BF BETTER FINANCE

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

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

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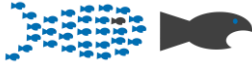Ján Šebo
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Acronyms

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.

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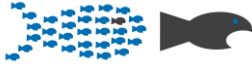
Custodian* – is the entity responsible, as a minimum, for holding the pension fund assets and for ensuring their safekeeping.

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

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[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.

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[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).

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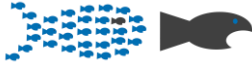
Open pension funds* – are funds that support at least one plan with no restriction on membership.

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,

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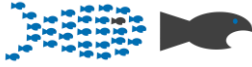
Supervisory board* – is(are) the individual(s) responsible for monitoring the governing body of a pension entity.

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.

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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.

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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.

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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.

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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.

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[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.
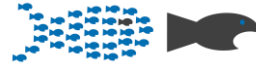
Aggregate summary return table	Pillar II								
	1 year		3 years		7 years		10 years		max. available ▲
	2020	2019	2018-2020	2017-2019	2014-2020	2013-2019	2011-2020	2010-2019	
Austria	1.41%*	8,01%	1,23%	1,78%	2,35%	2,53%	1,79%	2,01%	1,48%
Belgium	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Bulgaria	1,41%	2,71%	-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%
Netherland	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.
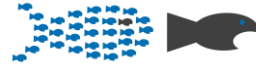
Taxation

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 <u>taxation regime</u>. 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 (<u>contribution</u> – *what you pay for your pension*; <u>returns</u> – *what your investments earn*; and <u>pay-outs</u> – *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; <u>Source</u>: 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.

Pension Savings: The Real Return
2021 Edition

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.

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[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
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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

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[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

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[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);

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[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

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[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

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[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

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[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).

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[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%

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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).

Chart GR2. EU27 households' financial assets
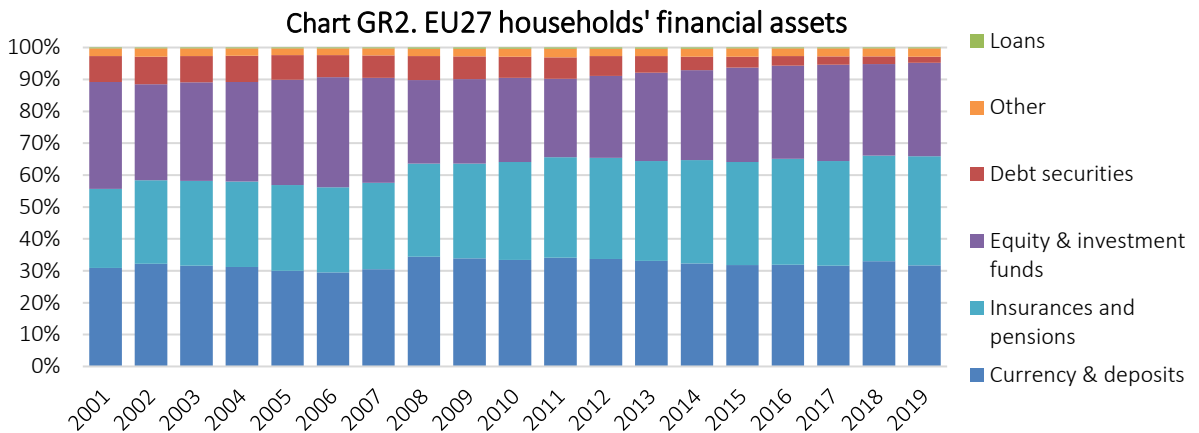
Source: BETTER FINANCE based on Eurostat data; 2020 data not yet available

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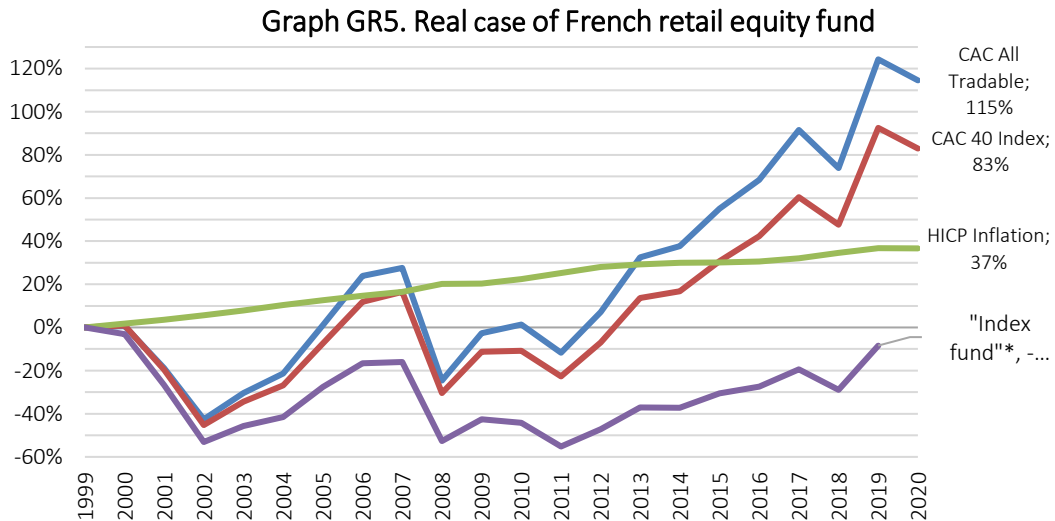
Source: BETTER FINANCE research, fund manager; * 2000-2003 simulated

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;

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[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]

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[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

€ 95.310 — Accumulated savings

€ 80.142 — Savings net of fees

€ 64.013

€ 55.803

€ 38.339

€ 34.786

€ 36.295 — Savings net of fees and inflation

€ 30.807

€ 23.410

After 20 years   After 30 years   After 40 years
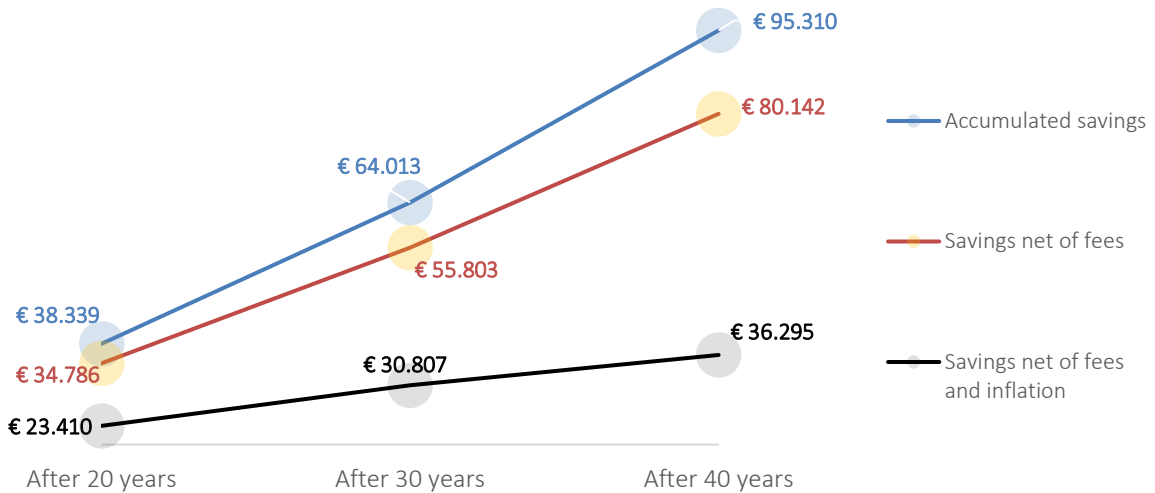
Source: *BETTER FINANCE PEPP Level 2 position paper*

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?*	*What is a "**real 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.	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:
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%.	• 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*.
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.	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).
Nominal returns can be recalculated into **real returns** (see right-hand side) by **adjusting for inflation**.	

Graph GR8. Real value of savings

€221

€100

Start Year, Year 2, Year 4, Year 6, Year 8, Year 10, Year 12, Year 14, Year 16, Year 18, Year 20, Year 22, Year 24, Year 26, Year 28, Year 30, Year 32, Year 34, Year 36, Year 38, Year 40
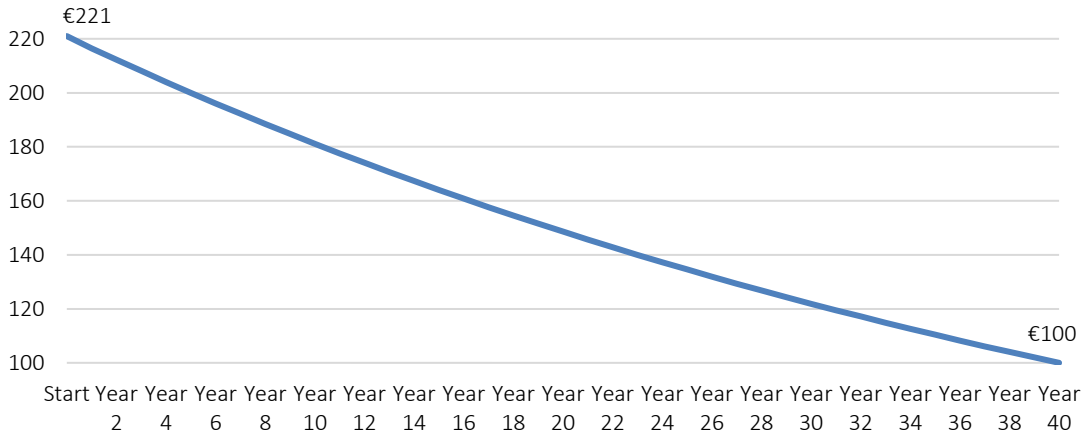
Source: BETTER FINANCE PEPP Level 2 position paper

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 <u>net equity of households</u>?

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 <u>aggregate replacement ratio for pensions?</u>

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.

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]

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[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%

Country	Year				
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):

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[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

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[41] As measured by the MSCI All Country World Index (ACWI) Net Returns denominated in €.

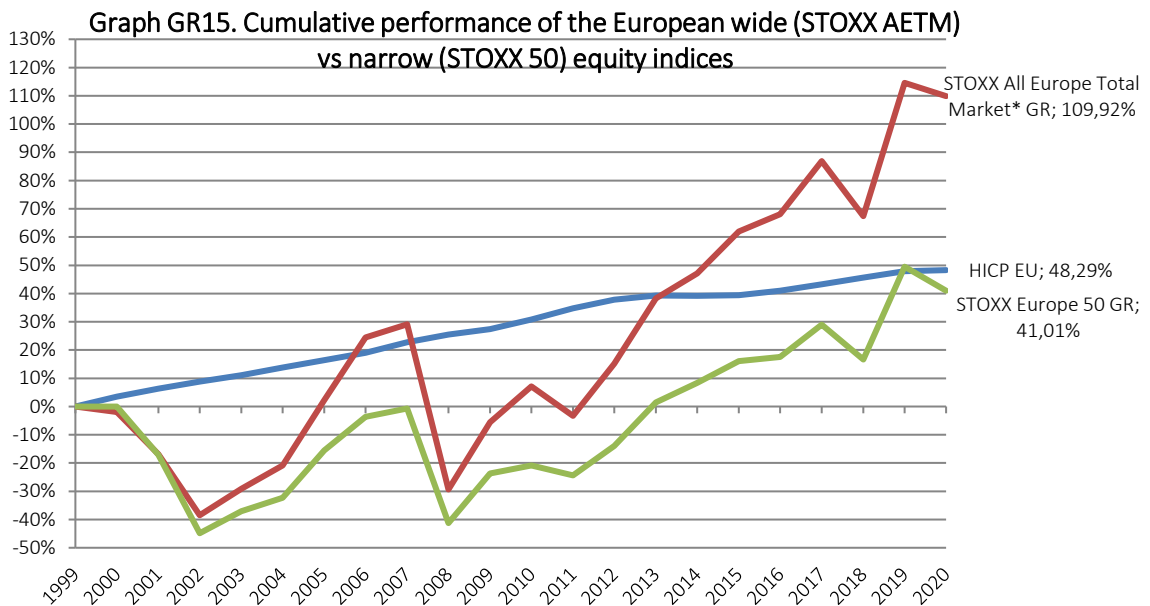[42] As measured by the MSCI USA Net Returns Index, calculated in €.

[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

STOXX All Europe Total Market* GR; 109,92%

HICP EU; 48,29%
STOXX Europe 50 GR; 41,01%

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%.

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[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

Pan-European Bond Index, 155,17%

Inflation (HICP); 48,29%
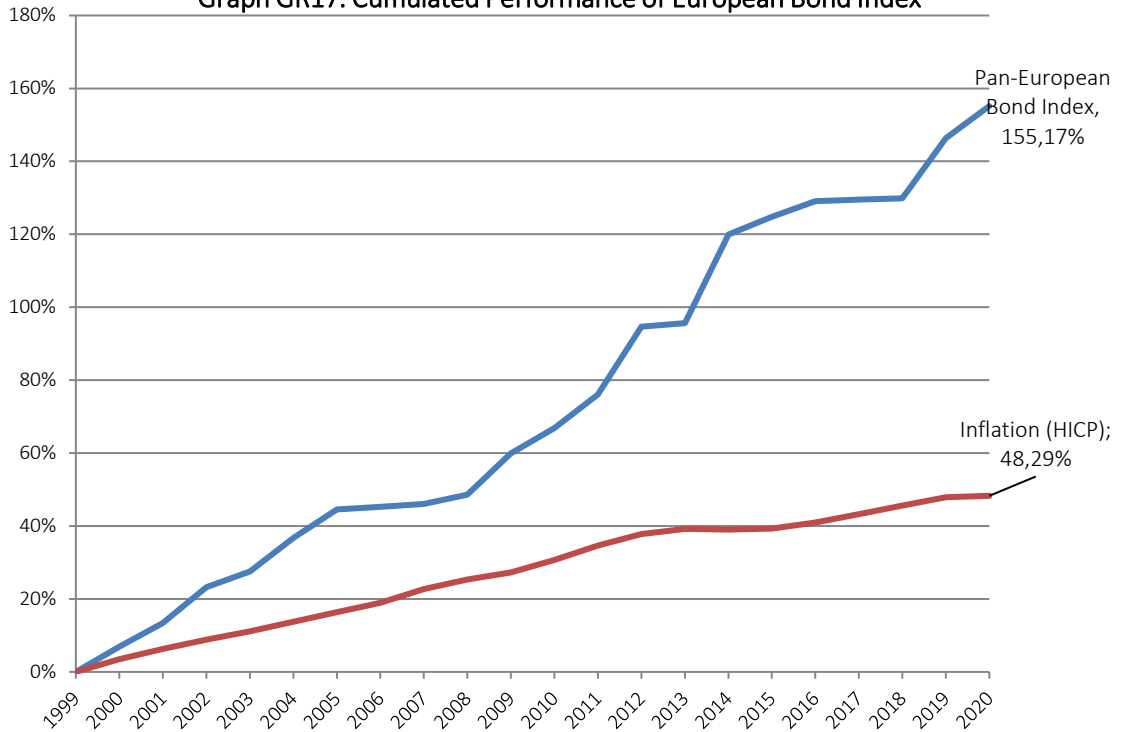
Source: Eurostat; Bloomberg website; own computations

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:

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[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

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[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

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[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.

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[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	● <u>**EEE regime**</u>; 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.

<u>Note</u>: 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

BE	Occupational Pension Plans (IORP), 2000-2020	2,24%
	Pension Savings Funds, 2000-2020	1,78%
DE	Pension insurances, 2000-2020	2,10%
ES	Pension funds (all), 2000-2020	0,52%
	Pillar II schemes (occupational), 2000-2020	0,79%
	Pillar II schemes (associate), 2000-2020	0,32%
FR	Life Insurance, Guaranteed, 2000-2020	1,63%
	Life Insurance, Unit-linked, 2000-2020	-0,71%
	Corporate Savings Plans, 2000-2020	0,81%
IT	Closed Pension Funds,2000-2020	1,31%
	Open Pension Funds, 2000-2020	0,33%
NL	Pension Funds, 2000-2020	2,89%
	Life Insurance, 2000-2020	0,13%
UK	Pension Funds, 2000-2017	3,06%

*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

AT	Pension funds, 2002 - 2020	1,37%
	Pension insurances, 2002 - 2020	2,05%
BE	"Assurance Groupe" (Branch 21), 2002-2014	2,00%
	Life Insurance (Branch 21), 2002-2014	1,63%
BG	Universal pension funds (TWR), 2002-2020	-1,35%
	Voluntary pension funds (TWR), 2002-2020	0,17%
HR	Mandatory Pension Funds, 2002 - 2020	3,28%
	Voluntary Pension funds, 2002 - 2020	3,59%
DE	AOPP, 2002-2019	2,28%
FR	Public employee pension, 2003-2020	-1,41%
PL	Employee Pension Funds, 2002-2020	3,74%
SE	AP7 pension fund, default option, 2002-2020	8,13%
	Premium pensions, own choice, 2002-2020	4,96%

*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

BE	OPP-ICs (Branch 21), 2002-2014	2,59%
DE	Riester Pension Insurance, 2005-2020	1,51%
	Rürup Pension Insurance, 2005-2020	1,53%
EE	Mandatory pension funds, 2003-2020	0,67%
	Supplementary pension funds, 2003-2020	1,54%
IT	PIP With Profits, 2008-2020	1,36%
	PIP Unit-Linked, 2008-2020	2,23%
LT	Occupational pension plans, 2004-2020	1,72%
	Supplementary pension plans, 2004-2020	1,05%
LV	State Funded Pension Funds, 2003-2020	-0,07%
	Voluntary Private Pension, 2011-2020	1,58%
PL	Voluntary pension funds (DFE), 2013-2020	4,11%
RO	Pillar II Funded pensions, 2008-2020	2,41%
	Voluntary private pensions, 2007-2020	-0,85%
SK	Pillar II Funded pension, 2005-2020	-0,03%
	Supplementary pension funds, 2009-2020	0,61%

Source: BETTER FINANCE Research, Table 20

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

DK	Pension plans Hybrid DC with guarantee 2016-2019 (net of inflation and taxes, breakdown on capital guarantee)	4,71%
	Pension plans DC without guarantee 2016-2019 (net of inflation and taxes, breakdown on capital guarantee)	4,89%
SE	ITP1, 2016-2020	8,23%
	SAF-LO, 2016-2020	8,34%
	PA-16, 2016-2020	8,10%
	AKAP-KL, 2016-2020	8,61%
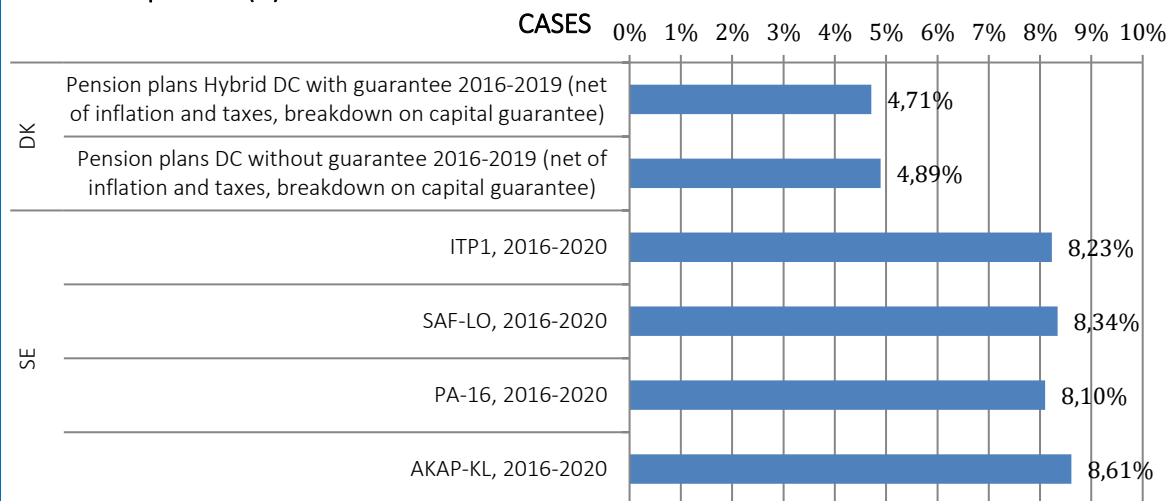
Source: Graph 20

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: Spain

Resumen

Los trabajadores españoles no ahorran para su jubilación. "El ladrillo y el mortero" constituyen más del 70% de la cartera de un hogar español típico. Y no hay forma de pensar en este activo como ahorro para la jubilación. Dado que las prestaciones de jubilación de la Seguridad Social sustituyen más del 80% de los ingresos laborales perdidos en el momento de la jubilación (según la OCDE, ya que la tasa de sustitución agregada de Eurostat es mucho menor, pero sigue siendo una de las más altas de las jurisdicciones analizadas en este informe, con un 70%), ¿por qué los empleados españoles deberían ahorrar con este fin? En consecuencia, la industria española de pensiones (pilares II y III) es mucho menor que en Dinamarca (la más alta de la UE27) y Paìses-Bajos (la segunda más alta). Los activos de los Fondos de Pensiones a finales de 2019 alcanzaron el 10,75% del PIB de ese año, y si a ello se le añaden los vehículos de jubilación asegurada o similares a la jubilación, se podrían encontrar 15,24 puntos porcentuales más. Estas y otras razones implican que la gestión de activos en esta limitada industria no puede ser barata. Sin duda, los activos del Pilar II son tan baratos de gestionar como en los países avanzados, pero no es el caso de los activos del Pilar III. La fiscalidad de los activos y rentas de jubilación en España responde al régimen de EET, como en la mayoría de los países de la OCDE. La rentabilidad real neta media acumulada desde el año 2000, en el sistema estándar de Planes de Pensiones, una vez ajustada la inflación, ha sido de apenas un 0,43% anual. Poco se sabe sobre la rentabilidad media de los activos de los vehículos asegurados, y su cálculo no ha sido el objetivo de este informe. Todos los datos utilizados pueden encontrarse en las páginas web de fuentes oficiales fácilmente disponibles (INVERCO, DGSFP y Banco de España).

Summary

Spanish workers don't save for their retirement. "Bricks & Mortar" make more than 70% of a typical Spanish household's portfolio. And there is no way to think of this asset as retirement savings. As Social Security old-age benefits replace more than 80% of lost labour income at retirement (according to OECD, as the Eurostat aggregate replacement rate is much lower, but still among the highest of the jurisdictions analysed in this report, at 70%), why Spanish employees should save with this purpose? As a result, Spanish Pensions Industry (Pillars II and III) is much smaller than in Denmark (highest in the EU27) and Netherlands (second highest). Pension Funds' assets at end 2019 reached 10.75% of GDP that year, and if insured retirement or retirement-like vehicles were added to this, an extra 15.24 percentage points could be found. These and other reasons imply that

asset management in this limited industry cannot be cheap. To be sure, Pillar II assets are as cheap to manage as in advanced countries, but this is not the case with Pillar III assets. Taxation of retirement assets and income in Spain responds to the EET regime, as in most OECD countries. Average cumulative net real returns since 2000, in the standard Pension Plans system, once inflation adjusted, has been just 0.43% annually. Little is known about average returns to insured vehicles' assets, and its computation has not been the purpose of this report. All data used can be found on readily available official sources' web sites (INVERCO, DGSFP and Bank of Spain).

Introduction

The Spanish pension system is composed of three pillars:

- Pillar I – Public, with a pay-as-you-go major branch of compulsory, contributive pensions (old-age, invalidity and survivors' benefits) and a minor, means-tested assistance branch for over 65 years old individuals (old-age and invalidity). [244]
- Pillar II – Voluntary, defined benefit and defined contribution employer-sponsored pension plans (restricted de facto to large companies).
- Pillar III – Voluntary, personal (or associated) defined benefit pension plans and a variety of other qualified retirement savings vehicles.

A more detailed structure of these three pillars is presented in the following table.

Introductory Table. Multi-pillar pension system in Spain (2019)		
Pillar I **National Social Security**	**Pillar II** **Employer-Sponsored Pension Plans**	**Pillar III** **Individual Pension Plans**
Participation	Mandatory	Voluntary	Voluntary
Type of funding	Financed by social contributions (employees 4.7%, employers 23.6%)	Financed normally by employers' contributions (no standard rate)	Financed by insured persons
Type of benefit entitlement	Variable percentage of a 22-year average pensionable wage	Both DB and DC	DC
Management	Publicly managed; Benefits paid via National Social Security Agency (INSS)	Managed by independent agencies under Companies' Social Partners supervision	Managed by Plan's Promoters (Financial, Insurers or Associations)
Products	Contributory state pension, Non-contributory state pension and Minimum Basic Income (as from July 2020)	Pension Plans (standard vehicle), Insured Pension Plans (PPA), Life Insurance, Individual Saving Plan (Spanish acronym: PIAS) and Long-term Individual Saving Insurance (Spanish acronym: SIALP).	

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[244] As recently as in June 2020 the Government enacted e new Social Security basic scheme, the "*Ingreso Mínimo Vital*" (Minimum Basic Income), addressed to people most in need, means tested and subject to job search and other eligibility conditions. See this for a compact explanation (in Spanish): https://revista.seg-social.es/2020/05/30/el-gobierno-aprobara-el-ingreso-minimo-vital-esta-semana/.

	Average contributory pension (14 payments per year): €1,466 per month (old-age, newly retired employees)	Employer Sponsored standard Pension Plans (14 payments per year): €799 per month (old-age, income only Plans, 2018)	Individual standard Pension Plans (14 payments per year): €174 per month (old-age, income only Plans, 2018)
Average benefit	Average non-contributory pension (14 payments per year): €396 per month (old-age and invalidity)	Only 40,4% of total beneficiaries opt for income only benefits and these amount to 27,8% of total benefits paid	Only 19,1% of total beneficiaries opt for income only benefits and these amount to 51,5% of total benefits paid
Coverage	Social Insurance is compulsory for all workers. There were 6.1 million old-age pensioners in 2019. All persons 65 and over are eligible for Social Assistance.	Barely 8.6% of active population (11,9% of employees) are covered by Employer-sponsored Pension Plans. Only 41.7 thousand retirees received income-only benefits in 2019.	Slightly below 25% of population aged 16 to 64 is covered by Individual Plans. Only 190 thousand retirees received income-only benefits in 2019.
Aggregate replacement rate: 70%			

It is well known that Social Security contributions, even if they are immediately spent on current benefits and not accumulated as savings by workers, may return relevant yields when retirement benefits are finally received. This happens everywhere, al so in Spain. Estimations of the implicit rate of return for Spain are around 6% real per year. This means that Social Security, as a matter of fact, returns every euro paid in contributions around 12 years after retirement when the average retiree has a similar time span of remaining life years.

This implicit return is difficult to beat by marketed retirement products, even if these offer by default sustainability when they are of the DC variety. Something that Social Security benefits cannot offer.

This said, the summary table below tells a story that bears a sharp contrast with the above description of Social Security internal rate of return. Long term (since 2000) net (of fees), real, before taxes, returns of the standard retirement plans Pillars II and III) in Spain has been 0.51% and this thanks to the good performance of stock markets in 2019.

Aggregate summary return table									
	1 year		3 years		7 years		10 years		Since 2000
	2020	2019	2018-2020	2017-2019	2014-2020	2013-2019	2011-2020	2010-2019	2000-2020
PILLAR II									
Nominal return	1.53%	8.78%	2.24%	3.73%	3.22%	5.26%	3.81%	4.78%	3.01%
Real return	2.10%	7.93%	1.74%	2.14%	2.80%	4.28%	2.94%	2.60%	0.79%
PILLAR III									
Nominal return	0.23%	8.81%	1.37%	2.72%	2.25%	4.34%	2.87%	3.42%	2.53%
Real return	0.80%	7.96%	0.86%	1.14%	1.83%	3.35%	2.00%	2.10%	0.32%
Both Pillars									
Nominal return	0.67%	8.80%	1.66%	1.47%	2.62%	4.66%	3.23%	3.91%	2.72%
Real return	1.24%	7.95%	1.15%	1.25%	2.20%	3.67%	2.36%	2.60%	0.51%

Source: Own calculations based on INVERCO data

Pillar I

The National Institute for Social Security (INSS, Spanish acronym) is the national agency for pensions run by the central government. The Spanish Social Security covers all workers against old-age, invalidity (their dependants) and survivorship (widowhood and orphanhood). It has two separate branches: an insurance branch and an assistance branch sharply differentiated not only by law but also by its size, nature and functions.

The insurance branch of Social Security is, by far, the dominant scheme in the Spanish pension's arena (all vehicles considered). It is contributory, compulsive for all workers, either employee and firms and is financed through social contributions that, within each current year, are used to pay for current pensions. The financial method of the system is thus of the Pay-As-You-Go variety. As of 31st December 2020, The INSS was paying 9.8 million pensions (to about 8.9 million beneficiaries) at a rate of € 995.80 each per month (14 payments in a year, all pension categories, all beneficiaries). Within these figures, almost 6,1 million pensions went to the old age category at an average rate of € 1,143,55 per beneficiary and month (14 payments in a year).

As for workers' coverage, as of 31st December 2018, 19.3 million workers were affiliated to the national Social Security scheme. Out of these, almost 14.8 million (76.7%) were wage earners covered by the General Regime of SS and almost 3.3 million (17.1%) independent workers covered by the Self-employed Regime. The remaining few, a mere 6.2% of workers, belonged to different sub-regimes within Social Security. Around half of unemployed workers were covered at the end of 2019 by Social Security through social contributions paid on their behalf by the Spanish Employment Agency for as long as they received unemployment benefits.

Besides social insurance pensions, the Spanish Social Security, through its assistance branch, as of 31st December 2019, paid 452.2 thousand pensions of which 261 thousand pensions were old-age and the rest were invalidity pensions. Non-contributory (assistance) pensions are subject to means

tests and are clearly a minor scheme since autonomous regions in Spain offer a wide range of basic benefits to those individuals and households in need.[245] These pensions are paid by Social Security, although fully financed out of general taxation. The average amount paid under this scheme was € 392 per month and beneficiary (14 payments in the year). This amount can be complemented by other personal characteristics.

Within the contributory pensions class, social contributions provide, as of 2019, for 87,8% of total cost of Social Security contributory pensions. The total contribution rate is 28.3% of gross pensionable wage. This rate splits in 23.6 pp paid by employers and 4.7 pp paid by workers. The self-employed must pay the whole 28.3% rate on their pensionable earnings. Pensionable wages (and earnings) track effective wages closely through a scale with a minimum pensionable wage (as of 2019) of € 1,050 and a maximum pensionable wage of € 4,070.10 per month. Employees cannot choose their contribution base but self-employed can do it and the majority of them do choose the minimum pensionable earnings base. This results in their retirement pensions being too small. Many of these benefits will have to be latter complemented with an assistance top in order to reach the statutory minimum retirement pension. This resulting, paradoxically, in a larger internal rate of return for minimum contributory old age pensions recipients, over their past contributions, compared to retirees receiving higher or maximum contributory pensions payable by Social Security.

Pillar II

As shown in the Introductory Table above, Social Security old-age benefits in Spain replace pre-retirement wages with one of the highest rates in the world and against a rather high pay-roll tax mostly paid by employers[246]. So, there is little margin left for occupational and personal retirement accounts to step substantially into the retirement arena[247]. And, indeed, what we observe in Spain is a very limited landscape for marketed retirement solutions despite the fact that the modern regulation for these products was enacted around 1987 last century.

Pillar II in Spain embraces employer-sponsored retirement accounts for wage earners and individual pension plans for the self-employed (and associate pension plans, a minor category). These products are financed through contributions mostly paid by employers and employees rarely participate on a matching basis. Independent workers pay their own Pillar II contributions. There is a variety of retirement vehicles that employers may offer their employees, or available for self-employed workers as well. Amongst them, tax-qualified Pension Plans are the standard and most prevalent vehicle. These Pension Plans are capitalisation retirement accounts of either Defined Benefit or Defined Contribution type to which employers contribute with a percentage of wage.

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[245] As recently as June 2020, Social Security is offering a new individual Minimum Basic Income. See footnote no 1 above.
[246] This said, however, pay-roll taxes to Social Security or other welfare programs are deferred wages and, were they to be entirely supported by employees, gross wages should be accordingly updated to accommodate this wedge.
[247] See Introductory Table above.

Workers can also contribute. Contribution rates to occupational Plans may vary considerably, but their average rate can be estimated at around a modest 2.6% of average gross wage[248], or around €629 per employee and year (2019). Employers are not obliged by law to offer these accounts, although some may be obliged by Collective Bargaining agreements in an industry or sector, which is rare. And indeed, very few companies, but the large ones, offer them to their workers as only barely 2 million accounts of this type where registered through 2019, to a total active population of 23 million that same year, a mere 8,6%. In 2019, only 41.7 thousand retired workers received old-age benefits. Average annual benefit was € 11,180 (gross) and the benefit rate (against average annual gross pay) was 39.6%. As of 31st December 2019, total assets under management (AuM, in what follows) to these accounts totalled € 35,7 billion (almost € 2 bn up from one year earlier), that is, a small 2.9% of Spanish GDP.

Pillar II retirement accounts are fiscally qualified by the government. Contributions by employers or employees are tax free up to a general limit of €8,000 per person per year. Benefits, no matter whether retrieved in form of monthly income or as a lump-sum, are taxed under the existing personal income taxation rules (a dual personal income taxation system). When benefits are retrieved in form of an income stream, beneficiaries are obliged to buy an annuity (life or term) or a drawdown.

Often in Spain and in many other countries, and this is a crucial issue of understanding for our industry, layman savers and even experts refer to this fiscal treatment as "incentives" or even "a fiscal gift". The truth is that having contributions tax exempted and taxing benefits (tax deferral) is the world standard, rather than the opposite or, even worst, double taxation of pensions if both contributions and benefits were to be taxed. Tax deferral, as opposed to an "incentive", is not a gift from government or from the rest of society is a just treatment for income won after decades of work efforts and frugality.

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[248] Estimation based on data from INVERCO and INE.

Pillar III

Pillar III embraces personal, or individual Pension Plans, the latter being again the dominant type within a large variety of types (see the Introductory Table above). These plans are personal, voluntary and "complementary" to both Pillar I and Pillar II arrangements. These accounts are equally treated, as Pillar II accounts, from the tax point of view or, in what concerns other features, are virtually the same product as employer-sponsored Pension Plans. In 2019, only 190 thousand retired workers received old-age benefits. Average annual benefit was € 2,441 (gross) and the benefit rate (against average annual gross pay) was 8.6%. As of 31st December 2019, Pillar III included 7.5 million retirement accounts that belonged to around 6.5 million individuals (or 21,37% of Spanish population 16-64 years old). AuM for these plans totalled € 79.85 bn (slightly € 7.6 bn up from one year earlier), that is, a mere 6.4% of Spanish GDP.

Household Savings

Personal (financial) saving in Spain is not a salient feature of its economy's financial side. But for the fact that it is so low because Spaniards love to save "*autrement*", in "bricks & mortar". This said, households are still able to spare some money by the end of the year and have so far managed to accumulate a financial buffer. Only a small part of these assets, however, are dedicated to retirement purposes. One of the reasons for this lies in the fact that Social Security forces Spanish workers to save through pay-roll taxes paid in large part as for employees) by their employers. This reduces the disposable income households could save. Besides, in exchange for heavy pay-roll taxation (28.3% of gross -pensionable- wages only for retirement and associated contingencies), public pensions replace lost wages due to retirement, at a 72.7% (average, effective benefit) rate. This, definitely, must reduce enormously the desire and/or capacity to save for retirement of Spanish workers.

As for real estate, it is well known that it is hardly a retirement asset at all. Yet many owners, that in Spain tend to own more than one house or apartment, think that they could use their houses as a source of retirement income. However realistic this may be, the fact is that an astonishing three fourths of Spanish households' total wealth is made of "bricks & mortar", its value representing around four times the value of Spanish GDP. So, housing is "the" retirement asset in Spain and retirement solutions providers would better think on how to develop sound retirement income products based on housing rather than hope for households to start accumulating proper retirement assets, at least for a while.

The overall picture on households' Gross Disposable Income (year-on-year change), Consumption (year on year change) and Gross Savings (rate over Disposable Income) is shown in Graph ES1 below. During the crisis (2009-2013), the savings rate oscillated amply around an average of 10.5% of Gross Disposable Income. 2009 and 2013 were precisely the most recessive years of the period. Pre-crisis years (since mid-90s in the last century) savings rate was low reflecting the strong

dynamics of private consumption, fuelled by cheap debt and intense employment creation coupled with wage increases. After 2008, the big recession and a twin recession in 2011-2013, led Spanish households to increase their savings ratio above 13% in 2009, and keep it close to 10% in the following recessive years. Meanwhile, wages stagnated, and employment continued to fall bringing the unemployment rate above 25% in the through of the second recession, at mid-2013.

Graph ES1. Evolution of household spending and (financial) savings rate
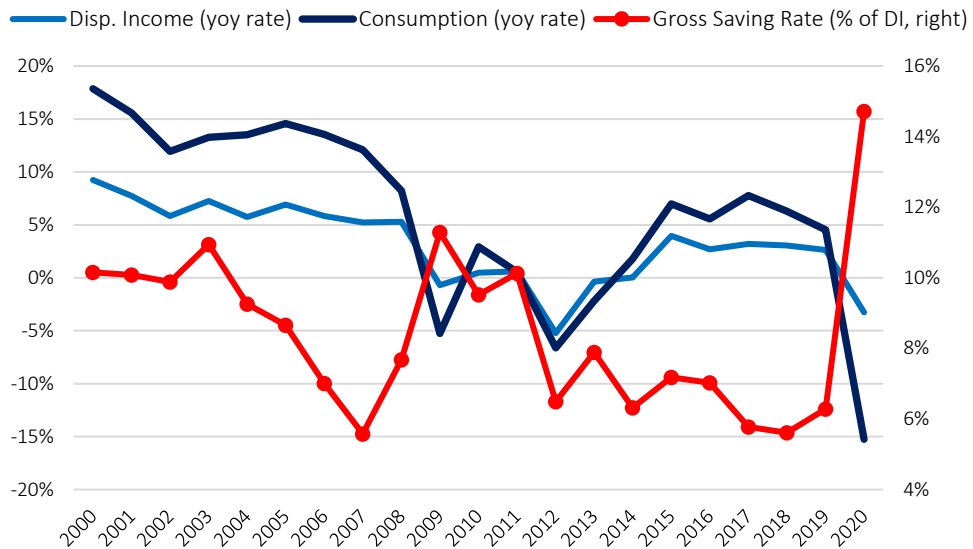
Source: Own calculations based on data from the Bank of Spain

Expansive years (2015-2018), when consumption was growing vigorously the savings rate dipped to a bottom 5% of disposable income. In 2019, consumption (and the economy) decelerated, and savings bounced to above 7%. However, 2020 brought an unprecedented health crisis, which triggered many restrictions on travelling and economic activity. As such, the consumption rate decreased sharply in 2020, respectively-12%, while the gross savings rate increased by 14.7%.

By the end of 2020, financial assets owned by Spanish households (and non-profit institutions serving households - NPISH) amounted to € 2.34 trillion, according to the Spanish Central Bank financial balance sheets statistics.

If we take a closer look at the distribution of financial assets owned by households in 2019-2020, as shown in Table ES2 below, one can immediately observe that the "cash and bank deposits" class of assets, with €988 billion, takes up to 42% of all financial assets held by Spanish households. "Equity" being the second most important financial asset in households' portfolios at €545 billion and 23.2% of total financial assets.

Table ES2. Financial assets held by Spanish households 2019					
	2019		2020		Change
	€ bn	%	€ bn	%	(%)
Cash and bank deposits	918.6	38.3%	988.8	42.2%	7.6%
Investment Funds	338.5	14.1%	347.7	14.8%	2.7%
Shares	670.2	27.9%	544.9	23.2%	-18.7%
Pension rights	174.6	7.3%	176.3	7.5%	1.0%
Insurance	213.6	8.9%	210.4	9.0%	-1.5%
Other	84.3	3.5%	77.4	3.3%	-8.2%
Total	2,399.8	100%	2,345.5	100%	-2.3%

Source: own elaboration based on Bando de España

Spanish households continued to increase their investment funds and insurance holdings in 2020 compared to 2019. Equity holdings went down by 4.7 p.p. and pension entitlements (apart those included in insurance contracts, *vid infra*) continued to stay slightly above 7% of their total financial assets. A very modest claim.

Pension Vehicles

Even if, due to the overwhelming presence of Social Security, the room for Pillars II and III is not a very large one in Spain, there is a large variety of marketed retirement products. The most standard retirement vehicles are Pension Plans and Insured Pension Plans. Normally, retirement vehicles are provided by financial institutions and insurers that also act as managers and depositaries of occupational pension funds. Also, a number of professional associations have since long created *Mutualidades* (Mutual Funds) some of which operate as regulated alternative schemes to Social Security self-employed schemes for these occupational groups.

Current laws regulating modern Pillars II and III were enacted around 1987-1988. Occupational pensions, that were directly provided by employers to their employees before then, were gradually taken out of company books and entrusted to newly created operators (*Planes de Pensiones*) and/or integrated into standard vehicles also created by those laws (*Fondos de Pensiones*).

Notwithstanding the fact that Spanish households choose to hold their financial assets in form of bank deposits and cash, collective investment vehicles kept their place in 2020 at a 14.8% share of total financial assets, just after equity, however Table ES2). Holdings of all major sub classes, within the broad collective investments class, had healthy increases with pension funds spotting a rarely seen in a decade 8.9%.

Table ES3. Total assets managed by Instituciones de Inversión Colectiva - 2009-2019 (€Mn)						
	Investent Funds				Pension Funds	Total
	Investment Funds		Investment Trusts		Foreign IF		
	Financial	Real Estate	Financial	Real Estate			
2009	163,243	6,774	25,925	309	32,200	84,920	313,371
2010	138,024	6,123	26,155	322	48,000	84,750	303,374
2011	127,731	4,495	24,145	316	45,000	83,148	284,835
2012	122,322	4,201	23,836	284	53,000	86,528	290,171
2013	153,834	3,713	27,331	868	65,000	92,770	343,516
2014	194,818	1,961	32,358	826	90,000	100,457	420,420
2015	219,965	421	34,082	721	118,000	104,518	477,707
2016	235,437	377	32,794	707	125,000	106,845	501,160
2017	263,123	360	32,058	620	168,000	110,963	575,124
2018	257,514	309	28,382	734	168,000	106,886	561,825
2019	276,557	309	29,446	725	195,000	116,419	618,456
2020	276,497	311	27,599	886	220,000	118,523	643,816

Source: INVERCO Report on Investment Funds and Pension Funds 2020

In 2020, investors and savers witnessed extraordinary returns that fully compensated for the dim results in the previous year. They even jumped into more risky assets in most asset classes. But they did not significantly increase their net savings into Investment and Pension Funds. Returns on assets were vastly responsible for the healthy increases in assets values as shown in Table ES4. These returns happened to be the highest observed during the recovery since 2013.

Table ES4. Flows of funds for Investment Funds & Pension Funds 2010 – 2018 (€ Mn)							
	Investments Funds				Pension Funds			
	BoY Assets	Net Investment	Net Yields	EoY Assets	BoY Assets	Net Investment	Net Yields	EoY Assets
2012	127,731	-10,263	4,854	122,322	83,148	70	3,310	86,528
2013	122,322	23,048	8,463	153,833	86,528	239	6,003	92,770
2014	153,833	35,573	5,412	194,818	92,770	898	6,789	100,457
2015	194,818	24,733	413	219,964	100,457	526	3,535	104,518
2016	219,964	13,820	1,652	235,436	104,518	264	2,063	106,845
2017	235,436	21,410	6,277	263,123	106,845	451	3,667	110,963
2018	263,123	8,410	-14,019	257,514	110,963	-170	-3,907	106,886
2019	257,514	1,693	17,350	276,557	106,886	799	8,734	116,419
2020	276,557	1,161	-1,221	276,497	116,387	1,184	952	118,523

Source: INVERCO Report on Investment Funds and Pension Funds 2020

Pension Plans

Pension Plans (Planes de Pensiones) are the standard retirement saving vehicle in Spain, albeit only one of many different retirement vehicles. They can be promoted by employers on behalf of their employees, by professional associations on behalf of their members or by financial institutions for

the general public (workers included, of course). Insurance companies also promote Insured Retirement Plans (Planes de Previsión Asegurados, PPA) for the general public and Insured Employers Retirement Plans (Planes de Previsión Social Empresarial, PPSE). These insured vehicles are basically equivalent to their non-insured counterparts.

Pension Plans are voluntary and complementary to Social Security pensions. They are not integrated in whatsoever way with Social Security. Plans created after 1987 legislation are DC plans but many of previously existing occupational plans, that had to be latter segregated from their parent companies, continue to be DB plans.

Pension Plans integrate for the sake of management and by law into Pension Funds (Fondos de Pensiones) to reach scale and financial synergy. This is the case of small II Pillar plans and of III Pillar or individual retirement plans. Pension Funds are legal entities, linked or not to financial institutions, obliged by law to contract out their managing and a depositary function with specialized agents.

Pension Plans in Spain, like in most countries, are tax qualified retirement vehicles. All payments by participants (or in their behalf) are tax-exempt up to a limit, so that compounded interest may play its full magic over larger savings during many years. Benefits are taxed (*vid infra*). In exchange for this tax treatment, funds cannot be cashed in in advance of retirement, unless some major contingencies happen (redundancy, sickness or long-term unemployment), albeit some extra flexibility has been added recently (*vid infra*). Accrued rights, however, can be switched between managing institutions and/or depositaries at no cost within the individual accounts scheme.

Table ES5 below presents the number of participants (accounts rather, see note at the bottom of the table) to Pension Funds as of 31st December 2010 to 2019. That decade sums up the recent trajectory of this important complementary retirement income institution in Spain. As of December 2019, slightly more than 9.5 million accounts were integrated in the whole scheme. The individual accounts sub scheme totalled 7.5 million accounts, 78.7% of total number of accounts.

Table ES5. Number of participants to Pension Plans 2010-2020					
	Dec. 2010		Dec. 2020		
	Participants	% of total	Participants	% of total	Change 10-19
Associate schemes	78,072	0.7%	52,292	0.5%	-33.0%
Employer-sponsored schemes	2,149,334	19.8%	1,961,787	20.6%	-8.7%
Individual schemes	8,601,775	79.4%	7,527,819	78.9%	-12.5%
Total	**10,829,181**	100%	**9,541,898**	100%	**-11.9%**

Source: Own elaboration based on INVERCO data

The most salient feature displayed in the above table is the drop in the number of accounts since 2010, an 11.9% rather uniformly distributed on time, shared by all sub schemes but especially relevant (in absolute terms) in the individual accounts sub scheme, that lost more about 1.2 million accounts in the period.

Correspondingly, as Table ES6 shows, the number of pension plans displays an almost regular decrease al through the present decade. The number of plans totalled 2,964 in 2010 and 2,399 at the end of 2020, a 19.1% decrease averaging over sub-schemes, and fairly regular though time.

By putting the figures from Table ES5 and ES6 together, we deduct that the average size of pension plans increased between 2010-2020 from 3.2 thousand accounts per plan to almost 4 thousand, likely making the system more efficient. Even if one cannot get rid of the feeling that the whole scheme reached a ceiling time ago and is now well set for a continuous and regular decline unless a new policy is devised.

Table ES6. Number of Pension Plans by type of scheme				
As of December 31st	Individual schemes	Employer-sponsored schemes	Associated schemes	Total
2010	1,271	1,484	209	2,964
2011	1,342	1,442	198	2,982
2012	1,385	1,398	191	2,974
2013	1,384	1,350	187	2,921
2014	1,320	1,330	178	2,828
2015	1,257	1,312	172	2,741
2016	1,189	1,305	164	2,658
2017	1,107	1,291	156	2,554
2018	1,079	1,293	151	2,523
2019	1,027	1,284	146	2,457
2020	976	1,282	141	2,399
Change 2010-2020	-23.2%	-13.6%	-32.5%	-19.1%

Source: Own elaboration based on INVERCO data

If Pillar II schemes (employer-sponsored and associate) represented, as of December 2019, 20.6% of total accounts and 58,2% of total plans, implying that individual accounts sub schemes are considerably larger than Pillar II plans in terms of number of accounts managed, the former had 31.4% of AuM (Table ES7 below). This, in turn, implies that average retirement assets per account are also larger within the Pillar II schemes than within Pillar III. Actually, €10,619 per account in the latter versus €17,956 per account in the former.[249]

Coming to total AuM for the whole Pension Plans and Funds industry, as of December 2020, this indicator showed a moderate increase (compared to 2019-2018), at 1.8% (whereas employer-sponsored plans slightly decreased) over the preceding year. Two warnings are in order now. First,

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[249] Using standard mortality tables for Spain and assumptions about returns, these amounts yield very low pure lifetime annuities. The annuity a typical individual account could buy retiring at 65 amounts to around € 53 per month and increases up to € 90 in the case of the typical occupational account. This said, retirement savings under these two modalities tend to be larger at retirement age. Also, within the occupational variety, around half a million accounts belong to civil servants and these accounts have almost no vested assets. On the other hand, some associate and employer-sponsored plans, covering dozens of thousands of employees in manufacturing and financial and advanced services, notably in the Basque Country (manufacturing) but also all across Spain for professional services (lawyers or engineers), hold large average retirement accounts. That's why benefits at retirement are normally cashed in as a lump sum.

note that the current level of Pension Plans' AuM is the highest on record albeit due to the brilliant performance of investments in 2019, rather due to more investment by participants coming to the system (Table ES5). Second, the total AuM for Pension Plans today barely represent 10.75% of GDP, compared to other EU jurisdictions, such as the Netherlands, where the assets managed by pension funds are twice the country's GDP.

Table ES7. Evolution of Pension Plans' AuM by scheme (31st December, 2009-2019)							
	Individual		Employer sponsored		Associate		Total
	AuM (Mn)	%	AuM (Mn)	%	AuM (Mn)	%	AuM (Mn)
2009	53,228	62.6%	30,784	36.2%	992	1.2%	85,004
2010	52,552	62.0%	31,272	36.9%	926	1.1%	84,750
2011	51,142	61.5%	31,170	37.5%	835	1.0%	83,148
2012	53,160	61.4%	32,572	37.6%	795	0.9%	86,528
2013	57,954	62.5%	33,815	36.5%	1,001	1.1%	92,770
2014	64,54	64.0%	35,262	35.1%	940	0.9%	100,457
2015	68,012	65.1%	35,548	34.0%	958	0.9%	104,518
2016	70,487	66.0%	35,437	33.2%	921	0.9%	106,845
2017	74,378	66.9%	35,843	32.3%	903	0.8%	111,123
2018	72,247	67.5%	33,957	31.7%	829	0.8%	107,033
2019	79,850	68.6%	35,710	30.7%	859	0.7%	116,419
2020	82,014	69.2%	35,681	30.1%	827	0.7%	118,523

Source: Own elaboration based on INVERCO data

It can also be seen that 69.2% of total AuM in these retirement vehicles belong to the Individual accounts sub scheme, representing a mere 7.44% of GDP. This category of assets has increased its value a 2.7% over the previous year, compared to the -0.16% decrease for occupational pensions assets.

Even if the type of assets in which Pension Funds' assets are invested vary regularly with time, in an effort to increase overall returns for participants, the primary objective of managers is to do their best given the overall choices of participants concerning the class of assets their funds are invested in.

Typically, Pension Funds offer a variety of risk profiles that participants generally adhere to for some time until they decide to switch their risk profile. This is generally the case of individual schemes, where participants can switch regularly between schemes albeit these schemes remain relatively specialized as for their risk profile as participants come and go. The above implies that all standard asset class must be present in overall portfolios at minimum and maximum thresholds, ranging from mostly bond based schemes to mostly equity-based schemes. Occupational schemes, however, are set with the risk profile established (if at all) by their sponsors and fund managers (or control boards, where employers and workers representatives sit) will have certain freedom to change the risk profile of the fund according to market conditions. Over a large period of time then, both participants, with their regular scheme choices, and managers and social partners may induce relevant changes in the asset allocation of pension funds.

Graph ES8 below shows that Spanish Pension Funds are relatively conservative, as one should expect, and allocate more than ¾ of their assets to a combination of mostly-bond-based and mixed (equity + bond-based) schemes. Mostly-equity-based schemes have a reduced stance but, indeed, in 2020 funds have switched towards riskier investments as yields have truly soared.

Graph ES8. Investments by asset class (Pillar III schemes) 2010 - 2020
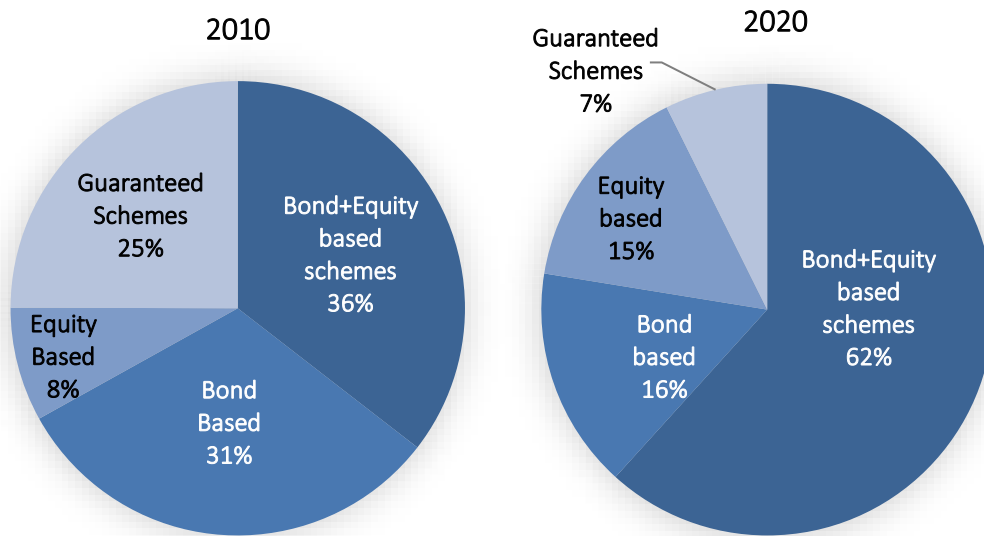
Source: INVERCO Report on Investment Funds and Pension Funds 2010-2020

On a shorter-term perspective (Table ES9), asset allocation structure of Pension Funds (all schemes) is obviously more stable even if there has been a sharp contrast with respect to 2018 concerning assets' returns. At the end of 2020 (latest data available by the DGSFP), a bias towards equity, Investment Funds and Trusts and foreign sovereign bonds is clearly discernible as well as away from domestic sovereign bonds and liquid assets, less attractive. Less risky investments, however, continued to dominate the allocative strategies of the Spanish Pensions Industry during 2020.

Table ES9. Pension Funds' Asset Allocation 2018-2020									
	IVQ18	IQ19	IIQ19	IIIQ19	IVQ19	IQ20	IIQ20	IIIQ20	IVQ20
Equity	15%	16%	16%	17%	17%	15%	16%	16%	16%
Investment Funds & Trusts	24%	25%	25%	27%	27%	24%	27%	27%	29%
Domestic Government Bonds	19%	18%	17%	17%	15%	15%	15%	14%	13%
Foreign Government Bonds	13%	13%	13%	14%	14%	17%	14%	14%	13%
Securities and Private Bonds	18%	18%	18%	18%	18%	19%	20%	20%	19%
Other (Liquid Assets)	11%	10%	11%	8%	9%	10%	9%	8%	10%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Own elaboration based on DGSFP data

As shown in Graph ES8, when a mid-term perspective is adopted, the increasing role of riskier assets in Pension Funds' allocation strategy is the result of a gradual switch from bonds in the last few years after sovereign debt became less and less attractive in an ultra-low interest rate scenario. A bet that finally, in 2019, has rewarded those who undertook it.

Life Insurance

Measured by own AuM, the Insurance Industry is a major retirement income products provider in Spain, both for Pillar II and, specially, Pillar III. Also, a substantial part of Pension Funds' assets is managed by insurers. A salient feature of this trade is the large variety of retirement vehicles that are marketed by the industry, in Spain and everywhere.

Some of these vehicles are indistinguishable from genuine retirement or pension plans (if we forget about the insurance part of any retirement solution) and quite a few are genuine life insurance solutions marketed since very old times by the industry and turned into retirement vehicles through a progressive assimilation with the standard vehicle (Pension Plans) firstly regulated in Spain some thirty years ago (*vid supra*). This assimilation has been fuelled by converging fiscal treatments for all these products even if some of them continue to have distinctive features of their own.

Very often, market practitioners make the distinction between "finance" and "insurance" when describing the nature of a given retirement solution. It must be said that as long as it is a true, integral "retirement solution", any product must contain insurance genetics in its composition. What is also true, instead, is that this insurance part must not necessarily be the heaviest part of any retirement product. Any retirement solution can contain an insurance part all through the accumulation and decumulation cycles of the most comprehensive product one might imagine to just the time span past the life expectancy points of the cohort the buyer belongs to. In between that span, a retirement product may or may not embody insurance features but just financial ones. Insurance-only retirement products tend to be safer and thus costlier for the buyer than financial only (no insurance on them, thus). This balance implies per se a rather large array of products, but not necessarily a "very large one". As retirement products are not easy to understand by the common buyer, a very large array of products in the market does not makes things easier for the retirement industry.

According to UNESPA, the Spanish Insurers Association, the total life and saving technical reserves/assets under management of the entire Spanish insurance sector at the end of 2020 amounted to € 242.4 bn, having spotted a 0.61% increase over 2019. As for the number of insured persons (and participants), 2020 ended with 33.4 million, slightly decreasing compared to 2019 (-1.36%).

Not all insured persons/participants and technical reserves/assets under management were allocated to retirement and/or pension vehicles. But about 25 million insured persons and €189.8 Bn worth of technical reserves were closely related to retirement rights and savings generated within the insurance sector. Moreover, insurers established in Spain manage assets worth €48.2 bn

on behalf of 3.4 million Pension Plans participants. The details of these gross numbers can be seen in Table ES10 below.

Table ES10. Insured Retirement and other Retirement-like vehicles 2020							
Broad Category	Type of Vehicle	Persons insured (x000)			Technical provisions (Mn)		
		Pillar II	Pillar III	Both Pillars	Pillar II	Pillar III	Both Pillars
Deferred capital	Insured Pension Plans (PPA)		884.1	884.1		12,097.8	12,097.8
	Company Retirement Plans (PPSE)	35.5		35.5	390.7		390.7
Pension Accruals and Insured Saving Vehicles	Risk	2,330.9		2,330.9	532.0		532.0
	PIAS*		1,195.5	11,955.6		14,441.1	14,441.1
	SIALP**		526.9	526.9		4,396.5	4,396.5
	Deferred capital	195.0	2,689.5	2,884.5	2,960.7	43,163.2	46,123.9
	Annuities***		1,536.6	1,536.6		64,985.5	64,985.5
	Income (acc. phase)	212.1		212.1	11,649.6		11,649.6
	Income (pay-out phase)	278.3		278.3	10,293.8		10,293.8
	Unit/Index-Linked	34.7	1,200.2	1,234.9	1,483.7	13,594.0	15,077.7
Other Group Insurance	Risk	3,356.6		3,356.6	1,063.8		1,063.8
	Defered capital	315.9		315.9	2,489.6		2,489.6
	Pensions (acc. phase)	21.0		21.0	1,227.8		1,227.8
	Pensions (pay-out phase)	55.1		55.1	3,389.5		3,389.5
	Unit/Index-Linked	31.1		31.1	937.8		937.8
Total		6,866.4	8,032.8	14,899.1	36,418.9	152,678.2	189,097.1
YoY change (in %)		0.80%	-5.60%	-3.89%	0.46%	-0.62%	-0.41%
Pro memoria		Numbers (x000)			Assets under Management (Mn)		
Pension Plans managed by Insurers		3,411.6			48,278.3		
YoY change (in %)		0.97%			4.57%		

Note: Individual life insurance and long-term care insurance are not included in these figures.
*Standing for Plan Individual de Ahorro Sistemático or Regular Individual Saving Plan
** Standing for "Seguro Individual de Ahorro a Largo Plazo" or Individual Long-Term Saving Insurance
*** Life and Term Annuities, including tax-qualified asset's conversions into annuities in the year
Source: own computations based on UNESPA Nota de Prensa on the insurance sector, Q4 of 2020

Table ES10 above also shows indeed a large variety of retirement and pension vehicles offered by the insurance industry and, it can also be seen, that even as they share an insurance feature that

makes then quite different from the purely financial vehicles (as they try to cope with death uncertainty through actuarial techniques) each vehicle responds to a different need by consumers concerning their risk profiles, fiscal rules applying to them, etc.

It is clear that the most popular insured retirement products are Deferred Capitals and Annuities, commanding, respectively, 2.9 and 1.5 million insured persons and totalling technical reserves of €46 bn and € 65 bn, respectively. Many other products that emerged when the standard Pension Plans were regulated in Spain have a rather moderate presence in the insurance industry. In what follows, some of these different products are explained.

Insured Retirement Plans (PPA)

The Insured Retirement Plans (PPA or *Planes de Previsión Asegurados*, in Spanish) are the insured counterpart of standard Pension Plans previously discussed. Among all insured retirement (or retirement-like) vehicles, PPAs are the most proper for this purpose. Their features concerning taxes, redeemability or other are thoroughly the same as with Pension Plans, but for the fact that interest and principal risks are taken by the insurer, at a cost naturally. In particular, a known and certain interest rate is attached to this product. Once retirement happens, the insured person gets a life annuity (a lump-sum is also a popular option). In a way, technically at least, a PPA is basically a pure deferred annuity. Table ES10 shows that, by December 2020, 0.84 million individuals had adopted this Pillar III retirement vehicle, with total technical reserves amounting to €12.1 bn, a mere 14.4 thousand euros per account.

Company Retirement Plans (PPSE)

These are employer-sponsored Group Insurance aimed at complementary retirement benefits, basically a deferred capital product. They are the insured counterpart to the employer-sponsored Pension Plans (Pillar II), albeit more flexible as they adapt better to SMEs conditions. Table ES10 shows that, as of December 2019, only 35.5 thousand workers have been opted in this Pillar II retirement vehicle by their employers, with technical reserves amounting to €390.5 Mn, again a mere €11,000 per account.

Regular Individual Savings Plan (PIAS)

Regular Individual Saving Plans (PIAS or Planes Individuales de Ahorro Sistemático, in Spanish) are, again, insured saving plans to which individuals can contribute regularly. If certain conditions are met and savings are not removed after a long period of time, accumulated assets must be converted into a permanent income at very low (and decreasing with age) fiscal cost (on interest or capital gains). Table ES10 shows that, as of December 2020, almost 1.2 million individuals remained in this Pillar III retirement vehicle, with technical reserves amounting to €14.4 bn, or 12 thousand euros per account, representing an increase of about 1,600 euros compared to 2019.

Long-Term Individual Saving Plans (SIALP)

Long-term Individual Saving Plans (SIALP or Seguro Individual de Ahorro a Largo Plazo, in Spanish) are PIAS-like retirement vehicles. The major difference with a PIAS being that they can be cashed both as an annuity or as a lump-sum. As of December 2020, 527 thousand individuals have this product totalling € 4.4 bn technical reserves, barely €8.3 thousand euros per account.

Charges

Since inception (19987/1988), the current Pension Plans market in Spain has been characterized by large average charges. This said, there are three aspects that need to be dealt with right away: (i) the market has always been and continues to be very small and this entails a heavy toll on efficiency, (ii) Pillar II schemes bear internationally competitive low fees that, given market size, must be cross subsidized with significantly higher fees charged in Pillar III markets, and (iii) fees have been decreasing in the last years due to regulatory pressure on companies.

Data discussed below is eloquent enough about the consequences for savers that stem out of these market conditions. Average fees[250] have been oscillating in the last decade at around 1% of assets under management. Using this figure as a proxy for Total Expense Ratio (TER or total cost ratio for investors), and under basic assumptions, typical investors could bear a Reduction in Yield (RiY) rate of 13%.[251]

As for the insurance part of the retirement market, little is known referring to data directly usable for harmonized comparison, although all relevant data are available in raw from the regulators and the industry itself. The large variety of retirement and pension products available in this market segment, and their varied features complicates enormously the task, however. The work to be done in order to produce directly comparable data cannot be made in the context of this chapter and any initiative to reach that goal should be most welcomed.

Even if regulation itself accounts for part of the extra burden that management and depositary fees pose on consumers, the fact is that too large a chain of intermediaries (managers, commissioners and retailers) end up by adding to the overall cost for the participant or the insured. Recently, and regularly, management and depositary fees have been limited by law.[252] These regulations however allow variable fees to be set based on yields, within certain limits.
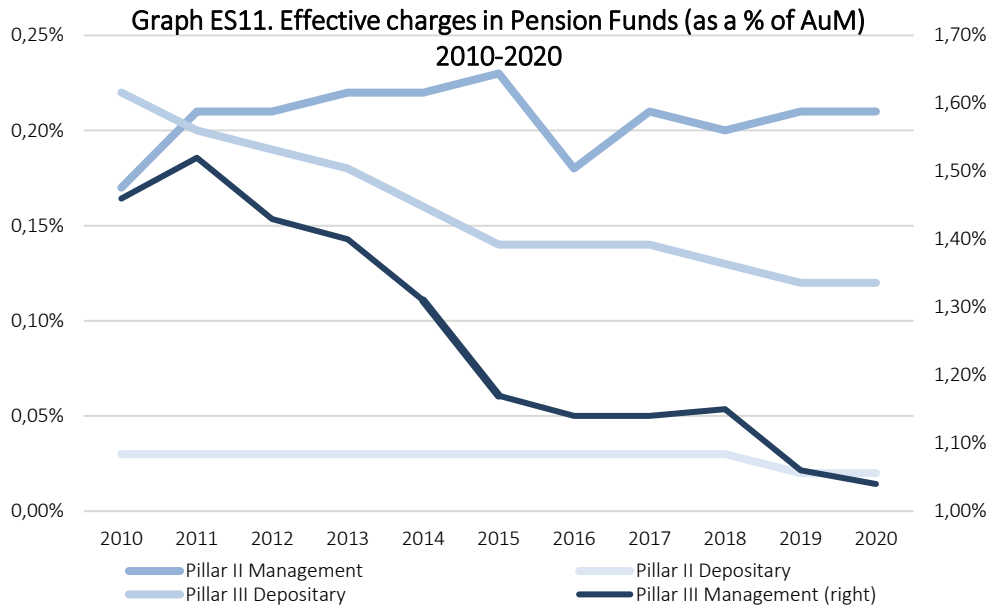
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[250] Management and depository, all classes combined, weighted by market shares

[251] It is assumed that a typical investor increases his or her annual savings in retirement assets at 2% per year, for 35 years; total annual fees (TER) are 1% of AuM at the end of the year. Gross yields of AuM are assumed at 2% per year. Total Expenses (TE) from previous year are detracted from AuM for the next year. RIY ratio is then computed as accumulated TC at year 35 as a percentage of gross AuM at year 35.

[252] Royal Decree 304/2004 established specific limits to management and depositary fees. Royal Decree 681/2014 modified this. More recently, Royal Decree 62/2018, set maximum management fees including fees paid to non-managing retailers, depending on the asset classes under management at 0.85% for mostly bonds funds, 1.3% for mixed bonds funds and 1.5% for the rest of funds. Maximum depositary frees were set at 0.2%.

Graph ES11 and Table ES12 and bellow show the evolution of effective average fees charged on Pillars II and III Pension Funds to Plan participants by both managers and depositaries. Note that to management fees, as said before, some retailing fees (not known) may also be added.

Graph ES11. Effective charges in Pension Funds (as a % of AuM) 2010-2020

Legend: Pillar II Management · Pillar II Depositary · Pillar III Depositary · Pillar III Management (right)

Source: Table ES12 bellow.

The most salient feature of the data in the graph is clearly and immediately appreciated at first sight: Pillar II assets (employer-sponsored pension plans) are considerably cheaper to manage (up to almost 6 times cheaper in recent years) whereas depositary fees, that are comparatively lower in both pillars, continue to be 4 times cheaper in Pillar II as compared to Pillar III. The question remains whether just market scale grants such a large difference and, ultimately, large fees (Table ES12).

Table ES12. Effective charges in Pension Funds (as a % of AuM)												
Pillar	Function	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Pillar II	Management	0.17%	0.21%	0.21%	0.22%	0.22%	0.23%	0.18%	0.21%	0.20%	0.21%	0.21%
	Depositary	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.02%	0.02%
Pillar III	Management	1.46%	1.52%	1.43%	1.40%	1.31%	1.17%	1.14%	1.14%	1.15%	1.06%	1.04%
	Depositary	0.22%	0.20%	0.19%	0.18%	0.16%	0.14%	0.14%	0.14%	0.13%	0.12%	0.12%

Source: Own elaboration based on DGFSP data

Within this context, industry transparency requirements at the international scale are starting to provide a framework within which generate a comprehensive understanding and common ground for comparison about the cost and the advantages of complementary retirement vehicles as these

solutions became increasingly necessary to help cushion the hard landing of Social Security benefits everywhere.

All Pillar III vehicle providers are obliged to advance a Key Information Document (KID) package to their customers. These KID packages are firmly rooted on PRIIPS regulation that is not binding however for pension products. Pillar II products are not obliged to advance a KID package to their customers, albeit they must of course provide information akin to this package.

Taxation

With charges and returns (*vid infra*) taxation is one of the hottest issues around retirement products. But it shouldn't be, think twice. Income must be taxed, this everyone admits, but not double taxed. This is unjust and inefficient. One could also admit easily that labour and capital income can be differently taxed, or that tax bases can convey certain policy objectives. But definitely not that the same income concept is taxed twice.

In the absence of ordinary tax deductibility for retirement vehicles, as practiced by virtually all countries, that part of income saved for years for future retirement, and the interest earned on that income, would be taxed twice.

This treatment is often referred to as "tax incentives" or "tax gifts", and also questioned by certain social or political agents as unjust or regressive tax benefits. Nothing less true. The conventional tax treatment to which pension assets and products are subject is generally and admittedly the best way to avoid what otherwise would be a case of unacceptable double taxation of personal income.

The pensions industry must be clear and strong on this if their members want to be perceived as truly looking after the best interest of those who entrust their savings to them. As much as they must be clear and strong, by the way, on transparency, open competition and best-efforts concerning charges and returns.

Normally, taxing retirement vehicles means exempting income as it is saved (as well as interest earned on this income) and taxing benefits as they are cashed. That's the "Exempt-Exempt-Tax" or EET paradigm most commonly used in the world. Another way to avoid double taxing of income is to tax contributions and interest and make benefits tax exempt (TTE), but this paradigm is rarely used. In truth, neither pure extreme is actually being used as all countries have some limits to deductibility and also some limits to benefits exemption.

Normally too, tax allowances at accumulation of savings are justified because these retirement savings can't be cashed or converted into non-retirement savings before retirement age. Yes, this a legitimate way to justify EET schemes. But again, tax authorities only have to claim unpaid taxes back when savings conversion occurs instead of forcing savers to stay fixed on their products.

Taxing retirement savings and benefits remains in the literature and in practice a much-debated issue, just because we don't realize that the best and most fair taxing schedule for these bases

should be exactly the same tax regime that Social Security social contributions and benefits enjoy, that is full (or almost full) EET.

Even if standard Pension Plans set the tax norm for many other retirement vehicles, there remain important differences, especially at the pay-out phase, among the pension plans and insurance vehicles. Some of these peculiarities are analysed below.

Pension Plans

The fact that tax exemptions during accumulation are important is well reflected in the Spanish market as most of the payments into these vehicles happen at the end of the year when investors seek to improve their tax bills by deciding up to what limit bring their contributions to retirement saving plans. This has contributed to locate the only and most important attractive of saving for retirement into the tax treatment of this kind of investments. The limit up to which income saved for retirement under a Pension Plan is tax exempt in Spain is currently €8,000.

Table ES13. Personal Income Tax scale and rates - Central Government*		
Tax Base from…	To	Nominal Marginal Rates**
€ 0	€ 12,450	9.50%
€ 12,450	€ 20,200	12.00%
€ 20,200	€ 35,200	15.00%
€ 35,200	€ 35,200	18.50%
€ 60,000	-	22.50%

* Spain has several government levels and PIT is roughly split in half between Central and Regional Governments (See Table ES11).
** Only Central Government, only labour income. Interests and dividends are thoroughly taxed at 19%. Effective rates are sensibly lower.
<u>Source</u>: Agencia Tributaria

When withdrawal of benefits at retirement occurs, there are three possible cases:

(i) Retirement income is retrieved as a lump-sum: after a deduction of 40% from this sum the rest is taxed at the current marginal personal income tax rate. No distinction is made between principal and interest earned during accumulation phase, despite the fact that Spain has a dual personal income tax.

(ii) Retirement income is retrieved as a life (or term) annuity: this income is considered as wages or labour income and taxed at the current marginal personal income tax rate, again with no distinction whatsoever between principal and interest part of pension benefits.

(iii) Retirement income is retrieved both as a lump-sum and an annuity ("mixed income"): both tax regimes apply, each of them to the corresponding part of the retirement benefit in the first year.

This said, depending on where each retiree has his or her fiscal residence, the tax bill may change. Spain has its Personal Income Tax scheme split between the Central Government and its seventeen Autonomous Regions. While the Central Government sub scheme applies uniformly for the whole

nation, the regional sub schemes have different income brackets and marginal tax schedules, as it is shown in Tables ES10 and ES11.

Table ES14. Personal Income Tax - Autonomous Regions		
Region*	Top Income Bracket (ordered)	Top Marginal Tax Rate beyond Top Income Bracket
Madrid	53,407.20	21.00%
Castila y León	53,407.20	21.50%
Catilla-La Mancha, Galicia, Ceuta y Melilla	60,000.00	22.50%
Murcia	60,000.00	23.30%
Canarias	90,000.00	24.00%
Cantabria	90,000.00	25.50%
Extremadura	120,000.00	25.00%
Andalucía	120,000.00	24.90%
La Rioja, C. Valenciana	120,000.00	25.50%
Aragón	150,000.00	25.00%
I. Balears	175,000.00	25.00%
P. de Asturias, Cataluña	175,000.00	25.50%

* Two historical Autonomous Regions (Navarra and The Basque Country) are exempted from the Common Tax Regime. Two Autonomous Towns are included (Ceuta and Melilla)
Source: Agencia Tributaria

Life insurance products

Since 1999 premiums paid into insured saving are not tax exempt. Retirement capitals or income from these vehicles are not taxed except in its interest and capital gains part. These capital gains are integrated into the savings tax base and subject to a tax rate schedule of 19% up to the first € 6,000, 21% from € 6,000 to € 50,000 and 23% beyond € 50.000. When benefits are paid as annuities, the tax rate depends on the life of the annuity and the age of the annuitant when payments began. In case of death of the annuitant, with remaining capital reverting to them, heirs will have to pay inheritance tax, which may vary considerably depending on the region where they have their fiscal residence, as this tax lies within the regional jurisdiction.

Insured Retirement Plans (PPA)

This vehicle has a similar tax treatment as standard Pension Plans, Contributions to these plans are tax exempted up to an annual limit of € 8,000 and benefits are taxed as labour income taking into account the recipients age at retirement. Capital gains are subject to a dual income tax scheme. The tax regime of this vehicle thus can be said to be of the EET kind.

Regular Individual Savings Plan (PIAS)

PIAS are a more flexible vehicle than Pension Plans and PPAs, also from the point of view of taxation. As a retirement saving vehicle, annual contributions to it are fully tax deductible up to a limit of €

8,000 per year, as with Pension Plans and PPAs. There is also a global limit for this type of saving plan: €240,000. Savers can only own one PIAS. At the pay-out phase, if income is received as a lump-sum, taxation intervenes as usual through the dual income tax for labour income (principal) and capital gains income (returns).

But if retirement income is retrieved as a life annuity, capital gains are 100% exempt and principal is taxed according to a rapidly diminishing rates schedule. PIAS can be cashed in well before ordinary retirement age, but when cashed after age 65 the tax rate is 20% falling to 8% when cashed after age 70.

The €240,000 limit for total saving under a PIAS is relevant here for, as from 2015, individuals aged 65 or more who liquidate any asset they may own (financial, real estate, art works, etc) to buy a life annuity have related capital gains fully exempted from the dual income tax.

Returns

Spanish capital and debt markets returns

In 2008 major world stock indexes suffered a 40% loss with respect to the previous year. That was a catastrophe. All asset classes linked to stock suffered accordingly. Hundreds of thousands of workers in advanced countries had to postpone their retirement because these losses would mark the value of their retirement incomes for the rest of their lives nearing them to poverty at old age. Most of these stock markets recovered the 2007 line by 2012-2013, But the Spanish stock market has barely recovered the 2008 bottom-line. This can be seen in Graph ES15 below.

Graph ES15. Major Stock Markets performance 2007-2019

S&P 500
DAX 30
CAC 40
NIKKEI 225
EURO STOXX 50
IBEX 35
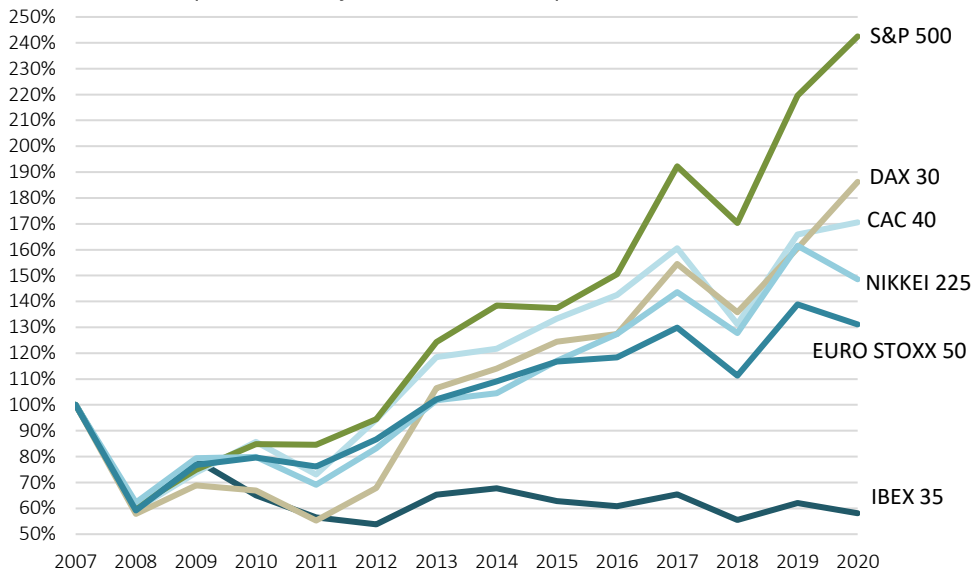
Sources: BME, STOXX, Euronext, DAX, S&P 500, DOW

Happily enough (unfortunately), Spanish workers have their retirement savings well away from the stock market. In fact, Spanish workers have no (relevant) retirement assets at all as we have been arguing so far. Spanish workers have no relevant retirement savings because they have a rather large (expected) Social Security implicit wealth as pension benefits replace labour income above 80% (OECD).

If 2018 was a bad year for stocks return, 2019 was exceedingly better so that most exchanges overshot 2017 levels and took most markets to all-time highs since the beginning of the financial crisis. In the period 2007-2019 the S&P 500, for instance, grew by around 120% (a cumulative annual rate of 6.8%), or a 66% in the case of the German DAX 30. The Spanish IBEX 35, in 2019, displayed a dismal 62% of its 2007 value.

Sovereign debt markets in advanced countries, on the other hand, haven't been less turbulent. Provoking real roller coaster effects in associated assets and savings. Spanish 10y bond yields, in particular, reached intervention levels in 2012, at 679 bpts in August. Only a financial sector rescue package saved the sovereign market from Brussels intervention, at a cost naturally. See Graph ES6 below.

Graph ES16. Major Sovereign Bond Yields (10 years) 1993-2021
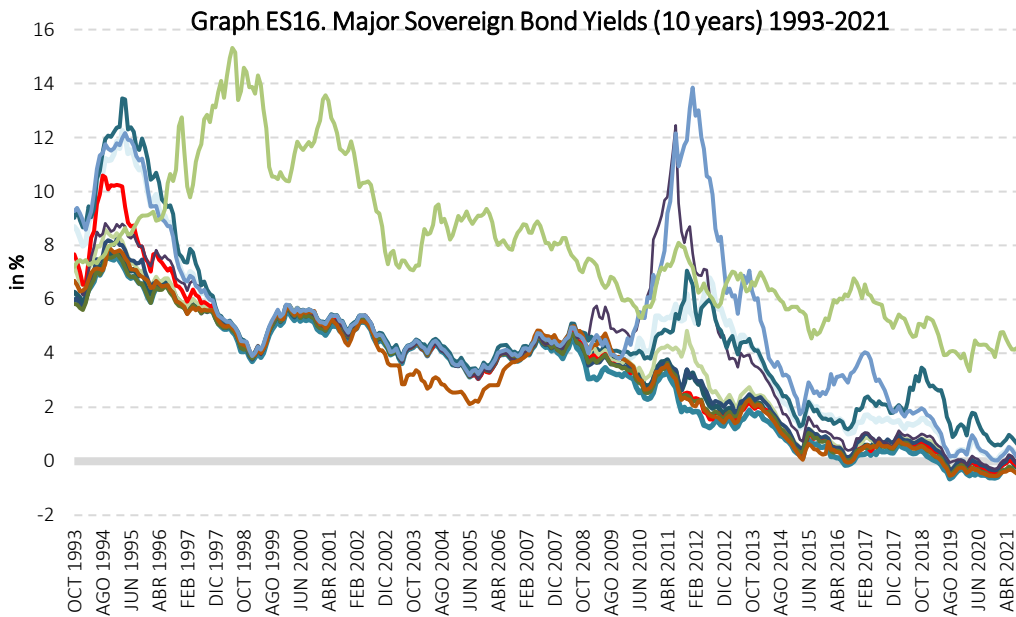
Source: Banco de España

Since May 2015, the ECB succeeded calming lenders and sovereigns entered into a considerably quieter environment. By mid-2019 European and Japanese 10y bonds reached around 0 or negative levels. Spanish 10y bonds were quoted at 0.33% in September, doubling compared to the same period in 2020, most probably due to the decrease in economic output and state borrowing. Only, among advanced economies, Treasury 10y bonds (USA) stood below 2% in late 2019, albeit at historical low levels.

All in all, any retirement vehicle has to be invested in a mix of stocks, debt and monetary assets and the performance of these underlying assets determines the returns of those savings. As for vehicles set in advanced countries, the strong recovery of Stock markets in 2019 and the strong appreciation of bonds has undoubtedly been a blessing provided that management has profited efficiently from these conditions. In Spain, stock and bond markets have increased slightly in 2020, albeit more modestly in what concerns the former.

Retirement assets' performance (standard Pension Funds)

One of the salient features of the Spanish retirement vehicles market is the large variety of solutions marketed and the small size of the overall market, let apart the small significance of some of its segments. This may seem hard saying, but a way must be found to substantially enlarge the number of workers covered and the size of per account assets and reserves.

So far, as it is shown in the tables below, savings have managed to maintain their purchasing power with few exceptions performing better. Undoubtedly, even if a crude one, the key factor pushing

or keeping Spaniards into the complementary retirement savings system is tax deferral (and the locking-in effect it creates), and not as much the real, after fees returns of these assets.

However, all the evidence produced below belongs to the standard Pension Plans system, not to insured retirement vehicles, due to data limitations. All data comes basically form the web site of INVERCO, the Spanish body representing Mutual Investment Institutions and Pension Funds.

Notice, nevertheless, that retirement products insurance comes at an additional cost (with respect to purely financial vehicles) due to the intrinsic nature of both guaranteeing assets' value, on the one hand, and mutualising longevity, on the other. Even if insurers are good performers also in terms of assets management and enjoy the very long-term premiums of the underlying matching assets they invest in, they need to beat the insurance extra cost that these products embody.

Table ES17 contains the basic information concerning Pillars II and III Pension Funds. Returns are labelled "gross", "net" and "real". Gross means before management and depositary fees and commissions (retailing and other transaction costs are disguised here), net means after management and depositary fees and commissions, being nominal returns, and real means after fees and inflation. We obtain the gross returns by adding to the net returns published by INVERCO the management and depositary fees published by the DGSFP; as such, since data earlier than 2009 is not available, we were not able to compute the gross returns between 2000-2009.

The returns by pillar are calculated as follows: we use the employer-sponsored and associate plans as a proxy for the Spanish occupational pensions pillar (pillar II) and we calculate, for each year, the weighted average return, based on the assets under management of associate and employer-sponsored plans. For the voluntary pillar (pillar III), we use INVERCO's data for individual pension plans. To calculate the overall return of Spanish pension funds, we use the same methodology: weighted returns based on the assets under management of associate, employer-sponsored, and individual plans.

At first glance, positive net nominal returns dominate the landscape, and even net real returns, with some years at really good returns on assets invested. On historical basis, average cumulative real returns continue to be clearly positive (INVERCO).

2018, however, was a bad year for investments returns of all sorts, particularly the stock market. But returns in 2019 overshot the 2018 ones. This provided for the best year in the current decade.

Table ES17. Returns of Spanish Pension Funds (before taxes)					
	Pillar II			Pillar III		
	Gross Return	Net Return	Real net Return	Gross Return	Net Retrn	Real net Return
2000	n.a.	-3.40%	-7.40%	n.a.	7.9%	3.93%
2001	n.a.	0.62%	-1.89%	n.a.	-3.5%	-6.04%
2002	n.a.	-3.72%	-7.74%	n.a.	-5.0%	-8.98%
2003	n.a.	6.69%	4.00%	n.a.	5.1%	2.40%
2004	n.a.	5.56%	2.28%	n.a.	3.7%	0.41%
2005	n.a.	8.43%	4.71%	n.a.	6.4%	2.69%
2006	n.a.	5.46%	2.74%	n.a.	5.1%	2.37%
2007	n.a.	2.46%	-1.82%	n.a.	2.0%	-2.27%
2008	n.a.	-10.5%	-12.0%	n.a.	-6.6%	-8.09%
2009	9.47%	9.28%	8.38%	10.39%	8.76%	7.86%
2010	2.18%	1.98%	-0.89%	0.25%	-1.43%	-4.30%
2011	0.21%	-0.03%	-2.38%	0.50%	-1.22%	-3.57%
2012	8.25%	8.01%	5.01%	7.29%	5.67%	2.66%
2013	8.00%	7.75%	7.45%	10.30%	8.72%	8.41%
2014	7.38%	7.13%	8.27%	7.77%	6.30%	7.43%
2015	3.13%	2.87%	3.00%	2.52%	1.21%	1.34%
2016	2.94%	2.73%	1.32%	2.97%	1.69%	0.28%
2017	3.42%	3.19%	1.96%	3.85%	2.56%	1.34%
2018	-2.99%	-3.22%	-4.44%	-3.20%	-4.48%	-5.71%
2019	9.01%	8.78%	7.93%	9.99%	8.81%	7.96%
2020	1.76%	1.53%	2.10%	1.39%	0.23%	0.80%

Note: Gross Returns are returns before management and depositary charges, Real Returns are computed using the Spanish HCPI published by Eurostat.

Source: Own calculations based on INVERCO data

A more vivid landscape emerges when overall returns are followed through time with the help of average cumulative returns computations as presented in Table ES17. This time overall returns for the entire Pension Funds' system are presented and the cumulative perspective is based in 2000. Average cumulative returns at any particular year are thus for the period "2000-that-particular-year".[253] We must note that deflation in 2020 helped a bit the returns of all investments in Spain.

In the period 2000-2020, Spanish pension plans delivered a 65% profit in nominal net terms (165% value of 2020 compared to the beginning) and an annual cumulative nominal return of 2.49%, which is among the highest among the jurisdictions analysed in this report. This return is net (after charges) for savers, but inflation must be taken into account. After adjusting for inflation, the cumulative real returns are smaller (+7.91%), which means that nominal returns just helped to match inflation since 2000 to present. The corresponding average cumulative real rate is thus 0.52% for the period. Note that inflation has been negative in four years in the period and moderate over

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[253] Average cumulative returns for the last 3, 5, 10 or 15 years at 2019 or at any other year can be easily computed using the cumulative return data in the corresponding column in Table ES13.

the rest of years. The annual average inflation rate decreased between due to the deflation recorded in 2020 (-0.6%), which means that the purchasing power of the Euro increased compared to Spanish consumer prices.

	Nominal Returns			Real Returns*			Harmonised Consumer Price Index
Table ES18. Returns of Spanish Pension Funds (after charges and before taxes)							
	YoY Return	Cum. Return	Average since 2000	YoY Return	Cum. Return	Average since 2000	
2000	2.95%	102.95	2.95%	-0.54%	99.46	-0.54%	3.49%
2001	-2.07%	100.82	0.41%	-4.89%	94.60	-2.74%	2.82%
2002	-4.77%	96.01	-1.35%	-8.36%	86.69	-4.65%	3.59%
2003	5.79%	101.57	0.39%	2.69%	89.02	-2.87%	3.10%
2004	4.51%	106.15	1.20%	1.45%	90.32	-2.02%	3.06%
2005	7.21%	113.80	2.18%	3.82%	93.77	-1.07%	3.39%
2006	5.23%	119.75	2.61%	1.68%	95.34	-0.68%	3.55%
2007	2.08%	122.25	2.54%	-0.77%	94.61	-0.69%	2.85%
2008	-8.07%	112.38	1.31%	-12.19%	83.07	-2.04%	4.12%
2009	7.70%	121.03	1.93%	7.94%	89.66	-1.09%	-0.24%
2010	-0.13%	120.88	1.74%	-2.18%	87.71	-1.19%	2.05%
2011	-0.76%	119.96	1.53%	-3.80%	84.38	-1.41%	3.04%
2012	6.59%	127.86	1.91%	4.15%	87.87	-0.99%	2.44%
2013	8.36%	138.55	2.36%	6.83%	93.88	-0.45%	1.53%
2014	6.92%	148.14	2.65%	7.12%	100.56	0.04%	-0.20%
2015	1.78%	150.78	2.60%	2.41%	102.98	0.18%	-0.63%
2016	2.04%	153.85	2.57%	2.38%	105.43	0.31%	-0.34%
2017	2.77%	158.11	2.58%	0.47%	105.92	0.32%	2.30%
2018	-4.08%	151.66	2.22%	-5.76%	99.82	-0.01%	1.68%
2019	8.80%	165.01	2.54%	8.10%	107.91	0.38%	0.70%
2020	0.67%	167.61	2.49%	1.24%	111.44	0.52%	-0.57%

* Real Returns are computed using the Spanish HCPI published by Eurostat
Source: Own elaboration and computation based on INVERCO data

The overall picture shown in the table above, however, hides a much richer detail of returns by type of retirement scheme and the asset classes these schemes are invested in. Tables ES19 to ES20(A) and (B) below offer this detail.

Pillar II Pension Funds are much cheaper to manage, as seen before, and obtain a larger net nominal return as seen in Table ES19, particularly those of the associate segment, a minor one, nevertheless. Spanish Pension Funds' average cumulative nominal returns were 2.53%, 3.04% and 2.80% over the 2000-2020 period for, respectively, individual, associate and employer-sponsored plans. A 67%, 87.5% and 78.4% cumulative return, respectively, over the entire period. The overall return rate was 2.49%. Once inflation adjusted, average real returns managed to stay slightly above inflation, namely 0.23%, 1.07% and 0.82% for, respectively individual, associate and employer-sponsored plans and 0.40% for the standard Pension Plans system.

Table ES19. Returns of Spanish Pillar II Schemes (after charges and before taxes)				
	Associate Plans		Occupational Plans	
	Nominal	Real	Nominal	Real
2000	0.93%	-2.56%	-3.62%	-7.11%
2001	0.10%	-2.72%	0.64%	-2.18%
2002	-3.84%	-7.43%	-3.72%	-7.31%
2003	5.61%	2.51%	6.73%	3.63%
2004	6.56%	3.50%	5.52%	2.46%
2005	9.49%	6.10%	8.39%	5.00%
2006	8.16%	4.61%	5.36%	1.81%
2007	3.05%	0.20%	2.44%	-0.41%
2008	-11.10%	-15.22%	-10.50%	-14.62%
2009	9.23%	9.47%	9.28%	9.52%
2010	0.95%	-1.10%	2.01%	-0.04%
2011	-1.11%	-4.15%	0.00%	-3.04%
2012	6.94%	4.50%	8.04%	5.60%
2013	9.51%	7.98%	7.70%	6.17%
2014	6.88%	7.08%	7.14%	7.34%
2015	2.57%	3.20%	2.88%	3.51%
2016	2.45%	2.79%	2.74%	3.08%
2017	2.99%	0.69%	3.19%	0.89%
2018	-4.32%	-6.00%	-3.19%	-4.87%
2019	10.31%	9.61%	8.74%	8.04%
2020	1.39%	1.96%	1.53%	2.10%
Cum. 2000-2020	187.49%	124.95%	178.41%	118.65%
Average 2000-2020	3.04%	1.07%	2.80%	0.82%

Source: Own calculations based on INVERCO data

Given the performance of Pillar II pension funds and the overall system performance just discussed, the conclusion emerges that Pillar III funds have performed in the 2000-2020 period very slightly above inflation, namely at 0.23%.

Being this, indeed, the case, it is interesting to look at the asset classes these funds are invested in as these schemes' managers have more flexibility than occupational schemes' managers, rather more constrained by social partners' presence in control boards of these Plans.

Table ES20(A) shows returns of debt-based Individual Funds (Pillar III). Due to higher charges (already netted out in data), net returns are sensibly poorer to those of occupational funds, where charges are typically five to six times lower. After inflation adjustment, real returns show a dominant negative pattern that, in averaged cumulative terms over the 2000-2020 period, translate into real investment returns that range between -0.15% for Long-term debt-based funds to -1.11% for Mixed debt-based funds. Average nominal returns cannot beat the 1.85% mark in the best performing class the Long-term debt-based category. Before charges, however, returns for Pillar III funds' investments aren't that different from returns for Pillar II funds' investments.

Table ES20(A). Returns of Individual Pension Plans - (After charges and before tax)						
	Short-Term Debt		Long-Term Debt		Mixed Debt	
	Nominal	Real	Nominal	Real	Nominal	Real
2000	3.83%	0.34%	0.68%	-2.81%	-2.20%	-5.69%
2001	3.64%	0.82%	0.62%	-2.20%	-2.41%	-5.23%
2002	3.83%	0.24%	0.73%	-2.86%	-5.16%	-8.75%
2003	1.95%	-1.15%	2.62%	-0.48%	3.92%	0.82%
2004	1.77%	-1.29%	1.92%	-1.14%	3.16%	0.10%
2005	1.04%	-2.35%	1.78%	-1.61%	5.33%	1.94%
2006	1.26%	-2.29%	0.34%	-3.21%	3.58%	0.03%
2007	1.94%	-0.91%	0.75%	-2.10%	1.32%	-1.53%
2008	2.13%	-1.99%	2.03%	-2.09%	-8.79%	-12.91%
2009	1.80%	2.04%	3.96%	4.20%	6.05%	6.29%
2010	0.64%	-1.41%	0.47%	-1.58%	-1.54%	-3.59%
2011	1.38%	-1.66%	1.39%	-1.65%	-2.21%	-5.25%
2012	3.47%	1.03%	4.79%	2.35%	5.41%	2.97%
2013	2.08%	0.55%	4.66%	3.13%	6.11%	4.58%
2014	1.37%	1.57%	8.93%	9.13%	3.61%	3.81%
2015	-0.20%	0.43%	-0.46%	0.17%	0.78%	1.41%
2016	0.20%	0.54%	1.25%	1.59%	0.71%	1.05%
2017	-0.11%	-2.15%	0.11%	-1.93%	1.50%	-0.54%
2018	-1.79%	-3.53%	-2.01%	-3.75%	-4.08%	-5.82%
2019	0.65%	-0.25%	2.91%	2.01%	5.14%	4.24%
2020	-0.19%	0.38%	1.36%	1.93%	-0.39%	0.18%
Cum. 2000-2020	135.33	90.02	146.19	96.90	119.81	79.13
Average 2000-2020	1.45%	-0.50%	1.82%	-0.15%	0.86%	-1.11%

Source: Own elaboration based on INVERCO data

As for Pillar III funds mostly invested in stock, Table ES20(B) contains further and final evidence telling us that by no means returns for this category can be said to be better than those of debt-based investments. Indeed, average real returns to mostly-stock-based investments, as shown in the table, lie around the -0.54%/-0.94% threshold on average over the 2000-2020 period. Paradoxically, guaranteed funds, despite being the option of more conservative savers manage to obtain a healthy 1.25% real return in the last two decades, a 3.21% nominal return and a cumulative 94.3% nominal return over the entire period.

Table ES20(B). Returns of Individual Pension Plans - (After charges and before tax)						
	Stocks Mixed		Stocks		Guaranteed	
	Nominal	Real	Nominal	Real	Nominal	Real
2000	-4,97%	-8,46%	-10,60%	-14,09%	9,22%	5,73%
2001	-7,73%	-10,55%	-16,30%	-19,12%	0,35%	-2,47%
2002	-17,20%	-20,79%	-30,10%	-33,69%	5,04%	1,45%
2003	8,70%	5,60%	16,18%	13,08%	5,67%	2,57%
2004	5,60%	2,54%	8,88%	5,82%	4,66%	1,60%
2005	12,16%	8,77%	18,73%	15,34%	4,64%	1,25%
2006	10,09%	6,54%	18,30%	14,75%	1,44%	-2,11%
2007	2,96%	0,11%	3,93%	1,08%	1,48%	-1,37%
2008	-23,80%	-27,92%	-38,40%	-42,52%	0,68%	-3,44%
2009	14,21%	14,45%	27,20%	27,44%	3,77%	4,01%
2010	-0,82%	-2,87%	1,63%	-0,42%	-3,96%	-6,01%
2011	-7,01%	-10,05%	-10,40%	-13,44%	1,15%	-1,89%
2012	8,62%	6,18%	10,43%	7,99%	5,48%	3,04%
2013	12,51%	10,98%	22,19%	20,66%	9,41%	7,88%
2014	4,77%	4,97%	7,63%	7,83%	11,37%	11,57%
2015	2,50%	3,13%	5,58%	6,21%	0,27%	0,90%
2016	2,70%	3,04%	4,34%	4,68%	2,12%	2,46%
2017	4,54%	2,50%	8,83%	6,79%	0,41%	-1,63%
2018	-6,55%	-8,29%	-10,10%	-11,84%	0,41%	-1,33%
2019	12,17%	11,27%	23,59%	22,69%	4,12%	3,22%
2020	-0.66%	-0.09%	2.93%	3.50%	1.03%	1.60%
Cum. 2000-2020	124.77	82.02	137.22	89.18	194.29	129.72
Average 2000-2020	1.06%	-0.94%	1.52%	-0.54%	3.21%	1.25%

Source: Own elaboration based on INVERCO data

The two tables below summarise the returns of all Spanish pension funds (aggregated based on weightings of AuM) on standardised reporting period (last year, last 3 years, last 7 years, 10 years, and since 2000) and the subsequent table presents the standardised period returns based on the "Pillar" classification.

Average nominal and real net returns of Spanish pension funds					
	1 year 2020	3 years 2018-2020	7 years 2014-2020	10 years 2011-2020	since 2000
Nominal	0.67%	1.66%	2.62%	3.23%	2.49%
Real	1.24%	1.15%	2.20%	2.36%	0.52%

Source: Tables ES19 and ES20

Aggregate summary return table								
	1 year		3 years		7 years		10 years		Since 2000
	2020	2019	2018-2020	2017-2019	2014-2020	2013-2019	2011-2020	2010-2019	2000-2020
PILLAR II									
Nominal return	1.53%	8.78%	2.24%	3.73%	3.22%	5.26%	3.81%	4.78%	3.01%
Real return	2.10%	7.93%	1.74%	2.14%	2.80%	4.28%	2.94%	2.60%	0.79%
PILLAR III									
Nominal return	0.23%	8.81%	1.37%	2.72%	2.25%	4.34%	2.87%	3.42%	2.53%
Real return	0.80%	7.96%	0.86%	1.14%	1.83%	3.35%	2.00%	2.10%	0.32%
Both Pillars									
Nominal return	0.67%	0.67%	1.66%	1.66%	2.62%	2.62%	3.23%	3.23%	2.49%
Real return	1.24%	1.24%	1.15%	1.15%	2.20%	2.20%	2.36%	2.36%	0.52%

Source: Tables ES19 and ES20

Investment strategies

Returns discussed in the previous section are indeed varied. Their diversity, of course, is rooted in a couple of basic factors: (i) the assets in which retirement funds are invested in and (ii) the strategies managers deploy, given the portfolio, in order to get a high return for their customers. In general, few facts can be established concerning the data described above:

- For the 2000-2019 period, overall nominal (after charges) returns for Pillars II and III pension funds combined have been 2.49% and real returns have been 0.52%, nominal and real respectively, that is, a 197-basis points difference given to inflation.
- In the last decade (2011-2020), for Pillar II pension funds, with gross nominal returns of 3.94% (simple average), net nominal returns of 3.70% and net real returns of 2.67%, barely 23 basis points of assets under management have been given to managers and depositaries every year and 112 basis points per year have been given to inflation.
- However, for Pillar III pension funds, in the same period, with (unweighted, simple average) gross real returns of 3.97%, net returns of 2.55% and real returns of 1.51%, a much higher 143 basis points have been given to management and depositary costs and also 112 basis points to inflation. So that charges have been 120 basis points larger for Pillar III vehicles than for Pillar II ones.
- In Spain, up to six different regular portfolios are managed in the pensions industry, ranging from almost-only debt to almost-only stocks and guaranteed funds (that may contain both bonds and stock in varied proportions). Nominal returns for these broad categories, for the 2000-2020 period (annual, cumulative) have been 1.45%, 1.82% and 0.86% for, respectively, short-term, long-term and mixed debt vehicles and 1.06%%, 1.52% and 3.21% for, respectively, mixed stocks, almost-only stocks and guaranteed funds.

As a clue for the reasons behind the widely varied results just discussed, several ones are rather standard irrespective of managers' capacity to beat the most popular categories. Long-term debt yields more than short-term debt, debt is less volatile than stocks and thus less risky and managers' fees are far smaller for Pillar II vehicles than for Pillar III ones. The superior returns of guaranteed

funds however defy common sense as these should bear some extra cost due to the guaranty over the principal they embody.

So, to what extent managers have been responsible for the rather mild results that pension funds have obtained in Spain since 2000? To answer this question, one should go fund by fund and manager by manager, which is not the purpose of this chapter[254], but few general comments can be made. Guaranteed funds, that accounted for 9.53% of Pillar III total assets in 2029 (19,47% in 2010) have been much more profitable for participants than the rest, while assumedly they are more expensive to run due to the insurance coverage they embody. On the other hand, Pillar III vehicles are considerably more charged by management fees than their Pillar II counterparts.

Managers in Spain may be restricted by the rigid asset structure in the established portfolios within Pillar III while being rather freer in what concerns Pillar II vehicles (albeit they may eventually be the same). But the fact is that gross (before charges) returns in these two broad categories differ by a mere 3 basis points in favour of the former since 2010. The large difference in (net) returns (115 bp, same period) being thus entirely attributable to managing fees, much lower within Pillar II than within Pillar III.

All categories or retirement vehicles in Spain invest rather shyly in foreign assets with only few funds specialising in these assets' class. Superior returns in foreign assets however are by no means assured and this investment strategy has extra costs anyway.

Guaranteed funds' managers, finally, which are considerably freer than their non-guaranteed counterparts (being also the same managers eventually) and, besides, do not have to face internal control bodies like their Pillar II counterparts, seem to have profited from these conditions to obtain larger returns for their vehicles' participants.

Conclusion

Spanish retirement assets, through standard Pension Plans are a mere 9.3% of GDP. Insurance retirement (and retirement-like) assets and provisions, a large array of different products not equally qualified as retirement vehicles, could add another 15.24% GDP points to standard Pension Plans. This, by all standards, is a small pensions industry even if some 9.5 million individuals participate in Pension Plans and some 15.5 million individuals are covered by insurance retirement or quasi-retirement vehicles. Assets, technical provisions or other retirement rights barely reach €10,000 per contract or account making the whole system an insufficient complement, let alone an alternative, to Social Security retirement benefits. Unfortunately, this state of affairs is common to many other European countries.

The retirement vehicles market in Spain, however, has a rich structure of agents, products and retirement schemes that, on paper, should be able to cover the entire work force and beyond. Two

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[254] See Fernández y Fernández-Acín (2019). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3319461

tightly related factors prevent this to happen: the pervasive presence of Social Security pensions, whose old-age variety replaces lost labour income at retirement by around 80% and the reluctancy of employers to sponsor retirement schemes for their employees because of costs reasons, particularly among SMEs.

This Spanish pension report, apart general descriptions of the landscape, has gone with a certain detail through some of the most salient features of our Pillars II and III arrangements on, basically, three crucial dimensions: (i) charges, (ii) taxes and (iii) returns.

On charges, we find that these are rather large on average, only because the Individual schemes are considerably costlier to manage than occupational ones. The latter keep their charges very low in line with what is observed in other more advanced and developed markets. Actually, thanks to intense regulatory effort in the last few years, charges to the Pillar III schemes have decreased clearly. A continuation of this trend, without a significant increase in market size, continues to look far less affordable.

On taxation, Spain has an EET, tax-deferral regime for retirement assets and incomes, which is the standard in most countries in the world. Spain also has deductibility of contributions to retirement vehicles (up to certain limits), an even more followed standard in most countries in the world. This is the right way to avoid unacceptable double taxation. No tax expert would have any doubt about the importance of keeping not only the current deductibility of contributions but also tax deferral. Tax deferral empowers the accumulation of pension rights and may also turn to be a good business for tax authorities in the longer run.

This means that the above-mentioned tax treatment of pensions (deductibility cum deferral) should not be seen as gifts or favours, but as the best policy that can be performed. Some ceilings to tax deductibility may be too low or even arbitrary. Less understandable is still the push among political and social agents to dismantle deferral and/or deductibility. The latter would be even worse.

This said, tax deferral in Spain is seen by most agents participating in the retirement market, be they workers, insured persons or even managers and retailers, as the only reason to buy/sell these products. A cultural trait that may explain, jointly with other reasons discussed in this report, the poor development of Pillars II and III in our country.

On returns, it has to be admitted that performance to date has been barely enough to just beat inflation. A result that many will find poor. Nominal gross returns for more than two thirds of participants are loaded with heavy charges, as mentioned before, but before charges returns are not that terrible. Again, it is taxes that come in to help many participants to reach the conclusion that it is still worth putting their money into this vehicle, despite the illiquid nature of most of these schemes. Participants' *revanche*, however, takes the form of a strategic game in which they allocate just enough money every year to these investments as to exhaust the fiscal margin, no more. And this just for some of them, as the rest of participants cannot perhaps afford to put more money into their complementary pension pots and/or, perhaps, they think that Social Security will always

be there to give them back retirement benefits with a much higher implicit rate of return (on their contributions) free of management fees and inflation linked.

Imprint

Editor and Publisher

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