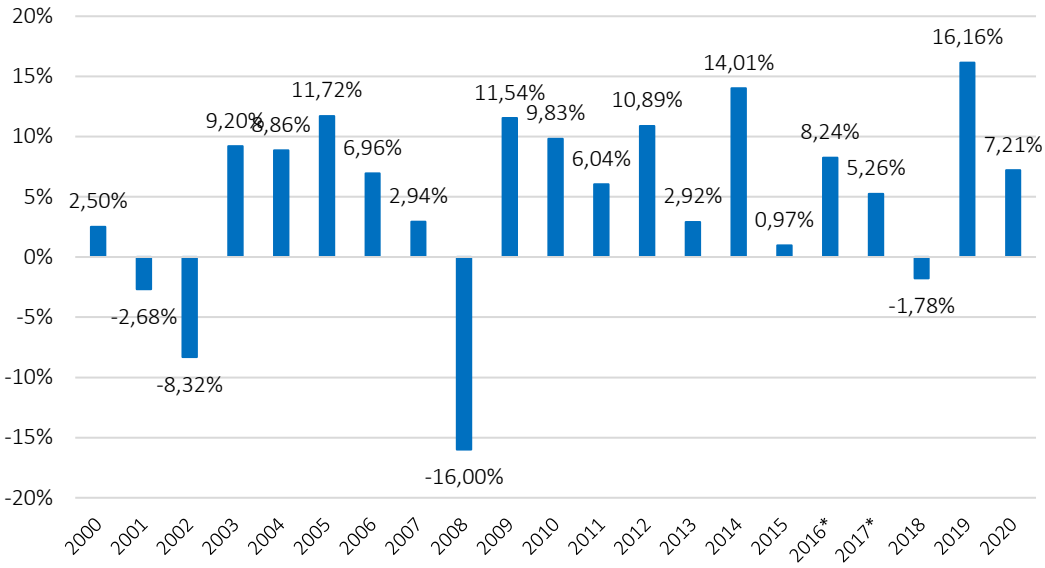
At this stage, we have calculated the time-weighted nominal returns on investment for each year between 2000 and 2020 (in percentages). Using the quarterly returns reported by the Dutch regulator DNB we have determined the weighted overall investment return of all pension funds for the 2020 as well. The results show that 2019 was a truly exceptional year in terms of returns, but also followed close by in 2020. The annual weighted nominal return achieved by pension funds was 7.66%, higher than in many other jurisdictions analysed in this report. This was due to a combination of stock markets, which compensated for the low interest rates on bonds. With this positive result, 2020 raised the geometric yearly average since 2000 with more than half a percentage point, from 4.95% to 5.08%, continuing the growth trend.

Table NL9. Annual nominal return of all Dutch pension funds	
Year	Return as % of total assets
2000	2.70
2001	-2.48
2002	-8.12
2003	9.40
2004	9.06
2005	11.92
2006	7.16
2007	3.14
2008	-15.76
2009	11.73
2010	9.98
2011	6.23
2012	11.1
2013	3.15
2014	14.18
2015	1.47
2016	8.74
2017	5.81
2018	-1.26
2019	16.70
2020	7.66
Average 2000-2020	5.08

Source: DNB Dutch Central Bank

After establishing the nominal returns, we have subtracted the average charges from the average return (which are generally exempted from taxation). The results are visible in the graph below.

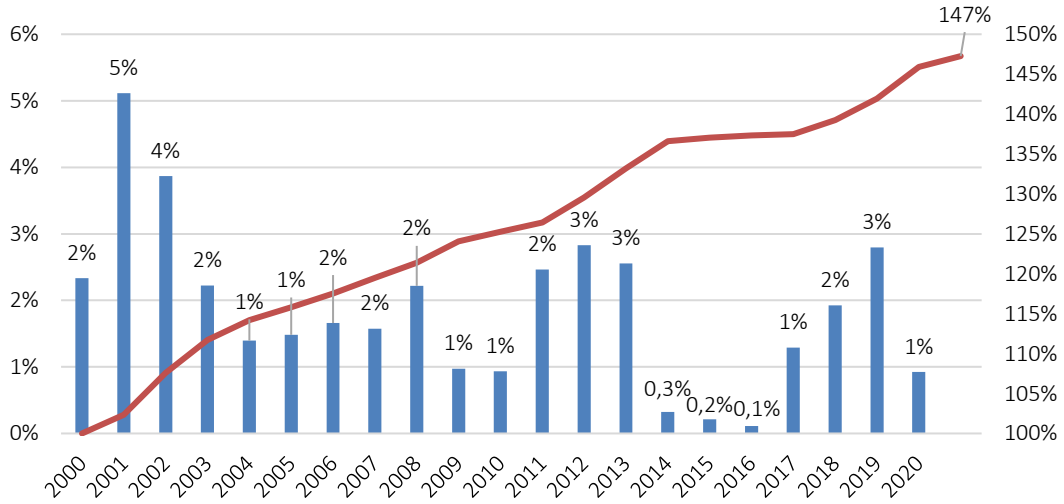
Graph NL10. Returns after charges and before inflation



Source: Derived from tables NL3 and NL5

The next step on the way to calculating the real return on investment of the Dutch pension funds is to control for the annual inflation rate which reached 2,7% in 2019 but deflated considerably in 2020, due to COVID-19 restrictions, to 0.92%.

Graph NL11. Annual inflation rate in the Netherlands



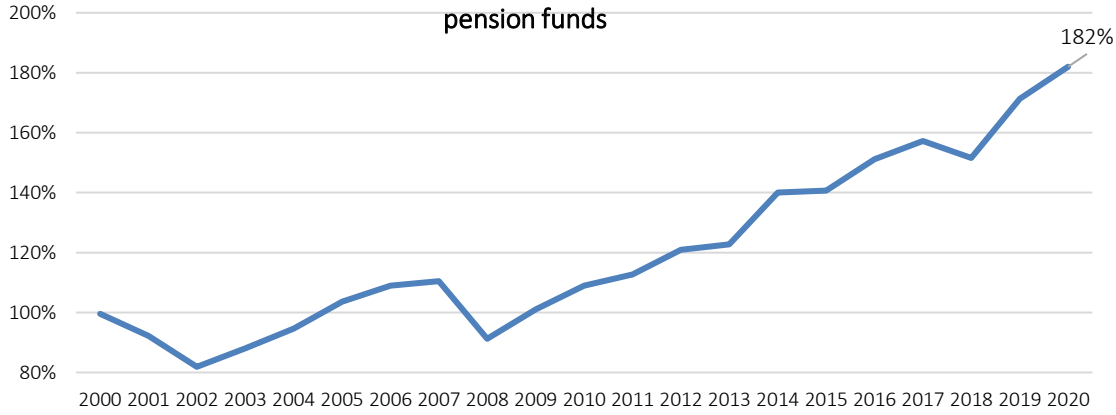
Source: Own calculations based on Eurostat

When we use the inflation data from Eurostat (M12 to M12 change) from 2000 and adjust the return after charges for inflation, we get the following outcome:

Table NL12. Return after charges and inflation	
2000	0.16%
2001	-7.41%
2002	-11.73%
2003	6.82%
2004	7.36%
2005	10.09%
2006	5.21%
2007	1.34%
2008	-17.82%
2009	10.46%
2010	8.82%
2011	3.49%
2012	7.84%
2013	0.35%
2014	13.64%
2015	0.76%
2016	8.12%
2017	3.92%
2018	-3.63%
2019	13.00%
2020	7.21%
Average 2000-2020	2.89%

Source: Own calculations

Graph NL13. Cumulative real net performances of Dutch occupational pension funds



Source: Own composition based on Table NL12

Over the last 21 years, Dutch pension funds collectively have had very variable, even volatile, annual results in terms of real returns. Real annual returns ranged from -17,36% in 2008, the year the collapse of Lehman Brothers threw global financial markets into a tailspin, to 14,08% in 2014 when the European Central Bank did its utmost to lift the Eurozone out of its debt crisis and stagnation. Even as Dutch pension funds invest relatively heavily in bonds and other securities, their returns have proved greatly dependent on volatile financial markets in an age of low interest rates. This is partly due to the fact that interest rate changes have a greater impact on the durations and value of securities when the starting rates are close to zero, compared to situations in which interest rates at the start of year are at higher levels. Much of these returns, however, remain unrealized as pension funds hold on to their bond assets to continue matching their long-term liabilities, which are even more interest-rate dependent.

2019 and 2020 stood out as years of high real returns together with 2009 (a bounce back year) and 2014. During the aftermath of the dotcom bubble in the early 2000s, in 2008 when the financial crisis was at its height and in 2018, real returns have been disappointingly negative. Overall, the last 21 years have produced solidly positive real returns for Dutch pension funds, with the geometric annual average real return reaching 2.89% by the end of 2020. While the first decade of the 21st century was a lost decade in terms of real returns, cumulative yields since the start of 2010 have added 80% to the real value of pension savings.

Pillar III vehicles

Third-pillar products in The Netherlands have been wrought with problems in The Netherlands. In 2006 the largest financial scandal in Dutch history erupted when it was revealed that commercial life insurance and pension products had hidden cost structures that greatly penalized savers. This *woekerpolis-affaire* (usurious insurance affair) seriously dented the Dutch public's trust in the financial sector and sparked a host of regulations designed to increase transparency and limit or eliminate profiteering. The momentum for such regulations was strengthened even further by the global financial crisis which started two years later. These regulations threw the market for third pillar products into turmoil, forced the reform or abolishment of some of these products themselves, and greatly limited the profits that could be made with them by providers and (especially) by middlemen. On the upside, consumer interest became better protected and the impetus to increase transparency has made The Netherlands one of the global forerunners in terms of detailed and accurate reporting on the fortunes and expenses of financial products and institutions.

Afterwards, new products were introduced, some of which depended on interest rates. But these have remained so low over the past decade that all pension products based on guaranteed benefits have become unsustainably expensive to purchase and have all but disappeared from the Dutch third-pillar market. Virtually all life insurances and pension products sold to individuals currently have higher risk profiles. Furthermore, tax regime changes implemented in 2015 have also meant that pension saving has become less fiscally attractive for those with high incomes. Nevertheless,

the third-pillar market in The Netherlands is still alive and may see a change of fortunes in this century's third decade, especially if the coming reform of pension schemes and pension funds (resulting from the Pension Accord) does not go smoothly and further erodes the Dutch public's trust in Pillar II.

Life insurance schemes constitute a large part of the third pillar products and hence can be used as a proxy for the returns in this pillar. Below we present the total return after charges and taxes, but before inflation, and the amount invested on behalf of owners of life insurance policies. It is important to note that an unknown percentage of the pension plans executed by life insurance companies fall under Pillar II (employer-related pension) rather than Pillar III (personal pension). So, as stated, the returns of the life insurance companies are merely a proxy for Pillar III returns (data on the returns of another pension vehicle active in both the second and third pillar, the PPI, are missing entirely).

Table NL14. Real Return of Life Insurance Companies in the Netherlands

Year	Investment result (after charges and taxes) (in mln EUR)	Investments on behalf of policy holders (in mln EUR)	Nominal return (net of charges)	HICP Inflation	Real return (net of charges, inflation)
2000	2,771	70,928	4%	2%	2%
2001	2,593	76,960	3%	5%	-2%
2002	240	68,535	0%	4%	-3%
2003	2,793	76,814	4%	2%	1%
2004	2,306	82,755	3%	1%	1%
2005	3,322	95,972	3%	1%	2%
2006	3,935	99,693	4%	2%	2%
2007	6,951	100,755	7%	2%	5%
2008	-5,580	87,460	-6%	2%	-8%
2009	2,070	101,246	2%	1%	1%
2010	180	106,624	0%	1%	-1%
2011	-460	105,555	0%	2%	-3%
2012	360	110,790	0%	3%	-2%
2013	2,208	106,480	2%	3%	0%
2014	-2,988	111,112	-3%	0%	-3%
2015	3,547	104,934	3%	0%	3%
2016	2,819	110,160	3%	0%	2%
2017	3,179	103,093	3%	1%	2%
2018	3,280	85,634	4%	2%	2%
2019	3,069	95,938	3%	3%	0%
2020	2,735	98,744	2.77%	1%	1.83%
AVERAGE 2000-2019			1.98%	1.84%	0.13%

Source: Own calculations, Statistics Netherlands, DNB

The average annual return after charges, but before inflation, for life insurance companies in the Netherlands between 2000 up to and including 2020 amounts to 1.94%. The average annual inflation rate in the Netherlands over the same period was 1.84%. Therefore, the average real

annual return of insurance companies in the Netherlands for the period between 2000 and 2020 stands at virtually nil (0.13%).

Presenting all these calculations together, we get the following table:

Table NL15. Average real return of pension funds and insurance companies in the Netherlands

	Nominal return pension funds (1)	Return insurance companies after charges (2)	HICP annual inflation rate (3)	Charges pension funds (4)	Real return pension funds ((1-4)/3)	Real returns insurance companies (2/3)
2000	2.7	3.91	2.33	0.2	0.16	1.54
2001	-2.48	3.37	5.11	0.2	-7.41	-1.66
2002	-8.12	0.35	3.87	0.2	-11.73	-3.39
2003	9.4	3.64	2.22	0.2	6.82	1.38
2004	9.06	2.79	1.39	0.2	7.36	1.38
2005	11.92	3.46	1.48	0.2	10.09	1.95
2006	7.16	3.95	1.66	0.2	5.21	2.25
2007	3.14	6.9	1.57	0.2	1.34	5.24
2008	-15.76	-6.38	2.22	0.24	-17.82	-8.41
2009	11.73	2.04	0.97	0.19	10.46	1.06
2010	9.98	0.17	0.93	0.15	8.82	-0.75
2011	6.23	-0.44	2.47	0.19	3.49	-2.84
2012	11.1	0.32	2.83	0.21	7.84	-2.44
2013	3.15	2.07	2.56	0.23	0.35	-0.47
2014	14.18	-2.69	0.32	0.17	13.64	-3.00
2015	1.47	3.38	0.21	0.5	0.76	3.16
2016	8.74	2.56	0.11	0.5	8.12	2.45
2017	5.81	3.08	1.29	0.55	3.92	1.77
2018	-1.26	3.83	1.92	0.52	-3.63	1.87
2019	16.70	3.2	2.80	0.54	13.00	0.39
2020	7.66	2.77	0.9	0.45	6.23	1.83
Avg.	5.08%	1.98%	1.84%	0.29	2.89%	0.13%

Source: *Data reported by the Dutch Central Bank.*

Conclusion

Dutch employees are far less dependent on a state pension compared to other Europeans since their individual pension plans account for the main part of their retirement income.

Generally speaking, the pension funds that invest the largest share of pension contributions tend to provide decent returns after taxes, charges and inflation. For the period considered here, 2000-2020, the average annual real return is 2.89%. The pension vehicles in the third pillar, such as life

insurance companies, return far less, practically nil over the same period. However, one must note that the third pillar is relatively small, and a relatively small number of individuals are enrolled in it.

Historically, in the post-war period, Dutch employers and employees have invested much in pension schemes and premiums, with the traditional rule of thumb being that one-fifth of wage benefits were dedicated to pension investments. Also, the Dutch pension system has maintained an exceptional degree of compulsion, submitting most sectors of the economy to mandatory sectoral pension schemes. This, combined with a regulatory framework which utilizes discount rates that are more prudent (many argue that these are too prudent) than those used by EIOPA, for example, explains why the Dutch pension system is consistently judged to be (one of the) strongest in the world.

Like other pension systems in OECD countries and elsewhere, however, Dutch pensions have come under strain by the combination of an aging population and historically low interest rates. Over the last decade, Dutch pensions have not kept up with inflation rates despite positive real returns. The reason for this is the low discount rate that pension funds are forced to employ in their valuation of pension liabilities, which in the age of low interest rates has made the *effective* returns of pension funds (the growth of assets compared to the growth of liabilities) negative. Also, as the labour market has become increasingly flexible, generational conflict has increased within pension funds (which utilize cross-generational subsidies in the traditional expectation that employees spend their entire working lives within a single sectoral or company-based pension fund) and a growing part of the work force does not fall under any Pillar II pension scheme at all.

The Dutch government, trade unions, and employers' organizations have signed an accord (*Pensioenakkoord*) aimed to address the issue of intergenerational subsidies and financial difficulties which points towards a general move away from DB towards DC. So far, however, little has been done to address the growing Pillar II 'blind spot' (*witte vlek*) which may lead to strongly declining average replacement rates in the future and to growing elderly poverty rates. On a brighter note, Dutch pension regulators and pension funds, have pioneered a focus on cost-related transparency over the last few years. Due to the financial clout of Dutch pension funds, this has forced many (internationally operating) investment firms to clarify the structure of fees and charges, as well as their policies on sustainable investments. The governance and efficiency of pension funds themselves has improved as well, partly as a result of an ongoing process of consolidation driven by mergers between pension funds.

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Editor and Publisher

The European Federation of Investors and Financial Services Users
Rue d'Arenberg 44
1000 Brussels
Belgium
info@betterfinance.eu

Coordinators

Aleksandra Mączyńska
Ján Šebo
Ştefan Dragoş Voicu

Contributors

Torben M. Andersen
Edoardo Carlucci
Laetitia Gabaut
Johannes Hagen
José Antonio Herce
Arnaud Houdmont
Matis Joab
Michal Mešťan
Gregoire Naacke
Dayana Nacheva
Yordanka Popova
Guillaume Prache
Joanna Rutecka-Góra
Dr. Thomas Url

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