Private Pensions: The Real Return

A Research Report by

EuroFinUse

The European Federation of Financial Services Users

The Real Return of Private Pensions

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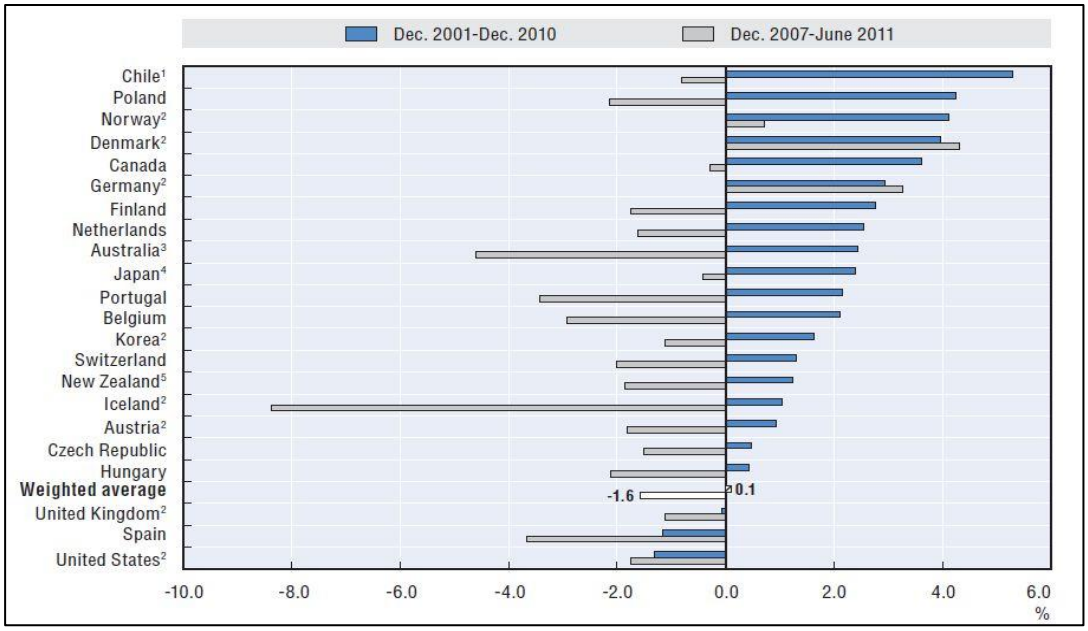
Executive Summary

"Due to the nature of long-term savings and pension plans, particular care is needed to ensure that consumers are being offered products that are really adapted to their needs and marketed appropriately. These are major, once in a lifetime, financial decisions for consumers. Therefore, consumers must be in a position to make their choices in full knowledge of the product, correctly assessing their circumstances and needs."

From the European Commission's Green Paper on
Retail Financial Services in the Single Market, April 2007

Recent OECD statistics[1] have cast a dark shadow over the aspirations of private pension savers. Over the last 5 years, real returns from private pension funds (after inflation) have been negative in many EU Member States. They have failed to hold their purchasing power, setting a gloomy outlook for tomorrow's pensioners.

Chart 1. Average annual real net investment return of pension funds in selected OECD countries



Source: OECD Pensions Outlook 2012, Figure 1.1, page 21

[1] Pensions Outlook 2012, OECD

EuroFinUse welcomes the research carried out by the OECD on this topic. The OECD report is one of the very few statistical sources that cast light on a **vital feature of pension investment**, namely the **ability to preserve the real value of capital** and to **earn a real return on that capital**.

However, the **report's results are partial**; the OECD research on real returns **only covers pension funds**, it **does not cover all costs or the impact of taxation**. The inclusion of these further deductions however, provides savers with useful investment decision-making information, on how to best utilise their pension savings. The report also does **not include individual pension savings products** although sometimes referred to as 'pillar 3' **neither** does it cover **OECD member France**, **nor Romania, Bulgaria, Lithuania and Latvia, which are not members of the OECD**.

1. **The OECD publication of recent private pension fund returns raises serious concerns and should be seen as a first step for a more in-depth European review, for the following reasons:**

- The OECD study shows, on average, nearly flat real returns (+0.1%) over the last 10 years for the products and countries covered, and negative returns (-1.6%) over the last 5 years;
- The returns were computed after inflation but before charges and taxation (at least some of them). Hence, the actual return for pension savers will be less than suggested by the OECD results;
- The OECD report only includes pension funds stricto sensu. It excludes individual private pension products and does not include France and several other EU Member States;
- Despite such concerning results, the OECD still strongly recommends that citizens should make a greater contribution to personal pension provision. When advising people to save more, public authorities should bear in mind that pension saving products are in many cases destroying real value of citizens' savings. This is why providers and public authorities should seek to protect the long-term purchasing power of savings, before advising citizens to increase those.

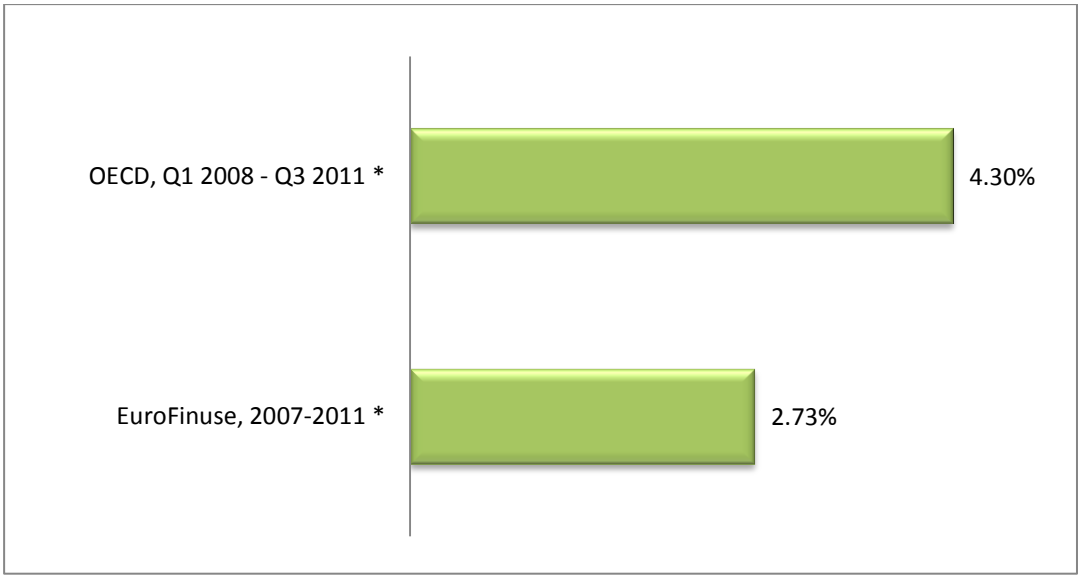
2. **The goal of the EuroFinUse research report, is to examine the concerns raised by the OECD report through:**

- Trying to evaluate net real pension returns after charges and after taxation;
- Evaluating those net returns for all private pension products and not only for pension funds;
- Evaluating those net returns for France as well as for countries partially covered by the OECD report; and
- Identifying the contributing factors for these returns.

3. **EuroFinUse's research on private pension returns shows that net returns to savers are often even less than the OECD data would suggest. In addition, medium term outlook is for this trend to continue and probably deteriorate further, as financial repression is at work against EU pension savers;**

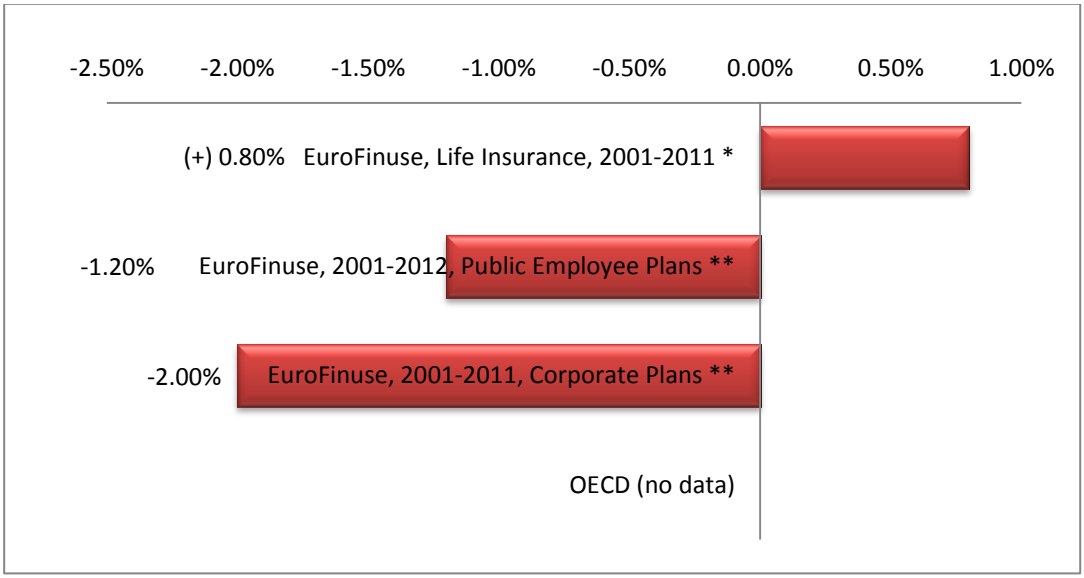
- Of the first three countries covered by our research, only the smallest, Denmark provides pension savers with significantly positive re al returns. Returns from Spain have been negative. In France, the products purely dedicated to long-term goals have suffered from very negative real returns and the much larger life insurance returns turned negative for the first time in 2011, shedding concern on their future utility to savers.
- The disclosure of pension returns is very poor; historical returns are almost never disclosed after inflation, after all charges, and after tax. Overall pension savers are not made aware of the declining purchasing power of their investments.
- The sale and advice of pension products seems more influenced by commissions than by suitability.
- The solvency rules have reduced the opportunity to earn real returns, by shifting asset allocation away from real assets in favour of fixed income, with particular emphasis on sovereign debt.
- The taxation of private pensions can be very complex and the tax burden, in France, can exceed 100% of real returns.

Chart 2. Real returns of private pensions in Denmark (*after tax)



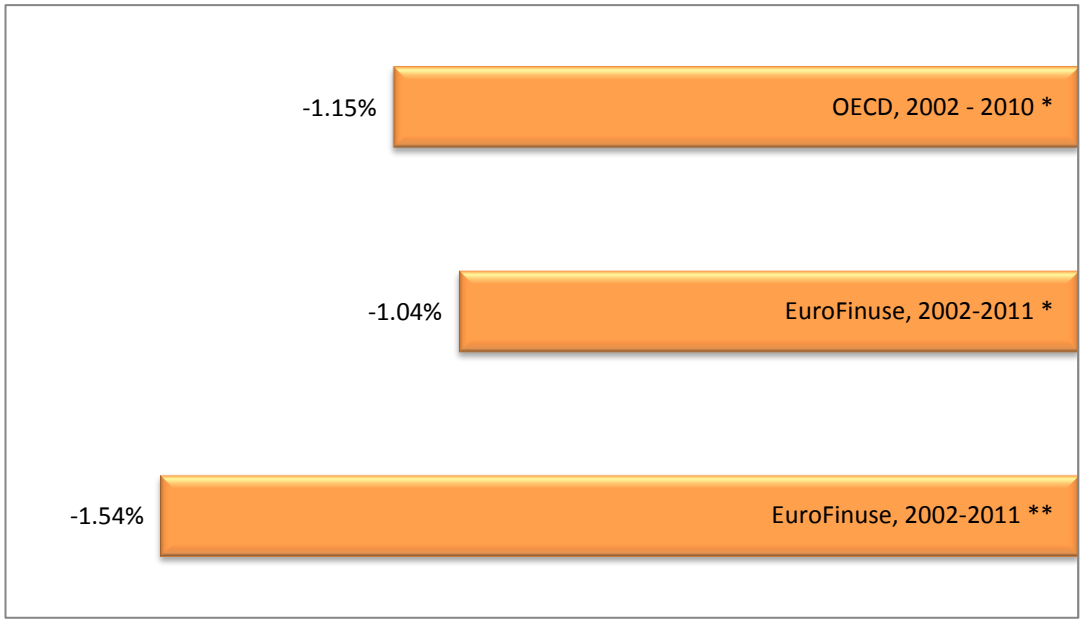
Source: EuroFinUse Research

Chart 3. Real returns of private pensions in France (*after tax **before tax)



Source: EuroFinUse Research

Chart 4. Real returns of private pensions in Spain (*before tax **after tax)



Source: EuroFinUse Research

4. Next steps and proposals

- EuroFinUse intends to use its newly proposed methodology to research the recent evolution of private pension savings returns in other EU countries
- Based on the above findings, **EuroFinUse can already recommend the following**:
    - Thoroughly improve and harmonise disclosures for all long term and retirement savings products: this is in line with EuroFinUse proposals regarding the European Regulation on packaged retail investment products "PRIPs"[2] (currently discussed at the European Parliament).
    - In particular the disclosure of historical returns must be provided:
        - After inflation;
        - After all charges borne directly or indirectly by the investor; and
        - After taxes (as required in the US for investment funds).
    - Governments should support the design of simple retirement savings vehicles and securities that protect the long-term purchasing power of savings. These should be readily accessible, without need for advice and its associated commissions
    - All pension products should be subject to prudential regulation taking into account the very long duration of the liabilities and therefore allow for higher portfolio allocation on investments such as equities. The focus should be on future cash flows, not current values.
    - Taxation should incentivise retirement saving and investment over consumption, or at least not penalise this behaviour.
    - Basic financial mathematics should be part of all school curricula, as this is a crucial tool in selecting suitable investment products for pension savers.

[2] http://www.EuroFinUse.org/fileadmin/user_upload/documents/Position_Papers/Investment/EF_PRIPs_Position_Paper.pdf

Introduction

Reports produced by the European Commission[3] (EC) and the Organisation for Economic Cooperation and Development[4] (OECD) have alerted policy makers to the accelerating burden of State pensions[5] on public accounts. Increasing longevity - specifically the lengthening period of retirement and number of retirees to contributors - are the factors driving this fiscal funding gap. In addition to longevity, changes in regulation and accounting rules have made the provision of defined benefit (DB) occupational pensions[6] unaffordable. With nearly all DB schemes closed to new members and further accruals, the occupational pension's area is now dominated by hybrid schemes, with life insurance style characteristics or defined contribution (DC) schemes.

EU citizens will have to respond to these changes by becoming increasingly responsible for providing their own pensions. This means making choices on investment products and rates of contribution. They face a range of personal pension options, clustered around two types of savings schemes, either DC (unit-linked) policies or life insurance.

According to the OECD, a private pension plan

> '*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*'[7]

We consider this definition to establish the scope of our research, which seeks to look at financial instruments other than pension funds that are used for private retirement provision (OECD only looks at pension funds). As regards pension funds *stricto sensu*, we include pension funds sponsored by employers, but where the individual participant is the main decision-maker on contributions and investment choices (such as DC plans sometimes termed "*instividual*" in the US).

The recent OECD report[8] states, '*Even when measured over the period 2001-10, the pension funds' real rate of return in the 21 OECD countries that report such data averaged a paltry 0.1% yearly*'. Statistics and research on the real return of pension products for EU

[3] White Paper – An agenda for Adequate, Safe and Sustainable Pensions – COM(2012) 55 final
[4] Pensions Outlook 2012, OECD
[5] State pensions, also known as Pillar I pensions
[6] Occupational pensions, also known as Pillar II pensions
[7] Private Pensions: OECD Classification and Glossary, OECD, 2005, page 49
[8] Pensions Outlook 2012, OECD (p15)

savers is at best sketchy and – more of a concern – they tend to confirm that pension savers have earned very low returns in real terms

This report, in its initial phase[9], will develop a deeper understanding of how these returns were achieved, by examining the experience in Denmark and Spain. The report will further evaluate private pension product returns in France, a country not covered by OECD return data. The following sections go through a process of return attribution to identify and analyse the factors that have influenced the real returns received by pension savers. We will discuss the historical experience and technical issues around each topic and review the recent experience within Europe and the three EU Member States.

Country Profiles and Real Returns

Table 1 indicates the level of pension coverage in each country. The data provides information on the value of occupational pension assets and the average replacement rate of the State pension. We include further data on life insurance assets, as life insurance (particularly in France) is the leading vehicle for personal pension savings. France, with life insurance assets at 74.3% of GDP, has the highest level of life cover of the three countries in our study. It is notable that French occupational pension assets represent a relatively small part of GDP. Denmark follows with life assets at 68.1% of GDP, occupational pension assets providing another 49.7%. The Danish system, with its quasi-mandatory contribution requirements, has the highest level of private pension coverage of the three Member States. Spain has the lowest level of life and occupational pension assets at 17.8% and 7.9% of GDP respectively. This low level of private pension coverage is indicative of the Spanish citizen's dependence on the State pension. The table also shows that the Spanish State pension provides an 84.5% replacement ratio. While the Danish replacement ratio is even higher, the figures are not comparable. The Danish system is largely funded, while Spain's State pension runs on a 'pay-as-you-go' mechanism.

[9] In a Phase II of the research programme, EuroFinUse envisages expanding the number of EU Members States covered under the research methodology developed in this report, to get a more complete picture of the pension return experience across the EU.

Table 1. Country Profiles

Denmark			
Occ. Pension Assets	€116.5bn	Pension Assets as % of GDP	49.70%
Life Insurance Assets	€162.1bn	Life Ins. Assets as % of GDP	68.10%
Working Population	2.9m	Dependency Ratio	24.90%
Net average replacement ratio of State pension			94.50%
France			
Occ. Pension Assets	€58.4bn	Pension Assets as % of GDP	2.90%
Life Insurance Assets	€1,494.0bn	Life Ins. Assets as % of GDP	74.30%
Working Population	28.7m	Dependency Ratio	25.70%
Net average replacement ratio of State pension			60.80%
Spain			
Occ. Pension Assets	€83.9bn	Pension Assets as % of GDP	7.90%
Life Insurance Assets	€189.0bn	Life Ins. Assets as % of GDP	17.80%
Working Population	23.1m	Dependency Ratio	24.70%
Net average replacement ratio of State pension			84.50%

Source: IPE, OECD & Eurostat

Our research, independent from the OECD, confirms that the historical real returns, after investment charges and before taxes, from 2002 to 2011, for pension funds in Spain have been poor. In addition to the OECD study, we find the returns from France have also been poor. It is immediately apparent that developing a concept of mean real return in each country is fraught with challenge. Firstly, accessing data on a national level has been extremely difficult. While OECD collects data for Denmark and Spain, it does not for France. Our independent gathering of national data, from the supervisory authorities, trade and savers' associations (see Table 2) shows marked differences in outcome not only in magnitude but also occasionally in direction from the OECD data.

Limitations

The number of existing individual private pensions in each of the three Member States covered by this study is a function of national population and pension coverage. Whilst there is data on the size of the working population (Denmark 2.9m, France 28.7m and Spain 23.1m); data on pension coverage is difficult to obtain. Coverage in Denmark is very high, due to mandatory contribution requirements of the ATP, a second state pension run

as a fully funded defined benefit scheme. The situation in Spain is less clear, as the private pension market is relatively new. France is a special case; approximately 12m citizens hold life assurance policies, which upon maturity may be used to purchase an annuity on retirement. Consequently, because of this established alternative form of retirement savings, and of the large state-run pay-as-you-go pension system, pension funds *per se* (according to the OECD definition) have a very limited presence in France.

Nevertheless, it can be concluded that there are numerous individual private pension schemes in place. Establishing a mean return in each country is a challenging task, as there will be a broad range of individual experiences. This study has sought to model future long term real returns on personal pensions by weighted multiplication of historical long term returns with OECD asset allocation data; neither sources of information are complete. As concerns the composition of our investment return data, we have not considered the returns of countries outside Europe. However, we believe this weakness is mitigated by the high degree of correlation in investment returns between major overseas markets. We have not considered the returns of real estate, loans and a variety of alternative assets. In practicality, these asset classes represent a fairly small proportion of pension portfolios, accounting at most for less than 10% of assets but more commonly for less than 3%[10]. These assets are selected for their low correlation with other assets in order to reduce the portfolio's overall risk. However, it is highly likely that they exhibit some positive correlation with other mainstream assets. Consequently, their minority presence and correlation characteristics will only have a marginal impact on overall portfolio returns.

As concerns, the asset allocation data provided by the OECD, they only cover three years of the past decade: 2001, 2007 and 2010, and does not at all cover France. However, the data we were able to retrieve capture significant events in the financial markets that mark high and low points (turning points) in the risk characteristics of these portfolios. Therefore, we believe the asset allocation data provided by the OECD offers useful support for our analysis.

Another issue is the aggregation of data, which will produce a spurious mean outcome. Private pension savings vehicles span a range of products, polarised at one end by pure life insurance contracts (assurance[11]) and the other by unit-linked/DC investment plans. As can be illustrated in the data we have collected from France, the investment characteristics of both types of vehicles result in completely different returns. The

[10] Table A27. Public pension reserve funds' portfolio allocation in selected OECD countries, 2010, OECD Pensions Outlook 2012, page 230

[11] Life Assurance – sometimes called 'endowment' is a product where the individual receives life insurance protection up until a certain date, followed by the payment of an assurance sum, if the individual lives beyond the specified date.

aggregated data that we have collected from Denmark does not express the average experience of pension savers, as these returns are a mixed outcome from both guaranteed life and unit-linked savings vehicles. This is an unlikely outcome, as most pension savers have either one or the other and seldom both. Hence, to assist the reader in their own analysis, we have displayed the FTSE market indices total return data for the major asset classes used in insurance contracts and unit-linked policies. But of course FTSE indices reflect capital markets' returns: before inflation, before taxes and – even more importantly – before any expenses that may be charged by intermediaries such as brokers, asset managers, custodians, distributors, etc. on private pension products.

Table 2. Historical real returns before taxes*

Denmark										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
OECD	-6.5%	5.6%	11.6%	15.2%	1.2%	-2.7%	4.0%	1.3%	7.7%	NA
Life Guar. and Unit-linked.						-0.9%	-5.1%	5.1%	8.9%	6.3%
Equities Dom	-32.1%	20.5%	17.6%	32.0%	15.2%	11.2%	-62.5%	34.0%	33.2%	-15.5%
Equities Non-dom	-37.8%	12.8%	9.4%	21.5%	16.6%	0.5%	-58.6%	27.0%	8.4%	-11.5%
Govt. Bonds Dom	6.8%	3.1%	6.0%	3.0%	-2.0%	-0.4%	7.0%	2.6%	3.3%	6.4%
Govt. Bonds Non-dom	7.0%	1.8%	4.9%	3.0%	-2.6%	-1.2%	6.7%	2.7%	-1.0%	-0.9%
Corp Bonds	5.8%	4.5%	4.9%	1.5%	-1.8%	-1.8%	2.7%	8.7%	3.5%	-0.4%
France										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
OECD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Life Guaranteed	2.5%	2.0%	2.0%	2.3%	2.3%	1.2%	2.7%	2.5%	1.3%	0.3%
Life Unit-linked	-17.5%	5.9%	4.0%	12.5%	7.0%	-1.4%	-23.6%	13.2%	3.1%	-9.7%
Equities Dom	-38.2%	14.5%	8.5%	22.9%	18.6%	1.2%	-52.8%	23.4%	2.3%	-15.7%
Equities Non-dom	-37.8%	12.8%	9.4%	21.5%	16.6%	0.5%	-58.6%	27.0%	8.4%	-11.5%
Govt. Bonds Dom	7.0%	1.6%	4.9%	3.5%	-2.2%	-1.0%	10.0%	1.9%	3.4%	2.1%
Govt. Bonds Non-dom	7.0%	1.8%	4.9%	3.0%	-2.6%	-1.2%	6.7%	2.7%	-1.0%	-0.9%
Corp Bonds	5.8%	4.5%	4.9%	1.5%	-1.8%	-1.8%	2.7%	8.7%	3.5%	-0.4%
Spain										
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
OECD	-7.0%	2.3%	0.6%	2.1%	1.8%	1.4%	-12.2%	2.8%	-1.1%	NA
Unit-linked	-8.3%	2.8%	1.2%	3.6%	2.5%	-2.1%	-9.6%	6.9%	-3.0%	-3.1%
Equities Dom	-39.5%	22.5%	11.7%	12.4%	23.6%	2.9%	-52.2%	24.0%	-24.0%	-16.3%
Equities Non-dom	-37.8%	12.8%	9.4%	21.5%	16.6%	0.5%	-58.6%	27.0%	8.4%	-11.5%
Govt. Bonds Dom	5.9%	1.4%	4.2%	1.8%	-3.3%	-2.2%	5.0%	3.2%	-6.8%	4.9%
Govt. Bonds Non-dom	7.0%	1.8%	4.9%	3.0%	-2.6%	-1.2%	6.7%	2.7%	-1.0%	-0.9%
Corp Bonds	5.8%	4.5%	4.9%	1.5%	-1.8%	-1.8%	2.7%	8.7%	3.5%	-0.4%

Source: OECD, FTSE & EuroFinUse Research

*Note: EuroFinuse research is the source of country life and pension real returns, stated after investment charges and before tax;
The OECD and EuroFinuse return data for life and pension funds are before tax;
Total returns data (dividends included) for equities index; FTSE Euro based index;
All equities data from FTSE Developed Europe Equity Index;
All non-dom bonds data from FTSE Euro Government Bond Index;

Return Attribution

The real return of an investment portfolio is determined by the following factors:

- Inflation
- Asset mix
- Asset performance
- Portfolio manager/advisor competence
- Investment Charges, and
- Taxation

Inflation

Inflation, the tendency for prices to rise, is probably the most material risk to a pension portfolio. Its damaging impact on returns is very rarely, if ever, disclosed to pension savers. Without the presentation of real return data, savers can very easily – and probably will – fall victim to 'money illusion'. Hence, EuroFinUse strongly supports the approach of the OECD to focus on real pension returns and not nominal returns. We ask that the disclosure of historical long term real returns be mandatory for all long term and retirement savings products.

Funds set aside today to purchase a pension tomorrow, are only worth what they can buy at tomorrow's prices. Both the OECD and European Commission reports predict declining replacement rates of State pensions, thereby transferring the burden of provision to the citizen. Given the growing importance of private pensions, it is imperative that they deliver real returns in order to maintain a good standard of living in retirement.

Very long term studies looking at the real returns on assets between 1900 and 2011, conducted by Elroy Dimson, Paul Marsh, and Mike Staunton[12] demonstrate the insidious effects of inflation on wealth. The long term inflation experience of the three Member States differs significantly. Denmark has the lowest at 4.0%, followed by Spain at 6.0% and lastly by France at 7.3%.[13]

Economic analysis of these three countries during this period reveals a clear positive relationship between inflation and expanding public sector deficits, public debt and consumer credit. This is particularly marked in France and Spain as the consequence of war and of the State's desire to take control of the means of production. Denmark's

[12] Credit Suisse Global Investment Returns Yearbook 2012
[13] Ibid

experience sharply contrasts with the other two countries, where the government kept 'relatively' firm control of the public finances. Further, unlike many European countries the growth of the State (in Scandinavia) saw 'the socialisation of consumption, not of production[14]'. The emphasis was on the provision of welfare and education, not the nationalisation or control of output, as seen in France and Spain. This policy kept the private sector competitive, promoted the efficient allocation of resources and consequently exerted downward pressure on prices.

Table 3 illustrates the recent experience of inflation in Denmark, France and Spain, compared with the average of the 27 Member States of the European Union.

Table 3. Inflation [%]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Denmark	2.09	2.57	1.22	0.95	2.2	1.66	2.44	2.38	1.17	2.75
France	2.13	2.36	2.3	1.74	1.71	2.75	1.15	1.05	1.99	2.57
Spain	3.94	2.65	3.22	3.66	2.71	4.15	1.49	0.84	2.82	2.34
EU 27	2.3	2.09	2.42	2.29	2.17	3.1	2.13	1.55	2.64	2.95

Source: Eurostat

The recent data shows that inflation has been tracking considerably below the long term historical averages: Denmark 1.97% versus 4.0%, France 1.98% versus 7.3% and Spain 2.78% versus 6.0%. The average for the European Union is 2.36%. The annualised rate of inflation, as measured by the Harmonised Index of Consumer Prices (HICP) of the 27 countries of the European Union, was 2.39%. Inflation from 2002 to 2010 has been stable, with generalised acceleration in 2007 followed with deceleration in 2008. This deceleration was strongest in Spain and weakest in Denmark.

The historical experience of high public sector deficits and their management through inflation by both the French and Spanish governments provides an alarming precedent to today's situation. As Table 4 demonstrates, the last few years have seen a marked deterioration in the public sector finances in the three countries under review and the EU as a whole. It is notable that Denmark continues to lead, both historically and currently, the three countries in fiscal restraint and lower levels of inflation.

Given the current fiscal imbalances, pension savers should be very concerned by the threat of inflation upon their savings, and have a genuine desire to earn a real return on those savings. Perhaps the most significant difference that could

[14] Scandinavia 1914-1970, Lennart Jorberg and Olle Krantz, The Fontana Economic History of Europe, Contemporary Economics-2, edited by Carlo M. Cipolla, 1976

affect the outcome on this occasion is the change in European demographics. In many European States, the retired or soon to retire, have become the electoral majority; inevitably, they will steer public policy.

Table 4. Public sector deficit and debt

	Public Sector Deficit as a % of GDP		Public Debt as a % of GDP	
	2008	**2011**	**2008**	**2011**
Denmark	3.2%	-1.8%	33.4%	46.6%
France	-3.3%	-5.2%	68.2%	86.0%
Spain	-4.5%	-8.5%	40.2%	69.3%
EU 27	-2.4%	-4.4%	62.2%	82.5%

Source: Eurostat

Perhaps this time inflation will no longer be a viable tool of public policy. However, historical precedent suggests this hypothesis is at best optimistic.

If governments force their citizens to take more responsibility for their retirement, then it would be equitable for governments to provide securities that offer a positive real return on debts. We believe that governments should issue inflation index-linked securities targeted at pension savers that offer real protection against inflation. These securities should be readily accessible, so that savers can avoid intermediary charges.

Asset Mix

A portfolio's asset mix determines its risk characteristics and expected return. Our analysis suggests that the potential annual real return of pension portfolios, before investment charges and taxation, in Denmark, France and Spain up until 2007 was of 3.6%, 2.5% and 2.4% respectively. Post 2007, the risk profile of these portfolios materially declined, through the substitution of real assets for debt assets. This reduced the potential returns to 3.5%, 1.5% and 1.8% respectively. We believe that the financial crisis and preparations for the new insurance Directive – Solvency II accounts for this change in risk behaviour. While the volatility caused by the financial crisis explains a shift away from risky assets, the effect of Solvency II is more subtle. We are concerned that while the financial crisis will pass, Solvency II is likely to have a lasting adverse effect upon the investment returns that pension savers will receive. Hence, we call on policy makers to adopt a distinctly separated prudential framework for the entire pensions sector (whether insurance-regulated or not), to help pension savers achieve real returns on their savings. We discuss the impact of Solvency II towards the end of this section.

Table 5 shows selected asset allocation data, produced by the OECD, for pension assets in Denmark and Spain, for 2001, 2007 and 2010. As mentioned, France does not provide data to the OECD on pensions' funds. However, Chart 5 in the French case study (Annex 1) provides a decent proxy for private pension asset allocation in 2011.

In an unregulated environment, the asset mix of pension portfolios is determined over a two-stage process: strategic asset allocation followed by tactical asset allocation. The foundations of strategic asset allocation lie in modern portfolio theory. Here the expected returns and estimated covariance of assets are combined to provide a collection of portfolios with different risk and return characteristics. A curve that maps the portfolios with the highest expected return for a given level of risk is known as the efficient frontier. The optimal strategic asset allocation is a function of the pension scheme's ability to take risk to achieve an expected return. This is a point, which is tangential to the efficient frontier. Tactical asset allocation adjusts the strategic mix to reflect a bias in favour of assets that are perceived to be undervalued against those that are considered overvalued.

The asset allocation data in Table 5 is a product of both strategic and tactical asset allocation. The data only gives a snapshot of asset allocation at three points in time over a ten-year history. Because the statistical inputs for strategic asset allocation are derived from long term averages, therefore unlikely to change much year on year, it is possible to conclude that risk aversion has increased in the Danish and Spanish pension portfolios. The case supporting this opinion is the material shift from real to debt assets between 2007 and 2010. This move exceeds the bounds of tactical asset allocation, inferring a shift in strategic asset mix along the left side of the efficient frontier.

Table 5. Asset Allocation

		Cash & Deposits	Bills & Bonds		Equities	Mutual Funds	Other investment[15]	Sum[16]
			Public	Private				
Denmark	2001	0.3%	10.3%	36.8%	39.7%	10.0%	0.0%	97.1%
	2007	0.3%	24.1%	26.7%	30.7%	11.6%	4.7%	98.2%
	2010	0.5%	49.0%	19.6%	15.2%	2.0%	12.5%	98.8%
Spain	2001	4.7%	37.3%	20.9%	19.6%	4.3%	13.0%	99.8%
	2007	5.6%	25.8%	33.8%	17.4%	8.5%	0.3%	91.4%
	2010	17.8%	26.2%	27.1%	11.2%	7.4%	0.1%	89.8%

Source: OECD database

In broad terms, the financial assets used to construct a portfolio come in two forms: real assets and debt assets. The financial performance of real assets, such as equities and real estate, are linked to the general economy and inflation. For example, share ownership in a food retailer provides participation in a revenue stream dependent on consumer income and choice. Consumer income is a function of wages and employment, both of which are directly related to economic growth and inflation. The same can be said for real estate, as rents are dependent on the same factors. Hence, in terms of fundamental valuation, the value of a company or a property will be linked with the expected nominal growth of the economy. The economy will influence the company's ability to generate earnings and the property's ability to earn rent, and consequently the level of dividends received by investors in business and property. In the words of the late and distinguished pensions' manager George Ross Goobey '*Common stocks are a convenient method of obtaining a diversified equity in the nation's future productive capacity*'.[17]

Debt assets differ significantly from real assets in that the investment returns are specified in advance. While the cash flows that support the servicing of debt assets are economically dependent, the payments are unrelated. The same food retailer might issue debt with a five-year maturity with a 5% coupon, priced at par. At the end of five years, a €100 investment will return €100 in principal, plus €25 (€5 x 5) in interest. The investor has a legal claim to both the return of principal and payment of interest. Further, this claim is superior to the owners of equity, and consequently the investment risk of debt assets is considerably less than equity assets.

[15] Including , among others, structured products
[16] Excluding loans, land and buildings, unallocated insurance contracts, hedge funds and private equity funds
[17] George Ross Goobey speech to ASPF 1956 p34
http://www.pensionsarchive.org.uk/27/text/27/files/Autum_Conference.pdf

In a rational world, there is a positive relationship between risk and return. Table 6 confirms this statement, by describing the long term historical returns and volatility (riskiness in terms of standard deviation) of equities, government bonds and bills in the three countries.

Table 6 indicates that Danish government bonds have delivered consistently high real returns. However, this is not quite correct, Table 6 is in fact describing mortgage bonds and not government bonds. The academic Claus Parum of the Copenhagen Business School explains the situation as follows:

> '*Traditionally, one would choose a government bond. However, the Danish government bond market has not been liquid during a large part of the twentieth century because Denmark did not have considerable government debt outstanding. On the other hand Denmark has had a large and liquid market for mortgage bonds for more than 100 years. Danish mortgage bonds have much more in common with government bonds than corporate bonds since Danish mortgage bonds (de facto) have no credit risk'.*[18]

Table 6. Asset Returns 1900 to 2011

		Equities	Bonds	Bills
Denmark	Real	4.9%	3.2%	2.2%
	Nominal	8.9%	7.2%	6.2%
	Standard Deviation	20.9%	11.7%	6.0%
France	Real	2.9%	-0.1%	-2.8%
	Nominal	10.2%	7.1%	4.1%
	Standard Deviation	23.5%	13.0%	9.5%
Spain	Real	3.4%	1.3%	0.3%
	Nominal	9.4%	7.2%	6.1%
	Standard Deviation	22.2%	11.7%	5.8%
TOW[19]	Real	4.6%	0.9%	0.9%
	Nominal	7.7%	3.9%	3.9%
	Standard Deviation	21.5%	15.3%	4.7%

Source: Elroy Dimson, Paul Marsh, and Mike Staunton - Credit Suisse Global Investment Returns Sourcebook 2012

This note on the Danish government bond data supports the earlier observation that there is a positive relationship between the level of government debt and inflation.

[18] Stocks, Bonds, Bills, and Inflation during the XX AC in Denmark, p7 Jul 2002 – Claus Parum
[19] The Old World (TOW), the average investment returns of 13 developed European countries

While Denmark has historically not issued much debt and has had low inflation, the opposite is true for France and Spain. Table 6 demonstrates that in the long run real assets[20] provide protection against inflation and reveals a mixed picture for debt assets. The debt sector is subdivided between public (government) and private (corporate) debt. The perceived risk on public debt is very low, though this image has been tarnished by the financial crisis. Consequently, government debt should offer lower levels of risk and return than equities, and the table confirms this statement. Worryingly the table highlights that French bonds and bills have historically given investors negative real returns, whereas Denmark succeeds Spain in having generated positive real returns.

In order to work towards our aim of estimating the real return on pension portfolios in Denmark, France and Spain, we need to formulate a potential long term real return for each country before charges and taxation. This is achieved by multiplying the long term real returns of the major asset classes – Table 6 – by the OECD portfolio asset allocation weightings – Table 5. However, there are a number of gaps in the data, which require the use of estimates and assumptions.

Firstly, OECD does not collect asset allocation data in France; hence, our first assumption is that the asset allocation for France mirrors that of Denmark. The basis supporting this assumption is that both countries are at similar levels of economic development and have similar levels of life insurance assets to GDP, see Table 1[21].

Second, the OECD asset allocation data includes weightings for equities, mutual funds and other investments. The returns on mutual funds and other investments are unlikely to be substitutes for bond instruments and are more likely to have the return characteristics of equities. Therefore, we will sum their weightings and allocate thereafter an equity return.

Thirdly, the equity returns in each of the three countries will be a mix of domestic and non-domestic assets. For the reasons discussed in our analysis of the equity markets of Denmark, France and Spain, we will estimate the equity exposure of non-domestic assets in Denmark as 75%, 40% for France and 60% for Spain. As a proxy for the non-Domestic equity market, we will use the real return of 'The Old World' data from the Credit Suisse Global Investment Returns 'Year Book' Table 6.

[20] Equities are used as a proxy for real assets

[21] In reality, the actual asset allocation of French long term and pension products is probably more conservative and risk averse than Denmark's. In particular, by far the biggest long term and pension savings product in France (life insurance contracts) were invested only 23% in equities and 72% in fixed income in 2011 (see Chart 5). But more work needs to be done to obtain a consolidated asset allocation for all French private pension savings.

Fourthly, private or corporate debt represents a meaningful allocation in the Danish and Spanish pension portfolios. Unfortunately, we have not been able to locate a long term historical record of the real returns generated by investment grade[22] European corporate bonds. However, we have developed an estimate of 2.49% by using the following methodology, with data from the United States market and adjusting it for the experience in Europe. Using data from the St. Louis Federal Reserve Economic Data (FRED), we have subtracted the difference in yields between the US 10year Treasury bond and the Moody's US Baa Corporate bond yield, from April 1953 to November 2012. The average credit spread[23] was 1.84%, or a real return of 3.84%. On referring to the Credit Suisse Year Book, we discovered that the returns in the US for all asset classes were much greater than that of the developed world. Indeed the authors make a point in stating that America's ascendance as a world power during the 20th Century was a material factor for these additional returns and that this 'success bias' should not be extrapolated into the future. With this thought in mind, we reviewed the European data, known as 'The Old World' in the Credit Suisse Year Book. The average difference between the rates of real return on the equity and government bond markets in the old world and the US is 1.35%. As the risk characteristics of corporate bonds lie between those of equities and sovereign bonds, we reduced the US corporate bond real return by 1.35% to estimate a long term real return on European Corporate bonds of 2.49%.

Lastly, as concerns the real returns on the asset allocation to cash and deposits in Table 5, we allocate these assets with the historical real returns experience on government bills.

The product of all these calculations produces our asset weighted expected pension portfolio real returns, for the three countries presented in Table 7.

[22] Bonds with credit ratings of BBB- or better from S&P and Fitch, or Baa3 or better from Moodys
[23] The difference in yields between bonds of the same maturity, but of different credit quality

Table 7. Weighted Real Returns

		1 Govt. Bills	2 Govt. Bonds	3 Private Bonds	4 Equity	5 = 1+2+3+4 Total
Demark	2001	0.01%	0.33%	0.92%	2.32%	3.58%
	2007	0.01%	0.77%	0.67%	2.20%	3.64%
	2010	0.01%	1.57%	0.49%	1.39%	3.46%
France	2001	-0.01%	-0.01%	0.92%	1.78%	2.68%
	2007	-0.01%	-0.02%	0.67%	1.68%	2.32%
	2010	-0.01%	-0.05%	0.49%	1.06%	1.49%
Spain	2001	0.00%	0.48%	0.52%	1.52%	2.53%
	2007	0.00%	0.34%	0.84%	1.08%	2.26%
	2010	0.00%	0.34%	0.68%	0.77%	1.79%

Source: EuroFinUse Research

While the assumptions used to generate Table 7 are open to challenge, the table illustrates a plausible model of expected real returns, before deductions of fees and taxes. It also shows that the change in asset mix since 2007 has reduced the expected outcome in each country. The turbulence of the financial crisis has certainly prompted a shift in the asset mix towards a more conservative – less risky – pension portfolio. However, we are concerned that preparations for the implementation of Solvency II may also be having a more permanent risk and consequently return effect on pension portfolios.

In each of the three countries, the bulk of pension products are provided by insurance companies or by pension institutions who share the same regulatory framework. The insurance sector's prudential regulation comes from the Solvency Directive. Therefore, the asset allocation of most pension portfolios falls under the scope of the Solvency Directive. Unfortunately, the nature of Solvency regulation constrains the capacity of insurance companies to hold equity assets. This is because equity prices are volatile and represent a significant valuation risk under mark-to-market accounting. This volatility attracts a material regulatory capital penalty, which discourages insurance companies from holding equity assets. Given the overwhelming evidence that equities have historically given greater real returns than bonds, we question whether the Solvency regulatory regime is the right regime for the pensions sector, whether it is insurance-regulated or not. Fundamentally, the liquidity needs of the pension sector and the non-pension insurance sector are very different.

The introduction of Solvency II is likely to further discourage equity ownership by insurance companies. Analysis of QIS 5[24] suggests that capital requirements will be higher under Solvency II, unless firms employ further risk reduction measures, such as reducing their equity exposures[25]. This discrimination against equity ownership will reduce the real return capability of private pensions. It may also have adverse secondary effects on the pricing and supply of risk capital in Europe. Our case rests on the observation that pension savers are in most cases legally prohibited from calling on their pension resources until retirement. Consequently short term market volatility is of little concern for a liability that is due several years or even decades in the future. Therefore, severe regulatory restrictions placed on equity assets will only reduce the opportunity for pension savers to earn real returns on their investments. Further, in periods of crisis these assets can offer exceptional returns to a pension vehicle with a long investment horizon, precisely because other investment vehicles with shorter investment horizons cannot bear the same risk.

We are concerned that the direction of regulation masks an underlying interest on the part of governments to force savers to buy government debt in order to reduce the cost of financing that debt – this is financial repression. Effectively enforced ownership of government debt means that pension savers will have to purchase overpriced government securities – sometimes with interest rates below the level of inflation – that will reduce their opportunity to earn a real return. The experience of the holders of French and Spanish government debt from the 1950s to the 1970s vividly shows how governments are willing to inflate away the real value of their debt at the expense of the saver's interest. This is unacceptable, particularly at a time when governments are calling on their citizens to take a greater responsibility for their own retirement. Hence, we vigorously oppose any regulatory measures that discriminate against equity ownership in the pensions sector.

Therefore, we urge policy makers to consider a regulatory framework for the pensions sector that is distinct from that of the non –pension insurance sector. A framework that is sympathetic to an investment strategy that maximises potential return while being cognisant of the pension savers' diminishing appetite for risk and future liquidity requirements.

Asset Performance 2000 to 2011

Notwithstanding our comments in favour of real assets above, the period from 2000 to 2011 has been exceptionally poor for continuous holders of equity assets.

[24] EIOPA, Quantitative Impact Study 5 for Insurance Companies
https://eiopa.europa.eu/consultations/qis/insurance/quantitative-impact-study-5/index.html
[25] Succeeding Under Solvency II – Guy Carpenter Briefing , March 2011

However, we believe that an informed and prudent portfolio manager should have recognised the intrinsic over valuation of equities at both the dot com and credit bubbles of 2001 and 2008 and adjusted his asset allocation accordingly.

Equity Markets

Table 8 provides a detailed analysis of the performance of the developed European, Danish, French and Spanish equity markets in nominal and real terms. The equity indices data is from FTSE and the inflation data (CPI) is from Eurostat. European Equity Market performance, as measured by the FTSE Developed Europe Index from 2000 to 2011 has been poor. The total real return (capital appreciation with reinvestment of dividends) has averaged -2.79% over the period. However, the return outcome to a saver who makes regular contributions to a scheme will be very different, due to the timing of contributions and the influence of charges and taxes. We discuss the impact of charges further by modelling three scenarios in the investment charges section.

The first decade of the 21st Century has probably been the most eventful in the history of finance. Shortly after the commencement of the millennium, the bursting of the bubble in technology stocks, the collapse of leading companies such as Enron and WorldCom, and the leading auditor Arthur Andersen impacted on the financial markets. These very public failures caused investors to lose trust in the equity markets, big business and the audit profession. The years 2003 to 2007 saw a period of recovery before the current financial crisis and widespread economic recession.

There is an on-going debate concerning price efficiency in markets. The financial trauma of the last decade has shown that investors will price the same equities at widely different levels depending on the collective perception of risk on any given day. The pricing may have little consideration for the underlying future fundamentals of the business and more to do with the collective mood of the market. However, this observation relates to the topic of short termism, which is outside the scope of this report.

As Table 8 illustrates, of the three countries in our study, Denmark delivered the best returns with a significant lead over Spain and France. The annualised real returns respectively were 3.79%, -0.21% and -3.26%; these returns are well below historical means.

The Danish market is the smallest of the three markets, accounting for 0.5% of the FTSE Developed World index (DWI), 14 stocks make up the FTSE Danish index.

There is a significant weighting towards the pharmaceutical and biotechnology sector (56%), industrial transport (16%) and banks (10%). As at the end of 2011, one stock, Novo Nordisk accounted for 47.7% of the country index. This compares with just under a 15% weighting at the beginning of 2001. Given the limited investment choice and highly concentrated nature of the market, it is highly likely that Danish pension funds have the majority of their equity investments outside Denmark.

The French market is the largest of the three, accounting for 4.12% of the DWI. The FTSE index is composed of 85 stocks. The index is fairly well balanced across the various industrial and service sectors of the economy, with biases towards the personal goods, oil and gas producers, utilities and construction. The French market offers a diversified range and a good number of large equity investments. Consequently, a diversified equity portfolio for a French pension fund could have most of its exposure in the domestic market.

The Spanish market accounts for 1.45% of the DWI; its FTSE country index composes of 29 stocks. There is a bias in the index to fixed line telecom (22%), banks (11%), electricity (9%) and construction (5%). While the Spanish market is considerably larger than the Danish, the range and number of equity investments is small in comparison to France. Hence, we would expect that a diversified equity portfolio in a Spanish pension fund to contain a significant portion of non-domestic investments

Bond Markets

Table 9 provides a detailed analysis of the performance of the European Bond markets from the end 2000 to 2011. Table 9 provides returns for a range of debt instruments: Eurozone Government Bonds, Euro Corporate Bonds and the returns from Government Bonds in Denmark, France and Spain. The bond indices data is from FTSE, the inflation data (CPI) is from Eurostat.

The returns from the bond markets go through three distinctive phases. The period from 2000 to 2005, sees a market of rising prices and falling yields. This coincides with asset substitution from the declining equity markets during the 2000 and 2001 European recession, followed by a period characterised by low inflation and low expectations for inflation. The situation changes in 2005 through to 2007, inflation expectations begin to rise as the economic expansion draws down on spare capacity. Consequently, bond prices decline and yields rise. This situation reverses sharply from 2008 to date, the third phase. As the financial crisis spreads through the global economy, investors markedly reduce their

exposure to financial risk by selling equities and buying government bonds. This third phase sees a dramatic rise in the prices of government bonds, in countries, which are perceived to be safe havens from the financial storm. In addition, central bankers have massively intervened to keep Government debt yields artificially low (and therefore prices high). For example, the € one trillion of "LTRO" loans granted by the ECB to European banks in 2011-2012 had only to be collateralised by EU Government bonds.

The return experience within Denmark, France and Spain varies according to perceived credit risk. Denmark leads the three countries with an eleven year annualised real return of 3.62%, followed by France, 3.25% and lastly by Spain, 1.61%. The differing cost of government debt in the three countries highlights their respective sovereign credit risks. As of the end of the fourth quarter of 2011, the yield on Danish Government bonds averaged 0.96%, which contrasts with Spain at 4.86% and France at 3.02%. While Denmark and France have very similar annualised rates of real return, the attribution of return is predominantly capital based in Denmark and predominantly yield based in France. With the exception of 2000 and 2001, the yields to maturity on French Government Debt exceed those of Denmark's. From 2009 onwards, there is a clear acceleration in this trend, where yields on Danish Debt fall by 2.27% but only by 0.46% in France. Spain's relatively poor performance is attributable to its known fiscal problems and troubled banking sector.

The Euro corporate bond sector (investment grade bonds) has achieved an eleven year annualised real rate of return of 2.79% and closed 2011 with a yield to maturity of 4.08%. The lower cost of finance for investment grade Euro corporates with respect to Spain, suggests that the market believes them to be a better credit risk than Spanish sovereign bonds.

The recent performance of government and corporate bonds has shielded the returns of many private pension portfolios. The yields on these securities are at historical lows, which is a material consideration for future returns, at some stage, yields may revert to historical norms. This process of mean reversion would result in persistent capital losses for pension portfolios, if they remain heavily exposed to these debt instruments.

Table 8. Historical Equity Market Returns

	2000 Q4	2001 Q4	2002 Q4	2003 Q4	2004 Q4	2005 Q4	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	Ann/Avg
Developed Europe													
Total Return	242.86	205.30	143.98	167.16	188.19	238.65	288.01	298.41	169.71	225.82	252.12	231.47	-0.44%
%Δ		-16.80%	-35.48%	14.93%	11.85%	23.75%	18.80%	3.55%	-56.44%	28.56%	11.02%	-8.55%	
Yield	1.84%	2.36%	3.36%	2.64%	2.71%	2.65%	2.69%	2.98%	5.55%	3.25%	3.16%	4.11%	3.11%
HICP	121.6	124.9	127.8	130.5	133.7	136.8	139.8	144.2	147.3	149.6	153.6	158.2	
%Δ		2.68%	2.30%	2.09%	2.42%	2.29%	2.17%	3.10%	2.13%	1.55%	2.64%	2.95%	2.39%
Total Return Adj for CPI	100.00	82.30	56.41	64.14	70.48	87.35	103.15	103.62	57.69	75.58	82.19	73.26	-2.79%
Real %Δ		-19.48%	-37.78%	12.84%	9.43%	21.46%	16.63%	0.45%	-58.56%	27.02%	8.38%	-11.50%	
Real Yield		-0.32%	1.06%	0.55%	0.29%	0.36%	0.52%	-0.12%	3.42%	1.70%	0.52%	1.16%	0.83%
Denmark													
Total Return	827.34	743.96	553.99	688.53	828.84	1,166.42	1,380.69	1,582.83	868.07	1,233.48	1,767.00	1,549.55	5.87%
%Δ		-10.62%	-29.48%	21.74%	18.55%	34.17%	16.86%	13.66%	-60.07%	35.13%	35.94%	-13.13%	
Yield	1.01%	1.67%	2.41%	2.18%	2.22%	1.87%	1.80%	1.42%	2.99%	1.13%	0.88%	1.42%	1.75%
HICP	109.1	111.4	114.3	115.7	116.8	119.4	121.4	124.4	127.4	128.9	132.5	135.7	
%Δ		2.09%	2.57%	1.22%	0.95%	2.20%	1.66%	2.44%	2.38%	1.17%	2.75%	2.39%	1.98%
Total Return Adj for CPI	100.00	88.07	63.91	78.47	93.58	128.82	149.97	167.79	89.85	126.19	175.86	150.58	3.79%
Real %Δ		-12.71%	-32.05%	20.52%	17.60%	31.97%	15.20%	11.22%	-62.45%	33.96%	33.19%	-15.52%	
Real Yield		-0.42%	-0.16%	0.96%	1.27%	-0.33%	0.14%	-1.02%	0.61%	-0.04%	-1.87%	-0.97%	-0.17%
France													
Total Return	662.00	543.94	379.23	448.94	500.03	639.70	783.34	814.68	486.15	620.61	647.81	568.02	-1.38%
%Δ		-19.64%	-36.07%	16.87%	10.78%	24.63%	20.26%	3.92%	-51.63%	24.42%	4.29%	-13.14%	
Yield	1.69%	2.28%	3.72%	2.16%	2.38%	2.20%	2.41%	2.84%	5.50%	3.53%	3.56%	4.68%	3.08%
HICP	105.2	106.7	109.0	111.6	114.2	116.2	118.2	121.5	122.9	124.2	126.7	130.0	
%Δ		1.42%	2.13%	2.36%	2.30%	1.74%	1.71%	2.75%	1.15%	1.05%	1.99%	2.57%	1.92%
Total Return Adj for CPI	100.00	81.01	55.29	63.93	69.58	87.48	105.31	106.55	62.86	79.41	81.25	69.43	-3.26%
Real %Δ		-21.06%	-38.20%	14.52%	8.47%	22.90%	18.55%	1.17%	-52.77%	23.37%	2.30%	-15.72%	
Real Yield		0.86%	1.59%	-0.20%	0.08%	0.46%	0.70%	0.09%	4.35%	2.48%	1.57%	2.11%	1.28%
Spain													
Total Return	712.20	671.29	482.07	636.20	762.80	924.32	1,245.64	1,380.63	872.61	1,188.46	1,015.81	941.83	2.57%
%Δ		-5.92%	-33.11%	27.74%	18.15%	19.21%	29.83%	10.29%	-45.88%	30.89%	-15.70%	-7.56%	
Yield	2.01%	2.09%	3.01%	2.33%	2.89%	2.93%	3.05%	3.05%	6.31%	4.54%	6.10%	7.57%	3.99%
HICP	111.6	114.4	119.0	122.2	126.2	130.9	134.5	140.2	142.3	143.5	147.6	151.1	
%Δ		2.48%	3.94%	2.65%	3.22%	3.66%	2.71%	4.15%	1.49%	0.84%	2.82%	2.34%	2.75%
Total Return Adj for CPI	100.00	91.95	63.48	81.58	94.72	110.65	145.12	154.31	96.09	129.78	107.84	97.67	-0.21%
Real %Δ		-8.39%	-37.05%	25.09%	14.93%	15.55%	27.12%	6.14%	-47.37%	30.05%	-18.51%	-9.91%	
Real Yield		-0.39%	-0.93%	-0.32%	-0.33%	-0.73%	0.34%	-1.10%	4.82%	3.70%	3.28%	5.23%	1.23%

Source: FTSE, Eurostat and EuroFinuse Research

Source: FTSE, Eurostat and EuroFinuse Research

Table 9. Historical Bond Market Returns

	2000 Q4	2001 Q4	2002 Q4	2003 Q4	2004 Q4	2005 Q4	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	Ann/Avg
Eurozone Government													
Tot Rtn	107.21	113.39	124.48	129.42	139.29	146.82	146.18	148.92	162.62	169.73	172.48	176.10	4.62%
%Δ		5.60%	9.33%	3.89%	7.35%	5.27%	-0.44%	1.86%	8.80%	4.28%	1.61%	2.08%	
Yield to Maturity	5.04%	4.93%	4.11%	4.15%	3.63%	3.37%	4.08%	4.49%	3.72%	3.68%	3.90%	3.77%	4.07%
HICP	121.6	124.9	127.8	130.5	133.7	136.8	139.8	144.2	147.3	149.6	153.6	158.2	
%Δ		2.68%	2.30%	2.09%	2.42%	2.29%	2.17%	3.10%	2.13%	1.55%	2.64%	2.95%	2.39%
Tot Rtn Adj for CPI	100.00	102.97	110.47	112.48	118.16	121.73	118.60	117.13	125.22	128.68	127.36	126.26	2.14%
Real %Δ		2.93%	7.03%	1.80%	4.93%	2.97%	-2.60%	-1.24%	6.67%	2.73%	-1.03%	-0.87%	
Real Yield		2.25%	1.81%	2.06%	1.21%	1.07%	1.91%	1.39%	1.60%	2.13%	1.26%	0.82%	1.59%
Euro Corporate													
Tot Rtn	103.68	110.95	120.33	128.54	138.27	143.71	144.18	146.15	153.55	168.68	178.83	182.59	5.28%
%Δ		6.78%	8.11%	6.60%	7.30%	3.86%	0.33%	1.36%	4.94%	9.40%	5.84%	2.08%	
Yield to Maturity	5.68%	5.45%	4.66%	4.31%	3.78%	3.65%	4.47%	5.22%	5.21%	4.04%	3.63%	4.08%	4.52%
HICP	121.6	124.9	127.8	130.5	133.7	136.8	139.8	144.2	147.3	149.6	153.6	158.2	
%Δ		2.68%	2.30%	2.09%	2.42%	2.29%	2.17%	3.10%	2.13%	1.55%	2.64%	2.95%	2.39%
Tot Rtn Adj for CPI	100.00	104.19	110.42	115.52	121.29	123.20	120.96	118.87	122.26	132.24	136.55	135.37	2.79%
Real %Δ		4.10%	5.81%	4.51%	4.88%	1.56%	-1.84%	-1.74%	2.81%	7.85%	3.20%	-0.87%	
Real Yield		2.77%	2.37%	2.22%	1.36%	1.36%	2.30%	2.13%	3.09%	2.49%	0.99%	1.13%	2.02%
Denmark													
Tot Rtn	107.23	113.09	124.23	129.66	139.02	146.41	145.96	148.93	163.65	169.85	180.52	197.13	5.69%
%Δ		5.32%	9.39%	4.28%	6.97%	5.18%	-0.30%	2.01%	9.42%	3.72%	6.09%	8.80%	
Yield to Maturity	5.09%	4.96%	4.09%	4.03%	3.49%	3.17%	3.94%	4.37%	3.24%	3.23%	2.47%	0.96%	3.59%
HICP	109.1	111.4	114.3	115.7	116.8	119.4	121.4	124.4	127.4	128.9	132.5	135.7	
%Δ		2.09%	2.57%	1.22%	0.95%	2.20%	1.66%	2.44%	2.38%	1.17%	2.75%	2.39%	1.98%
Tot Rtn Adj for CPI	100.00	103.29	110.58	114.02	121.10	124.76	122.33	121.81	130.69	134.07	138.62	147.80	3.62%
Real %Δ		3.23%	6.82%	3.06%	6.02%	2.98%	-1.97%	-0.43%	7.04%	2.55%	3.33%	6.42%	
Real Yield		2.87%	1.52%	2.81%	2.54%	0.97%	2.28%	1.92%	0.86%	2.06%	-0.29%	-1.42%	1.47%
France													
Tot Rtn	113.60	119.75	131.21	136.50	146.72	154.67	153.99	156.69	175.13	180.43	190.45	199.58	5.26%
%Δ		5.27%	9.14%	3.95%	7.21%	5.28%	-0.44%	1.74%	11.12%	2.98%	5.40%	4.68%	
Yield to Maturity	4.92%	4.85%	4.04%	4.07%	3.56%	3.30%	4.01%	4.42%	3.34%	3.48%	3.22%	3.02%	3.85%
HICP	105.2	106.7	109.0	111.6	114.2	116.2	118.2	121.5	122.9	124.2	126.7	130.0	
%Δ		1.42%	2.13%	2.36%	2.30%	1.74%	1.71%	2.75%	1.15%	1.05%	1.99%	2.57%	1.92%
Tot Rtn Adj for CPI	100.00	103.93	111.48	113.27	118.97	123.27	120.65	119.43	131.96	134.53	139.20	142.17	3.25%
Real %Δ		3.86%	7.01%	1.60%	4.91%	3.54%	-2.15%	-1.02%	9.98%	1.93%	3.41%	2.11%	
Real Yield		3.43%	1.91%	1.71%	1.26%	1.56%	2.30%	1.67%	2.19%	2.42%	1.23%	0.45%	1.83%
Spain													
Tot Rtn	112.79	119.66	132.01	137.46	148.00	156.28	155.31	158.36	169.02	175.98	169.17	181.94	4.44%
%Δ		5.92%	9.82%	4.04%	7.39%	5.44%	-0.62%	1.95%	6.52%	4.03%	-3.95%	7.28%	
Yield to Maturity	5.09%	4.95%	4.07%	4.11%	3.56%	3.28%	4.02%	4.45%	3.74%	3.78%	5.18%	4.86%	4.26%
HICP	111.6	114.4	119.0	122.2	126.2	130.9	134.5	140.2	142.3	143.5	147.6	151.1	
%Δ		2.48%	3.94%	2.65%	3.22%	3.66%	2.71%	4.15%	1.49%	0.84%	2.82%	2.34%	2.75%
Tot Rtn Adj for CPI	100.00	103.50	109.76	111.30	116.04	118.13	114.25	111.76	117.52	121.34	113.40	119.14	1.61%
Real %Δ		3.44%	5.88%	1.39%	4.17%	1.78%	-3.34%	-2.20%	5.03%	3.19%	-6.76%	4.93%	
Real Yield		2.47%	0.13%	1.46%	0.34%	-0.37%	1.30%	0.30%	2.26%	2.94%	2.36%	2.51%	1.43%

Portfolio Manager/Advisor Competence

The process by which a saver's funds are channelled into an investment plan is commonly the product of a two-stage process. An adviser who assesses the saver's needs and designs an investment plan to satisfy those needs typically performs the first stage. The investment plan will determine the level of contributions and where these contributions are invested – usually into collective vehicles or insurance products. The second stage is the management of the investment vehicles so that they perform as described.

The competence of the asset managers should be assured under the current regulatory regime. We have confidence in this regime, provided the national regulator has adequate resources to enforce, monitor, police and prosecute its area of responsibilities. The Markets in Financial Instruments Directive 2004/39/EC (MiFID) and its transposed national law requires that investment firms have fit and proper staff to professionally execute their tasks. Compliance resources must also be in place to overview the whole investment process. Investment firms make significant use of indices, produced by third parties, as benchmarks on which to measure performance and to control risk through minimising tracking error. Minimising tracking error is the stated objective of index funds, a risk management metric for 'active' institutional pension funds and an internal yardstick for many retail funds.

While investment risk management is generally very good, active fund management results are frequently underwhelming. According to Table 10, for the 10 years' returns (between December 1991 to December 2011), only in one of the 12 fund categories did the rolling returns outperform their targeted benchmark by more than 50% of the occasions. In general, most funds underperform their benchmarks on a regular basis and some funds (Euro bond funds, USD bond funds) usually underperformed their benchmarks.

Table 10. Percentage of funds beating their benchmark by category

	1 YEAR PERIOD	3 YEAR PERIODS	10 YEARS PERIODS
ALL EQUTY FUNDS	42.8%	41.4%	39.7%
ALL BOND FUNDS	31.6%	24.7%	17.4%
EQUITY ASIA PAC EX-JAPAN	48.4%	48.9%	54.4%
EQUITY EMG MKTS GLOBAL	38.5%	31.1%	24.6%
EQUITY EUROPE	37.7%	35.9%	27.0%
EQUITY GLOBAL	42.2%	38.4%	32.5%
EQUITY NORTH AMERICA	36.2%	30.3%	20.8%
EQUITY UK	46.4%	47.6%	47.4%
BOND EMG MKTS GLOBAL	45.8%	45.4%	------
BOND EUR	25.8%	18.5%	6.3%
BOND GLOBAL	34.4%	30.4%	23.1%
BOND USD	25.9%	16.8%	6.4%

Source: Lipper, '*Beating the Benchmark'*, March 2012, page 6, figure 3

Certain sophisticated investment vehicles that may make use of private equity, frontier investments, alternative investments and derivative instruments, do not use indices as a risk management tool. The management of these assets requires specialist knowledge and may carry additional risks – such as counterparty risk. We note these features and the fact that they are currently under regulatory review. Concerning insurance products, the sector is covered under the Solvency regulation. The insurance regulatory regime requires regulatory capital, it also obliges that insurance activities are conducted by fit and qualified staff , who in turn are surveyed by a compliance team.

Our main concerns lie with the advisers in the first stage of the process. CFA Institute conducted a member survey in January 2009 on retail investment products and discovered that over 72%, of those who expressed an opinion, believed that the sale of these products was driven by their fees rather than suitability[26]. This is an area of concern and subject to regulatory review. We are particularly troubled by the differences in regulatory standards between MiFID (which applies only to securities and investment funds) and the Insurance Mediation Directive (IMD) – and potentially the IORP[27] Directive - concerning the

[26] Q6 http://www.cfainstitute.org/Survey/retail_investment_products_poll.pdf
[27] Directive 2003/41/EC on Institutions for occupational retirement provision

suitability of advice given to savers/investors, the clear and not misleading information requirements, and the prevention of conflicts of interests (inducements) at the distribution level. In MiFID the standards are robust, whereas in the IMD are they are almost absent.

The current state of regulation means that private pension products are sold under different regulatory regimes depending on whether they are offered by an insurance company, a corporate plan sponsor, or a bank/investment management firm. We believe this is not in the best interests of pension savers. Therefore, we call on policy makers to create one unified regime for the marketing and sale of private pension products, as was considered by the EU Commission as early as 2007[28]. The recent Kay review[29] sets out principles for regulation of the equity markets. We believe these principles are equally appropriate for pension savers. They are as follows:

1. Regulation should adopt the perspective and interests of market users, not market intermediaries. Market users are companies and savers.
2. Regulation should emphasise issues of structure and incentives rather than control of behaviour.
3. Regulation should not be based on the assumption that markets will achieve efficient outcomes if supplied with sufficient information, but whenever possible address policy objectives directly.
4. Regulation should be more consumer focussed, emphasise and promote simple products and trusted providers, stressing product suitability and supplier integrity.
5. Government and regulatory policy should aim to ensure that there are no unnecessary disincentives to using equity markets, either for companies or for their investors.
6. Regulatory requirements based on inappropriate metrics discouraging equity investment should be reviewed.

Of the six points, points 1 - 4 are directly relevant to the marketing and sale of pension products to savers. Points 5 and 6 are directly relevant to our call for a distinct regulatory regime for insurance and pension products.

Investment Charges

Investment charges can accumulate over years a material proportion of forgone savings capital. Over an eleven-year period, using Key Investor Information

[28] EC Green Paper on retail financial services; see quote on first page of the report
[29] The Kay review of UK Equity Markets and long term decision making, July 2012

Document (KIID) published fee scales, we found that the fees and commissions on a typical UCITS product, used as a regular savings vehicle, could consume between 8.4% and 16.2% of the saver's original investment[30].

The underlying assumption that frames consumer protection regulation, on the sale of financial products, is that investors have very limited financial literacy. Analysis conducted by the EC during the development of the KIID for UCITS IV[31], supports this assumption. Consequently, financial intermediaries must comply with customer due-diligence and risk assessment requirements. The 1980s have seen the emergence and growth of retail investment funds in Europe, leading to a change in the structure of retail investment portfolios. These portfolios, were formerly a collection of individual securities, are now mostly a suite of collective investment vehicles or packaged investment products. It is debatable whether this change in structure has increased the investor's overall risk-adjusted return[32], as these collective vehicles carry significant charges that reduce the investor's potential return. During this transition, the commissions on security transactions steadily fell to a fraction of its pre 1980s levels. Hence, it is plausible to consider that the changing complexion of retail portfolios was a reaction by integrated investment firms to falling commission revenues, in order to protect their overall revenues.

Collecting pan-European information on pension charges has proved to be very challenging. The providers do not generally disclose this information. At EU level, only investors in UCITS funds enjoy mandatory and harmonised disclosure of charges (UCITS IV Directive). The current EC proposed Regulation on PRIPs aims at spreading harmonised and clear investment product disclosure beyond UCITS funds, but does not thus far include private occupational pension funds in its scope, and is also not yet finalised.

In the UK, the National Association of Pension Funds with the Association of British Insurers, the Investment Management Association and the Society of Pension Consultants have just endorsed a new Code[33] on the disclosure of pension charges. The Code becomes fully effective in April 2013. Bill Galvin, the

[30] See detailed analysis infra in the "invesmtnet charges" section

[31] Executive Summary 'UCITS Disclosure Testing Research Report, June 2009 http://ec.europa.eu/internal_market/investment/docs/other_docs/research_report_en.pdf

[32] As mentioned above, according to Lipper, only a minority of investment funds outperform their benchmark index over ten years, see 'Beating the Benchmark', March 2012, page 6, figure 3, reproduced here as Table 10

[33] http://www.napf.co.uk/PolicyandResearch/~/media/Policy/Documents/0273_Pensions_charges_made_clear_code_of_Conduct.ashx, November 2012

Chief Executive of UK Pensions Regulator, drily noted that the Code – comprising 20 pages – came nearly 18 months after the regulator had called on the industry to improve transparency[34].

To work around the non-disclosure of fees in the pensions sector, we have had to use a variety of sources, both indirect and secondary. Perhaps the best proxy for understanding and getting a measure of at least some of the charges on unit-linked pension products is to examine related products covered under the Undertakings for Collective Investment in Transferable Securities Directive (UCITS IV)[35]. The Directive brought into existence the Key Investor Information Document (KIID), which has dramatically improved transparency for these collective investment vehicles. If an investor purchases a simple UCITS product, the charges take four forms: entry costs, exit costs, on-going charges (including portfolio transaction costs) and performance fees. The level of these charges and their presence varies between funds. For example, the M&G European Fund[36] has a 4% entry charge and 1.71% on-going annual management charge, there are no exit charges or performance fees. This compares with their European Index Tracker Fund[37] that has no entry and exit charges and an on-going charge of 0.75%.

Investment charges have a considerable effect on the investment returns. The case study published by EuroFinUse in 2010[38], comparing the return of two index equity index funds replicating the same index and 'passively' managed by the same asset manager, illustrates this point. The only difference between the two funds is that Fund A is an Exchange Traded Fund (ETF) not marketed to retail clients, and Fund B is a retail index fund marketed only to retail clients. Fund B has an expense ratio of about twelve times the expense ratio of Fund A. After the passage of six years, these extra expenses have meant that Fund A has earned a return three times higher than Fund B.

[34] "UK industry code on charges a 'useful starting point', Webb says", Investment & Pensions Europe, 28th November 2012

[35] A unit-linked insurance contract will typically bear all the charges found in UCITS, plus the insurance contract's annual charge

[36] M&G KIID http://www.mandg.co.uk/Consumer/Images/european-fund_gbp_a_inc_uk_kiid_eng_uk_gb0030928229_tcm1481-62050.pdf

[37] M&G KIID http://www.mandg.co.uk/Consumer/Images/european-index-tracker-fund_gbp_a_inc_uk_kiid_eng_uk_gb0030929185_tcm1481-62059.pdf

[38] http://www.EuroFinUseEuroFinUse.org/fileadmin/user_upload/documents/Position_Papers/Corporate_Governance/EuroInvestors_reply_to_the_Green_paper_towards_adequate_sustainable_and_safe_European_pension_systems1289909049.pdf (pages 8 to 10)

As a further illustration, we have constructed three hypothetical scenarios of what an investor might receive from a regular savings plan into the European equity markets, commencing from the end of 2000 and realising the investment at the end of 2011. The savings plan evolves as follows; from the end of December 2000 to the end of December 2010, the saver makes an annual contribution of €1,000. The sum of these eleven contributions is €11,000. We will use the total investment returns of the FTSE Developed Europe Index as the proxy portfolio. The three scenarios are as follows: zero costs – Scenario A, a 0.81% on-going charge without entry or exit costs – Scenario B and lastly a 4% entry charge and 1.71 on-going fee – Scenario C. The on-going fees are calculated as a simple average to the values of the funds at the beginning and end of each period. Table 11 presents the value of the funds in selected years and the terminal year of 2011.

Table 11 illustrates that under scenario A, no fees, the investor would have made a gain of €1,159 on the €11,000 investment. Scenario B shows a small gain of €232, while Scenario C shows a loss of €1,122. The total fees earned over the eleven years are €920 and €1,778 in scenarios B & C, which equals 8.4% and 16.2% of the total investment. There is no alignment of interests between the investor and the asset manager. When the saver stops contributing , possibly due to change in personal circumstances, the full force of fees at 0.81% and 1.71%, from the UCITS described above, accumulate each year. Compounded over 10 years, these fees will subtract another 8% and 18% respectively from the original investment. Hence, under these circumstances, after 20 years these fees will have consumed 16.4% and 34.2% of the saver's investment.

Table 11. Value of funds, scenarios under different fee structures

	2000	2001	2003	2005	2007	2009	20011
Scenario A	€1,000	€1,845	€3,664	€7,498	€11,412	€10,967	€12,159
Scenario B	€1,000	€1,831	€3,593	€7,249	€10,861	€10,326	€11,232
Scenario C	€960	€1,743	€3,375	€6,703	€9,869	€9,276	€9,878

Source: EuroFinUse Research

The fees reflect those of two simple UCITS products, more complex products levy higher fees for questionable gains in investment returns. A recent Financial Times article titled '*Watch the costs at funds of funds*', 9th November 2012, posed the question, '*Is your financial adviser recommending that you invest in a fund of funds*?' Replying, '*If so think twice and ask why, as many experts think the extra costs entailed in funds of funds are not justified by their performance*'.

The article stated that, '*Investors are typically charged 2.5 per cent each year, compared to about 1.5 per cent for a single manager fund*'.

Research from the Dutch Central Bank estimated the charges of occupational pension funds and life insurance products. As table 12 below shows, the total cost of life products exceeds 2% of assets, whereas for occupational schemes the charge is 0.15% of assets.

Table 12. Pension Fund Charges

	Life Insurers		**Pension funds**	
	% of contribution	% of assets	% of contribution	% of assets
Admin. Costs	12.9%	1.27%	4.4%	
Profit	11.0%	1.08%	-	-
Total	**23.9%**	**2.35%**	**4.4%**	**0.15%**

Source: Steenbeek O.W., van der Lecq S.G., '*The Costs and Benefits of Collective Pensions Systems*'

We found the process of calculating a consolidated investment charge for each of the three countries very difficult. Firstly, there is no regulatory requirement for this information. Secondly, the charges vary from one product category to the next. Thirdly, in the case of packaged products, there may be disclosure of the top level charge, but this is only partial, as the provider remains silent on the charges levied on the underlying products. In Denmark, pension providers do publish their fees, however they are difficult to compare due to the variety of products on offer. An analysis of a small sample of products indicates that charges range between 0.6% and 1.4%, or an average of 1.0%. There is no published consolidated or average data in France. Our summary analysis indicates that investment charges are in the order of 2%. In Spain, management fees and depository costs have regulatory caps of 2% and 0.5% respectively[39]. The regulator[40] consequently publishes aggregate data on these fees. For the years 2007 to 2011, the charges levied on individual pension schemes have ranged between 1.41% to 1.65% for management fees, and 0.20% and 0.32% for depository fees. Taking the average sum of management fees and depository fees together, we arrive at an average charge of 1.8%. However, in Spain, commissions charged by financial intermediaries fall outside the scope of the

[39] Royal Decree 304/2004 of pension plans and funds

[40] General Directorate for Insurance and Pension Funds (Direccion General de Seguros y Fondos de Pensiones), Ministry of Economy. Fees have to be reported by pension funds and are published on-line at http://www.dgsfp.meh.es/comisiones/comisiones.aspx

regulation and therefore outside our calculation. Our calculations for Denmark and France are also before advisor/broker commissions.

While it is certainly appropriate that portfolio managers and their agents are compensated for their services, the implied level of fees experienced by the retail sector, particularly in France and Spain, makes earning a positive return extremely challenging. Fees reduce the investor's overall return, but it is unclear whether these collective schemes deliver proportionate risk-adjusted benefits for their costs.

Denmark appears to offer the lowest investment charges and that may be due to the influence of the 'ATP' (pension) scheme on the rest of the Danish market. The ATP is an autonomous government entity, working in collaboration with social partners. It advertises itself as the low cost provider of supplementary pensions in Denmark. It is a model of transparency and offers a public/private competitive solution for individual savers. We believe that the establishment of ATP type structures in other Member States would be extremely beneficial to savers.

Another alternative to reducing the cost of investment is for the saver to become a 'do-it-for-yourself' investor. The growth of online broking has brought this option to anyone who has access to the internet and a bank account. Through research on the UK, we found one online broker offering flat commissions of £12.50 per bargain and no account management fee providing there is at least £7,500 of funds in the account[41]. Such arrangements offer breath-taking savings when compared to intermediary charges. But then of course financial literacy becomes even more an issue.

As mentioned fee disclosure in the pensions sector is patchy, partial and often opaque. Our analysis suggests that average investment charges for Denmark, France and Spain are in the region of 1.0%, 2.0% and 1.8% respectively. Our estimates are approximate and note that charges vary considerably from product to product. Further, these estimates do not include commissions on the sale of these products, which where applicable, could range between 2% to 4% of the original investment. Table 13 explores the impact of investment charges on our forecasted real long term returns. This is achieved by subtracting our estimated investment charges for each of the three countries from our forecast modelled annual returns[42], derived from table 7 (based on long term trends).

[41] TD Direct Investing http://www.tddirectinvesting.co.uk/choose-an-account/~/media/uk/pdf/rates-charges-current.pdf

[42] Using 2010 OECD asset allocation data

Table 13. Forecasted annual real returns after investment charges

	Modelled nominal return	Investment charges[43]	Net nominal return	Net real return[44]
Denmark	3.46% + 4.0% = 7.46%	-1.0%	6.46%	2.46%
France	1.49% + 7.3% = 8.79%	-2.0%	6.79%	-0.51%
Spain	1.79% + 6.0% = 7.79%	-1.8%	6.00%	0.00%

Source: EuroFinUse Research

Of the three countries in our study, only the Danish saver is likely to receive a real return on their investments (2.46%). The Spanish saver sees no real return and the French saver is likely to see a negative real return of just over 0.5% per annum.

Over the long term there is a clear cost benefit for all Member States to increase financial literacy. We would suggest that the topic is integrated into the under 16 school maths syllabus. A learning module designed around understanding the KIID would also be very beneficial. Such a module could integrate the use and understanding of percentages and compound interest into the practical experience of commissions, management charges, historical returns and risk. The British Broadcasting Company's (BBC) online supplementary education service 'Bitesize', which works in parallel with formal school curriculum is tentatively using these concepts in its GCSE maths syllabus[45].

The KIID of UCITS IV Directive has materially improved disclosure in the collective investment sector. Early work is currently in progress to hopefully bring KIID pre-contractual disclosure to the long term and retirement savings sectors. We believe that policy makers ought to prioritise this work programme as the single most valuable contribution to improve consumer welfare in the financial services sector.

A combination of improved disclosure and greater financial literacy will allow investors to make better informed choices. It could also unleash competitive forces between financial services providers that exert downward pressure on fees. Bill Galvin's comment, mentioned earlier in this section, illustrates the frustration expressed by regulators at the reluctant progress of the finance industry to bring transparency to its customers. The pension savings business is probably the only business that does not routinely put a price tag on its products.

[43] See National Studies, data collected by EuroFinuse
[44] Excluding impact of taxation and other costs to be borne by the end-investor
[45] http://www.bbc.co.uk/schools/gcsebitesize/

Taxation

The impact of taxes on investments is similar to that of investment charges; they reduce the potential return that an investor may earn. They may also create distortions in investing behaviour that lead to suboptimal portfolios. Investment taxes come in four forms: VAT on portfolio management services, stamp duties, taxation on upward changes in portfolio value (such as interest payments, dividends and capital gains – real and notional) and sometimes taxation on the value of the investments.

The impact of taxation on returns is also largely hidden to pension savers across the EU. There is currently no EU level requirement to disclose historical after-tax returns. By contrast, this disclosure has been mandatory for decades for all US domiciled investment funds. EuroFinUse asks that historical returns after tax be disclosed to all pension savers.

We believe that there should be tax relief on retirement products during their contribution and accumulation phases. Saving is deferred consumption and should be exempt from taxation until the accumulated savings are drawn down for consumption. The experience in the three countries is as follows:

Denmark – With the exception of lump sum contributions, individual pension contributions are tax deductible. Where individuals make lump sum contributions, the drawdown is free from tax. In either case, pension schemes are subject to a return on assets tax of 15.3%.

France – The taxation regime is extremely complex relative to the other two countries, see our country study for detailed analysis. The major obstacle to achieving a real return, after charges on pension savings, is the tax rate, currently at 23%[46] on the lowest lump sum redemptions, levied on the nominal income of both straight life insurance and unit-linked contracts (notional and real capital gain, interest, dividends and other income). The nominal returns on life insurance contracts have been steadily declining, while taxation has increased; consequently, real returns have declined (in 2011 they became negative). Some contributions to the DC pension plans (occupational 'PERCO' and individual 'PERPs') are tax deductible, but those plans still represent a small share of private pension products in France. While these contributions have some deductibility from income tax, they are not in general, deductible from 'social levies' ('prélèvements sociaux').

[46] The lowest tax rate is calculated as 7.5% income tax (the lowest rate) plus 15.5% in social levies

In France, there is also a wealth tax on assets of €1.3 million and above; we do not take account of this tax in our research.

Spain – The taxation system offers good support for pension savers. Contributions are tax deductible up to prescribed limits. Whilst in accumulation there are no taxes on dividends, income or capital gains, nor is there corporation tax or VAT levied on management and depository fees. Drawdowns are taxed differently depending on whether they take the form of a lump sum payment or of a regular income. PIAS, an individual savings account that converts to an annuity on retirement, has an €8,000 limit on tax deductibility and a cap on the size of the plan at €240,000.

Taxation on annuity payments operates on a declining sliding scale dependent on when the saver commences drawdown. At less than 40 years of age, 40% of the annuity income is liable for income tax. However, if the saver commences drawdown after the age of 70, the tax liability falls to only 8% of the annuity income. Table 14 estimates the net real return to savers after investment charges (see table 12) and taxation, based on our modelled real returns displayed in Table 7.

Table 14. Forecasted real returns after investment charges and taxation (Intra-plan, accumulation phase)

	Modelled nominal return	Taxation on returns	Investment charges	Net nominal return	Net real return
Denmark[47]	3.46% + 4.0% = 7.46%	-15.3%[48]	-1.0%	5.32%	1.32%
France	1.49% + 7.3% = 8.79%	-23.0%[49]	-2.0%	4.77%	-2.53%[50]
Spain[51]	1.79% + 6.0% = 7.79%	Tax free	-1.8%	6.00%	0.00%

Source: EuroFinUse Research

[47] Only including account taxation during the accumulation phase. Excluding taxation of payouts (capital and/or annuities)
[48] The 15.3% rate of tax is levied on changes in market value; the tax charge is 7.46% x 15.3%
[49] This tax is levied on all sources of return, therefore the formula for the tax charge is 8.79% x 23%. 23% is made of 15.5% social levies and 7.5% income tax. 7.5% is the best case
[50] We acknowledge the discrepancy between this figure and the actual 10-years returns according to EuroFinuse research (0.9%). This difference exists because this theoretical model is based on long-term historical data; also, the last decade was exceptionally good for bonds.
[51] Only including taxation during the accumulation phase; Taxation of payouts (capital and/or annuities) not considered. Tax benefits for contributions to pensions schemes also excluded, According to calculations by EuroFinuse, there is an additional approximate effect of negative half per cent (-0.5%) for the pay-out (of capital recovered via a lump sum). See Spanish case study;

Under this modelled scenario, the Danish saver is the only one, out of the three countries in our study, who is likely to achieve a marginal real return. We estimate that the French saver will receive a negative return of 2.53%. France's 23% tax rate on nominal expected long term returns of 8.79% equates to 2.02% of return, which consumes more than all of the estimated real return of 1.49%It is obvious that the incidence of taxation can have a material impact on the real return and the accumulation of wealth within a pension scheme. We are of the opinion that if governments wish to reduce their state pension burdens, then the tax regime on individual pensions must be favourable. We believe that contributions should be tax deductible up to prescribed limits and that tax should not be levied on the returns that the fund generates. We then support the taxation of drawdown, which should be treated as income. If any of these conditions cannot be satisfied, we urge governments to provide a simple, transparent and proportionate tax regime. We strongly recommend that the incidence of taxation on past performance be clearly disclosed in pre-contractual information offered to the savers of pension schemes. Taxation should be disclosed as a distinct charge on the investment vehicle, as is required under US law for all investment funds (see Annex 3 for an example of US mutual fund mandatory disclosures about the impact of taxes on performance). This is all the more important where pension savings taxation is highly complex, such as in France.

Conclusion

The OECD report presents a paradox to policy makers; it is difficult to justify a policy of private pension provision where the returns on private provision are poor and have even been negative over the last five years on average. Their report makes a valuable contribution to the pension debate by focusing on real returns, because real returns preserve the future purchasing power of tomorrow's retirees. If pension savers cannot enjoy real returns then there is no point in making private provision.

Table 15. Yearly Returns of Private Pension Products After Inflation and Before Taxes (*after tax)

Denmark	Life Guaranteed and Unit-linked ,2007-2011 +**2.73%**
France	Life Guaranteed, 2001-2011**+0.80%*** Public employee plans, 2001-2011 -**1.20%** Corporate plans, 2001-2011 -**2%**
Spain	Unit Linked, 2002-2011 **-1.04%**

Source: EuroFinUse Research

The OECD report is incomplete in its coverage of European Member States; the most obvious example is the absence of France from its analysis, other countries missing include non-OECD members: Romania, Bulgaria, Lithuania and Latvia. We see however, the OECD report as the first step in a process for EU policy development on this topic. EuroFinUse intends to continue to contribute to this debate through the expansion of this research project to cover other EU Member States.

Our report confirms the OECD's analysis that the real return on pension schemes has been '*paltry*'. Alternative official sources of information in addition to our analysis confirm that real returns have been poor and often negative. However, the data provided by these sources often differ in terms of magnitude and sometimes by sign (+/-) from the OECD. Whilst the mean outcome is poor, the disparity and mixed nature of official return data leads us to question the quality and value for accurate analysis of this topic.

Our analysis indicates that by using the 2010 asset allocation data from the OECD and adding long term real returns on the data of these assets, **the potential long term returns on the Danish, French and Spanish portfolios is between 1.8% and 3.5% before taxation and charges**. After taking account of charges and taxation, we find that **only Danish savers are likely to achieve a real return on savings**. **For Spanish savers, the expected return is zero**, but **for French savers the impact of**

taxation is particularly onerous. Our predicted long term annualised net real return for the French saver is minus 2.53%.

Inflation is currently at historically very low levels, but this is not expected to continue. Public sector deficits and debt accumulation in Member States is rising; France and Spain's historical experience suggest that persistently high inflation follows these events. Inflation has a tendency to increase nominal returns and may reduce the potential to earn real returns, before deductions. As investment charges and taxation are levied on nominal returns, the combined effects of inflation, charges and taxation, will seriously erode the opportunity of earning a net real return on savings.

The evolving regulatory regime is putting pressure on insurance regulated pension schemes to act like insurance companies with a heavy bias in favour of owning government debt. We have discussed at length that debt is inferior to real assets in terms of generating real returns over the long run. Further, this regulatory push to risk reduction raises a serious concern, motivated by a governmental desire to finance cheaply its growing debt, by forcing its purchase on pension savers. In short, this regulatory thrust is a form of financial repression, which while reducing a government's debt burden, will make pension savers poorer.

The returns from the equity markets during the period of the OECD review have been very poor. The returns on government bonds have been mixed. Where there has been a flight to quality, as in Germany, returns have been very strong. In countries such as Greece and Spain, returns have been poor, either because investors have seen default or fear default on sovereign debt. Indeed the financial crisis has challenged the belief that government debt is a risk free asset. Looking forward, the safe haven markets offer very little in terms of yield or capital return, they effectively condemn savers to negative real interest rates and a significant risk of capital loss. At some point yields will revert to normal levels, during this process holders of debt will see a persistent decline in the value of their investments.

There is practically no satisfactory disclosure of investment charges in the pensions sector and financial literacy of savers is very low. These two factors conspire to undermine competitive influences in the provision of financial services and lead to suboptimal investment outcomes. Our analysis suggests that investment charges and intermediary commissions significantly drag on investment returns. In the current climate of low returns, they could be consuming the vast majority of nominal return, leaving savers with negative real returns on their investments.

As with charges, disclosure on taxation is also very poor. The incidence of taxation varies between Member States. The Spanish regime is the most attractive to pension savers, with tax deductions on contributions and no tax liability on investments within a pension portfolio. The Danish regime provides deductibility on contributions, but erodes the real return through taxation on nominal investment returns. However, the French regime, which is very complex, is particularly unfavourable to pension savers. Our calculations suggest that through punitive taxation of nominal returns, savers are highly unlikely to earn a real return on their investments and may even endure declines in the real value of their investments.

Lastly, while we have confidence in the regulatory regime concerning the management of financial assets, concerns are high regarding regulation of quality and advice given to savers. We fear that advice is driven by commissions and not by suitability. The different regulatory regimes for the sale of pension products via insurance companies and banks or investment firms, creates scope for regulatory arbitrage, aggravating further this problem.

Recommendations

- As a matter of urgency, public bodies must ensure:
  - Fair, clear and not misleading information for all long term and retirement savings;
  - Independent and competent advice; and
  - Limit the increasing complexity of retail long-term investment products. Governments should support the design of a basic and simple retirement savings vehicle that would provide at least the protection of the purchasing power of those savings over the long term. It should also be easily accessible without "advice" and without heavy commission.

- Regulation needs to offer a unified framework for the marketing and sale of pension products to savers. As a general principle, regulation should adopt the perspective and interests of market users, not the perspective of market intermediaries[52].

- Thoroughly improve and harmonise the product disclosures for all long term and retirement savings products: this is in line with EuroFinUse proposals

[52] Kay Review, recommendation on the principles of regulation

regarding the European proposed Regulation on 'PRIPs'[53]. The current levels of disclosure on fundamental aspects that define past and expected performance of an investment vehicle are missing. Under these circumstances, it is impossible to make informed investment choices or stimulate a competitive national and pan-European market in the provision of private pension products.

- In particular the disclosure of historical returns must be provided:
    - After inflation (in real terms);
    - After all charges borne directly or indirectly by the investor; and
    - After taxes (as required for all US investment funds).

  If the finance services sector is unable to agree on the shape and form of pension product disclosures, then at a minimum policy makers must mandate that disclosure of historical returns must be provide after inflation, charges and taxation.

- Regulation must consider how to fairly compensate financial advisers, so that they focus on providing advice based on suitability and not selling the product that offers the highest fees. Ideally, regulation should be consumer focussed, emphasising and promoting simple products and trusted providers, stressing product suitability and supplier integrity[54].

- Basic financial maths should be part of all school curricula as this is crucial knowledge for accessing adequate pensions. This long term investment needs to be made in the school curriculum. In general, policy makers in all Member States need to raise the standard of financial literacy of their citizens. Financial literacy is a life skill on a par with reading and writing. In an aging population, increasingly forced to make its own retirement provision, financial literacy will have a key influence on retirement outcomes.
- Taxation should incentivise long term savings and investments and not consumption and short term savings, but at least not penalise them. This could be done by favourable tax treatment to contributions to pension schemes. The accumulation of pension wealth needs to have that, in order to

[53] In general terms, occupational and non-occupational pensions should be included into the scope of PRIPS to deliver a KID
http://EuroFinUseEuroFinUse.org/index.php?id=97&tx_ttnews%5Btt_news%5D=65&cHash=6039621f7b83e60247885ab630efab6b
[54] Ibid

encourage citizens to make private pension provision. At the very least taxation should not hurt the real value of pension savings.

- Prudential regulation must recognise that pension vehicles have potentially very long investment horizons. They have the capacity to opportunistically absorb risk, to achieve extraordinary real returns, where the non-pension insurance sector cannot. Pension investment vehicles can be contra cyclical and an important source of risk capital for the economic growth and employment opportunity. In particular, pension investments in equities must not be penalised. This is why all pension products should be -at least partially- exempted from solvency regulation that force suboptimal long term asset allocation.

- To provide protection from inflation, governments should issue inflation linked securities or promote simple inflation protected long-term savings products specifically targeted at pension savers. These securities and/or 'packaged' products should be readily accessible, without requiring the use of intermediaries. The aim should be to provide cheap access to a do-it-yourself retirement scheme that preserves the real value of the investment.

- Lastly, we believe that governments can play an important role in protecting saver interests and promoting universal pension coverage by establishing low cost public pension saving schemes for their citizens. **We believe that the Danish ATP[55] scheme serves as a model example of government working effectively with social partners to achieve this goal**.

[55]ATP is established by law; the Minister of Employment appoints the Committee of Representatives on recommendations offered by the social partners. The Minister also appoints the members of the Board.

Annex 1 - Country Studies

The analysis of the individual country studies of Denmark, France and Spain comprises six parts:

- Introduction
- Pension vehicles
- Charges
- Taxation
- Pension returns
- Conclusion

Denmark

Introduction

The Danish pension system is built of four elements:

- Basic State Pension (Folkepension) - Pay as you go;
- ATP, Mandatory Occupational Pension; Savings based; Provided by ATP;
- Occupational pensions; Voluntary system based on agreements between the social partners; Savings based; Provided by life insurance companies, lateral pension funds, banks and company pension funds;
- Private pensions; Voluntary individual; Savings based; Provided by life insurance companies and banks;

The statutory retirement age in Denmark is 65. This will increase in stages to 67 between 2019 and 2022. Post 2022 the retirement age will be linked to life expectancy. Through this the government tries to reduce its contribution to the pension system.

The Danish pension system is a mix of mandatory and voluntary components. Table 16 shows how the assets are distributed between the different types of providers. Denmark has close to universal pension coverage, with the ATP covering nearly 90% of the workforce. The mandatory system runs two schemes in parallel, the basic State pension – the Folkepension - and a State administered defined contribution

scheme – the Arbejdsmarkedets Tillægspension (ATP)[56]. The Folkepension (public pension system) is a pay-as-you go scheme restricted to Danish citizens who are resident in Denmark and citizens from the EEA Member States and Switzerland who are resident in Denmark or have been residents in Denmark during a certain number of years. Citizens from other countries can qualify if they fulfil certain more demanding criteria. The pension pays a flat rate for all those who are eligible, with supplementary entitlements assessed on family status and income. The ATP is a fully funded defined contribution scheme, which provides a lifelong pension from the age of 65 and a survivors' lump sum benefit for dependents in the case of the death of the ATP member. All employed persons are obliged to contribute, with contributions divided 2/3 and 1/3 between employer and employee, the contribution rate is a function of monthly working hours. The self-employed are invited to join the ATP system, which advertises itself as having lower administration costs (64DKK/year) than any private pension scheme in Denmark, though the total cost, investment and administration charges, approach 330DKK/year.

Table 16. Savings based pension assets in Denmark 2009-2011

Billion DKK	**2009**	**2010**	**2011**	**Mkt.**
Life insurance companies	996	1,092	1,208	46 %
Lateral pension funds[57] (Tværgående	354	382	411	16 %
Commercial banks and savings banks	379	407	401	15 %
Company pension funds (Firmapensionskasser)	36	38	43	2 %
ATP, LD[58]	420	478	579	22 %
Total	**2,186**	**2,398**	**2,643**	**100 %**

Source: Danish FSA

Company pension funds cover only 2 % of the savings based pension assets. Other occupational pension schemes in Denmark, based on agreements between the social partners are schemes covering more than one employer, typically a branch of industry or a profession.

[56] ATP is established by law. The Minister of Employment appoints the Committee of Representatives on recommendations offered by the social partners. The Minister also appoints the members of the Board.
[57] Danish nationwide occupational pension funds covering employees from more than one company (in contradiction to company pension funds).
[58] Lønmodtagerns Dyrtidsfond (Employees' Fund). The government suspended the indexed regulation of salaries in both the public and the private sector from 1977 – 1979. The amounts were placed on individual accounts in a pension fund LD "Lønmodtagernes Dyrtidsfond" (The fund for the wage earners cost of living allowance) created for that purpose by law. The amounts paid in to the fund for a full employed person was DKK 4368. And that has increased to DKK 110000 for those who left the investment management fully to the fund.

Danish pension funds are very large by international standards. In most countries, pension funds cover one company only (or even a single person), which is much more expensive. Large collective schemes have much lower costs for the beneficiaries. The Danish pension funds can benefit of economies of scale, as they provide the same product to a number of people, and therefore gaining important cost savings. Another reason for the low costs at ATP is that ATP only offers a single pension product, without much availability for choice of the scheme member (which would entail higher costs to be deducted from the pension benefits)[59].

The self-employed, if they decide to join the ATP system, pay a fixed contribution equal to 270 DKK/month each quarter. The description of the ATP and its associated charges are clearly presented on the ATP website www.atp.dk. Although the ATP is an independent fund managed by the social partners and the government, it is regarded as a private pension fund under OECD terminology. This makes sense, especially, for the self-employed, as they decide whether to join this scheme or not[60].

The pay-out from The Folkepension is DKK 69,650/year, supplementary entitlements can increase this pay-out to DKK 72,300/year. These supplementary entitlements start to reduce in value when other income exceeds DKK 65,300/year, they fall to zero when other income exceeds DKK 299,400/year. On average the payout from ATP scheme is around DKK 16,000/year. Naturally, for a DC scheme, the actual pay-out is the sum of contributions, investment performance and the age of retirement. There are other existing legislation-based mandatory pension schemes, but these are no longer open to contributions or new members and hence not mentioned here.

The voluntary system is a combination of labour market related pensions and occupational pensions (Arbejdsmarkedspensioner). These schemes are organised either as collective agreements between social partners within a special part of the labour market, or as agreements between the employer and the employees of a company. The occupational pension scheme is normally mandatory. It is a right for all employees of the company to become members of the scheme, but it is not possible to opt out of the scheme. Members may take their pension capital from one scheme to another within 3 years of changing jobs, in practice very few do it in time.

Approximately 75% of Denmark's working population (2.9m) contribute to an occupational pension scheme. Insurance companies or lateral pension funds manage these schemes, while employers only manage a minority. 90% of the population

[59] idem
[60] OECD Pensions at a Glance 2011:Retirement-Income Systems in OECD countries: Denmark, page 2 http://www.oecd.org/denmark/47272339.pdf

between 16 and 66 years contributed to the ATP (contributions are automatically deducted from the salary and / or from the public benefits the person may receive). Close to 1 million people contribute to private pension schemes other than occupational schemes[61]. Contribution rates for occupational schemes vary between 9% and 20% of salary. As with the ATP, the burden of contributions falls normally 2/3 with the employer and 1/3 with the employee.

Currently, there are two areas of public debate in the pension sector. The first, put forward by employees, seeks to allow employees the freedom to choose the provider of their occupational pension scheme. The second debate concerns the large number of changes in legislation and tax regulation related to pensions. It is difficult for consumers to find out how the Folkepension, the ATP and the occupational pension should be supplemented by private pensions or future savings. Even pension funds insurance companies and banks find it difficult to give the right advice to consumers.

Pension Vehicles

Denmark has four major types of private pensions:

- Life annuity (Livrenter) with a guaranteed or market based pension payment for the total life period of the member;
- Annuity or instalment pension (Rate pension) with a guaranteed or a market based pension payment for an agreed number of years, typically 10 years;
- Lump sum pension (Kapitalpension) with one pay-out[62];
- Lump sum pension (Alderspension) with one pay-out;

All private pension products are defined contribution schemes. The asset selection is not directly regulated, it is the responsibility of the each company to select assets that enable it to fulfil its obligations to the saver. This may take the form of a guarantee or more commonly an asset selection that faithfully matches the description of the product. All pension companies offered, until 1994, a guaranteed basic return rate of 4.5% per annum; effectively this forced the pension companies to invest heavily in bonds (government bonds or mortgage bonds). Since 1994, the Danish FSA has progressively reduced this guaranteed return to the current level of 0.5%. Whilst these reductions have protected the solvency of these schemes, they no longer protect the real value of their pension savings.

[61] Figures from Torben M.Andersen, Torben Möger Pedersen, Cristina Lage, Peter Melchior, Lars Rohde "Basispension" October 2012, Penge- og Pensionspanelet.
[62] Pay out from Rate pension and Kapitalpension can be changed by the saver to a life annuity.

With the decline in interest rates, there has been a shift towards market-based products. While this has expanded the freedom of portfolio managers to invest in real assets, such as shares, it has also increased the investment risk of pension portfolios.

Charges

Disclosure on charges has been very poor. There are a plethora of pension products on offer in Denmark, public information, where it is available, is of little value as the data offered by providers is not comparable. Providers calculate yearly costs for members both in DKK and as a percentage of assets. However, the basis for these calculations differs between banks, insurance companies and pension funds. These circumstances present significant information barriers to users, who may choose to compare products on the basis past performance and charges.

Pressure from consumers on providers to improve disclosure appears to be having some effect. All pension companies, from end of 2012, must inform their clients or members, of the yearly costs related to their pension scheme both in DKK and as a percentage. Providers will offer a cost-calculation facility, on their websites, making it possible to compare costs.

The Danish Insurance Association opened in December 2012 a new public service called 'Facts on pensions'. This web-based system[63] gives information about occupational pension products from insurance companies and lateral pension funds. Through the website, it is possible to compare information about savings, insurance, service and advisory services, interest, returns and charges from all providers. However, design limitations restrict the viewer's ability to make comparisons to four providers in each search. The web site posts information on charges, as yearly charges in DKK, as a percentage of assets. The information is further disaggregated into administration costs, in DKK, investment costs and the contribution to the owners of the providing company, if the scheme has a guarantee. The system does not give an overview of the costs, but a random search of different schemes displays yearly charges of between 0.6% and 1.4%.

Taxation

The Danish taxation system on pension contributions, assets and payouts from schemes are multidimensional, Table 17 rationalises the system by pension vehicle.

[63] www.forsikringogpension.dk

Table 17. Taxation on Pension Schemes

Pension Vehicle	Life assurance	Unit linked	Personal pension	Personal pension
Contributions	Tax deductible		Tax deductible up to 50,000 DKK	Non deductible max contribution
Tax on the investment	Interest, dividends, earnings and losses are taxed at 15.3%			
Pay-out[64] [65]	**Taxed like personal income**			**Tax free**

Source: EuroFinUse Research

Contributions to occupational pension schemes and individual private pension schemes are tax deductible, with limits on certain schemes. From 2013 however, deductibility exemption ends for the lump sum pension scheme (Kapitalpension). A new lump sum scheme called 'age-pension' (Alderspension) has been introduced; contributions are not tax deductible and consequently the pay out tax free.

All schemes are subject to a tax on pension returns (changes in market value) of 15.3%. Originally known as the 'real interest duty', the base of the tax was expanded to the return on assets (capital, interest and dividends), with tax rates varying by asset type. In 2001, the tax rate was harmonised to 15% across all pension assets and increased to 15.3% in 2012.

Pay-outs from personal pension schemes are taxed as income, with prevailing marginal rates between 32% and 49%. The pay outs from Kapitalpension, now closing, were taxed at a flat rate of 40 %. As mentioned above, payments from the new lump-sum pension (Alderspension) are free of tax.

[64] Special tax on high pensions, i.e. more than 362,800 DKK in 2010 (limit will be adjusted)
[65] Pay out exceeding the limit is taxed at 6 % in 2012. The tax will decrease 0.5 % per year until it becomes zero by 2020.

Pension Returns

We could not find a source for aggregate information detailing the investment returns for pension savers. While life insurance companies, lateral pension funds, company pension schemes and banks have to give scheme information to members on the development of pension plans, none of this information is publically available in aggregated form. The information published by the Danish FSA disaggregates information by business type:

- Life-insurance companies and lateral pension funds
- Company pension funds
- Commercial banks and saving banks and
- ATP

The Key Performance Indicators of private pension funds of the National Danish supervisor provide a good overview of the last years' after tax performance of the first category of pension plans[66]. Only companies active in all five years are shown in table 18a and 18b.

[66] http://www.finanstilsynet.dk/en/Tal-og-fakta/Statistik-noegletal-analyser/Noegletal.aspx

Table 18a. Return on customer funds after expenses but before income tax – Life Insurance

Selskabsnavn (Company)	2007	2008	2009	2010	2011	Average
SEB Pensionsforsikring A/S	6,20	-4,50	4,30	9,30	4,20	3.80%
Sampension KP Livsforsikring A/S	-2,10	1,10	0,80	16,00	20,80	6.93%
Forsikringsselskabet Alm. Brand Liv og Pension A/S	-0,06	-1,20	8,10	7,40	6,90	4.15%
Skandia Livsforsikring A/S	0,00	-14,20	-1,00	16,10	4,20	0.55%
PFA Pension, forsikringsaktieselskab	0,40	2,20	5,30	7,10	10,50	5.04%
PenSam Liv Forsikringsaktieselskab	0,90	-11,50	18,30	9,90	8,70	4.76%
Danica Pension, Livsforsikringsaktieselskab	0,00	-1,30	5,50	4,60	6,10	2.94%
PMF-Pension, Forsikringsaktieselskab	8,60	-11,40	10,10	3,30	15,20	4.74%
FunktionærPension, Pensionsforsikringsaktieselskab	0,30	-5,60	6,90	11,50	15,20	5.39%
Nordea Liv & Pension, livsforsikringsselskab A/S	1,10	-3,44	5,50	6,40	6,60	3.16%
PKA+Pension Forsikringsselskab A/S	3,20	0,22	6,57	6,52	2,53	3.78%
Industriens Pensionsforsikring A/S	-0,70	3,50	10,90	16,90	4,80	6.91%
PensionDanmark Pensionsforsikringsaktieselskab	2,10	-5,40	14,60	6,60	12,10	5.75%
Lærernes Pension, forsikringsaktieselskab	1,60	-3,90	12,70	11,83	6,11	5.48%
AP Pension livsforsikringsaktieselskab	3,30	-6,60	7,10	8,90	15,30	5.35%
Skandia Link Livsforsikring A/S	17,80	-19,40	31,30	0,00	-6,60	3.09%
Topdanmark Livsforsikring A/S	1,40	-13,30	10,10	4,70	-1,00	0.07%
Forsikrings-Aktieselskabet ALKA Liv II	0,00	0,00	0,00	0,00	-1,40	-0.28%
Topdanmark Livsforsikring III A/S	-9,70	-32,60	-22,10	-18,70	-12,30	-19.50%
PFA Soraarneq, forsikringsaktieselskab	-1,30	-7,20	8,10	5,80	3,40	1.61%
Nykredit Livsforsikring A/S	-23,70	-19,70	-15,60	-22,00	-22,70	-20.79%
Topdanmark Livsforsikring V A/S	-1,80	-1,10	5,70	9,60	9,70	4.30%
Skandia Livsforsikring A A/S	-44,80	-263,80	4,00	8,60	10,80	-202.50%

Table 18b. "Return on customer funds after expenses but before income tax" - Lateral pension funds

Selskabsnavn (Company)	2007	2008	2009	2010	2011	Average
BANKPENSION, Pensionskasse for Finansansatte	4,08	-15,43	9,32	12,80	4,39	2.53%
Danske civil- og akademiingeniørers Pensionskasse	-8,20	2,70	6,40	6,90	3,10	2.03%
Pensionskassen for Sundhedsfaglige	0,80	3,47	7,58	8,12	10,27	5.99%
Arkitekternes Pensionskasse	4,30	-22,00	16,20	7,40	4,40	1.17%
Pensionskassen for teknikum- og diplomingeniører	16,60	-9,90	4,30	8,10	18,40	7.00%
Pensionskassen for Jordbrugsakademikere og Dyrlæger	1,90	-13,00	14,50	9,70	3,90	2.96%
Juristernes og Økonomernes Pensionskasse	2,70	5,30	8,30	8,10	12,20	7.27%
MP Pension, Pensionskassen for magistre og psykologer	-0,50	-5,70	10,40	1,70	5,40	2.12%
Finanssektorens Pensionskasse	4,84	-5,21	4,69	10,52	6,19	4.07%
Pensionskassen for Sygeplejersker	0,80	0,42	10,54	8,61	10,61	6.09%
Pensionskassen for Farmakonomer	6,10	2,60	3,10	6,07	5,47	4.66%
Pensionsk. for sygehjælpere, beskæftigelsesvejledere, plejere og plejehjemsass.	-4,00	0,70	3,80	8,60	10,10	3.71%
Pensionskassen for Kontorpersonale	1,30	1,19	9,87	8,30	9,78	6.01%
Pensionskassen for Lægesekretærer	1,00	0,41	10,55	8,25	9,98	5.94%
Pensionskassen for portører	-3,10	-0,10	4,00	10,30	13,00	4.64%
Pensionskassen for trafikfunktionærer og amtsvejmænd m.fl.	-2,70	-4,80	3,30	9,20	11,10	3.03%
Pensionskassen for Socialrådgivere og Socialpædagoger	-0,30	7,91	3,04	15,15	11,19	7.26%
Pensionskassen for Børne- og Ungdomspædagoger	1,06	-12,10	-2,48	-6,76	-14,61	-7.16%
Lægernes Pensionskasse	0,70	-8,40	7,30	13,30	13,40	4.92%
Pensionskassen for Apotekere og Farmaceuter	0,60	-6,20	3,66	6,22	2,87	1.34%
Arbejdstagernes Pensionskasse	-1,80	-21,90	14,50	10,90	0,50	-0.43%

Source: Table 18a and 18b Danish FSA

Finally, as regards to the ATP, the Finanstilsynet[67] has praised this scheme for having had, in the 10-year period from 2002 to 2011, achieved an average market return, after tax and expenses, of 8.8 per cent, which is 3.9 per cent higher than the average for the Danish life insurance and pension companies. The Finanstilsynet stated that the size of future pensions depends on creating a high, stable return year on year.[68]

According to ATP[69], there are three factors explaining their impressive performance. Firstly, the use of bonds and interest rate swaps[70] to hedge the interest rate risk of the pension obligations gave a significantly positive return due to the decline in interest rates during the period. Secondly, due to the extensive use of risk diversification, and thirdly, ATP portfolio largely consisted of Danish equities. Shares held by ATP outperformed the average Danish stock market performance. The Danish stock market also outperformed shares of many leading markets during the decade. Additionally, as explained before, the very low management costs of the system certainly contributed to translate such good results into positive and significant net returns for private investors.

In order to obtain an aggregated returns rate in spite of the missing data for company pension funds and for commercial banks and saving banks, we have endeavoured to build our own estimated returns from the available public data. The return on customers' funds after expenses but before tax reported to the Danish FSA from the providers of private pension products for each year between 2007 – 2011 have been weighted by the contributions reported for 2011. This information can be found in table 19. Unit-linked products are not covered by this information. To develop an appreciation of the return to savers after inflation we have taken the return data and subtracted inflation derived from Denmark's consumer price index published by Eurostat. Table 19 thus gives a view on the real returns for savers before tax. The taxation on pension saver investment returns is displayed in Table 20.

[67] Danish Financial Services Authority
[68] ATP 2012 Annual Announcement of Financial Statements, page 5
[69] http://www.atp.dk/X5/wps/wcm/connect/ATP/atp.com/about/omatp/investments/returns_and_portfolios/
[70] An entirely new ATP pension system was introduced as from 2008. The new model is based on swap interest rates as opposed to the previous fixed nominal interest rate of e.g. 1.5 % for beneficiaries

Table 19. The real return of pensions from 2007 to 2011[71] in %

%	2007	2008	2009	2010	2011	2007-2011 average
Key figure: Return before tax and inflation on return on pension	0.8	-2.7	7.2	8.0	8.4	4.24
Inflation	1.7	2.4	2.4	1.2	2.8	2.10
Real return on pensions, after inflation and before taxes	**0.9**	**-5.1**	**4.8**	**6.8**	**5.6**	**2.14**

Source: EuroFinuse on figures from Danish FSA and Eurostat

Table 20. Taxes raised on investment returns on pension savings[72] in %

Billions DKK	2007	2008	2009	2010	2011
Banks	2.6	0.3	0.6	3.7	0.5
Life Ins. and Pension	1.7	2.4	2.4	1.2	2.8
Total	**0.9**	**-5.1**	**4.8**	**6.8**	**5.6**

Source: Danish Ministry for Taxes

Conclusion

There is little information on performance and charges, making it possible to compare across different types of pension providers (pension funds, insurance companies, banks). The recent web based tools launched by the Danish Insurance Association may have made a substantial improvement on the previous condition for the occupational pensions provided by members of that organisation.

Denmark is the only one of the analysed countries that has managed not only to protect the real value of the beneficiaries' pension pot, but also to grow this pot in real terms. This suggests that other EU Member States could learn from Danish pension practices and prudent fiscal policy. **The low cost structure of the ATP is perhaps a model for European provision**.

[71] Note: figures are not adjusted for the effect of taxation

[72] Note: the figures differ from the 'NR-accounts' by including the provenue from Den Sociale Pensionsfond (DSP)

It is important that consumers, when considering the different possibilities for private pension savings, have access to detailed information about the investment policies, the costs and the tax regime in order to be able to choose a pension provider.

The taxation of investment returns has a material impact on net investment returns to savers. It is therefore important for consumers to be informed about the tax consequences of a pension scheme.

What matters to people who retire from the working life and their dependents is the quality of the pension. Will the pension make it possible to pay for housing and living? Will the pension live up to the forecasts and expectations during the working life? The Denmark case shows how difficult it is to get information about the quality of pensions. How are the pensions developing during the contribution period, what is the return on customers' funds after taxation year for year and how is that in relation to the inflation? Politicians are acting in the dark when they do not have aggregated information on the development of pensions.

France

Introduction

France is not included in the OECD study of 'Pension funds' real net investment return', although it is one of the largest EU Member States. The reason given by OECD is that French public institutions do not collect this type of data and therefore they do not submit it to the OECD. EuroFinUse considers this as a significant limitation of the OECD Report and a serious concern for the EU, hence our interest in researching French private pensions returns.

The OECD scope of 'pension fund returns' also does not include pillar 3 products such as 'pension insurance contracts' and 'bank/investment company managed funds' (as investment funds can be used for retirement saving purposes). This is a particularly acute problem for France as the number one retail pension savings product is by far the life insurance. French "pension funds" stricto sensu are very small. Hence, private pension funds, by the OECD definition, are very limited in France anyway.

There is no consolidated data or statistical information on pension savings and assets in France. During our research, we could not find any information on this issue. We checked with the ACP (Autorité de Contrôle prudential), the French banking and insurance supervisor, who confirmed that they do not currently collect such data. We were surprised by this lack of information given the significance of pension provision as public policy issue. After all one can only manage what one can measure. Through our research, we have been able to cast 'some light' on more than 80% of the assets and participants that make up private pension provision in France.

The household savings rate is very high in France: 16.2% (3rd Quarter 2012, source: INSEE), but the majority of those saving are in real estate: more than 9%, and less than 7% in financial assets.

Table 21. Financial Savings of French Households (non-real estate)

	% of total savings	**% Δ 2011/2010**
Liquid investments	33.40%	4.90%
Collective Investments (funds)	6.40%	-2.80%
Insurance	41.20%	0.70%
Direct Investments	19.00%	-6.80%
TOTAL	**100%**	**-0.50%**

Source: Banque de France

The French market of pension savings products divides between life assurance contracts (€1,357bn), deferred annuity plans (€137bn)[73] and occupational DC plans (€58bn). The importance of life insurance in pension provision cannot be understated. The primary stated goal of French life insurance contracts – 'contrats en euros' (with profit contracts with nominal capital guaranteed) and 'contrats en unités de compte' (unit-linked contracts invested in 'units': mostly investment funds, UCITS or non-UCITS) – is retirement. Indeed the biggest associations of life insurance policyholders in France have the words retirement or retirement savings in their name. Taxation rules provide an incentive to stay at least eight years in the policy, but the average maturity is much longer.

Naturally, some of these products serve uses other than retirement, but the assumption here is that they are mainly used for retirement. Life insurance contracts are by far the number one long term saving product in France.

The OECD definition of 'pension insurance contracts', which covered €161.205bn of assets in 2010, would appear to be a very narrow definition of the actual market. The definition appears to cover only the deferred annuity market and none of the life insurance market.

Pension vehicles[74]

Life insurance contracts (individual) – mathematical reserves – € 1357bn

Of which:

Contrats en euros (capital guaranteed contracts)) – mathematical reserves – €1134bn
Unit-Linked Contracts – mathematical reserves – €201bn

Deferred annuity insurance contracts, individual plans – more than €137bn of assets

PERP, (Plans d'Epargne Retraite Populaires) assets under management – €7.5bn (2.1m participants)

PERPs are literally the "People's Pension Saving Plans". They were created in 2003 together with the PERCO described below. They are individual pension saving products under the

[73] FFSA – Assurances de Personnes - Données Clés 2011
[74] All figures are 2011 (end of 2011 for assets, reserves, provisions and number of participants, 2011 year for returns, inflation, etc.), unless specified otherwise.

French Insurance Code. The pay-out phase can only start at the age of 60 or at the age of retirement. The pay-out is usually takes the form of an annuity although, since 2010, up to 20% of the accumulated balance or share of the mathematical reserve can be withdrawn in a lump sum. The most typical PERPs are unit-linked contracts including a 'fond en euros' (capital guaranteed unit). The 'fond en euros' is the most popular investment option.

Contrats Madelin, assets under management – €20.2bn (960,000 participants)

The Contrats Madelin are named after a former minister of industry, are deferred annuity contracts available to independent – self-employed – workers. They are older than PERPs and have similar characteristics.

Contrats Madelin agricole, assets under management – €3.7bn (297,000 participants)

This is a sub-set of Contrats Madelin, which are only available to self-employed workers in the agricultural sector.

Deferred annuity plans (Public employees) - There are three such Plans totalling more than € 21 billion in assets, and close to 1.1 million participants: Prefon, Corem and CRH.

Prefon, assets under management – €10.4bn (375,000 participants)

Prefon was established in 1967 for public employees. Association Nationale des Fonctionnaires Epargnant pour la Retraite (ARCAF), an association of Public Employee pension fund participants[75], has complained about the poor governance of the Prefon, one of the very few pension savings plans where participants are not allowed to participate to the general assembly meetings.

Corem, assets under management – €7.3bn (390,909 participants)[76]

The Corem is a deferred annuity plan that continued another such plan called CREF in 2002. CREF – with approximately 450 000 participants mostly from the Ministry of national

[75] Web site of ARCAF: www.EpargneRetraite.org
[76] UMR 2011 annual report

education – was underfunded. As of 31/12/2011 the COREM and R1, the two plans continuing the former CREF, are still underfunded by € 734 million. Both the French State and the former CREF Mutual company have been condemned to indemnify the participants[77]. The Corem is distributed by a large number of mutuals and is opened to all French citizens since 2005, although the vast majority of its participants are still Public Employees.

CRH[78]- more than €3bn of assets and more than 300,000 participants[79]

The CRH is a deferred annuity plan available to public hospitals employees and other public employees of the ministry of health. It was restructured in 2008 because its liabilities were not fully funded. CRH does not disclose any annual report and financial data publicly. Even its pre-contractual publications do not disclose past performance. Based on the ongoing restructuring, the real returns of this plan are probably weak and below inflation.

Collective deferred annuities

Article 83, assets under management – €40.7bn

The Article 83s are collective deferred annuities plans that a company or a group of companies subscribe to on behalf of certain categories of employees and/or executives. It is a defined contributions plan in which, since 2011, employees are also authorised to contribute on a voluntary basis.

Article 39 assets under management – €3.9bn

The Article 39s are collective deferred annuities plans that a company or a group of companies subscribe to on behalf of certain

[77] http://www.epargneretraite.org/spip.php?article79
[78] Prefon , Cref and Corem are older deferred annuity products created in the first place for Public Employees (now Corem is opened to everyone).
[79] Prache, '*Les scandales de l'épargne retraite*' ; CRH does not currently publish its assets and number of participants

categories of employees and/or executives. It is a defined benefits plan.

Corporate savings plans (individual)

Plan d'Épargne Entreprise (PEE), value of assets – € 85bn (as of 31/12/2011)[80]

PEE is a long term (no withdrawals allowed except for a few exceptions before 5 years) corporate savings plan that invests in company shares and (for the major part) in non-UCITS specific investment funds called "FCPE". PEEs can offer a company matching contribution (*abondement de l'employeur*). The average maturity of the plans is much longer than the minimum.

Plan d'épargne retraite collectif (PERCO), value of assets – €5.0bn (as of 31/12/2011)[81]

The PERCO was created in 2003 together with PERPs. The main differences from the PEE are:

- No withdrawal allowed before normal retirement age (with few exceptions)
- More favourable tax treatment

The PERCO, a defined contribution plan, is quite similar to the biggest pension savings product in the USA, the '401k'. Withdrawals are flexible as in 401ks, either in the form of lump sums or as annuities. PERCOs seem to be the only pension funds recorded and reported by OECD for France, although it is still a very small pension saving product compared to others.

Corporate defined benefit plans (also known as 'retraites chapeau')[82]

None of these schemes are closed to new members. They take the form of corporate book reserves or insurance contracts. They cannot be considered as private pension savings products, as they are

[80] http://www.afg.asso.fr/index.php?option=com_content&view=article&id=863&Itemid=124&lang=fr
[81] http://www.afg.asso.fr/index.php?option=com_content&view=article&id=75&Itemid=121&lang=fr; OECD report end of 2010 amount : USD 5,298 billion
[82] No data collected by OECD, see OECD report page 215

typically mandatory schemes for employees within a company, and often do not require any contribution from them.

Bank and Investment company managed funds (OECD definition[83])

Those funds are not covered in this research as they can address many uses other than retirement.

Charges

Information regarding the charges levied on investors of French insurance products is sparse. Typically, on straight life insurance contracts, the disclosed annual charge will vary from 0.45% to 1%. However, this does not include a possible insurer's 'participation to profits' of up to 15 % of the annual gross income of the policy and does not include the annual charges of the underlying UCITS funds that can be part of the life insurance contract portfolio as well as straight securities. It also does not include entry fees (from 0 to 4.5% on premiums). For unit-linked insurance contracts; the annual charge is between 0.60% and 1%, but it does not include the annual charges of the underlying 'units' (typically UCITS funds) that can range from 1% to 4% (especially for funds of funds). France does not currently require the disclosure of the total annual charges (contract + units). Our estimates indicate that entry fees are in the region of 2% on average. On unit-linked products, the overall annual management fees are in the region of 2%.

Taxation

The tax liabilities on pension saving in France are very complex; the situation is almost unique for each of the numerous products available. In general, pension savers benefit from tax reductions for contributions to pension saving products, but are subjected to the standard rate of income tax on annuity payments. Alternatively, savers may not receive any tax benefits on contribution, but may benefit from a special lower tax rate on pay out. The following section describes the tax benefits and burdens on France's leading pension saving vehicles.

Life Insurance Products

Currently, contributions to these products do not receive preferential tax treatment, though benefits received are subject to lower special tax rate.

[83] See *2012 OECD Pensions Outlook*, Statistical Annex, Figure A2.Private pension plan: Institutional perspective, page 197 http://www.oecd.org/finance/privatepensions/oecdpensionsoutlook2012.htm

While invested, throughout the duration of the contract, the interest and capital gains realised or potentially earned each year, are subject to "social" contributions[84]. Since 2012, these contributions (of which there are no less than five) amount in total to a tax rate of 15.5%. In case of overpayment, the beneficiary will be credited the difference at the end of the contract. If the policyholder dies before the maturity of the contract, the first €152,500 is free of estate tax. Over the next €902,838 the tax rate progressively increases to 25%, everything above this level is taxed at 25%.

The income tax liability on partial or total withdrawals varies inversely according to the length of the contract. Only investment gains are liable for income tax. For contracts of less than 4 years of life, the rate is 35%, between 4 and 8 years the rate declines to 15% and for contracts greater than 8 years the rate falls to 7.5%.

If the saver purchases an annuity out of the lump sum payment on the maturity of the contract, the resulting income is subject to tax on the notional investment gain derived from the annuity. The portion taxed varies inversely with the age at which the beneficiary begins to draw down on the annuity. Currently, the rates are 70% if the beneficiary is under 50, 50% for between 50 and 59, 40% for between 60 and 69 and 30% if payments commence at over 69. This taxable portion is subject to income tax (at the personal rate) and to the five "social contribution" taxes, mentioned above, which currently amount to 15.5% as a whole.

PERP/PREFON/COREM/CGOS (Deferred annuities)

Savings made each year on a PERP or in favour of other pension schemes aimed mostly at public employees (Préfon, Corem, CGOS) are deductible up to 10% of income from professional activity of the previous year, however, there is a deduction cap of €27,696 for payments made in 2011 and €28,281 for payments in 2012.

People without professional income or low-income professionals (less than €34,620 in 2010 and €35,352 in 2011), may deduct their contributions respectively in the limit of €3,462 for payments made in 2011 and €3,535 for payments in 2012.

[84] "Prélèvements sociaux" are charged on all investment income, whatever the source (securities, life insurance, bank accounts, etc.)

However, these deductible allowances are subject to some reduction from the previous year's activity:

- The contributions made by the employer and employee under a Perco are exempt from income tax up to a prescribed limit;
- The employee and employer contributions paid to a compulsory supplementary pension business (regime called "Article 83");
- Contributions to a contract Madelin with the exception of the fraction corresponding to a 15% deduction;
- Contributions to voluntary schemes under Social Security retirement, from the mandatory pension contributions professions, or insurance group farmers, that exceed the mandatory minimum contribution.

If the envelope of deduction available calculated that way is not fully utilised during a year, the portion not used may be carried over to the following three years. On the other hand, payments that exceed the envelope of deduction are not carried forward.

Contrats Madelin

Independent professionals can deduct their contributions to profits up to 10% of their professional income year (within the limit of €3,535 in 2011 and €3,637 in 2012), plus 25% additional taxable income between €35,352 and €282,816 for 2011 and between €36,372 and €290,276 for 2012 which gives a maximum deduction of €67,113 in 2012.

Taxation and social contributions of the annuities for PERP, PREFON, COREM, CGOS and Madelin

At retirement, the employee (or the independent professional) who qualifies may receive the benefit of their savings in the form of a life annuity. Taxation for this form of annuity falls under the tax and social regime of retirement pensions:

- It is subject to income tax on 90% of the annuity income. The 10% deduction is capped: it cannot reduce the declared total pension (mandatory retirement and voluntary schemes combined) by more than €3,660. There is also a floor for this reduction of €374.
- Social contribution tax amounts to 8.1%, which is made up as follows,

- The pension is subject to the "CSG", but at a reduced rate of 6.6%, and the CRDS (0.5%). There is no abatement: contributions are calculated on 100% of the amount of pensions.
- Finally, the annuities from these savings products are not subject to social security contributions ordinary, but a single sample of 1% for health insurance.

Collective Deferred Annuities (CDA)

There are two types of CDA, which are defined by law as Article 83 or Article 39.

Article 83

Payments of employer and employee statutory payments are exempt from income tax, for up to 8% of the gross annual salary, capped at 8 times the Social Security ceiling. The proportion of payments that exceeds this limit is added to income taxation.

If there is also a PERCO in the company, the exemption limit is reduced by the amount of payments to the company in this PERCO (which themselves are exempt).

The voluntary payments of the employee, in turn, are exempt to the extent of 10% of the annual gross salary, capped at 8 times the Social Security ceiling (either €290,976 in 2012). This deduction is removed, if this amount and any other sums are paid by the employer or employee into the account of an Article 83 CDA, PERCO, PERP or contract Madelin. Note that if the total of such payments does not reach the ceiling, the difference may be carried forward three years.

Social contribution taxes

Contributions are treated as salaries, and subject to the CSG (7.5%) and CRDS (0.5%). Since 1 January 2012, there has been a small difference in the payment calculation according to whether the savings contribution comes from the employer or the employee:

- CSG and CRDS paid on employer payments is calculated on 100% of the sum, without reduction;
  CSG and CRDS contributions paid by the employee are calculated on the amount of 98.25%, which is the result of the reduction of 1.75% applies to wages (this reduction was up 3% last year). Note that this reduction only applies to the share of wages less than 4 times the Social Security ceiling (€145,488 in 2012).

In theory, the CSG and CRDS shall be borne by the employee. In practice, these are born by the employer, who collects these contributions at source for the social agencies.

Taxation and social contributions of the annuity

Like the PREP, the pension is subject to tax and social regime of retirement pensions – income tax and social contribution of 8.1%.

Article 39

The employer's contributions are not included in the salary, and the employee pays therefore neither tax nor social security contribution or CSG-CRDS on these amounts.

Taxation and social contributions of the annuities

As with all pensions, the annuity is subject to income tax (after deduction of 10%), the CSG (6.6%), the CRDS (0.5%), as well as health insurance contributions (1%). Moreover, in the specific case of annuities from Article 39, a new social contribution payable by the recipient of the annuity was created as part of the pension reform of 2010:

- The part of the annuity <€400/month is exempt
- Part of the annuity between €400 and €600/month is taxed at 7%
- Part of the annuity between €600 and €24,000/month is taxed at 14%
- Part of the annuity > €24,000/month is taxed at 21%

The social contribution is only partially deductible from income tax; the contribution on the part of the pension which is less than €1,000 deductible, but not the share of contribution of the pension over €1,000.

Corporate Savings Plans

PERCO

The employer's matching contribution, employee contributions from the legal profit sharing schemes known as "participation" and "interessement", and from time savings accounts or days of leave not taken are exempt from income tax. Other voluntary contributions from employees are notdeductible from the income tax.

Social contribution taxes

All contributions are subject to the CSG (7.5%) and CRDS (0.5%). As with Article 83, there has been a small difference in the payment calculation according to whether the savings contribution comes from the employer or the employee:

- CSG and CRDS paid on employer contribution as well as the amounts resulting from the participation and incentive is calculated on 100% of the sum, without abatement;
- CSG and CRDS contributions paid by the employee's contribution are calculated on 98.25% of the total. This reduction of 1.75% applies only on the share of wages less than 4 times the Social Security ceiling (€145,488 in 2012).

In theory, the CSG and CRDS shall be borne by the employee. In practice, these are born by the employer, who collects these contributions at source for the social agencies.

Taxation and social contributions of annuities

The scope of the tax liability on a pension, as for a life insurance contract depends on the age of the beneficiary at

retirement. This income is also subject to the social contributions on the taxable portion at 15.5%.

If the beneficiary chooses to receive a lump sum instead of an annuity, this is not taxed, but investment returns, the capital gains and interest generated by the plan, are subject to social contributions, at the rate applicable to financial products of 15.5%.

Pension Returns

Our pensions investment returns analysis reviews the performance of the leading pension savings vehicles.

Life contracts – capital guaranteed

The returns from capital guaranteed life insurance contracts, the number one private pension product in France have been positive up to 2010 thanks to the unusual high performance of fixed income assets as Table 22 demonstrates.

Table 22. The returns on French life contracts – capital guaranteed [%]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Disclosed return	4.8	4.5	4.4	4.2	4.1	4.1	4.0	3.6	3.4	3.0
Real return before tax	2.5	2.0	2.0	2.3	2.3	1.2	2.7	2.5	1.3	0.3
Real return after tax	**1.9**	**1.4**	**1.4**	**1.6**	**1.5**	**0.5**	**2.0**	**1.7**	**0.6**	**-0.3**

Source: FFSA, Eurostat and EuroFinuse Research

Our research into this private pension product has led to the following results and conclusions:

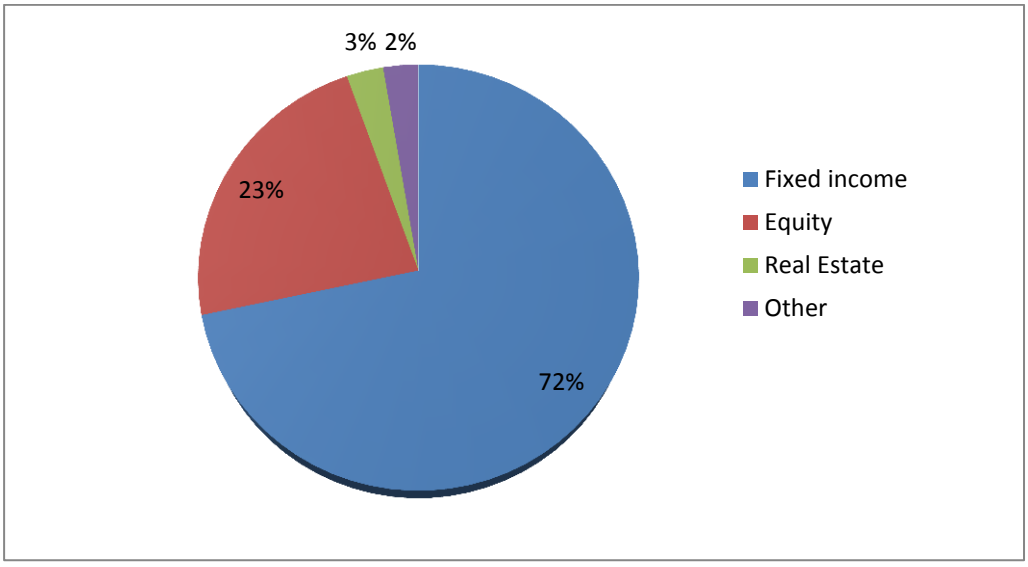
- Disclosed returns have little to do with actual after tax returns for pension savers, for example plus 3.0% versus minus 0.3% in 2011 in reality – they are misleading. This factor ought to be taken into consideration when drafting the key pre-contractual information standards for 'PRIPs'[85]. In the US the disclosure of after tax past performance is mandatory, but not in the EU, even for UCITS funds.

[85] European Commission regulation proposal 2012/0169 on key information for investment products, July 2012

The disclosure of real past performance (net of inflation) is not required either.

- Disclosed returns have been steadily going down for ten years mainly due to the lowering of interest rates, as French life insurance 'contrats en Euros' are on average invested at close to 90% in fixed income securities and 10% in equity. Global (including investments for non- capital guaranteed contracts – see Chart 5) life insurance assets allocation end of 2011 is as follows :

Chart 5. French Insurance Asset Allocation, 2011



Source: FFSA

While this asset allocation has insulated French pension savers from the stock market crises of 2001-2002, 2008 and 2011, it is now becoming problematic in an environment where the French government bond rates have declined too close to – or below the inflation level.

- Real returns before tax to French pension savers have gone significantly down over the past ten years, from 2.5% in 2002 to 0.3% in 2011. Of the 98bp decline in real before tax returns between 2010 and 2011, 40pb of the decline is due to falling investment returns (yields), 58bp from higher inflation.

- Real returns after tax to French pension savers became negative in 2011 (minus 0.3%). This is a best case calculation, which uses the lowest band of income tax, currently at 7.5%, and excludes the French wealth tax. While the gross tax take declined over the previous year, tax rates increased, but the effect was not seen, as taxes are a charge on the nominal return.

The increase of taxes is huge when the appropriate effective tax rate on real (net of inflation) income is measured, see table 22, from 24% in 2002 to 147% in 2011. This means the tax on life insurance income in 2011 not only wiped out all the income, but also ate into the saved capital. Note that capital may also be subject to wealth

Table 23. French nominal and effective tax rates on capital guaranteed life insurance returns

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Nominal tax Rate	13.4%	13.4%	13.7%	18.5%	18.5%	18.5%	18.5%	19.6%	19.6%	21.0%
Effective tax rate	24%	28%	29%	32%	32%	56%	26%	28%	47%	147%

Source: EuroFinUse Research

- The complexity of the French taxation on investment returns makes it extremely difficult for a saver to compute and consider the nominal and effective tax rate (and therefore the return after tax) on their investments. Returns are now subject to six different levies, each with as specific rate. Since 2002, there have been six increases in tax rates and two new forms of taxation.

With an environment of low interest rates, persistent inflation and public deficits, the real return outlook for savers investing in guaranteed life insurance products is not positive. In 2012, French inflation almost halved to 1.3% (2.5% in 2011), mainly due to a temporary reduction of taxes on oil prices. As average nominal yields are estimated at 2.85%[86] for 2012, real returns (both before and after tax) were back into the black. But will it last? 2013 nominal yields are again forecasted to decline to about 2.55 % and French inflation may go back to about 2%. With a minimum tax rate (excluding wealth tax) of 23 % on nominal rates, after tax real returns are likely to be negative again.

[86] Le Particulier Nr. 1083, March 2013

Life contracts – unit-linked

The returns from unit-linked contracts have been much poorer over the last decade as illustrated in Table 24. Over the last ten years French unit-linked contracts have had a negative real return of minus 2.3 % per annum because of poor average performance of retail 'units' (retail funds) and multiple layers of commissions (at fund level, at fund of funds level and at the contract level).

The units are mainly, but not exclusively, invested in equity funds. Because the units bear insurance wrapper fees, they have performed less well than the standalone equity funds, which already carry their own fees. There is no disclosure to clients of total fees (fund + wrapper) levied on these products.

Table 24. The returns on French unit-linked contracts

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Disclosed return	-15.2%	8.4%	6.4%	14.4%	8.8%	1.5%	-22.3%	14.4%	5.2%	-7.0%
Real return before tax	-17.5%	5.9%	4.0%	12.5%	7.0%	-1.4%	-23.6%	13.2%	3.1%	-9.7%
Real return after tax	**-17.5%**	**4.8%**	**3.1%**	**9.9%**	**5.3%**	**-1.7%**	**-23.6%**	**10.4%**	**2.1%**	**-9.7%**

Source: FFSA, Eurostat and EuroFinuse Research

Note: Real returns after tax have been slightly positive over the last ten years, but as shown in Table 25, for the larger category of capital guaranteed contracts, the outlook for upcoming years is rather negative with low interest rates, persistent inflation and increasing taxes on investment income.

Table 25. Real returns of all life contracts (capital guaranteed and unit-linked 2001-2011 based on the relative share of both categories in the overall mathematical reserves)

	Overall return	Average yearly return
Capital guaranteed contracts	13%	1.20%
Unit-linked contracts	-21%	-2.30%
All contracts	**8%**	**0.80%**

Source: FFSA data for years 2007-2011, EuroFinUse estimates for 2002

PERPs

We have not been able to obtain any average return data on PREPs. However, there is evidence from a review of 46 PERP contracts[87], to demonstrate that average 2011 returns are lower than the 'contrats en euros' life insurance contracts, i.e. less than 3%(nominal). Indeed, the review shows that the most popular ones (distributed by the biggest retail banking networks) had disclosed much lower returns of between 2.35% and 2.40%. Gross of inflation, taxes and without the impact of entry fees. After considering all these factors, the real net return of these PERPs in 2011 was very probably negative, except for people not subject to income tax or with a very low taxable income.

Technically the net real return on PERPs will be in most cases lower than for "contrats en euros", also due in most cases, to unfavourable taxation[88].

Deferred annuity plans for Public Employees (Prefon, Corem, CRH)

One difficulty in assessing real returns of deferred annuity plans is that up to 2010, it was not mandatory for those plans to disclose investment returns, Prefon being one example. Following EuroFinUse French member organisations' action, a 2010 Law[89] made this a legal requirement from 2011 on.

Prefon

Prefon published a return on its investment portfolio for 2011, but did not specify if it is gross or net of fees (which are close to 60bps per annum), probably gross. The accounting return was 3.71 % in 2011. However, the accounting return does not take into account the changes in the market value of assets. In addition, all the investment return is currently set aside in order to replenish reserves. In 2010, it appeared to the French Supervisor this was not even sufficient, and it forced Prefon's insurers to contribute several hundreds of millions of euros of their own funds to help Prefon balance its assets and

[87] Cofloma, Comparatif contrats PERP assurance vie, 2011 http://www.cofloma.fr/contrats_assurance.php?fiscalite=PERP

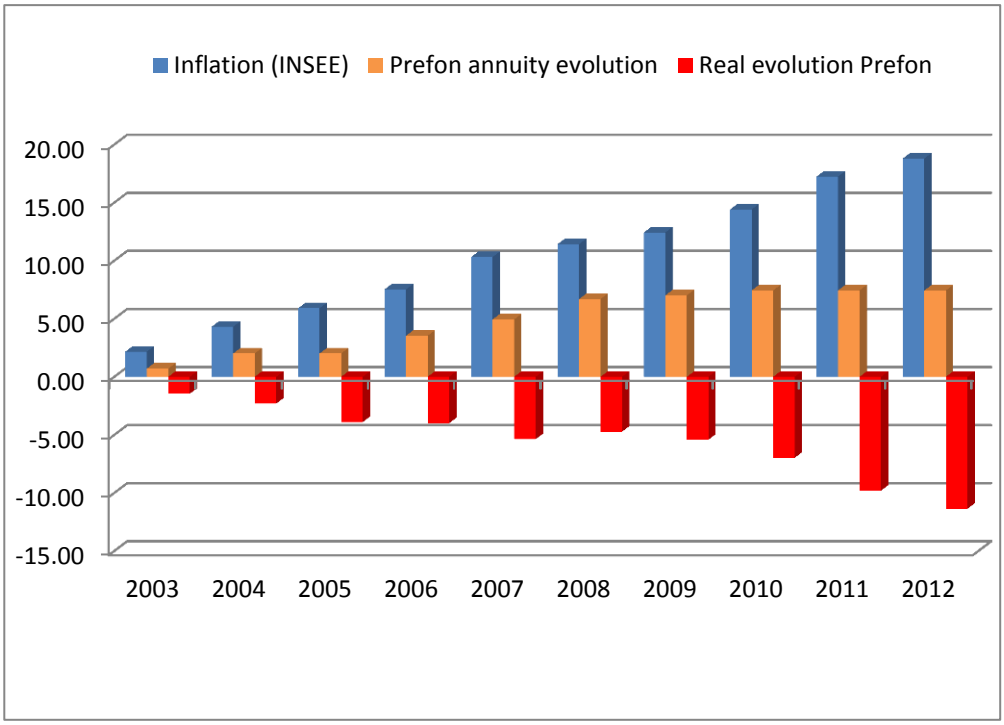
[88] See Les scandales de l'épargne retraite (G. Prache, 2008): other things being equal, the taxation of PERPs income is less favorable than the taxation of life insurance contracts for the majority of French savers.

[89] Law n° 2010-737 of 1st July 2010 - art. 35 (V) which modified Article L441-3 of the French Insurance Code.

liabilities[90]. In addition, the value of the participants' accumulated savings is not communicated to them. It is therefore impossible to compute a real rate of return individually and for all for the participants with the data currently made available by the Plan.

Another difficulty for deferred annuity products is to translate the impact of investment returns and other factors such as the conversion rate, the discount rate and the plan's evolving demographics on the actual long term return for the pension saver. One proxy return indicator is the one computed and published by the French association of pension fund participants ARCAF. It has been collecting for several years the annual rate of pension annuities increases before tax (see Chart 6). Since 2002, Prefon participants have lost 11 % of the real value of their entitlements (before tax). This key performance information is not disclosed to new participants[91].

Chart 6. Prefon Real Value, compounded evolution in %



Source: ARCAF 2013

[90] Les Echos 27 December 2010. This information was not disclosed by Prefon to the participants.
[91] ARCAF www.EpargneRetraite.org , 2013

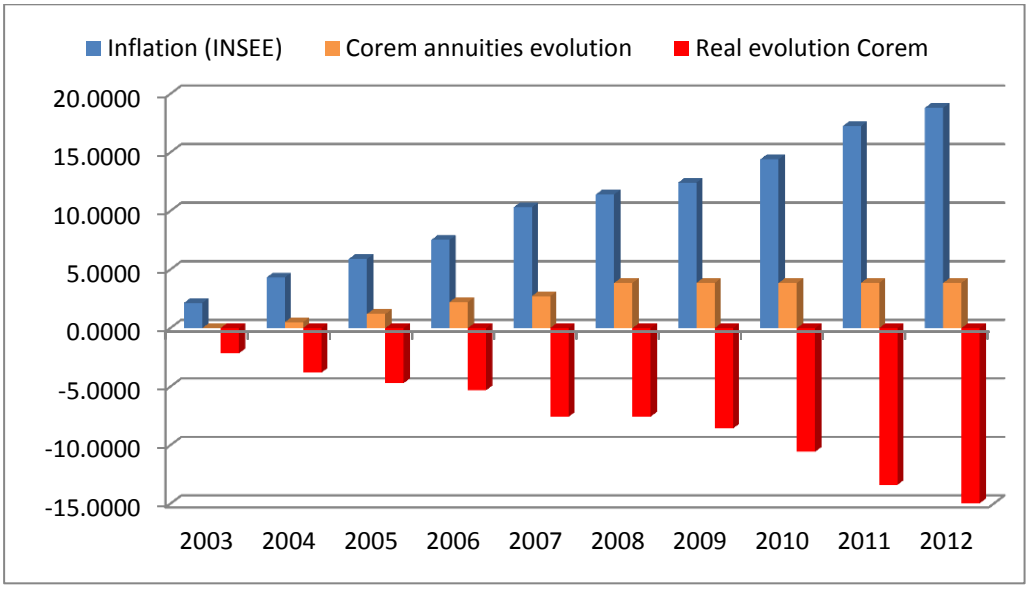
It is difficult to compute the evolution of the Prefon annuities paid after tax, as they are taxed at the marginal income tax rate on pensions and salaries, and as contributions have been deducted from taxable income for income tax purposes (but not for social levies).

Corem

Corem publishes the annual return on its investments, but also does not specify if these are gross or net of fees. The accounting return was 0.49% in 2011, down from 5.18% in 2010. However, the accounting return does not take into account the changes in the market value of assets. In addition, all the investment return is also set aside in order to replenish reserves. It is therefore impossible to compute a collective real rate of return.

The deferred annuity mechanisms of Corem are similar to those of Prefon, with the same difficulties in estimating the real return for the pension saver. Therefore, we also use here the proxy return indicator computed by ARCAF. The Corem is in deficit, its recovery plan is to maintain the nominal - not real - value of annuities served. As a result, the annuities served by CREF have lost more 15 % of their real value before tax (purchasing power) over the last 11 years (see Chart 7). These figures are before tax. This key performance information is not disclosed to new participants.

Chart 7. Corem Real Value, compounded evolution in %



Source: ARCAF 2013

Overall, EuroFinUse estimates the last ten years (2002-2012) loss of purchasing power of participants to French Public Employee Pension Schemes at minus 12.9 % (yearly **-1.2 %**) , as the weighted average based on the relative asset portfolio size of Prefon and of Corem.

CRH

CRH does not disclose any annual report and financial data publicly. Even its pre-contractual publications do not disclose past performance. Based on the on-going restructuring, the real returns of this plan are probably low and below inflation.

Article 83

There are no consolidated data available on the performance of Article 83 plans. As these plans are predominantly invested in unit-linked life insurance contracts, we can expect their performance to be consistent with these savings vehicles.

Article 39

There no data available on the consolidated performance of Article 39 plans. Because they normally guarantee a percentage of the last salary and the company supports all their costs, such information is not relevant for the customer.

Defined Contribution (DC) corporate plans

The French trade association AFG with help from Europerformance, collects the nominal returns of French DC corporate plans[92], see Table 26.

We did benchmark the bond investment returns against those of the most closely corresponding capital market[93]. On average, they underperform the bond market by more than 61 % over the last ten years: they returned 18.9% on a nominal basis while the bond market returned 55.3%. Already, overall a majority of general-purpose funds underperform their market benchmarks, in particular over the long term. This is especially true for bond funds[94].

[92] Methodology eliminates extreme reported performances and includes the "survivor bias" as funds closed or merged during the period measured are of course excluded : http://www.afg.asso.fr/images/stories/afg/offre/epargne-salariale/performances/methodologie_indices_fcpe.pdf

[93] FTSE Euro Government bond index

[94] See Table 10, and example for The Case for indexing: European- and offshore- domiciled funds, Vanguard, April 2012: only 11% of bond funds outperformed their benchmark over the last ten years ended 31 December 2011.

Another key reason for this dramatic under performance is the particularly heavy weight of commissions and fees on corporate plans funds.

Instead of using the available general purpose investment funds e – like the US DC plans do - the managers of French DC plans (PEE and PERCO) have created in addition their own specific and dedicated investment funds. Therefore we suspect that the dismal French DC plan bond returns are further explained by the recourse to custom-made specific fund structures, the most popular being named Fonds Commun de Placement d'Entreprise (FCPE). This adds more than 2,000 "FCPE" funds to the French retail market of funds, which is already more than supplied by about 7,000 general-purpose French-domiciled funds (not counting UCITs domiciled in other EU Member States and distributed in France). These funds are on average much smaller than general-purpose funds, therefore lacking economies of scale, adding to the already very large number of open-ended retail funds in France, with no benefits to pension savers.

Table 26. French corporate savings and pension plans. Average ten year returns of investment options (funds) 2001-2011

Fund ("FCPE") category	**Equity**	**Equity Euro**	**Equity Intl**	**Equity France**	**Diversified**	**Bonds**
10Y Nominal return	-8,8%	-10,5%	-6,7%	-10,1%	14,0%	18,9%
Yearly average	**-0,8%**	**-1,0%**	**-0,7%**	**-1,0%**	**1,3%**	**1,7%**
10Y Real return	-23,9%	-25,4%	-22,2%	-25,0%	-4,9%	-0,9%
Yearly average	**-2,2%**	**-2,3%**	**-2,0%**	**-2,3%**	**-0,5%**	**-0,1%**

Source: EuroFinUse and AFG/Europerformance

Over the last ten years to 2011, all equity fund categories suffered largely negative nominal returns. And none of the fund categories outperformed inflation, therefore they all destroyed the real value of savings, although only slightly for bond funds. But, as of the end of 2011, out of a total of € 53.2 billion of assets invested in corporate plans (excluding company stock), € 45 billion were invested in predominantly equity funds, i.e. 85%. Therefore the share of bond funds in total corporate plans assets is small. Taking into account that all equity fund categories yielded a negative annual return lower than -2%, it is then realistic to **estimate an average real return of about – 2% before tax per annum for corporate savings and pension funds in France**. 2012 has been a better year for equity markets, but that does not

change the conclusion, as 2001 – also not taken into account in these stats - was on the contrary a very bad year.

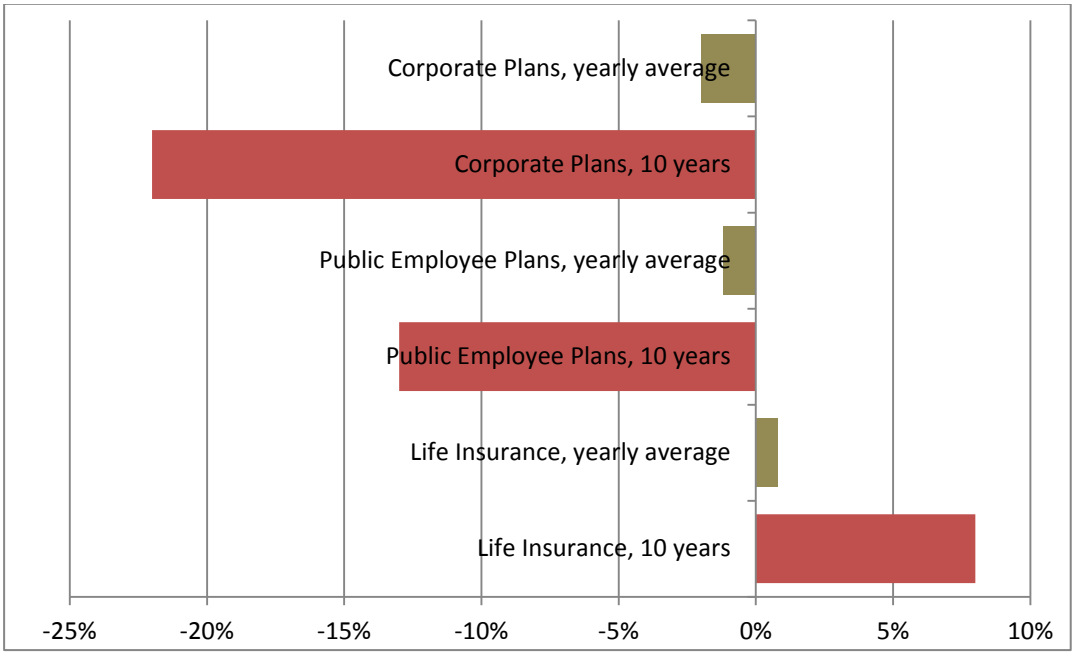
Conclusion

In reviewing our analysis we find that the annual real returns before tax on French guaranteed and unit-linked life insurance plans between 2002 and 2011 is + 1.90% and minus 1.40% respectively, after all charges. The bulk of private pension savings is within capital guaranteed life plans, which by regulation and prudence are mostly invested in debt instruments. With government bond yields at historically low levels the real returns on guaranteed plans have turned negative in 2011, and are likely to remain low with a high risk of becoming negative if the real return on government bonds declines further.

France's taxation system on private pension plans is very complex, its impact on real returns is high and increasing, as tax is levied on the nominal and not real returns. This reduces our respective annualised life insurance real returns after tax to 1.21% and minus 2.35%. In 2011, the incidence of taxation turned a small positive real return on guaranteed life plans into a negative return, as the effective tax rate climbed to 147% of the real return in 2011.

Overall, as Chart 8 shows, **life insurance was the only pension product category (but fortunately the predominant one by far) to provide a positive real return to French pension savers**. Public employee annuities and corporate savings and pension plans destroyed an important part of the value of pension savings over the last ten years (minus 13 % and minus 22 % respectively). Unfortunately, in 2011, French life insurance real returns became negative for the first time, raising concern about the outlook for the upcoming years with persistent inflation, low interest rates and increased taxation on nominal income and gains.

Chart 8. French Pension Savings Real Returns 2001-2011[95]



Source: EuroFinUse Research

[95] Life insurance: real after tax return; Public employee plans:real evolution of annuities' purchasing power 2002-2012 before tax; Corporate plans:real before tax return

Spain

Introduction

Household savings, through property and other forms of direct investment, have always been a significant feature of the Spanish economy. Historically, citizens in the absence of a comprehensive welfare system have had to build capital to provide for major life events such as retirement. The recent development of Spain's welfare system and its capacity to offer comprehensive care has not blunted the Spanish citizen's appetite for saving. According to the Bank of Spain (2011), the savings rate has risen strongly since the beginning of the crisis in 2007, due to increasing expectations of unemployment and hard times. As of the second half of 2012, the household savings rate was 12.1%.

In 2011, financial assets owned by Spanish households amounted up to € 1,719,156 million. Table 27 shows that households invested in a wide range of financial assets.

Table 27. Financial Savings of Spanish Households (non-real estate) 2011

	% of total savings	% Δ 2011/2010
Bank Deposits	49.7	+2.1
Collective Investments (funds and investment companies)	6.9	-2.8
Insurance	9.6	+6.7
Pension Funds	5.4	+1.9
Direct Investment	23.4	-6.8
Credits	1.5	0.0
Other	3.5	+6.1
TOTAL	**100**	

Source: 2011 Report on Insurances and Pension Funds, Directorate-General of Insurances and Pension Funds, Spanish Ministry of Economy and Competitiveness

The market for professional and individual-based pension schemes has only been recently established in Spain. The total capital invested in pension funds for the year 2011 was €83,954 million, representing the interests of 10,692,746 members.

Pension Vehicles

Pension schemes

When speaking of private pension provision in Spain, we should make a clear distinction between retirement plans and pension plans. Pension plans are

complementary to and perfectly aligned with the public pensions system (heavily promoted by Spanish public administration through generous tax benefits). Retirement plans are products that stem from the initiative of Spanish financial institutions for retirement saving purposes.

Retirement plans cater for people with low income levels. They are flexible as they allow savers to withdraw funds in times of hardship, but at the expense of high withdrawal fees. Pension plan savers cannot drawdown on their funds until retirement, except under very limited circumstances – defined by Spanish Pension Plans Law[96] – such as severeillness or long-term unemployment[97]. Consequently, retirement plans and pension plans have different degrees of liquidity, risk profile and tax treatment.

Table 28. Private pension providers by market share in %

1.	Pension fund management firms 'Gestoras'	32.2
2.	Savings banks	20.8
3.	Banks	13.4
4.	Insurance companies	10.2
5.	Other	23.3

Source: Ministry of Economy and Competitiveness

Table 28 lists the leading providers of private pension plans by market share. The split by type[98] is 48% Occupational, 45% Individual and 7% Associational[99]. Of the Occupational plans, 70% are DC (defined contribution), 28.7% DB (defiend benefits) and 1.3% mixed. The composition of Associational schemes is 66.4% DC, 33.2% DB and 0.4% mixed[100].

The Spanish Association for Collective Investments and Pension Funds (INVERCO) established a classification system for individual pension funds by liquidity and risk. Table 29 describes the categories and allocation as a percentage of private pensions.

[96] Royal Decrees 1/2002 and 304/2004
[97] Royal Decree 1129/2009
[98] Ibid
[99] According to Spanish classification, those pension funds promoted by associations or workers' unions
[100] Ministry of Economy and Competitiveness

Table 29. Pension fund categories and allocation

Category	Allocation
Non-mandatory 2nd Pillar Pension Funds for employees	39.94%
Non-mandatory 2nd Pillar Pension Fund from associations or worker unions to members	1.01%
3rd Pillar Pension Funds – Fixed Return, short term – *no variable return assets or derivatives whose underlying asset is not a fixed return asset in portfolio, average asset holding less than 2 years*	11.54%
3rd Pillar Pension Funds – Fixed Return, long term – *no variable return assets or derivatives whose underlying asset is not a fixed return asset in portfolio, average asset holding more than 2 years*	6.51%
3rd Pillar Pension Funds – Fixed Return, mixed – *less than 30% of portfolio composed of variable return assets*	13.80%
3rd Pillar Pension Funds – Variable Return, mixed – *between 30% and 75% of portfolio composed of variable return assets*	4.89%
3rd Pillar Pension Funds – Variable Return – *over 75% of total portfolio invested in variable return assets*	5.26%
3rd Pillar Pension Funds – Guaranteed Return Pension Funds – *those funds that count with the guarantee of a certain level of returns provided by a third party*	17.04%

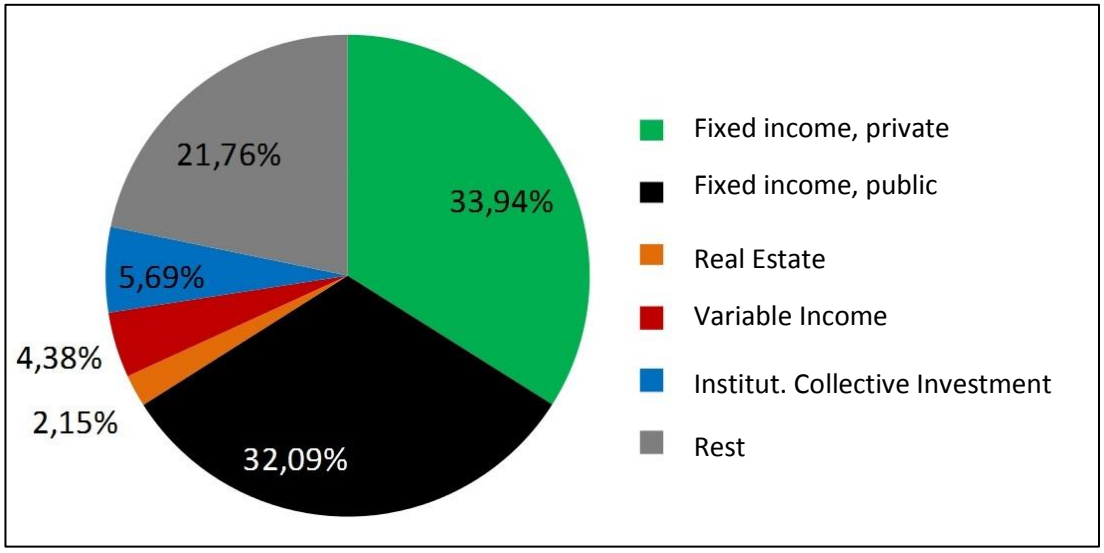
Source: INVERCO

Life Insurance

Life insurance policies are a quite popular savings product in Spain. According to UNESPA, the Spanish Insurance Industry Association, Spanish insurance companies manage €189 billion in savings. Out of that figure, 82.3% (€155 billion) corresponds to savings through insurance contracts and 17.7% corresponds to pension funds (as of 30 September 2012)[101]. Life insurance capital is mostly invested in debt securities, as illustrated in the Chart 9.

[101] http://www.unespa.es/adjuntos/fichero_3495_20121108.pdf

Chart 9. Life insurance asset allocation, Q4 2011[102]



Source: Directorate-General of Insurance and Pension Funds – 2011 Report on Insurances and Pension Funds, page 48

According to the Directorate-General of Insurances and Pension Funds (2011), the distribution of life insurance products is primarily through bank branches (72.99%) and exclusive agents (13.66%).

PPA, PIAS and PPSE

PPA (Insured Prevision Plans, "Planes de Prevision Asegurados") and PIAS (Individual Systematic Savings Plans, "Planes Individuales de Ahorro Sistematico") are an important category of financial products used for capital accumulation purposes. They are commonly considered as a type of life insurance. PPA and PIAS are individual long term savings products, which are constituted by periodic payments in order to accumulate capital and obtain a lifetime annuity from a moment the investor reaches a certain age (agreed in the contract) for the rest of the life of the investor. More specifically, PPA guarantee during the whole period of constitution of the capital a certain level of returns calculated through actuary methods. Unlike pension plans and PPA, which are not redeemable before retirement, it is possible to receive advanced annuity payment from PIAS.

As of 2012, PIAS amounted up to €3,086 million in capital with over 700,000 investors (a 10.2% increase over the previous year) and PPAs €10,222.05 million with 1,018,038 investors:

[102] Rest = deposits, structured products, derivatives, credits, cash

A third vehicle is the PPSE (Social Entrepreneurial Prevision Plans, "*Planes de Prevision Social Empresarial*")[103]. PPSE are very similar to occupational pension plans, with tax treatment similar to a PSE and other pension funds. However, they are much less popular than the two previous categories.

Charges

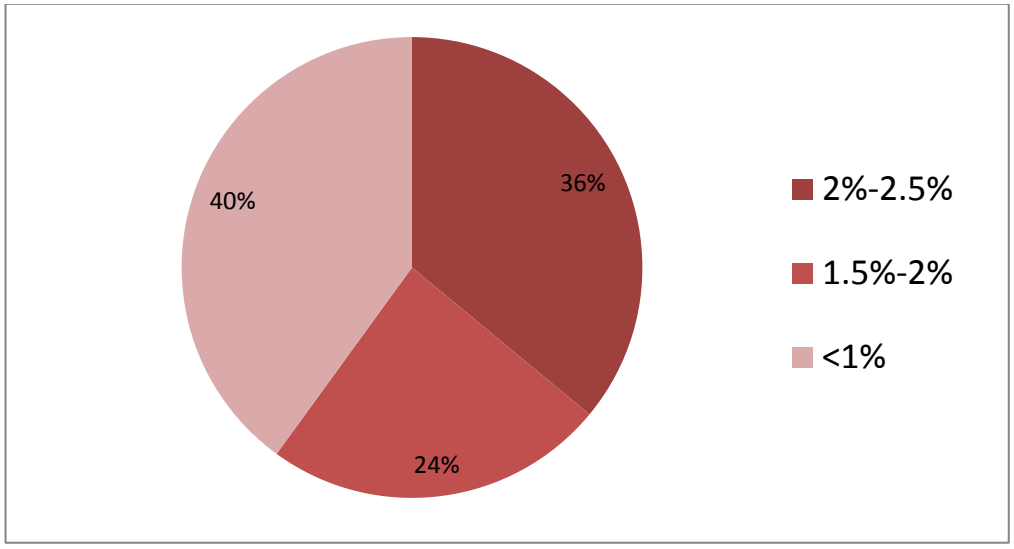
Public disclosure of charges related to private pension funds is poor. However, savers do benefit from some protection under the law, which limits management fees – but no mention on limits to commissions, which are usually paid out of management fees. Royal Decree 304/2004 of Pension Plans and Funds[104], Article 84 establishes specific limits on chargeable fees for pension plan subscribers for depository and management of the pension fund. The law also allows for variable fees based on performance. In all cases, providers shall respect the following limits:

- Pension fund managers are able to charge a 2% maximum level of fees on the annual value of the managed accounts. This limit should be respected both for the pension fund as a whole as well as for the pension plans that compose the pension funds, and individually for each pension fund subscriber.
- Depositories of pension funds shall charge a maximum of 0.5% of the value of the accounts. This limit shall be respected for each individual pension plan as well as for the pension fund as a whole, and individually for each pension fund subscriber.

As regards distribution fees of pension funds, Aguirreamalloa, Corres and Fernández (2012) state that inducements (commissions paid from providers to financial advisors) are often presented to consumers as ordinary fees (such as deposit, management, subscription and reimbursement commissions). According to their research, the salespersons (financial advisors) of pension products earn more than the portfolio managers do. Commission rates varied between less than one to two and half percent (see chart 10).

[103] According to according to Article 51.4 of the Income Tax Law 35/2006 and Royal Decree 1588/1999 (modified by the Royal Decree 1684/2007)
[104] http://www.boe.es/boe/dias/2004/02/25/pdfs/A08859-08909.pdf

Chart 10. Commissions charged to pension fund participants in 2007



Source: Aguirreamalloa, J; Corres, L. and Fernández, P. – Pension Funds Returns in Spain 2001-2011, IESE Research document, February 2012

Tables 30 and 31 demonstrate the evolution of management and depository fees for pension funds over the last few years. There is a clear difference in the magnitude of management fees charged on retail (3rd Pillar) schemes over institutional (2nd Pillar) schemes, in the order of nearly seven to one.

Table 30. Management Charges

	2007	2008	2009	2010	2011
Second Pillar	0.16%	0.18%	0.16%	0.17%	0.21%
Third Pillar	1.53%	1.65%	1.41%	1.46%	1.52%

Source: Aguirreamalloa, Corres and Hernandez (2011)

This is repeated to a greater extend in depository fees, here the order of magnitude between retail and institutional is nearly 9 to 1. These differences in fees between retail and institutional accounts, illustrate the power of informed bargaining by institutional investors on the pricing of product providers and the high commissions charged by retail distributors.

Table 31. Depository Charges

	2007	2008	2009	2010	2011
Second Pillar	0.04%	0.03%	0.03%	0.03%	0.03%
Third Pillar	0.32%	0.23%	0.22%	0.22%	0.20%

Source: Aguirreamalloa, Corres and Hernandez (2011)

According to Aguirreamalloa, Corres and Fernández (2012), managers do not report to pension fund participants about their portfolio management policy. They are critical of the quality of information that pension funds provide to participants. They consider that it is insufficient to permit informed judgement on whether portfolio manager activity created any value for the pension saver. Aguirreamalloa, Corres and Fernández believe that pension funds have a duty to inform the participants of their activities, including the fees they charge, information, which is not generally available. Theyalso consider it beneficial if pension funds informed their clients on the returns that would have been obtained before portfolio manager activity, to assess the added value of the manager. Aguirreamalloa, Corres and Fernández conclude that most of the activity of pension managers destroys rather than creates value.

Additionally, they are also critical of the secondary effects of the beneficial tax structure on personal pension plans. In their view, the tax structure attracts funds to opaque money losing schemes. These plans offer no ultimate advantage to savers, as the associated costs of explicit and hidden commissions, custody and transaction fees outweigh the tax benefits.

Taxation

Pension savers receive favourable tax treatment when they contribute to pension saving products:

Retirement Plans

There are no tax benefits for contributions to retirement plans. At the end of the plan, the investment return will integrate the year's income tax declaration as capital gains.

Life insurance products

Tax benefits for contributions to life insurance products generally ended in 1999. The returns of the accumulated capital will be taxed as with any other financial capital gains. If the policyholder dies before maturity of the policy, his estate will pay usual taxes on inheritance on the received capital. In some circumstances, it is possible to get tax relief on life insurance policies[105].

[105] For instance, if its purchase was tied to the purchase of a mortgage loan

PPAs (Insured Provision Plans, "*Planes de Prevision Asegurados*"[106])

These plans are exempt from capital gains tax and they receive increasingly favourable tax treatment (reductions in the tax base) according to the age of the saver at the beginning of pay-out, see Table 32.

Table 32. Tax base reduction on PPAs

Beneficiary	Tax Base Reduction
<50 years	Up to either €10,000 or 30% of savers' income (the smallest amount)
>50 years	Up to either €12,000 or 50% of savers' income (the smallest amount)
Disabled (over 65% disability)	Up to €24,250E (maximum €10,000 for every relative making contribution to disabled beneficiary)
Spouse (up to 8,000 annual income)	Up to €2,000

Source: Spanish Ministry for Taxes

PIAS (Individual Systematic Savings Plans, "*Planes Individuales de Ahorro Sistematico*")

These have favourable tax treatment under Law 35/2006 for Income Tax. There is a maximum annual deductible limit of €8,000 per year on PIAS. The maximum amount that an investor can accumulate in this plan is €240,000. If these requirements are met and the first contribution to the PIAS was more than 10 years ago, the saver will not pay tax on investment gains. There is no tax deduction for contributions to this savings product.

On the completion of the investment period in a pension plan, the saver has three options on the use of the accumulated wealth[107]:

- Take a lump sum; before 2007, a saver taking a lump sum payment would benefit from an additional 40% reduction in tax base for the capital. This dramatic increase on the marginal tax rate, even for people on historically low incomes, has effectively discouraged savers from taking lump sum payments.

[106] Royal Decree 439/2007 established tax benefits for PPAs
http://www.boe.es/buscar/doc.php?id=BOE-A-2007-6820
[107] The end of the investment period will come with retirement age (pension plans, retirement plans) or whenever the saver decides to end the plan (life insurance, PPA, PIAS, PPSE)

- Purchase of an annuity; the purchase of an annuity is not compulsory. The income is subject to tax, but normally at a much lower rate than through receiving a lump sum payment. The annuity income will be added to any other source of income of the pensioner (public pension, dividends, coupons, etc.). However, there is an extra benefit for annuities derived from insurance-based products (life insurance, PIAS, PPAs, PPSE), which depends on the age at which the saver begins to draw down on the investment[108], see Table 33.

Table 33. Tax base on insurance annuities

Age of the beneficiary when annuities start	Percentage of the annuity for which to pay income tax
<40 years	40%
40 to 49 years	35%
50 to 59 years	28%
60 to 65 years	24%
66 to 69 years	20%
Over 70 years	8%

Source: Spanish Ministry for Taxes

- Mixed solution, a certain amount is received by a lump sum and the other part is constituted through an annuity. Money received is treated as income for the purposes of taxation.

Pension Plans

Private pension funds' investment is the most popular specific pension savings instrument due to the large tax benefits for the income tax declaration (Laws 46/2002 and 62/2003); such tax benefits are the main reason why people contribute to private pension funds. Indeed, many contributions to private pension plans are made during the period when a tax declaration has to be presented (and therefore taxpayers can contribute to their private pensions' pot if they intend to pay less income tax).

[108] http://www.dgsfp.meh.es/gaspar/PPOtrosContratosPIASPrint.pdf

Every taxpayer younger than 52 years of age can deduct, from their taxable income, up to €8,000 per year for contributions to pension plans. Taxpayers over the age of 52, have a cumulative additional contribution allowance of €1,250 per year. This tops out after 13 years to produce a maximum ceiling on deductible contributions of €24,250 per year.

Fund participants in Spain will have to pay income tax when they retire not only on capital but also on the generated interests; therefore, we can say that the tax deduction is not indeed a tax benefit, but a tax payment deferral.

Every taxpayer younger than 52 years old can have tax deductions up to 8,000 Euro;

For taxpayers older than 52 they can add to that limit 1,250 Euro for additional year, up to a total of 24,250 Euro per year.

The amount of taxes to be paid upon retirement depends on whether the investor prefers to withdraw the lump sum or receive monthly payments until the moment of their death. In this case, annuities will receive the same tax treatment as salary income. This implies that the amount of taxes first deducted and later paid by the fund participant will generally not be the same; the net tax effect will vary from case to case.

Table 34. Income Tax Thresholds

Annual Income	Marginal Tax Rate
< 17,707€	24,75%
17.707 to 33.007€	30%
33.007 to 53.407€	40%
53.407 to 120.000€	45%
120.000 to 175.000€	49%
175.000 to 300.000€	52%[109]

Source: Royal Decree-Law 20/2011 of Urgent Budgetary Measures, 30 December 2011

For example, assuming capital returns of 3%, the capital generated by 1000€ after 15 years would be 1557€, e.g. 557€ of interests. The tax on those interests would be 105.83€ (assuming returns taxed at 19%).

[109] According to last revision of the tax system by Spanish Government, December 2011

Table 35. Effects on Taxes on Savings Products

Net Marginal Tax Effect (for every invested 1000€)	Relative effect of taxes on saving products
-105,83€	-6.8%[110] (for 15 years, annually 1.13%[111])

Source: EuroFinUse Research

It is possible for subscribers of Spanish pension funds to decide whether by the age they retire they receive the lump sum or monthly annuities. Therefore, we will assume that the future pensioner is choosing to receive the lump sum by the end of the pension plan. In this case, if the first contribution to the pensions plan was done more than 2 years ago, he will benefit of an extra taxable base reduction of 40%.

Table 36. Spanish Income Tax Formula

LIQUIDATIVE BASE = TAX BASE – BASE REDUCTIONS (e.g. for contribution to pensions fund)
INTEGER QUOTA = LIQUIDATIVE BASE * TAX RATE (by thresholds)
LIQUID QUOTA= INTEGER QUOTA – DEDUCTIONS
LIQUID QUOTA- OTHER DEDUCTIONS= FINAL TAX TO PAY

Source: Law 35/2006 for Income Tax

Retail investors care about final returns of pension saving products, e.g. the returns of investment products after inflation and taxes and the amount they will gain. It is only possible to know the actual returns at the final stage of the pension plan: it is the moment when the net tax effect can be calculated, by actualizing and deducing the past tax deductions to the paid taxes. Therefore, investment decisions between pension funds and alternative investment products for retirement are generally made without the required information on the final returns delivered by each of the options.

However, it is possible to estimate the real profitability of private pension plans versus alternative investment products through a practical example:

According to the Spanish income tax formula, for every 1000 Euro invested in a pension plan by an investor over 50 years old, the investor would get (assuming no

[110] 105.83 / 1557 e.g., total tax to pay versus capital plus interests
[111] $\sqrt[15]{6.8\%}$ = 1.13%

additional tax reductions at a later stage of the tax calculation) a reduction for investment on private pensions plan of the 50% of 1000€, e.g. 500€.

Assuming an inflation rate of 2%, we can actualize the tax benefits obtained at the moment where

Table 37. Net nominal and relative tax effect on returns

Annual Income	Marginal Tax Rate	Tax Savings	Actualised Tax Savings after 15yr (inflation of 2%)[112]	Tax to pay (taxable base = 694.2€)	Net Marginal Tax Effect (for every invested 1000€)	Relative effect of taxes on pension plans
< €17,707	24,75%	123.75 €	167 €	171.80 €	-5 €	-0.50%
€17,707 to €33,007	30%	150 €	202.50 €	208.30 €	-6 €	-0.60%
€33.007 to €53.407	40%	200 €	270 €	277.70 €	-8 €	-0.70%
€53.407 to €120.000	45%	225 €	303.75 €	312.40 €	-9 €	-0.80%
€120.000 to €175.000	49%	245 €	330.75 €	340.20 €	-9 €	-0.90%
€175.000 to €300.000	52%	260 €	351 €	360.90 €	-10 €	-1%

Source: EuroFinUse Research

As previously said, for a given return rate of 3%, the capital generated by the 1000€ after 15 years would be 1557€, e.g., 557€ of interests. There is an extra tax benefit through a taxable base reduction by 40% if the capital is recovered as a lump sum[113] e.g. 694.2€. In turn, the person should pay taxes (depending on its situation of the tax scale) when withdrawing the money from the pensions plan.

In order to obtain the marginal net effect, we will deduct the actualized tax benefits to the tax paid when recovering the capital through a lump sum:

[112] $(1 + 0.02)^{15}$ x Tax Savings

[113] This extra tax bonus disappeared as from 1 January 2007. However, it will be maintained for any capital contributions to the pension fund made before 2007. We will consider it as still in place.

As shown in Table 37 there is a negative -and increasingly bigger- fiscal incentive to invest in pension funds e.g. the disincentive is greater the higher the income of the investor is when finalizing the pension plan.

It would be possible for the investor to somehow "escape" from this burdensome taxation by receiving the pay-out through a lifetime annuity and not lump sum; although it would not be possible to benefit of the 40% reduction in the taxable base. Lifetime annuities would be added to any other sources of income (dividends, interests, coupons) and pay tax according to the tax threshold as presented above.

We should also bear in mind that taxes to pay for investors could be potentially even higher, as:

- Due to this big capital accumulation, it is very likely that a higher tax threshold is charged when withdrawing the capital from the pension fund as opposed to investing in the pension funds (e.g. higher tax threshold).

- A net returns rate of 1% has been assumed (3% investment returns and 2% inflation). This is not a very realistic assumption, as Spanish pension funds have proved not to succeed in beating inflation rates and protecting the real value of the money of investors.

Pension Returns

Private pension products are relatively young in Spain. The obligation to publish the information of private pension fund returns began with the publication of the Pension Plans and Funds Regulation, approved by the Royal Decree 1684/2007, which transposed the IORP Directive into Spanish law.

According to INVERCO[114], the average annual returns of Spanish pension funds (by category) were as displayed in Table 38. EuroFinUse could not find any consolidated data on the returns of other private pension savings products such as life insurance.

[114] INVERCO, Asociación de Instituciones de Inversión Colectiva y Fondos de Pensiones http://www.inverco.es/novedadesEstFPensT.do?id=1206_Junio%202012

Table 38. Returns on Spanish pension vehicle by category [%]

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2002 - 2011	2002 -2011 avge.
Non-mandatory 2nd Pillar Pension Fund from associations or worker unions to members											
-3.72	6.73	5.52	8.39	5.36	2.44	-10.50	9.28	2.01	0.00	26.56	2.38
Non-mandatory 2nd Pillar Pension Funds from firms to employees											
-3.84	5.61	6.56	9.49	8.16	3.05	-11.10	9.23	0.95	-1.11	28.18	2.51
3rd Pillar Pension Funds – Fixed returns (short term)											
3.83	1.95	1.77	1.04	1.26	1.94	2.13	1.80	-0.64	1.38	17.67	1.64
3rd Pillar Pension Funds – Fixed returns (long term)											
-0.73	2.62	1.92	1.78	0.34	0.75	2.03	3.96	-0.47	1.39	6.78	0.65
3rd Pillar Pension Funds – Fixed returns (mixed)											
-5.15	3.92	3.15	5.33	3.58	1.32	-8.79	6.05	-1.54	-2.21	4.67	0.46
3rd Pillar Pension Funds – Variable Returns - mixed											
-17.20	8.70	5.60	12.16	10.09	2.96	-23.80	14.21	-0.82	-7.01	-8.60	-0.89
3rd Pillar Pension Funds – Variable Returns											
-30.10	16.18	8.88	18.73	18.30	3.93	-38.40	27.20	1.63	-10.40	-7.90	-0.82
3rd Pillar Pension Funds – Guaranteed Capital Pension Funds (either fixed or variable returns)											
-	-	4.66	4.64	1.44	1.48	-0.68	3.77	-3.96	1.15	20.89	2.40
WEIGHTED AVERAGED ANNUAL RETURNS, BEFORE INFLATION AND TAXES											
-4.40	5.42	4.46	7.22%	5.23	2.08	-8.07	7.70	-0.13	-0.76	18.98	1.75
Inflation – CPI Spain, Eurostat											
3.94	2.65	3.22	3.66	2.71	4.15	1.49	0.84	2.82	2.34	31.51	2.77
ANNUAL RETURNS, AFTER INFLATION AND BEFORE TAXES											
-8.34	2.77	1.24	3.56	2.52	-2.07	-9.56	6.86	-2.95	-3.10	-9.88	**-1.04**
ANNUAL RETURNS, AFTER INFLATION AND BEFORE TAXES (see Table36)											
-8.84	2.27	0.74	3.06	2.02	-2.57	-10.06	6.36	-3.45	-3.60	-10.40	**-1.54**

Source: INVERCO and EuroFinuse Research

Our analysis identifies that the composite real annualised tax return for Spanish pension funds from 2002 to 2011 was, over the ten years, -9.88% before tax and -10.4% after tax). Aguirreamalloa, Corres and Fernández (2012) consider that, besides high fees the other main cause for the poor returns of Spanish pension funds was inadequate portfolio composition. The OECD data confirms that Spanish funds have increasingly weighted their portfolios towards debt assets. While this has been

a mixed benefit during the current financial crisis, in the long term the weighting towards debt securities will be a substantial impediment to the ability of these funds to generate real returns for their savers.

This trend towards greater debt weighting is mostly noticeable in the life insurance sector. There is anecdotal evidence to suggest that positioning ahead of the pending Solvency II Directive is the factor driving this trend. Solvency II has a low tolerance to volatile assets, such as unlisted or private equity (for such assets, even lower than for other equities). The draft Directive obliges insurance companies to conserve shareholder capital by investing in supposedly low volatility debt instruments (such as sovereign debt), which historically have relatively low rates of real return in comparison to real assets.

With respect to legislation governing the asset allocation of pension funds, the Royal Decree 304/2004, Articles 69 to 77 establish the requirements for asset allocation of pension funds in Spain. The Decree is prescriptive in that it details where portfolio managers can invest pension assets. Article 69.5 established that pension fund portfolios should be mostly invested in securities and financial instruments traded in regulated markets. Those securities and financial instruments traded in unregulated markets should have a relative low weight in the pension fund's portfolio. Article 70 comprises an exhaustive list of eligible investment instruments. Article 72 establishes very detailed requirements on portfolio allocation on the different types of assets for pension funds, according to investment coherence and diversification criteria. Article 73 establishes liquidity requirements, and Article 75 establishes investment valuation criteria.

Conclusion

The real returns of pension plans in Spain for the last 10 years have been globally negative.

Disclosure to individual savers of pension products is poor, according to research by Aguirreamalloa, Corres and Fernández, though fees are capped.

The taxation regime in Spain encourages personal pension provision, with tax deductibility on contributions and tax exemption through investment. Pension funds do not pay tax on capital gains or dividends received, nor corporation tax or VAT on management and depository fees. **The tax burden falls on the saver on pay-out**, usually having to pay much higher income tax marginal rates if capital is recovered through a lump sum creating an incentive for converting capital into an annuity and therefore taxes on a deferred basis.

Annex 2:
Definitions, Objectives, Scope & Methodology

The objective of this study is to validate, refine, assess and expand the OECD findings of the 'paltry' real returns on pension savings over the last decade[115].

The term 'real' in this context is the return after inflation. Through the collection of publically available and subscription-based information, we will seek to compute and decompose these returns and to attempt to identify the key factors explaining the concerning performance.

In its first phase (2012), the scope of this research project establishes a robust methodology for identifying the real returns of private pensions in three EU Member States: Denmark (which ranks well in the OECD study), France (not covered by the OECD study, which is one of its main weaknesses) and Spain. Like the OECD, we define 'private pensions' as non-mandatory schemes that are either taken out by the individual or facilitated by the employer or State and managed by a financial intermediary. In all cases, the individual and sometimes the employer, as a benefit of employment, fund these schemes. We will look as well at financial instruments other than pension funds that are used for private retirement provision (the OECD only looks at pension funds). In addition, as regards pension funds *stricto sensu*, we include pension funds that are sponsored by employers but where the individual participant is the main decision-maker on the contribution level and on the investment choices (DC plans that are sometimes called "*instividual*" in the US). The study examines the net real returns (returns on investment after fees, commissions, inflation and - to the extent possible - taxes) individuals receive through these pension products. The research concentrates on the most widely used private pension products in each country and attempts to assess the overall average real returns.

This research project draws on the methodology of an original case study of France developed by EuroFinUse, and presented in the annex of its response to the EC Pensions Green Paper[116]. The submission compared the returns of two French equity index funds, an ETF and a retail fund from 2004 to the end of 2009. The analysis presented the total returns of each fund with parallel changes in the consumer price index. It further decomposed the data to provide returns before and after the impact

[115] As can be seen in page 3, real returns of private pension funds in OECD countries, 5 and 10 years' period

[116] http://www.EuroFinUse.org/fileadmin/user_upload/documents/Position_Papers/Pensions/EuroInvestors_reply_to_the_Green_paper_towards_adequate__sustainable_and_safe_European_pension_systems1289909049.pdf

of taxation. This study expands and builds on the previous study by comparing the real returns of Denmark, France and Spain.

Other factors under analysis will be the access to relevant information, the scope of the OECD definition of a private pension and a discussion on asset mix, inflation protection, insurance guarantees and regulation.

Annex 3:

Disclosure of after tax performance of investment funds in the United States

This is an example of the mandatory after tax returns disclosure of an American investment fund.

In order to calculate the after tax returns it is necessary to take certain assumptions. In the example below, it was assumed that the shareholder was in the highest individual federal marginal income tax bracket at the time of each distribution of income or capital gains or upon redemption. In addition, State and local income taxes are not considered in the calculations. Finally, this does not apply to investors who hold fund shares in a tax deferred account, such as an individual retirement account or a 401(k) plan (US DC Corporate plan). For this reason, a disclaimer is required, stating that actual after-tax returns depend on every taxpayer's tax situation, and that therefore the actual amount of tax to pay will differ from the one in the prospectus of the fund.

Table 39. Example of real after tax returns disclosure of a US-domiciled fund[117]

	1 Year	5 Years	10 Years
Return Before Taxes	11.45%	4.03%	6.72%
Return After Taxes on Distributions	10.47	3.03	5.77
Return After Taxes on Distributions and Sale of Fund Shares	8.61	3.28	5.65
Comparative Benchmarks			
MSCI All Country World Health Care Index (reflects no deduction for fees, expenses, or taxes	8.89%	1.89%	3.28%
S&P Health Care Index (reflects no deduction for fees, expenses, or taxes	12.73	2.81	2.24
Spliced Health Care Index (reflects no deduction for fees or expenses)	8.89	2.6	2.14
Global Health/Biotechnology Gunds Average (reflects no deduction for taxes)	5.54	1.57	2.84

Source: Vanguard

[117] Extracted from the Vanguard Health Care Fund summary prospectus dated 29th May 2012

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