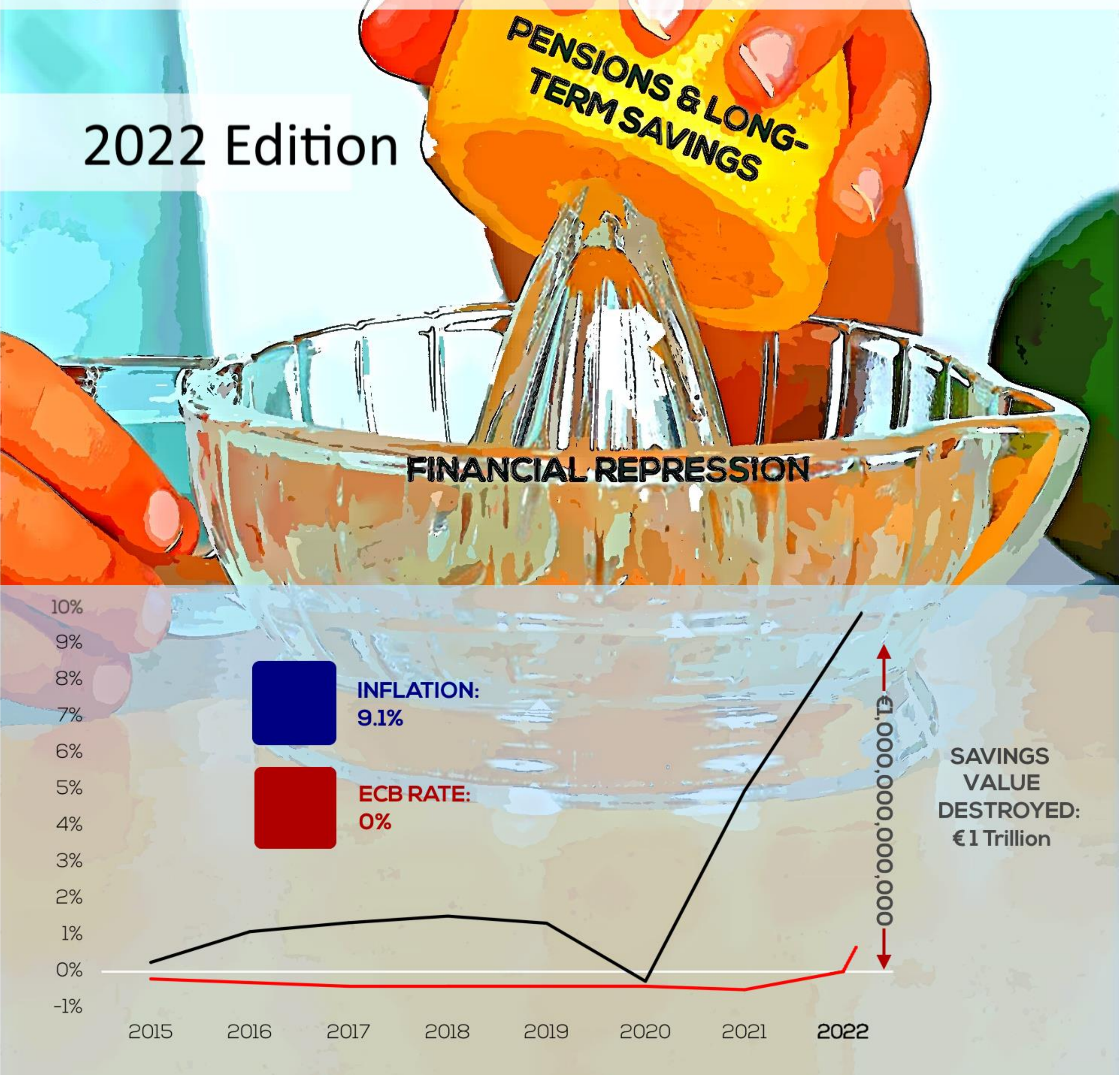
BETTER FINANCE

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

# Long-Term & Pension Savings | The Real Return

## 2022 Edition



# Pension Savings: The Real Return

## 2022 Edition

**A Research Report by BETTER FINANCE**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# Pension Savings: The Real Return

## 2022 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?"*[1]

## Strong equity returns in 2021 slowed down by inflation, which is here to stay

### *How much did pension savers earn on average?*

In this report, we aim to provide pension comparisons on every front possible. The aggregate summary return tables compare the annual average rates of returns between occupational/collective (Pillar II) pension schemes and between voluntary/individual ones (Pillar III) on 5 periods: 1, 3, 7, 10 years. These standardised periods eliminate inception and market timing biases, allowing to "purely" compare performances between different pension schemes. For information purposes, we also show the average return since data is available (last column).

| Aggregate summary return table | Pillar II | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 year | | 3 years | | 7 years | | 10 years | | max. available* |
| | 2021 | 2020 | 2019-2021 | 2018-2020 | 2015-2021 | 2014-2020 | 2012-2021 | 2011-2020 | |
| Austria*** | 3.08% | 1.40% | 4.12% | 1.23% | 1.92% | 2.35% | 2.68% | 1.79% | 1.56% |
| Belgium | n.a | n.a | n.a | n.a | n.a | n.a | n.a | n.a | n.a |
| Croatia | 2.55% | 8.06% | 3.38% | 2.81% | 4.76% | 4.99% | 4.82% | 4.10% | 3.25% |
| Denmark | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Estonia | 1.30% | 7.97% | 4.60% | 2.10% | 1.61% | 2.13% | 2.35% | 1.31% | 0.75% |
| France | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Germany | n.a. | 3.53% | n.a. | 2.23% | n.a. | 2.63% | n.a. | 2.46% | 2.35% |
| Italy | 1.44% | 7.30% | 3.96% | 1.85% | 1.97% | 2.81% | 3.30% | 2.66% | 0.86% |
| Latvia | 2.21% | 8.43% | 4.22% | 1.12% | 1.15% | 1.54% | 2.30% | 1.45% | 0.05% |
| Lithuania | 5.97% | 14.92% | 8.60% | 4.72% | 3.95% | 4.07% | 4.60% | 3.52% | 1.95% |
| Netherlands | 0.85% | 6.23% | 6.58% | 5.01% | 3.84% | 5.79% | 5.00% | 5.26% | 2.80% |
| Poland | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Romania | -2,58% | 2,59% | 1,64% | 1,81% | 1,23% | 2,68% | 2,83% | 2,95% | 2,04% |
| Slovakia | 3.38% | 5.37% | 3.13% | 0.70% | 1.59% | 1.50% | 1.43% | 0.79% | 0.21% |
| Spain | 1.52% | 2.10% | 2.25% | 2.40% | 3.02% | 3.86% | 2.56% | 2.86% | 0.86% |
| Sweden | 13.50% | 6.45% | 17.44% | 8.23% | n.a. | n.a. | n.a. | n.a. | 10.59% |
| 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; **UPF data used as proxy for Pillar II; ***Pension funds used as proxy for Pillar II, 2021 data is estimated; data for Netherlands Pillar II is only occupational pension funds*

[1] 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.

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.

| Aggregate summary return table | Pillar III | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 year | | 3 years | | 7 years | | 10 years | | whole reporting period* |
| | 2021 | 2020 | 2019-2021 | 2018-2020 | 2015-2021 | 2014-2020 | 2012-2021 | 2011-2020 | |
| Austria* | 0.44% | 1.27% | 0.96% | 2.65% | 1.29% | 3.09% | 1.50% | 3.30% | 1.95% |
| Belgium | n.a | n.a | n.a | n.a | n.a | n.a | n.a | n.a | n.a |
| Croatia | 2.00% | -1.41% | 2.97% | 2.13% | 3.48% | 4.57% | 4.41% | 3.75% | 3.51% |
| Denmark | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Estonia | 6.30% | 4.51% | 8.14% | 2.37% | 3.04% | 3.19% | 4.00% | 2.04% | 1.78% |
| France* | 0.37% | 1.13% | 1.55% | 0.65% | 1.07% | 1.43% | 1.63% | 1.47% | 1.47% |
| Germany** | -3.72% | 2.68% | -0.16% | 1.30% | 0.64% | 1.62% | 1.11% | 1.64% | 1.20% |
| Italy | 1.92% | 0.03% | 3.04% | 1.18% | 2.18% | 2.58% | 3.18% | 2.49% | 1.91% |
| Latvia | -1.01% | 2.14% | 3.18% | 0.82% | 0.59% | 1.75% | 2.17% | 1.58% | 1.34% |
| Lithuania | 0.54% | 4.83% | 4.65% | 2.29% | 2.17% | 2.85% | 3.37% | 1.98% | 1.03% |
| Netherlands | -2.29% | 1.83% | -0.04% | 1.39% | 1.19% | 1.14% | 0.33% | 0.27% | 0.02% |
| Poland | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| Romania | -3,07% | 0,99% | 0,60% | 0,35% | 0,22% | 1,53% | 1,90% | 1,91% | -1,00% |
| Slovakia | 1.92% | 1.30% | 3.03% | 0.08% | 0.92% | 1.00% | 1.39% | 0.44% | 0.71% |
| Spain | 2.10% | 0.86% | 1.58% | 1.33% | 2.20% | 3.08% | 2.26% | 1.60% | 0.35% |
| 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; ** Riester pension insurances contracts. Acquisition charges are included and spread over 5 years*

Unfortunately, due to unavailability of data breakdowns, for some country cases (UK, Belgium, Denmark, Poland) we were not able to calculate the annual real average returns by Pillar. Nevertheless, the results by retirement provision vehicle are available in Graphs 19 and Table 20 in the *General Report* and on an annual basis (nominal, net and real net return) in each country case).

*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.*

# Pension Savings: The Real Return

## 2022 Edition

## *General Report*

*One can supervise only what one can measure:*
*Why is this long-term savings performance report (unfortunately) unique?*

# I. INTRODUCTION

2022 marks the anniversary edition of BETTER FINANCE's Long-Term and Pension Savings Report. For 10 years, BETTER FINANCE aggregated and updated data and information on pension systems' structure, characteristics, charges, tax, and real net returns in a unique publication in this field.

Our report grew from the initial three country cases (Denmark, France, and Spain) covered in the 2013 report ("Private Pensions: The Real Return"[11]) to reach 18 jurisdictions and true long-term reporting horizons: where available, 22 years of gross, net, and real net returns of private occupational and voluntary retirement provision vehicles.

Today, BETTER FINANCE's research on the real returns of long-term and private pension savings comprises:

- this report (full version);
- the summary booklet;
- the *pensions dashboard*, an interactive tool on BETTER FINANCE's website to view and compare returns between private retirement provision vehicles.

## 1.1. The actual performance of this market is generally 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 comprehensive and comparable data on real net performances. So far, two other publications also aim to provide transparency on the topic, but have a limited scope and are too general to be useful for the average pension saver:

[11] Link for the print version available here: http://www.betterfinance.eu/fileadmin/user_upload/documents/Research_Reports/en/Pension_Study_EN_website.pdf.

| Table GR1. Comparison BETTER FINANCE report with EIOPA/OECD | | |
|---|---|---|
| | EIOPA | OECD |
| **Private pension products** | Only insurance-based pension products (unit-linked and profit-participation) based on surveys (68 providers/17 EU Member States/200 products) | Only pension funds (20 EU jurisdictions) |
| **Distinction between pillars (occupational vs voluntary)** | No | No |
| **Time horizon** | 5 years | 15 years max. |
| **Data/information on public pension systems** | No | Yes |
| **Pension system description (structure, conditions, costs, taxes)** | No | Yes |
| **Asset allocation** | No | Yes |
| **Gross returns** | No | No |
| **Nominal net returns** | Yes | Yes |
| **Real net returns** | Yes | Yes |
| **Real net returns, after tax** | No | No |

*Source*: BETTER FINANCE own research

Our report closes this informational gap for pension savers in 17 EU Member States. This is in line with the European Commission's "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 of EIOPA in the area of personal pension products with respect to past performance and costs comparison.[12]

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.

Reporting the real net return[13] 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;

[12] 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).

[13] 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.

- 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).

| Table GR2. BETTER FINANCE report structure and scope | |
|---|---|
| Structure | 1. Executive summary<br>2. General report (overview of data and findings)<br>3. Individual country cases (Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Poland, the Netherlands, Romania, Slovakia, Spain, Sweden, UK until 2019), representing 87% of EU27 population |
| Time horizons | 22 years (December 1999 – December 2021) or maximum available |
| Products covered | 1. Occupational pension pillar (pension funds, insurance-based pension products, other defined-benefit/contribution vehicles)<br>2. Voluntary pension pillar (pension funds, insurance-based pension products) |
| Public pensions | Structure, coverage, funding type, entry/pay-out conditions |
| Occupational pensions | Architecture (types of products offered), coverage, assets and/or asset allocation, costs, applicable tax regime(s) |
| Voluntary (individual pensions) | Architecture (types of products offered), coverage, assets and/or asset allocation, costs, applicable tax regime(s) |
| Returns | 1. Gross returns (before costs, tax, and inflation – where available)<br>2. Nominal net returns (before tax and inflation – where available)<br>3. Real net returns, before tax, inflation deducted<br>4. Real net returns, after tax (where available) |
| Data sources | Publicly available data and information sources |

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).

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

This report shows that it is not an impossible, but 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 2021, we find that 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 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 longer available since 2018 and the transfers to Pillar I (data from NSSI) are not disclosed; in the UK, the survey conducted by the Department for Statistics has been discontinued and information on British pension funds stopped at 2017;
- ***Late information***: at the time of printing, still a lot of 2021 return data have not been released by the national trade organisations or other providers. OECD has published preliminary data for December 2021, but on a limited number of jurisdictions and only for pension funds; moreover, 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.

Moreover, savvy retail savers and EU public authorities must rely on private databases (and divergent methodologies) to learn 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.

## 2. Value for Money: how to achieve pension adequacy?

Public pension authorities typically stress two requisites 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*".[14]

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). A simple example will illustrate why:

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

Assuming no inflation and saving 10% of activity income for 30 years,[15] 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% |



Moreover, in light of the special analysis undertaken in this report on *financial repression*, savers must also be aware and take into account the effects of ***inflation***, particularly since currently it reaches historical records.

### *What is pension adequacy?*

This question ultimately revolves around the level of retirement income (pension) compared to the pre-retirement income. The EU defines *pension adequacy* indirectly through three objectives that a pension system should achieve:

1) **income replacement**: ensure a minimum standard of living at retirement,
2) **sustainability**: ensure that the public pension system is sustainable; and
3) **transparency**: inform workers about the need to plan for their retirement.[16]

On income replacement, the EU's Open Method of Coordination on Social Protection and Social Inclusion[17] further specifies that pensions should:

- *in general*, be at a certain level so that the standards of living pre-retirement are maintained, to "*the greatest possible extent*", after retirement;
- *for special cases*, ensure a minimum standard of living at retirement so as to avoid pension poverty.

To measure the two above objectives, two indicators are generally used: the *aggregate replacement ratio*,[18] showing how big the gross pension is compared to the salary, and the

[15] As recommended by Public Authorities assuming 25-year life expectancy at retirement, gross of fees and taxes.
[16] Directorate-General for Employment, Social Affairs and Inclusion of the European Commission and the Social Protection Committee, *Pension Adequacy in the European Union 2010-2050* (May 2021) European Commission, available at: file:///C:/Users/Stefan/Downloads/pension%20adequacy%20in%20the%20european%20union%202010-2050-KE3012757ENN.pdf.
[17] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - "*A renewed commitment to social Europe: Reinforcing the Open Method of Coordination for Social Protection and Social Inclusion*" {SEC(2008) 2153} {SEC(2008) 2169} {SEC(2008) 2170} {SEC(2008) 2179}, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52008DC0418.
[18] According to Eurostat, the *aggregate replacement ratio* is the ratio of the median individual gross pensions of 65-74 age category relative to median individual gross earnings of 50-59 age category, excluding other social benefits.

*theoretical replacement rate*, showing the instant change (drop/increase) in income when retiring from active life:

$$Aggregate\ replacement\ ratio = \frac{gross\ median\ pension\ (pop.aged\ 65-74\ yo)}{gross\ median\ income\ (pop.aged\ 50-59\ yo)}$$

$$Theoretical\ replacement\ ratio = \frac{pension\ in\ the\ first\ year\ of\ retirement}{income\ in\ the\ last\ year\ of\ work}$$

The International Labour Organisation obliges parties to the Treaty to guarantee a minimum 40% of the previous earnings (prior to retirement) after 30 years of contributions;[19] the same threshold is used by the European Code of Social Security.[20] However, an actual threshold for pension adequacy was never agreed, although EU Member States agree on its objectives (to prevent old-age poverty, to replace income at a rate to *maintain* the standard of living, to be sustainable).

The reality is that pension adequacy[21] comprises two additional components, besides the actual *pension vs salary* ratio:

- the time spent to earn the pension vs the time spent receiving it;
- the amount of contributions to pension provision, namely mandatory (State) schemes and voluntary (occupational/individual) ones; put simply, *pension savings*.

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

Currently, the aggregate replacement rate (mostly State pension) is very low across the countries in scope of our report: fourteen out of seventeen jurisdictions provide a replacement rate lower than 60% for over more than 30 years of working life.

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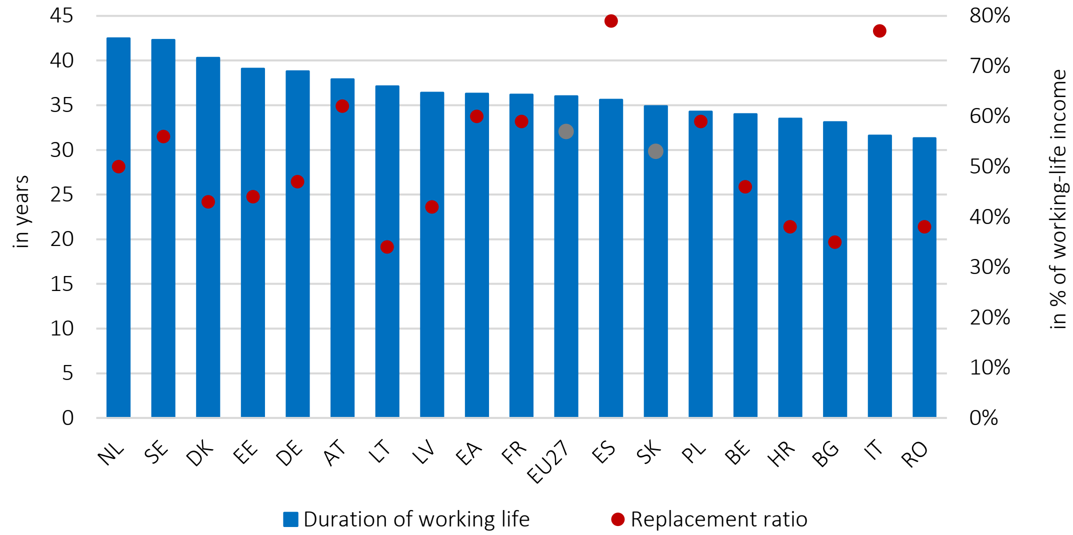
The indicator is based on the EU-SILC (statistics on income, social inclusion and living conditions) – See Eurostat, *Aggregate Replacement Ratio for Pensions (excluding other social benefits) by sex*, available at: https://ec.europa.eu/eurostat/databrowser/view/tespn070/default/table?lang=en.

[19] Art. 67 of Convention C102 on Social Security (Minimum Standards) of the International Labour Organisation, available at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C102; Art. 29 of the later adopted Convention C128 on Invalidity, Old-Age and Survivors' Benefits Convention of the International Labour Organisation (available here: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C128,/Document) required a higher threshold, i.e. 45%.

[20] Art. 67, Schedule to Part XI, of the European Code of Social Security, available at: https://rm.coe.int/168006b65e.

[21] Here we take only the financial point of view, but there are several other factors (non-financial) that contribute to "*maintaining the standard of life at retirement*", such as home ownership, sources of income, employment opportunities and access to non-financial benefits – see European Commission, *European Semester Thematic Factsheet: Adequacy and Sustainability of Pensions* (2017) European Commission, p. 3, available at: https://ec.europa.eu/info/sites/default/files/file_import/european-semester_thematic-factsheet_adequacy-sustainability-pensions_en_0.pdf.

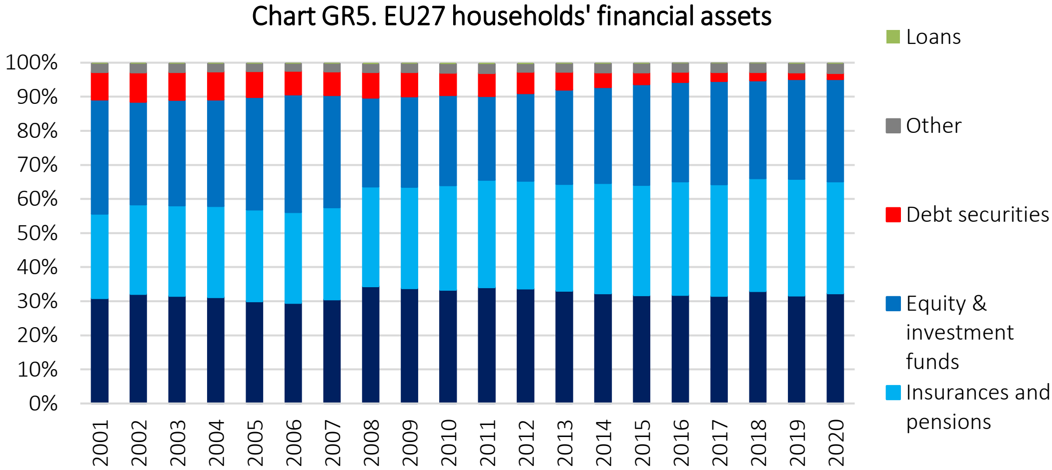
## Chart GR4. Pension adequacy across jurisdictions




*Source*: own composition based on Eurostar data; *EU27 replacement ratio corresponds to 2019; Slovakia replacement ratio corresponds to 2020

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.

## Chart GR5. EU27 households' financial assets




*Source: BETTER FINANCE based on Eurostat data*

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).

## 3. Performance: capital markets are not a proxy for retail investments

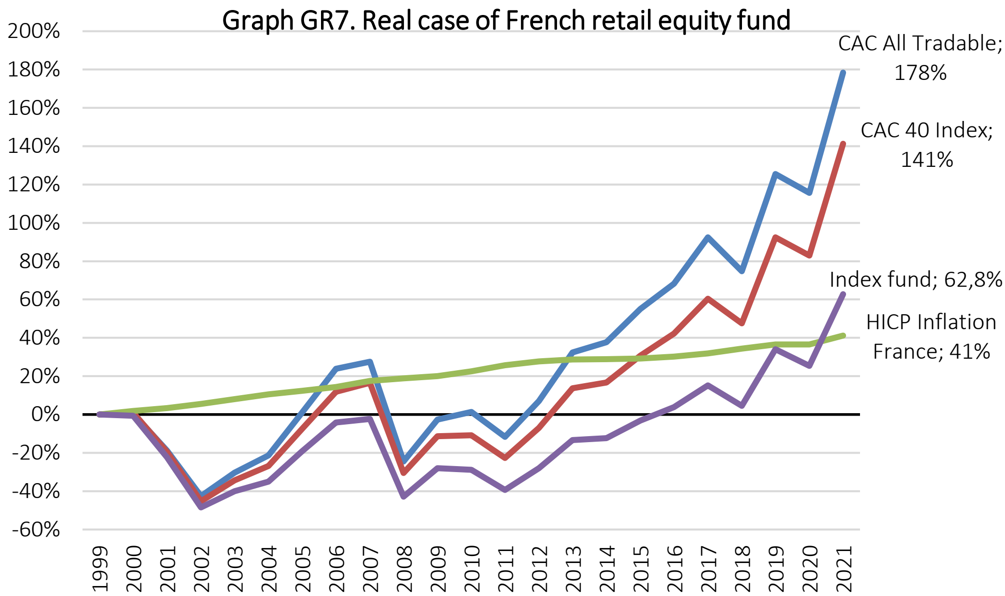
One could then argue that insurance and pension products have similar returns to a mixed portfolio of equities and bonds, since those are indeed the main underlying investment components of insurance and pension "packaged" products. However, this is not true as the share of packaged products and debt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

Table GR3 and Graph GR4 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 GR6. Real case of a Belgian life insurance (branch 23) | |
|---|---|
| Capital markets vs. Belgian individual pension insurance 2000-2021 performance | |
| **Capital markets (benchmark index*) performance** | |
| Nominal performance | 288% |
| Real performance (before tax) | 183% |
| **Pension insurance performance (same benchmark)** | |
| Nominal performance | 182% |
| Real performance (before tax) | 116% |

*Source: Sources: BETTER FINANCE own computations based on Morningstar public website; *Benchmark is composed of 50% bonds (LP06TREU) and 50% STOXX All Europe Total Market Return*

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




*Source: Own elaboration based on Graph FR3 in the French chapter*

The real case above illustrates an investment fund domiciled in France, a so-called retail CAC 40 "index" fund.[22] The fund actually underperformed the relevant equity index by 78.5 p.p. after 22 years of existence (1.85% per year), 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.

## 4. European Pension returns outlook

Our research findings show that most long-term and pension savings products did not, on average, overperform a broad capital markets index (balanced 50% equity – 50% bond), and in one too many cases even destroying the real value for European pension savers (i.e., provided a negative return after inflation). Based on our calculations and available data, 37 out of the 41 retirement provision vehicles analysed underperformed European capital markets by an average 1.93% per year. Moreover, three out of these 37 even delivered real negative performances over long-term periods (between 15 and 22 years).

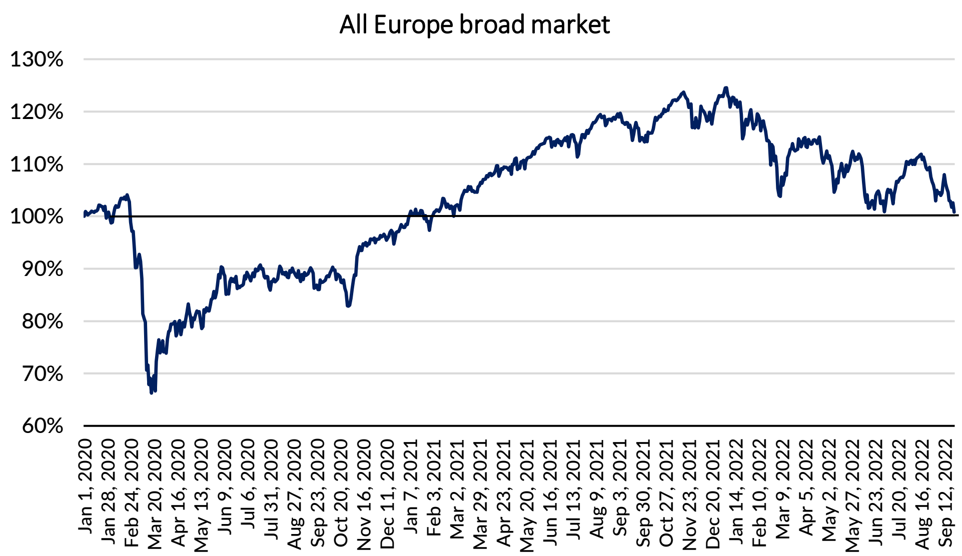
At the time of writing, the overall mid-term outlook for the adequacy of European pension savings is worrying when one analyses it for each of these main return drivers:

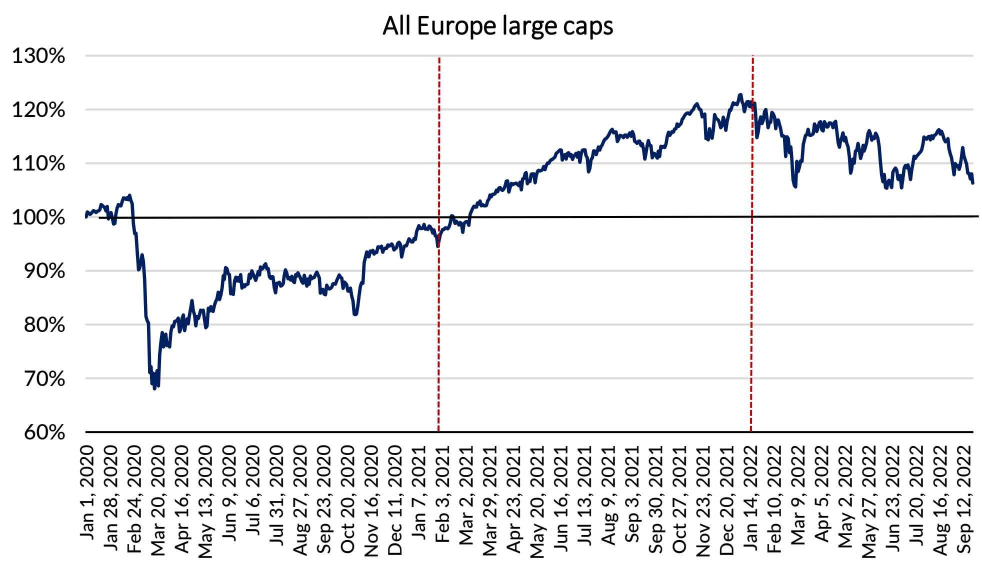
a) it is unlikely that the European bond markets will come any closer to the extraordinary returns of the period ended in 2020 for bonds due to the continuous

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

fall of interest rates, currently at rock-bottom levels; moreover, the reversal of quantitative easing programmes of Eurozone central banks will further affect the returns on sovereign bonds; the negative impact of this foreseeable trend in bond returns on pensions' returns will be reinforced by a higher proportion of bonds in pension products' portfolios in recent years; this is all the more relevant due to monetary policy response to the health-generated recession;

b) the strong growth of equities in 2020 and 2021 is already reverting, with the European all country broad equity index reaching pre-2020 levels and the large caps market also close by;

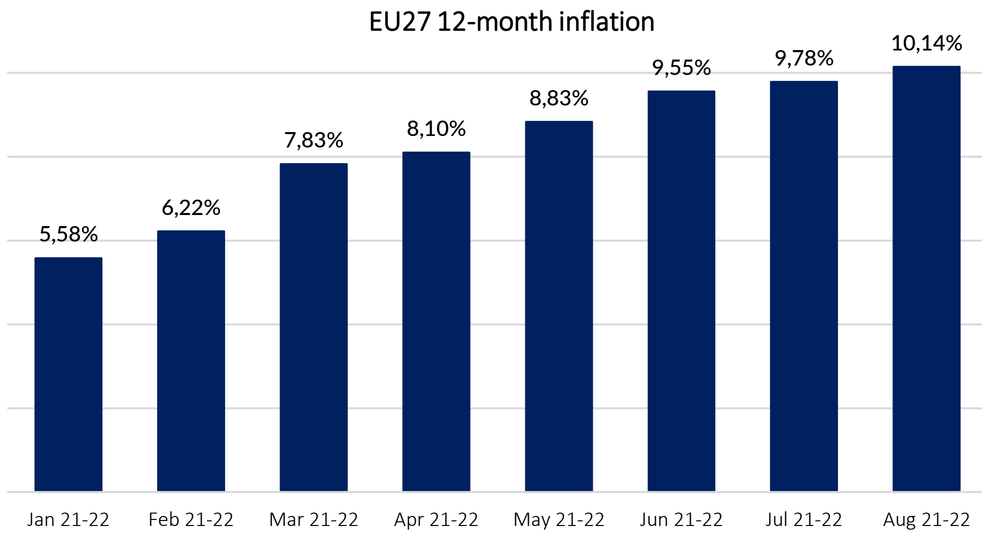


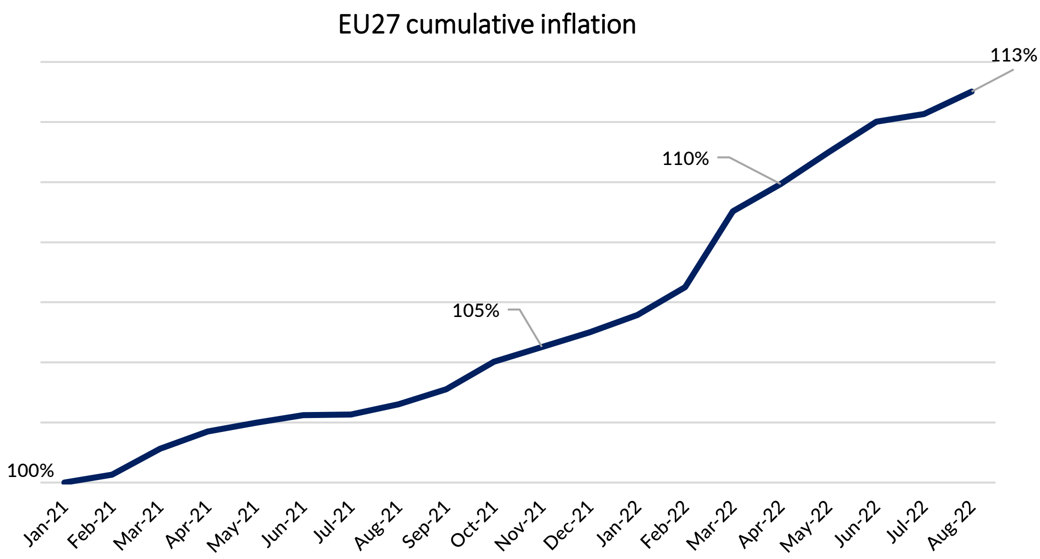




*Source*: Own composition based on MSCI data

c) costs and charges, as far as our data indicates, are not significantly improving;

d) inflation already took a heavy toll on pension returns in 2021 and it will be much, much stronger in 2022 due to record rates;




*Source*: Own composition based on Eurostat data

e) Taxes on long-term and pension savings do not show any significant downward trend either.

# Pension Savings: The Real Return

## 2022 Edition

## *Country Case: Spain*


## Resumen

Los trabajadores españoles no ahorran para su pensión. Más del 70% de sus activos totales son "ladrillos y cemento", que de ninguna manera puede considerarse un "activo previsional". Cuando las pensiones de Seguridad Social sustituyen más del 80% del salario previo a la jubilación, ¿por qué los trabajadores deberían ahorrar para ello? Como resultado de estos y otros factores, la "industria de las pensiones" (Pilares II y III) en España es pequeña y menos eficiente que si fuese tan grande como las de Holanda, Dinamarca o el Reino Unido. Los activos previsionales de los Planes de Pensiones a 31 de diciembre de 2021 llegaban al 10,55% del PIB de ese año, y las reservas técnicas de una amplia gama de productos asegurados para la jubilación (o similares) alcanzaban otro 15,82% del PIB, en total un 26,37% del PIB. Por estas razones, la gestión de estos activos no es barata, aunque puede llegar a serlo, y mucho, en los esquemas del Pilar II. La Fiscalidad de los activos y rentas de ambos pilares en España responde al régimen EET, común en la mayor parte de los países de la OCDE, si bien en los últimos dos años se ha deteriorado considerablemente para los vehículos del Pilar III. El rendimiento acumulativo medio general de los esquemas del sistema de Planes de Pensiones, una vez descontada la inflación, y antes de impuestos (marginal del IRPF, en este caso) ha sido del 0,58% por año en el periodo 2000-2021. Todos los datos utilizados en este capítulo provienen de fuentes oficiales fácilmente accesibles en internet (INVERCO, DGSFP, INE 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, why Spanish employees should save with this purpose? As a result, Spanish Pensions Industry (Pillars II and III) is small and less efficient as that of Denmark, Netherlands or the UK. Pension Funds' assets at end 2021 reached 10.55 percentage points of GDP that year, and if insured retirement or retirement-like vehicles' mathematical reserves were added to this, an extra 15.82 percentage points could be found, adding to a grand total of 26.37% of GDP. These and other reasons imply that asset management in this low-scale industry cannot be cheap. To be sure, Pillar II assets are as cheap to manage as in advanced countries or more, 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, although the last two years have witnessed a deterioration of fiscal terms grants to Pillar III schemes. Average cumulative net real return since 2000 through 2021, in the standard Pension Plans system, once inflation adjusted, and before taxes (the marginal Personal Income Tax in this case), has been just 0.58% annually. All data used in this chapter can be found on readily available official sources' web sites (INVERCO, DGSFP, INE 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, earnings related pensions (old-age, invalidity and survivors' benefits) and a minor, means-tested assistance branch for over 65 years old individuals (old-age and invalidity).

- Pillar II – Voluntary, defined benefit and defined contribution occupational, employer-sponsored pension plans (restricted de facto to large companies) and other qualified pension vehicles (insured and non-insured).

- Pillar III – Voluntary, individual defined contribution pension plans and a variety of other qualified retirement savings vehicles (insured and non-insured).

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

| Introductory Table<br>Multi-pillar pension system in Spain (2020/2021) | | | |
|---|---|---|---|
| | **Pillar I**<br>**National Social Security** | **Pillar II**<br>**Employer-sponsored Pension Plans** | **Pillar III**<br>**Individual Pension Plans** |
| **Participation** | Mandatory | Voluntary | Voluntary |
| **Type of funding** | Financed by social contributions (employees 4.7%, employers 23.6% of gross pay) | Financed normally by employers' contributions (no standard rate) | Financed by insured persons |
| **Type of benefit entitlement** | Final Wage formula (variable % of a 25 years average of actualized pensionable wages) | Both DB and DC benefits are used | DC benefits |
| **Management** | Publicly managed benefits paid by the National Social Security Agency (INSS) | Managed by independent agencies under companies' Social Partners supervision | Managed by Plans' Promoters (Financial institutions, Insurers or Associations) |
| **Products** | Contributory state pension, Non-contributory state pension and Minimum Basic Income (means tested, as from July 2020) | Pension Plans (standard vehicle), Simplified Pension Plans (new as from 2022), Insured Pension Plans (PPA), Life Insurance & Group Insurance, Individual Saving Plan (PIAS) and Long-term Individual Saving Insurance (SIALP). | |
| **Average benefit** | Average contributory pension (14 payments per year): €1,503 per month (old-age, newly retired employees) | Employer-sponsored standard Pension Plans (14 payments per year): € 819,74 per month (all contingencies, income only benefits, 2020) (a) | Individual standard Pension Plans (14 payments per year): €163 per month (all contingencies, income only Plans, 2020) (b) |
| | Average non-contributory pension (14 payments per year): €421.4 per month (old-age and invalidity) | Only 45,30% of total beneficiaries opt for income only benefits and amounts payed were 54,12% of total benefits paid | 66.8% of total beneficiaries opt for income only benefits and these amount to 29.75% of total benefits paid |
| **Coverage** | Social Insurance is compulsory for all workers. There are 6.2 million old-age pensioners. All persons 65 and over are eligible for Social Assistance. | Barely 11.24% of employees were covered by Employer-sponsored standard Pension Plans in 2021. Only 67.1 thousand beneficiaries received income only benefits in 2020. | Below 25% of population aged 16 to 64 was covered by Individual Plans in 2020. 332 thousand beneficiaries received income only benefits in that year |
| **Net replacement ratio (c)** | 74,3% (as for 2021) | 43.1% (as for 2020) | 8,1% |

(a) Employer-sponsored Pension Plans are the standard employee pension vehicle. Besides these, Group Insurance has a far larger popularity, although average capital is one fifth that of the Pension Plans'.

(b) Individual Pension Plans are the dominant personal retirement behicle for idependent workers and employees.

(c) This ratio is a gross, efective, average "benefit ratio" rather than a standard OECD type replacement ratio.

Source: Own estimation based on data from Social Security, INE, INVERCO and DGSFP

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, has returned every euro paid in contributions around 12 years after retirement when the average retiree has yet another 10 years of remaining life.

This implicit return is difficult to beat by marketed retirement products, even if these are by default sustainable when they are of the DC variety.

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 (after inflation) and before taxes, returns of the standard retirement plans (Pillars II and III) in Spain has been 0.68% in annual cumulative terms (0.50% for Pillar III schemes and 0.96% for Pillar II schemes) and this thanks to the good performance of stock markets in 2019 and 2021 (overall 8.8% in 2019 and 8.5% in 2021).

| Aggregate summary return table | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 year | | 3 years | | 7 years | | 10 years | | Since 2000 | |
| | 2021 | 2020 | 2019-2021 | 2018-2020 | 2015-2021 | 2014-2020 | 2012-2021 | 2011-2020 | 2000-2021 | 2000-2020 |
| PILLAR II | | | | | | | | | | |
| Nominal return | 8.09% | 1.53% | 4.93% | 3.32% | 4.38% | 4.33% | 4.62% | 4.02% | 3.18% | 2.94% |
| Real return | 1.52% | 2.10% | 2.25% | 2.40% | 3.02% | 3.86% | 2.56% | 2.86% | 0.89% | 0.86% |
| PILLAR III | | | | | | | | | | |
| Nominal return | 8.67% | 0.29% | 4.24% | 2.25% | 3.55% | 3.55% | 3.78% | 2.77% | 2.71% | 2.42% |
| Real return | 2.10% | 0.86% | 1.58% | 1.33% | 2.20% | 3.08% | 2.26% | 1.60% | 0.43% | 0.35% |
| Both Pillars | | | | | | | | | | |
| Nominal return | 8.50% | 0.67% | 1.80% | 0.79% | 3.83% | 3.81% | 4.07% | 3.22% | 2.89% | 2.62% |
| Real return | 1.93% | 1.24% | 1.80% | -0.5% | 2.48% | 3.34% | 2.56% | 2.05% | 0.61% | 0.54% |

Source: own composition 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, and survivorship (widowhood and orphanhood). It has two separate branches: an insurance, contributory and earnings-related branch and a non-contributory, assistance, flat means-tested benefits 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 public and private vehicles considered). It is contributory, compulsive for all workers, either employees or self-employed workers, 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. The pension formula is of the "defined benefit" type where only contribution (pensionable) wages, age at retirement and registered contribution years are considered (besides penalties/bonuses for early/delayed retirement).

As of 31st December 2021, The INSS was paying 9.92 million pensions (to about 8.9 million pensioneers) at a rate of € 1,039 each per month (14 payments in a year, all pension categories, all pensioners). Within these figures, slightly more than 6.2 million pensions went to the old age category at an average rate of € 1,196 per beneficiary and month (14 payments in a year). Direct total expenditure in earnings-related Social Security benefits in 2020 amounted thus to around € 144 billion, that is 11,97% of that year's GDP.[227]

As for workers' coverage, as of 31st December 2021, 19.4 million workers were affiliated to the national Social Security scheme. Out of these, 14.9 million (76.8%) were wage earning workers covered by the Social Security General Regime and 3.3 million (17.0%) independent workers covered by the Self-employed Workers Regime. The remaining few, a mere 7.8% of workers, belonged to different sub-regimes within Social Security.

There were also 3.1 million registered unemployed workers, 58,8% were covered by Social Security through social contributions paid on their behalf by the Spanish Employment Agency (SEPE, Spanish acronym) for as long as they received unemployment benefits.

Besides social insurance pensions, the Spanish Social Security, through its assistance branch, as of 31st December 2021, paid 446.1 thousand pensions of which 263 thousand were old-age and the rest were invalidity pensions. The average pension under this scheme was € 5,639.20 a year (2021 average), a total amount of almost € 2.5 billion, or 1,74% of that year's GDP. Non-contributory (assistance) pensions are subject to means (income and assets) 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.[228] These benefits are paid by Social Security thought fully financed out of general taxation. These benefits can be complemented by other personal characteristics (housing, dependent spouse and other health or disability conditions).

Within the contributory pensions class, social contributions received by the Social Security administration, that amounted to € 125.14 billion, provided, as of 2021, for 86,9% of total cost of direct Social Security contributory benefits. The total contribution rate is 28.3% of gross contribution 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. Contribution wages track effective wages closely through a scale with a minimum (as of 2021) of € 1,125.90 and a maximum of € 4,070.10 per month. Employees cannot choose their contribution wage but self-employed can do it and most of them do choose the minimum contributory earnings

[227] In 2021, Spanish GDP recovered partially from a strong decrease of 10.8% in 2020 with respect to 2019 because of Covid-19 administrative restrictions to economic activity. Direct earnings-related benefits in 2019 amounted to 10.9% of that year's DP. SS expenditure over GDP in 2020 was 12.5%.
[228] Since June 2020, Social Security is offering a new individual Minimum Basic Income.

base. This results in their ex-post retirement benefits being too small. Many of these benefits will have to be latter complemented with an assistance top to reach the statutory minimum retirement pension benefit. This resulting, paradoxically, in a larger internal rate of return for minimum earnings-related old age pensions recipients, over their past contributions, compared to retirees receiving higher or maximum earnings-related 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[229]. So, there is little margin left for occupational and personal retirement accounts to step substantially into the retirement arena[230]. And, indeed, what we observe in Spain is a very limited landscape for marketed retirement solutions even though the modern regulation for these products was enacted around 1987 last century.

The General Government Budget Law 11/2020, enacted on 30th December 2020, established new limits for tax deductibility of contributions paid by participants in occupational vehicles amounting to € 10,000 including employer's and employees' contributions.

Pillar II in Spain embraces employer-sponsored retirement accounts for wage earners[231]. These products are financed through contributions mostly paid by employers, with employees rarely participating on a matching basis.

There is a variety of retirement vehicles that employers may offer to 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. 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[232], or around € 619,71 per covered employee and year (2020). Normally, only above average wage earners are offered with these deferred wage benefits.

Employers are not obliged by law to offer this coverage to their workers, 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 barely 2 million

[229] 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.
[230] See Introductory Table above.
[231] "Associated pension plans", a very minor category used by cooperatives' members are classified as "other personal pensions" together with individual pensions within Pillar III vehicles by the regulator.
[232] Estimation based on data from INVERCO and INE.

accounts of this type where registered through 2021, to a total active population of 23.2 million that same year, a mere 8.4%. In 2020, only 95 thousand retired employees received old-age benefits from standard pension plans, in form of income, a lump-sum or other kind. Average annual equivalent benefit was € 11,628.65 (before taxes) and the equivalent benefit rate (against average annual gross pay) was 43.6%[233]. As of 31st December 2021, total assets under management (AuM, in what follows) to these accounts totalled € 37.8 billion (€ 2.1 billion above AuM one year earlier), that is, a tiny 3.14% of Spanish GDP in that year.

Pillar II retirement accounts are fiscally qualified by the government. Contributions by employers or employees are tax deductible up to an absolute limit of € 10,000 per person per year[234]. Benefits, no matter whether retrieved in form of monthly income, as a lump-sum or otherwise, are taxed under the current personal income taxation rules[235]. When benefits are retrieved in form of an income stream, beneficiaries are obliged to buy an annuity (life or term) or a drawdown. Nearly half of beneficiaries opt for a lump-sum given the tiny pension pots they manage to accumulate during their working lifetimes.

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 the fiscal treatment explained before as "incentives" or even "a fiscal gift". The truth is that having contributions tax exempted and taxing benefits (tax deferral) is the world EET standard (Exempt contributions, Exempt returns on those and Tax benefits), 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 thrift.

## 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 were equally treated, as Pillar II accounts, from the tax point of view up to 2020. But, as already mentioned, Law 11/2020 radically changed this status quo by reducing tax deductibility of contributions to € 2,000. In 2021 a new change in the 2022 Budget Law

[233] Detailed data on benefits is only available up to 2020.
[234] Up from € 8,000 as for December 2020. This absolute limit breaks down to € 1,500 as the general limit for Pillars II and III schemes and an additional limit of € 8,500 from employers plus employees' social contributions to Pillar II schemes. The Spanish Government has enacted in mid-2022 new legislation that regulates new Pillar II schemes called Simplified Pension Plans to which both employees and the self-employed can contribute. The above fiscal limits also apply to these schemes for employees, but now self-employed workers have an additional (to the general) limit of € 4.250 tax deductible.
[235] Spain has a Dual Personal Income Tax that differentiates income from investments from labour income. Pension benefits (both principal and interest), however, are fully taxed as labour income.

established that € 1,500 can be tax-free as the new extant general limit. One of the lowest thresholds in the OECD.

This double shock to Pillar III retirement savings will have devastating effects soon barely compensated by the "Simplified Pension Plans" newly introduced aiming at self-employed workers. As a result of these fiscal changes to Pillar III schemes, contributions to individual Pension Plans in the first six months of 2022 had fallen by 16,7% over contributions made in the same period in 2021 which had already fallen by 21.7% over contributions made in the same period in 2020. An accumulated fall of 34.8%. Analysts are expecting a continued fall in contributions to III Pillar schemes in the second semester of 2022. One salient feature within this category is that contributions by account holders are made at the end of the year using balances left to profit from tax deductibility.

In what concerns other features, however, Pillar III Personal Pension Plans are virtually the same product as employer-sponsored Pension Plans, albeit quite more expensive to manage. In 2021, only 500 thousand persons received benefits either as income, a lump-sum or both. Average annual benefit was € 5,423 (gross). As of 31st December 2021, Pillar III included 7.5 million retirement accounts that belonged to around 6.5 million individuals (or 21% of Spanish population 16-64 years old). These numbers did not change as from 2019. AuM for these plans totalled € 89.3 bn (€ 7.3 bn up from one year earlier), that is, a mere 7.41% of Spanish GDP.

## Household Savings

Personal (financial) saving in Spain is not a salient feature of its economy's financial side. Financial saving is so low because Spaniards love to save "*autrement*". That is, 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 a retirement objective. 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 by their employers on their behalf. This reduces both disposable income and the share of it that households could save. Besides, in exchange for heavy pay-roll taxation (28.3% of gross contribution wages only for retirement and associated contingencies), public pensions replace wages after retirement at around a 75% average, effective benefit rate.

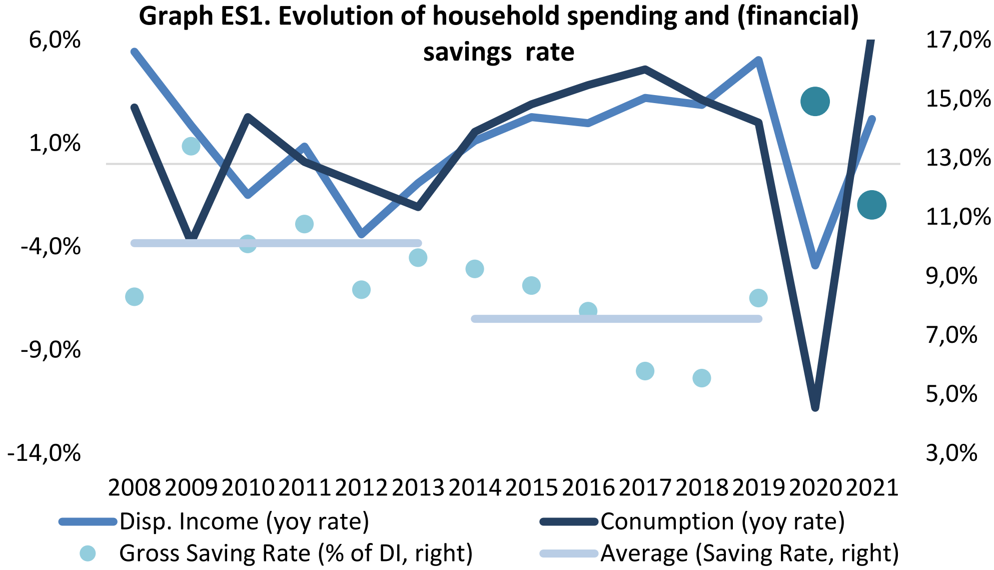
These factors reduce the desire and/or capacity to save for retirement of Spanish workers. Social contributions paid by employers (23.6 percentage points of the total rate) are commonly considered to be "deferred wage" showing up in a correspondingly lower gross pay received effectively by workers as compared to the gross pay, they would receive had them to pay the full contribution rate.

As for real estate, it is well known that it is hardly a retirement asset at all. Yet many homeowners, 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 near four times the value of Spanish GDP. Housing, in a way, is "the" retirement asset in Spain and retirement solutions providers would better think on how to develop sound retirement income products based on housing assets rather than hope for households to start accumulating proper retirement assets, at least for a generation and provided that radical changes help a development of large retirement solutions markets in Spain.

The above, basically the same text we wrote last year, tended to be the picture before Covid-19. And so continued to be in 2021, but for few important differences. First comes the fact that households, who were given by the government the possibility to withdraw part of their retirement savings to cope with financial hardship at home and/or at their businesses, did not actually use this window. Total AuM at Pension Funds (both Pillar II and III) have increased by € 11.6 billion, or a 9.9%, in 2021 over 2019. This increase was due mostly to interest payments (+ € 10.7 billion) than to net contributions (+ € 0.93 billion).

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 about 10% 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 loans and intense employment creation, coupled with wage increases. After 2008, the deep recession of 2009 and a second (and large) recession in 2011-2013, led Spanish households to increase their savings ratio above 13% in 2009, and keep it around 10% in the 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 elaboration based on Banco de España data*

Expansive years (2015-2018), when consumption was growing vigorously the savings rate dipped to a bottom 5% of disposable income in 2018. In 2019, consumption (and the economy) decelerated, and savings bounced to above 8%. As for 2020, we have seen an almost doubling of the savings rate observed in 2019, to a high of 14.9%. Covid-19 effectively restrained consumption in 2020 to a 2015 standard (a yoy 11.8% fall) while disposable income suffered far less (a yoy 4.9% fall). Finally, in 2021, we have observed positive rates of change for these three indicators, notably a far larger increase in consumption than in disposable income and a fall in the savings rate to a, notwithstanding, healthy 11.4% level not seen before de large rate observed in 2020.

By the end of 2021, (gross) financial assets owned by Spanish households (and non-profit institutions serving households - NPISH) amounted to € 2.7 trillion, according to the Bank of Spain financial balance sheets statistics. That amount represented slightly more than 3.6 times households' Gross Disposable income and above 2.2 times Spanish GDP. They also increased their holdings of financial assets by € 169 billion, a healthy increase of 6.7% compared to 2020.

If we take a closer look at the distribution of (gross) financial assets owned by Spanish households in 2020-2021, as shown in Table ES1 below, one can immediately observe that the "cash and bank deposits" class of assets, with more than one trillion euros at end 2021, takes up to an impressive 38.6% of all financial assets held by Spanish households, slightly below the share observed one year earlier. "Equity" being the second most important financial asset in households' portfolios at € 755.7 billion and 28.2% of total financial assets, or barely one percentage point up from a year earlier. Clearly, the Covid-19 recession had an impact in both preference for liquidity and precautionary savings, but this impact will be smoothly reversed.

In fact, very little of the large extra savings realized in 2020 and 2021 went to accumulation of pension rights, that barely increased in these two years.

| Table ES1. Financial assets held by Spanish households 2020-2021 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2020 | | | 2021 | | | Change (%) |
| | € bn | % | % of GDI | € bn | % | % of GDI | |
| Cash and bank deposits | 990.8 | 39.4% | 133.4% | 1,034.4 | 38.6% | 136.3% | 4.4% |
| Investment Funds | 350.8 | 14.0% | 47.2% | 408.7 | 15.2% | 53.9% | 16.5% |
| Shares | 689.9 | 27.4% | 92.9% | 755.7 | 28.2% | 99.6% | 9.5% |
| Pension rights | 176.3 | 7.0% | 23.7% | 188.4 | 7.0% | 24.8% | 6.8% |
| Insurance | 210.4 | 8.4% | 28.3% | 199.4 | 7.4% | 26.3% | -5.2% |
| Other | 95.6 | 3.8% | 12.9% | 96.6 | 3.6% | 12.7% | 1.1% |
| **Total** | **2,513.8** | **100%** | **338.5%** | **2,683.2** | **100%** | **353.6%** | **6.7%** |
| Pro memoria: GDI (a) | 742.5 | | | 758.7 | | | 2.2% |

*(a) GDI: Gross Disposable Income*
*Source: own elaboration based on Banco de España*

Spanish households did not increase much, or even decreased, their investment funds and insurance holdings in 2019. Equity holdings suffered a large fall as reflected in the table above. Pension entitlements, however, managed to keep their share at 7% of total financial assets. A very modest claim indeed.

With respect to households' Gross Disposable Income, it increased a contained 2.2% in a still complicated economic and financial year, but total financial assets jumped by 6.7%, reaching a relative nominal size of 3.5 times households' GDI an above two times Spanish GDP in 2021.

## 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 (occupational and personal) and Insured Pension Plans. Most retirement vehicles in Pillar III are provided by financial institutions and insurers that also act as managers and depositaries of Pillar II occupational pension plans. The latter are basically provided by employers. Also, several professional associations have since long created *Mutualidades* (Mutual Funds) that offer complementary (Pillar II) coverage to *mutualistas* (members), with some of those also operating as regulated alternative schemes to Social Security's self-employed schemes (Pillar I) 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 P&L accounts and entrusted to newly created entities that have their own legal personality (*Planes de Pensiones*) and their assets integrated into standard vehicles also created by those laws (*Fondos de Pensiones*). As recently as June 2022, however, the Spanish Parliament passed Law 12/2022 by which Public Occupational Pension Funds were created and brand new private Simplified Occupational Pension Plans were regulated allowing self-employed workers to join occupational schemes for the first time in Spain.

Notwithstanding the fact that Spanish households preferred to hold their financial assets in form of Bank Deposits & Cash, Equity kept their place in 2021 at a 28.2% share of total financial assets, well above Investment Funds (Tables ES1 and ES2). In 2021, total investment in this class of assets increased by 9.5%. Investment Funds enjoyed a healthy 16.5% increase. Pension funds improved considerably the performance observed in 2020 and had a nominal 6.8% increase repeating the pattern of 2019.

In 2021, both savers through Investment Funds and Pension Funds obtained excellent net yields amid clear domestic and international economic and financial recovery conditions after Covid-19 impact in 2020.

Investment Funds also received significant net investments of a level not seen since 2017 and were able to increase the value of AuM significantly, as shown in Table ES3. Pension Funds, however, entirely relied on net yields to see the volume of AuM increased as Net Investments were negative. For the first time in record, moreover, occupational, associated, and individual Pension Funds showed negative net investments.

| Table ES2. Total assets managed by Group Investment Institutions 2010-2021 (€Mn) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Group Investment Funds | | | | | Pension Funds | Total |
| | Investment Funds | | Investment Trusts | | Foreign IF | | |
| | Financial | Real Estate | Financial | Real Estate | | | |
| 2010 | 138024 | 6123 | 26155 | 322 | 48000 | 84750 | 303374 |
| 2011 | 127731 | 4495 | 24145 | 316 | 45000 | 83148 | 284835 |
| 2012 | 122322 | 4201 | 23836 | 284 | 53000 | 86528 | 290171 |
| 2013 | 153834 | 3713 | 27331 | 868 | 65000 | 92770 | 343516 |
| 2014 | 194818 | 1961 | 32358 | 826 | 90000 | 100457 | 420420 |
| 2015 | 219965 | 421 | 34082 | 721 | 118000 | 104518 | 477707 |
| 2016 | 235437 | 377 | 32794 | 707 | 125000 | 106845 | 501160 |
| 2017 | 263123 | 360 | 32058 | 620 | 168000 | 110963 | 575124 |
| 2018 | 257514 | 309 | 28382 | 734 | 168000 | 106886 | 561825 |
| 2019 | 276557 | 309 | 29446 | 725 | 195000 | 116419 | 618456 |
| 2020 | 276497 | 311 | 27599 | 886 | 220000 | 118523 | 643816 |
| 2021 | 317858 | 311 | 29247 | 913 | 272000 | 127998 | 748327 |
| YoY 20-21 | 14.96% | 0.00% | 5.97% | 3.05% | 23.64% | 7.99% | 16.23% |

*Source*: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021

| Table ES3. Flows of funds for Investment Funds & Pension Funds 2012 – 2021 (€ Mn) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Investments Funds (national, financial) | | | | Pension Funds | | | |
| | BoY Assets | Net Investment | Net Yields | EoY Assets | BoY Assets | Net Investment | Net Yields | EoY Assets |
| 2012 | 127731 | -10263 | 4854 | 122322 | 83148 | 70 | 3310 | 86528 |
| 2013 | 122322 | 23048 | 8463 | 153833 | 86528 | 239 | 6003 | 92770 |
| 2014 | 153833 | 35573 | 5412 | 194818 | 92770 | 898 | 6789 | 100457 |
| 2015 | 194818 | 24733 | 413 | 219964 | 100457 | 526 | 3535 | 104518 |
| 2016 | 219964 | 13820 | 1652 | 235436 | 104518 | 264 | 2063 | 106845 |
| 2017 | 235436 | 21410 | 6277 | 263123 | 106845 | 451 | 3667 | 110963 |
| 2018 | 263123 | 8410 | -14019 | 257514 | 110963 | -170 | -3907 | 106886 |
| 2019 | 257514 | 1693 | 17350 | 276557 | 106886 | 799 | 8734 | 116419 |
| 2020 | 276557 | 1161 | -1221 | 276497 | 116419 | 1176 | 928 | 118523 |
| 2021 | 276808 (a) | 25723 | 15327 | 317858 | 118523 | -270 | 9745 | 127998 |

(a) This year Real Estate Investment Funds are also included

*Legend*. BoY: Beginning of Year; EoY: End of Year

*Source*: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021

## Pension Plans

Pension Plans (*Planes de Pensiones*) are the standard retirement saving vehicle in Spain, albeit only one of many different retirement vehicles that are currently being marketed in the country. 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). Insurance companies also promote Insured Retirement Plans (*Planes de Previsión Asegurados*, PPA) for the general public and Insured Employer Retirement Plans (*Planes de Previsión Social Empresarial*, PPSE). These insured vehicles are basically equivalent to their non-insured counterparts and share with them the same regulatory standards.

Pension Plans are voluntary and complementary to Social Security pensions. They are not integrated in whatsoever way with Social Security benefits. 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, accounting for roughly half the assets managed into the occupational sub-class.

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 Pillar II, occupational plans and of virtually all Pillar III, or individual retirement plans and associated plans. Pension Funds are legal entities, linked or not to financial institutions, obliged by law to contract out their managing and depositary functions with specialized, authorised agents.

Pension Plans in Spain, like in most countries, are tax qualified (EET) 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 before 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 to different plan promoters at no cost within the individual accounts scheme.

Table ES4 below presents the number of participants (accounts rather, see note at the bottom of the table) to Pension Funds as of 31st December 2010 and 2021. The past decade has witnessed a worrying trend in the number of accounts/participants and things are not likely to improve unless strong action is taken.

As of December 2021, slightly less than 9.5 million accounts were integrated in the whole scheme. The individual accounts sub scheme totalled barely 7.5 million accounts, 79.1% of total number of accounts.

| Table ES4. Number of participants to Pension Plans 2010-2021 | | | | | |
|---|---|---|---|---|---|
| | Dec. 2010 | | Dec. 2021 | | |
| | Accounts | % of total | Accounts | % of total | Change 10-21 |
| Associate schemes | 78072 | 0.7% | 51281 | 0.5% | -34.3% |
| Employer-sponsored schemes | 2149334 | 19.8% | 1929079 | 20.4% | -10.2% |
| Individual schemes | 8601775 | 79.4% | 7474863 | 79.1% | -13.1% |
| **Total** | **10829181** | 100% | **9455223** | 100% | **-12.7%** |

*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, a 12.7% 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 than 1 million accounts in the period.

Correspondingly, as Table ES5 shows, the number of pension plans displays an almost regular decrease all through the present decade. Number of plans totalled 2,964 in 2010 and 2,325 at the end of 2021, a 21.6% drop, a fairly regular though time decrease averaging over sub schemes, but most relevant again (in absolute terms) for the individual accounts sub scheme. Associated schemes (inside Pillar III, according to the regulator classification) are minoritarian.

These data hide the fact that the average size of Pension Plans increased in the period from 3.2 thousand accounts per plan to nearly 4 thousand accounts per plan, 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 "big bang" happens in this industry.

| Table ES5. Number of Pension Plans by type of scheme 2010 - 2021 | | | | |
|---|---|---|---|---|
| As of December 31st | Individual schemes | Employer-sponsored schemes | Associated schemes | Total |
| **2010** | 1271 | 1484 | 209 | 2964 |
| **2011** | 1342 | 1442 | 198 | 2982 |
| **2012** | 1385 | 1398 | 191 | 2974 |
| **2013** | 1384 | 1350 | 187 | 2921 |
| **2014** | 1320 | 1330 | 178 | 2828 |
| **2015** | 1257 | 1312 | 172 | 2741 |
| **2016** | 1189 | 1305 | 164 | 2658 |
| **2017** | 1107 | 1291 | 156 | 2554 |
| **2018** | 1079 | 1293 | 151 | 2523 |
| **2019** | 1027 | 1284 | 146 | 2457 |
| **2020** | 976 | 1282 | 141 | 2399 |
| **2021** | 903 | 1286 | 136 | 2325 |
| Change 2010-2021 | -29.0% | -13.3% | -34.9% | -21.6% |

*Source*: own elaboration based on INVERCO data

Pillar II schemes (employer-sponsored) represented, as of December 2021, 20.4% of total accounts and 55.3% of total plans (accounts per plan). AuM within Pillar II plans represented 29.5% of system's AuM (Table ES6 below), a gradually diminishing share. This, in turn, implies that average retirement assets per account are also larger within the Pillar II schemes than within Pillar III. Actually, € 11.950 per account in the latter versus € 19,591 per account in the former.[236]

Coming to total AuM for the whole Pension Plans and Funds industry, as of December 2021, this indicator showed a strong increase of 8%, due to assets' yields in the year as net investment was negative for the first time ever (see Table ES3). Note, however, that total AuM for Pension Plans today barely reach 11% of GDP.

Table ES6. Evolution of Pension Plans' AuM by scheme 2010-2021

| As of December 31st | 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 | 64,254 | 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 |
| 2021 | 89,323 | 69.8% | 37,792 | 29.5% | 883 | 0.7% | 127,998 |

*Source*: own elaboration based on INVERCO data

It can also be seen that around 69.8% of total AuM in these retirement vehicles belong to the Individual accounts sub scheme, representing a mere 7.4% of GDP. This category of assets has

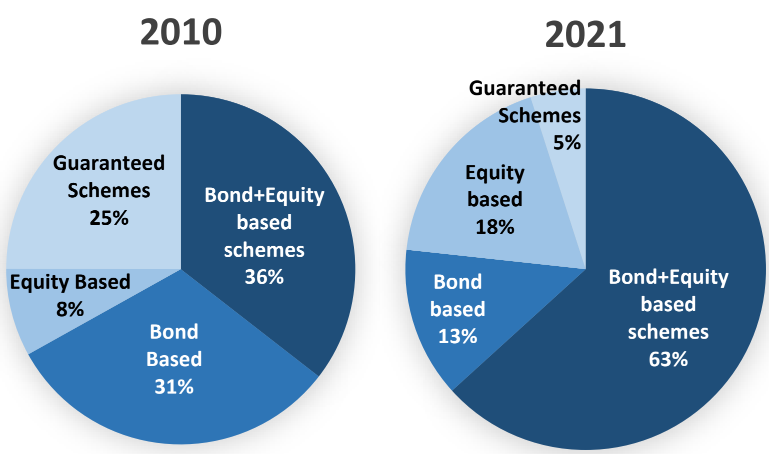
[236] Using standard mortality tables for Spain and assumptions about returns, these reduced amounts would yield very low instant lifetime annuities. The annuity a typical individual account could buy retiring at 65 amounts to less than € 60 per month (twelve payments) and increases up to less than € 100 per month in the case of the typical occupational account. This said, retirement savings under these two varieties tend to be sensibly larger at retirement age but won't even double the figures mentioned in the main text. Also, within the occupational variety, around half a million accounts belong to civil servants and most of these accounts have assets below one thousand euros per participant. That's why benefits at retirement are normally cashed in as a lump-sum. On the other hand, some employer-sponsored plans, covering dozens of thousands of employees in manufacturing and financial and advanced services (notably in the Basque Country, manufacturing), hold rather large average retirement accounts.

increased its nominal value an 8.9% over the previous year, compared to an increase of 5.7% for occupational pension plans' assets.

Typically, Pension Funds offer a variety of risk profiles that participants generally adhere to for some time until they decide to switch. 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 classes 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 ES2 below shows that Spanish Pension Funds are less and less conservative and allocate slightly more than ¾ of their assets to a combination of mixed (bond + equity-based) and mostly bond-based schemes. Mostly-equity-based schemes have a reduced, but increased, stance (18% of Pillar III assets) but, indeed, in 2021 funds have switched towards riskier investments than in 2020 (see Table ES7).

Graph ES2. Investments by asset class (Pillar III schemes) 2010 - 2021




*Source: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021*

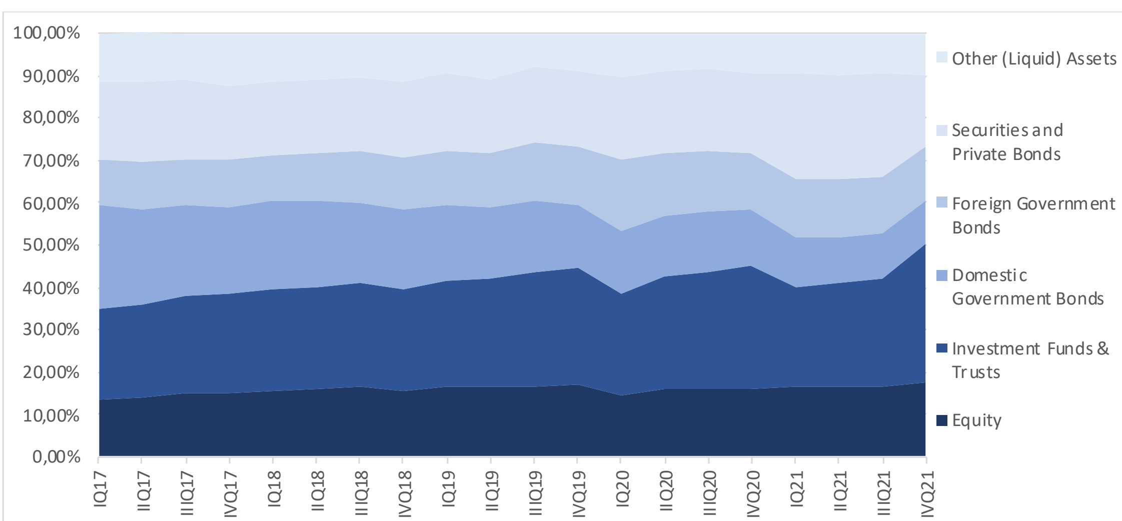
On a short-term perspective (Table ES7), asset allocation structure of Pension Funds (all schemes) is obviously more stable even if there has been a sharp contrast with respect to 2020 concerning assets' returns. At the end of 2020, despite the terrible economic conditions, allocative decisions did not change dramatically the picture seen by end 2019. But at the end of 2021 significant changes towards Investments Funds & Trusts and out of domestic and private bonds could be observed.

| Table ES7. Pension Funds' Asset Allocation 2018-2021 | | | | |
|---|---|---|---|---|
| | IVQ18 | IVQ19 | IVQ20 | IVQ21 |
| Equity | 15.33% | 17.03% | 16.29% | 17.50% |
| Investment Funds & Trusts | 24.16% | 27.43% | 28.84% | 32.61% |
| Domestic Government Bonds | 18.67% | 14.93% | 13.33% | 10.13% |
| Foreign Government Bonds | 12.67% | 14.01% | 13.18% | 13.14% |
| Securities and Private Bonds | 17.74% | 17.90% | 18.71% | 16.88% |
| Other (Liquid Assets) | 11.43% | 8.68% | 9.64% | 9.74% |
| Total | 100% | 100% | 100% | 100% |

*Source*: own elaboration based on DGSFP data

As shown in Graph ES4 below, 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, that in 2019, rewarded those who undertook it. 2020, as said, for all its complexity in economic terms, has really been a continuation of the basic allocation structure of the previous year with 2021 showing a continuation of the trend towards Investment Funds and Trusts.

Graph ES4. Pension Funds' Asset Allocation 2017-2021




*Source: own elaboration based on DGSFP data*

## 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 standard Pension Funds' assets is managed by insurers. A salient feature of this trade is the large variety of retirement and quasi-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 in 1987/1988 (*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 "financial" and "insurance" solutions when describing the nature of a given retirement solution. It must be said that if a given retirement product is a true, integral "retirement solution", it must contain insurance DNA 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 o 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 products (no insurance features 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 2021 amounted to € 252,28 bn, having spotted a healthy 6.3%% increase over 2020. As for the number of insured persons (and plan participants), 2021 ended with 18,9 million, and a 3.3% annual growth rate.

Not all insured persons/participants and technical reserves/assets under management were allocated to straight retirement and/or pension vehicles. But about 14.6 million insured persons and € 190.4 Bn worth of technical reserves were closely related to retirement rights and savings generated within the insurance sector at end 2021. Moreover, insurers established in Spain managed at that date assets worth 61.8 Bn on behalf of 4.3 million

Pension Plans participants displaying a very strong growth in this segment over 2020. The details of these numbers can be seen in Table ES8 below.

| Table ES8. Insured Retirement and other Retirement-like vehicles 2021 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **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) | | 911,3 | 911,3 | | 11.400,0 | 11.400,0 |
| | Company Retirement Plans (PPSE) | 36,7 | | 36,7 | 354,2 | | 354,2 |
| Pension Accruals and Insured Saving Vehicles | Risk | 2.277,1 | | 2.277,1 | 596,9 | | 596,9 |
| | PIAS* | | 1.137,1 | 1.137,1 | | 14.629,0 | 14.629,0 |
| | SIALP** | | 462,5 | 462,5 | | 4.320,6 | 4.320,6 |
| | Deferred capital | 196,6 | 2.298,3 | 2.494,9 | 2.913,0 | 42.008,1 | 44.921,1 |
| | Annuities*** | | 1.623,8 | 1.623,8 | | 63.089,6 | 63.089,6 |
| | Income (acc. phase) | 197,0 | | 197,0 | 13.300,0 | | 13.300,0 |
| | Income (pay-out phase) | 281,8 | | 281,8 | 10.126,0 | | 10.126,0 |
| | Unit/Index- Linked | 39,1 | 1.363,4 | 1.402,5 | 1.652,1 | 17.022,2 | 18.674,3 |
| Other Group Insurance | Risk | 3.366,0 | | 3.366,0 | 1.072,6 | | 1.072,6 |
| | Defered capital | 292,6 | | 292,6 | 2.499,2 | | 2.499,2 |
| | Pensions (acc. phase) | 19,3 | | 19,3 | 1.053,5 | | 1.053,5 |
| | Pensions (pay-out phase) | 54,9 | | 54,9 | 3.313,0 | | 3.313,0 |
| | Unit/Index-Linked | 34,1 | | 34,1 | 1.089,3 | | 1.089,3 |
| **Total** | | **6.795,0** | **7.796,2** | **14.591,2** | **37.969,7** | **152.469,5** | **190.439,2** |
| **YoY change (in %)** | | **-1,04%** | **-2,94%** | **-2,07%** | **4,26%** | **-0,14%** | **0,71%** |
| **Pro memoria** | | **Persons Insured (x1,000)** | | | **Assets under Management (Mn)** | | |
| **Pension Plans managed by Insurers** | | **4.348,4** | | | **61.846,19** | | |
| **YoY change (in %)** | | **27,46%** | | | **28,10%** | | |

*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 (https://www.unespa.es/notasdeprensa/evolucion-seguro-vida-diciembre-2021/)*

Table ES8 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.

The most popular insured retirement products are Deferred Capitals and Annuities, covering, respectively, 2.3 and 1.6 million insured persons and totalling technical reserves of € 44.9 Bn and € 63.1 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 ES8 shows that, by December 2021, 0.9 million individuals had adopted this Pillar III retirement vehicle, with total technical reserves amounting to € 11.4 bn, a mere € 12,500 per account.

## Company Retirement Plans (PPSE)

These are employer-sponsored Group Insurance aiming a complementary retirement benefit, 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 ES8 shows that, as of December 2021, only 36.7 thousand workers have been opted-in in this Pillar II retirement vehicle by their employers, with technical reserves amounting to 354.2 Mn, again a mere € 9,651 per account. Moreover, these products aren't gaining popularity, indeed.

## Regular Individual Savings Plan (PIAS)

Regular Individual Saving Plans (PIAS or *Planes Individuales de Ahorro Sistemático*) 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 ES8 shows that, as of December 2021, more than 1.1 million individuals have adopted this Pillar III retirement vehicle, with technical reserves amounting to € 14.6 bn, or € 12,866 per account.

### Long-Term Individual Saving Plans (SIALP)

Long-term Individual Saving Plans (SIALP or *Seguro Individual de Ahorro a Largo Plazo*) 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 2021, 462.5 thousand individuals had contracted this product totalling € 4.3 bn technical reserves, barely € 9,343 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 scale and thus 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 intense regulatory pressure on companies.

Data discussed below is eloquent enough about the consequences for savers that stem out of these market conditions. Average fees have been oscillating down in the last decade at around 1% of AuM[237]. 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, because of charges, of 13%.[238]

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.

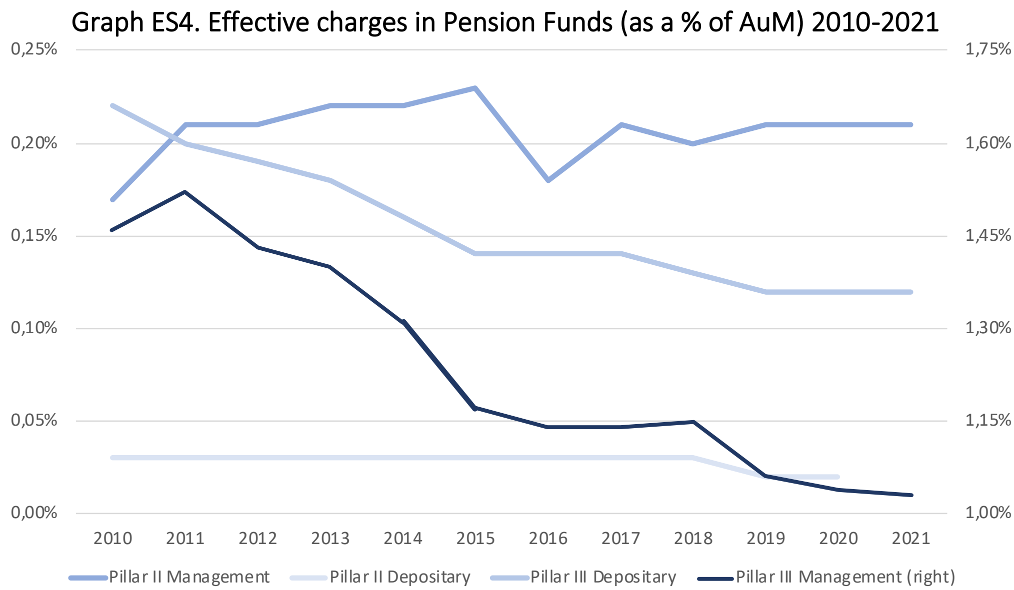
Even if regulation itself accounts for part of the extra burden that management and depositary fees pose on consumers, the fact is that too large a chain of intermediaries (managers, commissioners, and retailers) end up by adding to the overall cost for the participant or the insured person. Recently, and regularly, management and depositary fees have been limited

[237] Management and depository, all classes combined, weighted by market shares

[238] 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.

by law.[239] These regulations however allow variable fees to be set based on yields, within certain limits.

Graph ES4 and Table ES9 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.




*Source: own elaboration based on Table ES9 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 ES9).

[239] 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%.

| Table ES9. Charges in Pension Funds (as a % of AuM) | | | | | | |
|---|---|---|---|---|---|---|
| | Pillar II | | | Pillar III | | |
| | Management | Depositary | Both | Management | Depositary | Both |
| **2010** | 0,17% | 0,03% | 0,20% | 1,46% | 0,22% | 1,68% |
| **2011** | 0,21% | 0,03% | 0,24% | 1,52% | 0,20% | 1,72% |
| **2012** | 0,21% | 0,03% | 0,24% | 1,43% | 0,19% | 1,62% |
| **2013** | 0,22% | 0,03% | 0,25% | 1,40% | 0,18% | 1,58% |
| **2014** | 0,22% | 0,03% | 0,25% | 1,31% | 0,16% | 1,47% |
| **2015** | 0,23% | 0,03% | 0,26% | 1,17% | 0,14% | 1,31% |
| **2016** | 0,18% | 0,03% | 0,21% | 1,14% | 0,14% | 1,28% |
| **2017** | 0,21% | 0,03% | 0,24% | 1,14% | 0,14% | 1,28% |
| **2018** | 0,20% | 0,03% | 0,23% | 1,15% | 0,13% | 1,28% |
| **2019** | 0,21% | 0,02% | 0,23% | 1,06% | 0,12% | 1,18% |
| **2020** | 0,21% | 0,02% | 0,23% | 1,04% | 0,12% | 1,16% |
| **2021** | 0,21% | 0,02% | 0,23% | 1,03% | 0,12% | 1,15% |

*Source: http://www.dgsfp.mineco.es/es/Publicaciones/DocumentosPublicaciones/Informe%20del%20sector%202021.pdf (ps. 330 and 333).*

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 regularly.

## 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 (or tax deferral) of income saved for retirement purposes, 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 when benefits are received and, correspondingly taxed.

This treatment is often referred to as “tax incentives” or, more plainly, “tax gifts”, and 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. Tax deferral is, moreover, a way to increase the power of capitalization.

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 in. 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. 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 SS 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 final 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 absolute limit up to which income saved for retirement under a Pension Plan is tax exempt in Spain is currently € 10,000 for occupational Plans up by € 2,000 with respect to 2019) and € 1,500 for personal Plans (down by € 6,500 with respect to 2019). When the absolute limit of € 10,000 for Pillar II schemes is reached, participants can't put a single cent on their personal schemes.

The Budgetary Law for 2022 (December 2021) deepened the move initiated by the Budgetary Law for 2021 (December 2020) that eliminated equal tax treatment for Pillars II and III schemes, with personal retirement savings resulting clearly discriminated. The reason behind seems to be the need to reinforce occupational Plans, something that should not be done at the expense of personal Plans, however.

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 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 which Spanish region a 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 ES10. Personal Income Tax scale and rates - Central Government* | | |
|---|---|---|
| **Tax Base from…** | **To** | **Nominal Marginal Rates**** |
| € 0,000 | € 12,450 | 9.5% |
| € 12,450 | € 20,200 | 12.00% |
| € 20,200 | € 35,200 | 15.00% |
| € 35,200 | € 60,000 | 18.50% |
| € 60,000 | € 300,000 | 22.50% |
| € 300,000 | - - | 24.50% |

* Spain has several government levels and PIT is roughly split in half between Central and Regional Governments (See Table ES11).

** Only Central Government, only labor income. Interests and dividends are thoroughly taxed at 19%. Effective rates are sensibly lower.

Source: https://sede.agenciatributaria.gob.es/Sede/ayuda/manuales-videos-folletos/manuales-practicos/irpf-2021/capitulo-15-calculo-impuesto-determinacion-integras/gravamen-base-liquidable-general/gravamen-estatal.html

| Table ES11. 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% |
| Región de Murcia | € 60.000,00 | 22.90% |
| Cantabria | € 90.000,00 | 25.50% |
| Andalucía | € 120.000,00 | 23.70% |
| Canarias | € 120.000,00 | 26.00% |
| La Rioja | € 120.000,00 | 27.00% |
| Extremadura | € 120.200,00 | 25.00% |
| Aragón | € 150.000,00 | 25.00% |
| Illes Balears | € 175.000,00 | 25.00% |
| Principado de Asturias, Cataluña | € 175.000,00 | 25.50% |
| Comunitat Valenciana | € 175.000,00 | 29.50% |

* Two historical Autonomous Regions (Navarra and The Basque Country) are exempted from the Common Tax

Source: https://sede.agenciatributaria.gob.es/Sede/ayuda/manuales-videos-folletos/manuales-practicos/irpf-2021/capitulo-15-calculo-impuesto-determinacion-integras/gravamen-base-liquidable-general/gravamen-autonomico.html

## 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 annuitant's death, 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 € 10,000 and benefits are taxed as labour income considering 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.

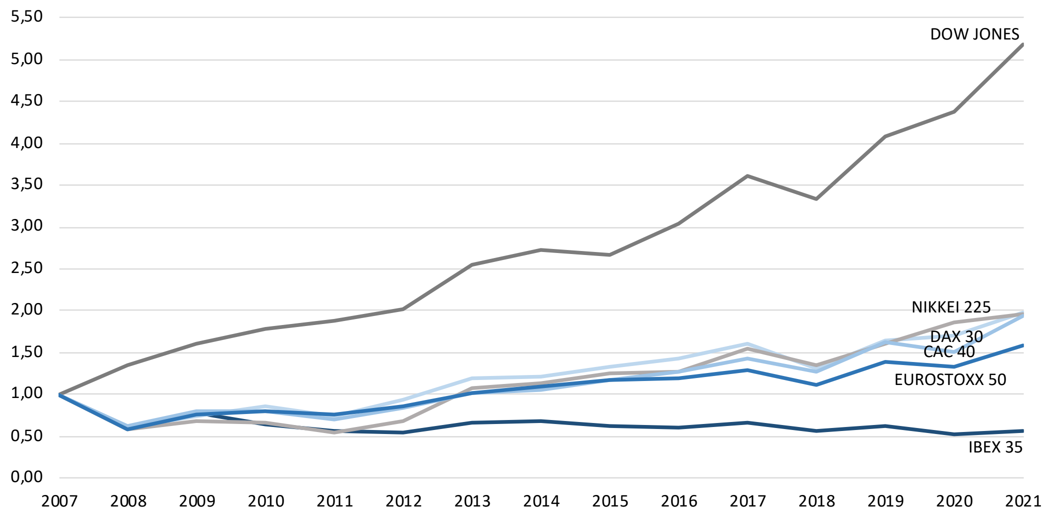
## Returns

### 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 many of 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 ES5 below.

Graph ES5. Major Stock Markets performance 2007-2021



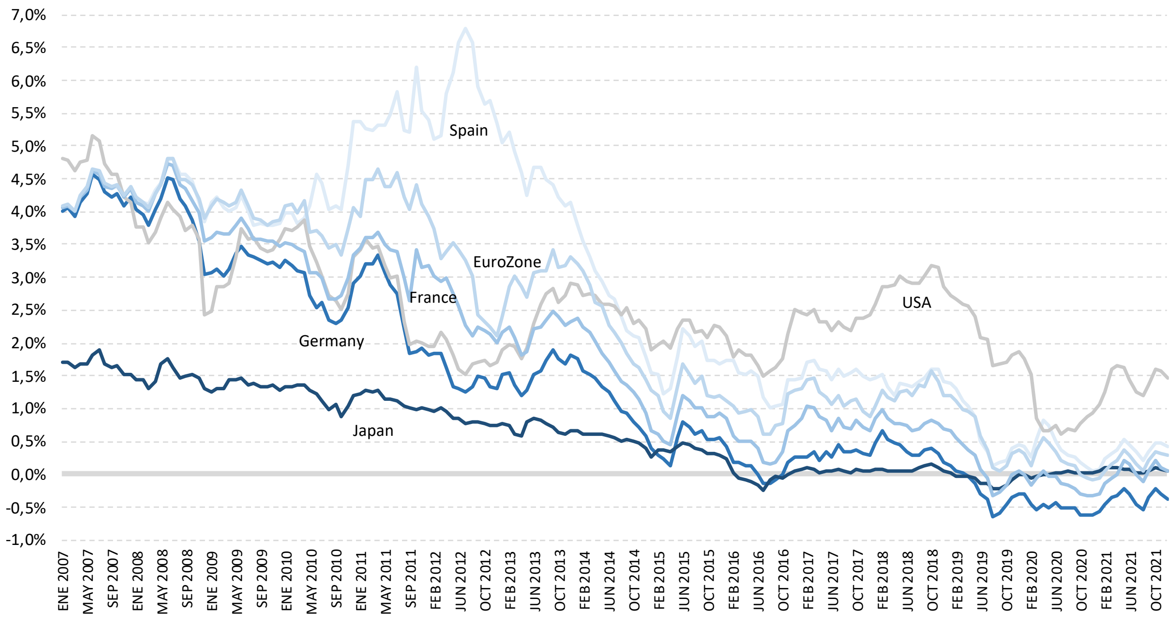

*Sources: BME*

Happily enough, some would say, 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) and, additionally, they have almost universal and large stocks of bricks and mortar.

If 2020 wasn't a good year for stocks returns for obvious reasons, 2021 has been exceedingly better so that most exchanges overshot above 2019 levels taking most markets to all-time highs since the beginning of the financial crisis. In the period 2007-2021 the DOW JONES, for instance, grew by around 419% (a cumulative annual rate of 12,5%), or a 97% in the case of the German DAX 30. The Spanish IBEX 35, in 2021, displayed a dismal 57% 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 reached intervention levels in 2012, at 679 bp in August. Only a EU financial sector rescue package saved the Spanish sovereign market, and perhaps the Euro, at a cost naturally. See Graph ES6 below.

Graph ES6. Major Sovereign Bond Yields (yoy, monthly, 10 years) 2007-2021




*__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 0.41% in December 2021 (0.04% in December 2020). Only, among advanced economies, Treasury 10y bonds (USA) stood below 1.5% in December 2021, 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 2021 and the strong appreciation of bonds has undoubtedly been a blessing if management has profited efficiently from these conditions.

## 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. May be that the newly adopted regulation of "Simplified Pension Plans" helps in this purpose.

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.

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 ES12 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. 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 was a bad year for investments returns of all sorts, particularly the stock market. But returns in 2019 overshot. This saga continued in 2020-2021 as the markets suffered everywhere due to the Covid-19 collapse of activity and the corresponding rebound in 2021.

| Table ES12. Returns of Spanish Pension Funds (before taxes) | | | | | | |
|---|---|---|---|---|---|---|
| | Pillar II | | | Pillar III | | |
| | Gross Return | Net Return | Net Real Return | Gross Return | Net Retrn | Net Real Return |
| 2009 | 9.47% | 9.28% | 8.38% | 10.39% | 8.76% | 7.86% |
| 2010 | 2.21% | 2.01% | -0.86% | 0.25% | -1.43% | -4.30% |
| 2011 | 0.24% | 0.00% | -2.35% | 0.50% | -1.22% | -3.57% |
| 2012 | 8.28% | 8.04% | 5.03% | 7.29% | 5.67% | 2.66% |
| 2013 | 7.95% | 7.70% | 7.39% | 10.30% | 8.72% | 8.41% |
| 2014 | 7.39% | 7.14% | 8.27% | 7.77% | 6.30% | 7.43% |
| 2015 | 3.14% | 2.88% | 3.01% | 2.52% | 1.21% | 1.34% |
| 2016 | 2.95% | 2.74% | 1.33% | 2.97% | 1.69% | 0.28% |
| 2017 | 3.42% | 3.19% | 1.97% | 3.85% | 2.56% | 1.34% |
| 2018 | -2.96% | -3.19% | -4.42% | -3.20% | -4.48% | -5.71% |
| 2019 | 8.97% | 8.74% | 7.89% | 9.99% | 8.81% | 7.96% |
| 2020 | 1.76% | 1.53% | 2.10% | 1.45% | 0.29% | 0.86% |
| 2021 | 8.32% | 8.09% | 1.52% | 9.82% | 8.67% | 2.10% |
| Average 2012-2021 | 4.92% | 4.69% | 3.41% | 5.28% | 3.94% | 2.67% |
| Differences (*) | - - | 24 | 127 | - - | 133 | 127 |

(*) On average, each year, 24 basis points have been given up to managers & depositors and 108 bp to inflation in Pillar II schemes, and 133 bp and 108 bp, respectively in Pillar III schemes
Note: Gross Returns are returns before management and depositary charges, Real Returns are computed using the Spanish HCPI published by Eurostat. See Table ES13 for cumulative and average returns
*Source: INVERCO, DGSFP and EUROSTAT*

A more vivid landscape emerges when overall returns are followed through time with the help of average cumulative returns computations as presented in Table ES13. 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 to that-particular-year".[240]

In the period 2000-2021, cumulative nominal returns for Pension Funds reached a 181,86 level (base 100 in 2000) and an annual cumulative nominal return of 2.76%. This return is net (after charges) for savers, but inflation must be taken into account. When this is done, cumulative real returns are slightly above the base (115,36 in 2021) so that nominal returns barely helped to match inflation since 2000 to present. The corresponding average cumulative real rate is thus 0.58% for the period. Note that inflation has been negative in five years in the period and relatively moderate over the rest of years.

[240] Average cumulative returns for the last 3, 5, 10 or more years in 2021 or at any other year can be easily computed using the cumulative return data in the corresponding column in Table ES13.

| Table ES13. Returns of Spanish Pension Funds (after charges and before taxes) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nominal Returns* | | | Real Returns*, ** | | | Harmonised Consumer Price Index |
| | YoY Return | Cum. Return | Average since 2000 | YoY Return | Cum. Return | Average since 2000 | |
| 2000 | 2.95% | 102.95 | 2.95% | -1.05% | 98.95 | -1.05% | 4.00% |
| 2001 | -1.64% | 101.26 | 0.63% | -4.15% | 94.84 | -2.62% | 2.51% |
| 2002 | -4.40% | 96.81 | -1.08% | -8.41% | 86.86 | -4.59% | 4.01% |
| 2003 | 5.79% | 102.41 | 0.60% | 3.10% | 89.55 | -2.72% | 2.69% |
| 2004 | 4.46% | 106.98 | 1.36% | 1.18% | 90.61 | -1.95% | 3.28% |
| 2005 | 7.22% | 114.70 | 2.31% | 3.50% | 93.78 | -1.06% | 3.72% |
| 2006 | 5.23% | 120.70 | 2.72% | 2.51% | 96.14 | -0.56% | 2.72% |
| 2007 | 2.18% | 123.33 | 2.66% | -2.10% | 94.11 | -0.76% | 4.28% |
| 2008 | -8.05% | 113.40 | 1.41% | -9.50% | 85.17 | -1.77% | 1.45% |
| 2009 | 7.70% | 122.14 | 2.02% | 6.80% | 90.96 | -0.94% | 0.90% |
| 2010 | -0.13% | 121.98 | 1.82% | -3.00% | 88.24 | -1.13% | 2.87% |
| 2011 | -0.76% | 121.05 | 1.60% | -3.11% | 85.50 | -1.30% | 2.35% |
| 2012 | 6.59% | 129.03 | 1.98% | 3.58% | 88.56 | -0.93% | 3.01% |
| 2013 | 8.36% | 139.81 | 2.42% | 8.05% | 95.69 | -0.31% | 0.31% |
| 2014 | 6.91% | 149.48 | 2.72% | 8.04% | 103.39 | 0.22% | -1.13% |
| 2015 | 1.78% | 152.14 | 2.66% | 1.91% | 105.37 | 0.33% | -0.13% |
| 2016 | 2.04% | 155.24 | 2.62% | 0.63% | 106.03 | 0.35% | 1.41% |
| 2017 | 2.77% | 159.54 | 2.63% | 1.55% | 107.67 | 0.41% | 1.22% |
| 2018 | -4.08% | 153.03 | 2.26% | -5.31% | 101.96 | 0.10% | 1.23% |
| 2019 | 8.80% | 166.50 | 2.58% | 7.95% | 110.07 | 0.48% | 0.85% |
| 2020 | 0.67% | 167.61 | 2.49% | 1.24% | 111.44 | 0.52% | -0.57% |
| 2021 | 8.50% | 181.86 | 2.76% | 1.93% | 113.59 | 0.58% | 6.57% |

* Cumulative and average returns (since 2000) are non-weighted.

** Real Returns are computed using the Spanish HCPI published by Eurostat

*Source: INVERCO, DGSFP and EUROSTAT*

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. The summary returns table offered at the beginning of this chapter is retaken here with Tables ES14 to ES16 below for the reader to have a more detailed view. These tables are self-explanatory.

| Aggregate summary return table | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 year | | 3 years | | 7 years | | 10 years | | Since 2000 | |
| | 2021 | 2020 | 2019-2021 | 2018-2020 | 2015-2021 | 2014-2020 | 2012-2021 | 2011-2020 | 2000-2021 | 2000-2020 |
| PILLAR II | | | | | | | | | | |
| Nominal return | 8.09% | 1.53% | 4.93% | 3.32% | 4.38% | 4.33% | 4.62% | 4.02% | 3.18% | 2.94% |
| Real return | 1.52% | 2.10% | 2.25% | 2.40% | 3.02% | 3.86% | 2.56% | 2.86% | 0.89% | 0.86% |
| PILLAR III | | | | | | | | | | |
| Nominal return | 8.67% | 0.29% | 4.24% | 2.25% | 3.55% | 3.55% | 3.78% | 2.77% | 2.71% | 2.42% |
| Real return | 2.10% | 0.86% | 1.58% | 1.33% | 2.20% | 3.08% | 2.26% | 1.60% | 0.43% | 0.35% |
| Both Pillars | | | | | | | | | | |
| Nominal return | 8.50% | 0.67% | 1.80% | 0.79% | 3.83% | 3.81% | 4.07% | 3.22% | 2.89% | 2.62% |
| Real return | 1.93% | 1.24% | 1.80% | -0.5% | 2.48% | 3.34% | 2.56% | 2.05% | 0.61% | 0.54% |

Source: own calculations based on data from INVERCO

| Table ES14. Returns of Spanish Pillar II Schemes (after charges and before taxes) | | | | |
|---|---|---|---|---|
| | Associate Plans (*) | | Occupational Plans | |
| | Nominal | Real | Nominal | Real |
| 2000 | 0.93% | -3.07% | -3.62% | -7.62% |
| 2001 | 0.10% | -2.41% | 0.64% | -1.87% |
| 2002 | -3.84% | -7.85% | -3.72% | -7.73% |
| 2003 | 5.61% | 2.92% | 6.73% | 4.04% |
| 2004 | 6.56% | 3.28% | 5.52% | 2.24% |
| 2005 | 9.49% | 5.77% | 8.39% | 4.67% |
| 2006 | 8.16% | 5.44% | 5.36% | 2.64% |
| 2007 | 3.05% | -1.23% | 2.44% | -1.84% |
| 2008 | -11.10% | -12.55% | -10.50% | -11.95% |
| 2009 | 9.23% | 8.33% | 9.28% | 8.38% |
| 2010 | 0.95% | -1.92% | 2.01% | -0.86% |
| 2011 | -1.11% | -3.46% | 0.00% | -2.35% |
| 2012 | 6.94% | 3.93% | 8.04% | 5.03% |
| 2013 | 9.51% | 9.20% | 7.70% | 7.39% |
| 2014 | 6.88% | 8.01% | 7.14% | 8.27% |
| 2015 | 2.57% | 2.70% | 2.88% | 3.01% |
| 2016 | 2.45% | 1.04% | 2.74% | 1.33% |
| 2017 | 2.99% | 1.77% | 3.19% | 1.97% |
| 2018 | -4.32% | -5.55% | -3.19% | -4.42% |
| 2019 | 10.31% | 9.46% | 8.74% | 7.89% |
| 2020 | 1.38% | 1.95% | 1.53% | 2.10% |
| 2021 | 9.00% | 2.43% | 8.09% | 1.52% |
| Cum. 2000-2021 | 104.35% | 22.54% | 92.84% | 20.45% |
| Average 2000-2021 | 3.30% | 1.02% | 3.03% | 0.85% |

(*) Associated Plans are considered personal, Pillar III plans by the Spanish DGSFP

*Source: INVERCO, DGSFP and EUROSTAT*

Occupational Pension Funds (Pillar II) are much cheaper to manage, as seen before, and obtain a larger net nominal return as seen in Table ES14 above. But their gross performance is not better than that of individual plans once compared in the longer term.

Given the performance of Pillar II pension funds and the overall system performance just discussed, the conclusion emerges that Pillar III funds have performed nominally in the 2000-2021 period only very slightly above inflation, namely 50 basis points above.

Being this 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 ES15 below 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 2000-2021 period, translate into real investment returns that range between -0.53% for Long-term debt-based funds to -1.16% for Mixed debt-based funds. Average nominal returns cannot beat the 1.67% 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 ES15. 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% | -0.17% | 0.68% | -3.32% | -2.20% | -6.20% |
| 2001 | 3.64% | 1.13% | 0.62% | -1.89% | -2.41% | -4.92% |
| 2002 | 3.83% | -0.18% | 0.73% | -3.28% | -5.16% | -9.17% |
| 2003 | 1.95% | -0.74% | 2.62% | -0.07% | 3.92% | 1.23% |
| 2004 | 1.77% | -1.51% | 1.92% | -1.36% | 3.16% | -0.12% |
| 2005 | 1.04% | -2.68% | 1.78% | -1.94% | 5.33% | 1.61% |
| 2006 | 1.26% | -1.46% | 0.34% | -2.38% | 3.58% | 0.86% |
| 2007 | 1.94% | -2.34% | 0.75% | -3.53% | 1.32% | -2.96% |
| 2008 | 2.13% | 0.68% | 2.03% | 0.58% | -8.79% | -10.24% |
| 2009 | 1.80% | 0.90% | 3.96% | 3.06% | 6.05% | 5.15% |
| 2010 | 0.64% | -2.23% | 0.47% | -2.40% | -1.54% | -4.41% |
| 2011 | 1.38% | -0.97% | 1.39% | -0.96% | -2.21% | -4.56% |
| 2012 | 3.47% | 0.46% | 4.79% | 1.78% | 5.41% | 2.40% |
| 2013 | 2.08% | 1.77% | 4.66% | 4.35% | 6.11% | 5.80% |
| 2014 | 1.37% | 2.50% | 8.93% | 10.06% | 3.61% | 4.74% |
| 2015 | -0.20% | -0.07% | -0.46% | -0.33% | 0.78% | 0.91% |
| 2016 | 0.20% | -1.21% | 1.25% | -0.16% | 0.71% | -0.70% |
| 2017 | -0.11% | -1.33% | 0.11% | -1.11% | 1.50% | 0.28% |
| 2018 | -1.79% | -3.02% | -2.01% | -3.24% | -4.08% | -5.31% |
| 2019 | 0.65% | -0.20% | 2.91% | 2.06% | 5.14% | 4.29% |
| 2020 | -0.19% | 0.38% | 1.36% | 1.93% | -0.39% | 0.18% |
| 2021 | -0.64% | -7.21% | -1.59% | -8.16% | 4.25% | -2.32% |
| Cum. 2000-2021 | 134.47 | 83.53 | 143.86 | 89.00 | 124.91 | 77.30 |
| Average 2000-2021 | 1.36% | -0.81% | 1.67% | -0.53% | 1.02% | -1.16% |

_Source_: *own calculations based on data from INVERCO*

As for Individual Pension funds mostly invested in stock, Table ES16 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 0.17% threshold on average over the 2000-2021 period. Paradoxically, guaranteed funds, despite being the option of more conservative savers manage to obtain a "healthy" 0.84% real return in the last two decades, a 3.03% nominal return and a cumulative 92.93% nominal return over the entire period.

| Table ES16. Returns of Individual Pension Plans - (After charges and before tax) | | | | | | |
|---|---|---|---|---|---|---|
| | Stocks Mixed | | Stocks | | Guaranteed | |
| | Nominal | Real | Nominal | Real | Nominal | Real |
| 2000 | -4.97% | -8.97% | -10.60% | -14.60% | 9.22% | 5.22% |
| 2001 | -7.73% | -10.24% | -16.30% | -18.81% | 0.35% | -2.16% |
| 2002 | -17.20% | -21.21% | -30.10% | -34.11% | 5.04% | 1.03% |
| 2003 | 8.70% | 6.01% | 16.18% | 13.49% | 5.67% | 2.98% |
| 2004 | 5.60% | 2.32% | 8.88% | 5.60% | 4.66% | 1.38% |
| 2005 | 12.16% | 8.44% | 18.73% | 15.01% | 4.64% | 0.92% |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2006 | 10.09% | 7.37% | 18.30% | 15.58% | 1.44% | -1.28% |
| 2007 | 2.96% | -1.32% | 3.93% | -0.35% | 1.48% | -2.80% |
| 2008 | -23.80% | -25.25% | -38.40% | -39.85% | 0.68% | -0.77% |
| 2009 | 14.21% | 13.31% | 27.20% | 26.30% | 3.77% | 2.87% |
| 2010 | -0.82% | -3.69% | 1.63% | -1.24% | -3.96% | -6.83% |
| 2011 | -7.01% | -9.36% | -10.40% | -12.75% | 1.15% | -1.20% |
| 2012 | 8.62% | 5.61% | 10.43% | 7.42% | 5.48% | 2.47% |
| 2013 | 12.51% | 12.20% | 22.19% | 21.88% | 9.41% | 9.10% |
| 2014 | 4.77% | 5.90% | 7.63% | 8.76% | 11.37% | 12.50% |
| 2015 | 2.50% | 2.63% | 5.58% | 5.71% | 0.27% | 0.40% |
| 2016 | 2.70% | 1.29% | 4.34% | 2.93% | 2.12% | 0.71% |
| 2017 | 4.54% | 3.32% | 8.83% | 7.61% | 0.41% | -0.81% |
| 2018 | -6.55% | -7.78% | -10.10% | -11.33% | 0.41% | -0.82% |
| 2019 | 12.17% | 11.32% | 23.59% | 22.74% | 4.12% | 3.27% |
| 2020 | -0.66% | -0.09% | 2.93% | 3.50% | 1.03% | 1.60% |
| 2021 | 11.91% | 5.34% | 23.42% | 16.85% | -0.70% | -7.27% |
| Cum. 2000-2021 | 139.63 | 86.40 | 169.36 | 104.20 | 192.93 | 120.29 |
| Average 2000-2021 | 1.53% | -0.66% | 2.42% | 0.19% | 3.03% | 0.84% |

*Source: own calculations based on INVERCO data*

## 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 for the 2000-2021 period, overall nominal (after charges) returns for Pillars II and III pension funds combined have been 2.76% and real returns have been 0.58% that is, a 218 basis points difference given to inflation (Summary Table).

- In the last decade (2012-2021), for Pillar II pension funds, with (unweighted average) gross nominal returns of 4.92%, net nominal returns of 4.69% and net real returns of 3.41%, barely 24 basis points of assets under management have been given to managers and depositaries every year and 108 basis points per year have been given to inflation (Table ES12).

- However, for Pillar III pension funds, in the same period, with (unweighted average) gross real returns of 5.28%, net returns of 3.94% and real returns of 2.67%, a much higher 133 basis points have been given to management and depositary costs and also 108 basis points to inflation. So that charges have been 109 basis points larger for Pillar III vehicles than for Pillar II ones (Table ES12).

- Up to six different regular portfolios are managed in the Spanish 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 2000-2021 period (annual, cumulative) have been 1.36%, 1.67% and 1.02% for, respectively, short-term, long-term and mixed debt vehicles and 1.53%%, 2.42%% and 3.03% for, respectively, mixed stocks, almost-only stocks and guaranteed funds (Tables ES15 and ES16).

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 are more conservatively invested and 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[241], but few general comments can be made. Guaranteed funds, that accounted for 4.94% of Pillar III total assets in 2021 (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 35 basis points average (unweighted, Table ES12) in favour of the former in the last ten years. The large difference in net returns (74 bp, same period) being thus almost entirely attributable to managing fees, much lower within Pillar II than within Pillar III, as said above.

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 this conditions to obtain larger returns for their vehicles' participants.

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

## Conclusion

Spanish retirement assets, through standard Pension Plans are a mere 10.55% 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 15.82% 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 14.6 million individuals are covered by insurance retirement or quasi-retirement vehicles. Assets, technical provisions or other retirement rights barely reach above € 13,000 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 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 in Pillar III schemes have decreased clearly. A continuation of this trend, without a significant increase in market size, continues to look far less affordable for managers.

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 the current deductibility of contributions and thus 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. Spain however has gone backwards in 2021 and 2022 strongly limiting the deductibility in Pillar III schemes. This has been corrected in part in 2022 with the new legislation regulating the “Simplified Pension Plans” to which independent workers can join in.

Tax deductibility cum deferral should not be seen as gifts or favours, but as the best policy that can be performed to encourage long term savings for retirement. Some ceilings to tax deductibility may be too low or even arbitrary. Less understandable is still the push among some political and social agents to dismantle tax deferral and/or deductibility.

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 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 gross (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 these vehicles, despite the illiquid nature of most of them. 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.

# 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.[289]

**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 100$^{th}$ 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.

[289] 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.[290]

**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 and does not bear the risk of longevity and the risk of investment. Defined

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

Benefits schemes may be part of an individual employment contract or collective agreement. Pension contributions are usually paid by the employee and the employer".[291]

**"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".[292]

**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.[293] In general, the inactive (dependent) population is represented by children, retired persons and persons living on social benefits.

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

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[291] 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.

[292] Ibid.

[293] 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.

**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.[294]

**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).

**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.

[294] 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).

**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.[295] 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,

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

custodians, consultants, asset managers and advisers to carry out specific operational tasks or to advise the plan administration or governing body.

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

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

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

**Pension plan*** – is a legally binding contract having an explicit retirement objective (or – in order to satisfy tax-related conditions or contract provisions – the benefits 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.

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