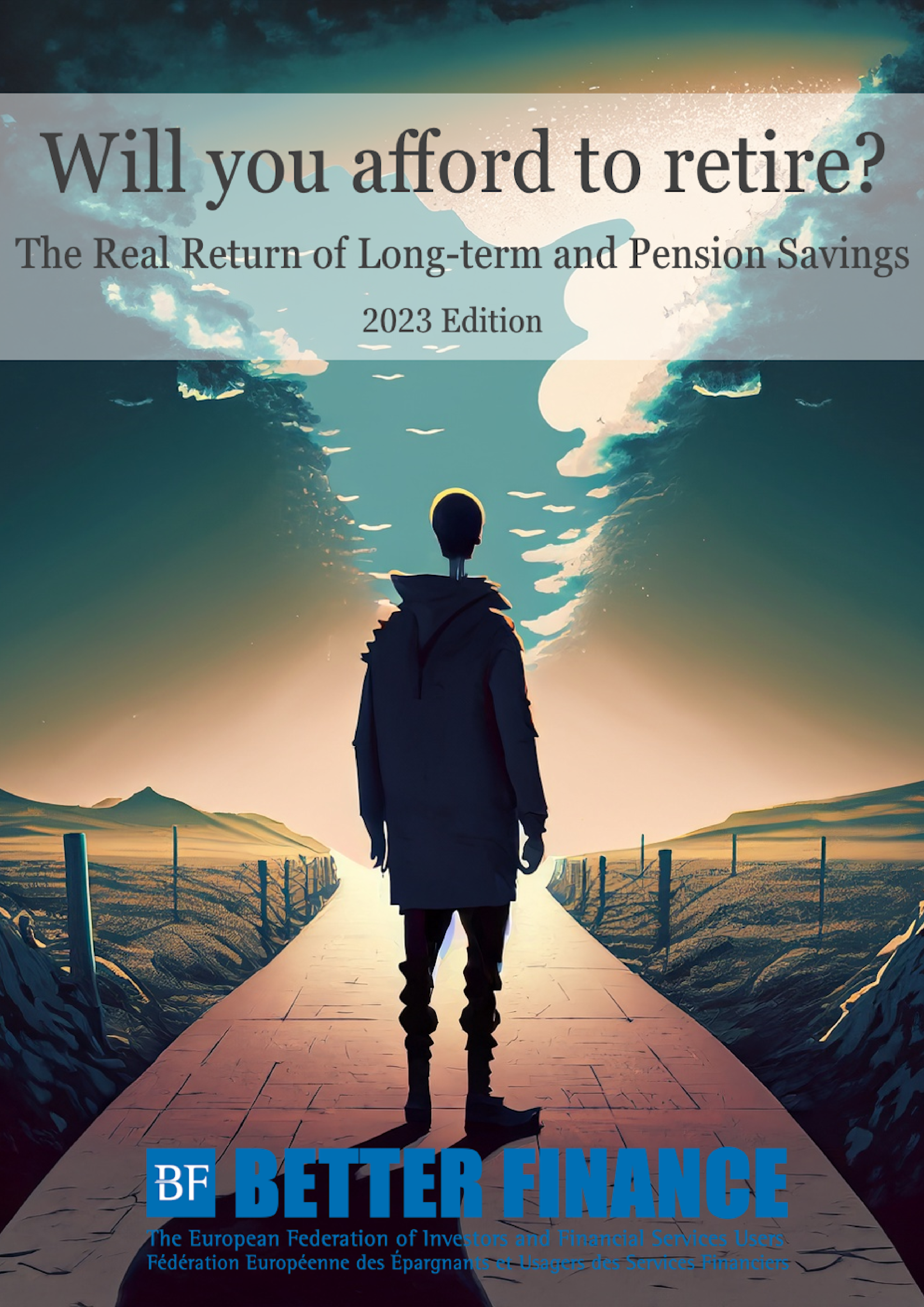
Will you afford to retire?

The Real Return of Long-term and Pension Savings

2023 Edition



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Country Case 5

Denmark

Resumé

Danmark har et stærkt og anerkendt pensionssystem. Formålet med pensionssystemet er først og fremmest at sikre et minimumskrav til og en fastholdelse af levestandarden for ældre medborgere. Systemet består af 3 søjler: de offentlige pensioner (folkepensionen—PAYG), de bidragsbaserede arbejdsmarkedspensioner samt øvrige private pensionsordninger. De 3 søjlers betydning har gradvist ændret sig gennem de seneste 30 år, hvor søjle 2 og 3 det vil sige arbejdsmarkedspensionerne og de private pensionsordninger har fået en stadig større betydning. I dag har ni ud af ti danskere en arbejdsmarkedspension, og hovedparten af arbejdsgiverne har enten via overenskomster eller firmaaftaler forpligtet sig til at indbetale til medarbejdernes pensionsordninger. Det danske system sikrer således den enkelte en rimelig pension på såvel kort som langt sigt, der er meget få økonomisk fattige pensionister og pensionernes dækningsgrader er høj. Danmark står dermed relativt godt nu, hvor de rigtigt store årgange når pensionsalderen.
Den samlede danske pensionsopsparing er da også betydelig og har i flere år udgjort mere end 150 pct. af landets BNP. Den samlede pensionsformue faldt dog mærkbart i løbet af 2022 og det i en situation med høje pensionsindbetalinger. Faldet skyldes de hårde år på de finansielle markeder med store kursfald på aktier og endnu større kursfald på obligationer grundet bl.a. den stigende rente.

Real returns 2022

Industry-wide pension funds: -16.03%

Life Insurance funds: -20.77%

Summary

Denmark has a strong and well-established 3 pillar pension system. The main aim is to ensure a minimum requirement for and maintenance of the standard of living for older citizens. The first pillar—PAYG—still provides the basic income for most elderly, but occupational pensions (pillar II) and other private pension schemes (pillar III) have become increasingly important over the past 30 years. Today, nine out of ten Danes have an occupational pension, and the majority of employers have, either via collective agreements or company agreements, undertaken to pay into the employees' pension schemes. The Danish system thus ensures individuals a reasonable pension in both short and long term, there are very few economically poor pensioners, replacement rates are high and the system is financially viable and public finances satisfy sustainability criteria taking into account an ageing population. Denmark is therefore in a relatively good position and there is no urgent need for reforms.
The total Danish pension savings is therefore also considerable and has for several years accounted for more than 150 per cent of GDP. However, the total pension assets fell noticeably during 2022 despite higher pension contributions. All asset classes suffered losses due to the tough years on the financial markets primarily from the rising interest rate.

Introduction: The Danish pension system

The Danish pension funds administer investments worth more than € 400 billion. The main aim of these investments is to give the pension savers the best possible rate of return. 2022 was challenging and the worst year since the 2008 financial crisis. The insurance and pension sector lost a total of 92-93 billion euro—primarily due to losses on bonds and interest rate derivatives from rising interest rates. The average nominal return of the pensions funds (Industry wide and Company pensions) is -21.5%. The real return is even weaker since inflation pushed losses deeper in the red down to -31.1%. Life Insurance did a little better turning out with -10.73% and in real terms -20,33%. During the first six month of 2023 the insurance and pension sector had a positive return of 12.3 billion euro due to earnings across all active classes including stocks, bonds and interest rate derivatives. The nominal returns for Industry wide and Company Pensions was in average at 2.37% and 3.69% for Life Insurance.

Despite the losses in 2022, the overall return since 2018 is 57 billion euro due to the high returns in 2019–2021.

Especially the Danish ATP suffered and experienced large investment losses in 2022. The real return of ATP, whose investment portfolio consisted mainly of long-term interest-bearing securities, was nearly -38% in 2022. The steep interest rate increased and large stock market declined thus resulted in extensive losses. The crash of ATP stands out and gave birth to lot of debate due to fact being a mandatory pension saving. However, the overall result for the year reflects the fact that the financial losses were greatest at the start of 2022 and that the year ended with positive returns and a positive result for the fourth quarter if viewed independently and ATP's return on 10-year term (2013-2022) is 1,7% per year and 20-year term (2003-2022) is 6,7% per year.

Table DK.1 – Long-term and pension savings vehicles analysed in Denmark

Product	Pillar	Reporting period	
		Earliest data	*Latest data*
Industry-wide pension funds	Occupational (II)	2005	2022
Life Insurance funds	Voluntary (III)	2003	2022

The Danish pension system is in a transition from being largely based on defined-benefit tax financed pensions to a larger role of defined contribution, funded occupational pensions. The latter have been expanded to most of the labour market in the 1990s and will mature in two decades. It is expected that in 2040 the pension payments will correspond to the contributions and we will see the first large cohorts of pensioners who have saved for their pension throughout their working lives. However, the payments from the labour market pension are expected to overtake the national pension as early as 2030.

The arrangement both serves to ensure decent pensions for all pensioners, and pension adequacy in terms of high replacement rates. It is essential to have a robust pension system to ensure the confidence of the financial markets in the long-term sustainability of the economy.

Table DK.2 – Annualised real net returns of Danish long-term and pension savings vehicles (before tax, % of AuM)

	Industry-wide pension funds	Life Insurance funds
Reporting period	2005-2022	2003-2022
1 year (2022)	-16.0%	-20.8%
3 years (2020–2022)	-1.8%	-6.1%
5 years (2018–2022)	1.0%	-2.5%
7 years (2016–2022)	2.3%	-0.6%
10 years (2013–2022)	2.8%	0.0%
Whole period	3.0%	0.1%

Data: Danmarks Nationalbank, Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

The system is financially robust and prepared for an ageing population, which is absolutely essential to ensure confidence of the financial markets in the long-term sustainability of the economy. In international comparisons, the Danish pension system stands out by low poverty rates among the elderly and high replacement rates. The financial viability against the backdrop of large demographic shifts is ensured. This position is reflected by being ranked consistently in the top A-tier in the Melbourne Mercer Global Pension Index 2023 (Mercer & CFA Institute, 2023).

The challenges for the system include, however, how to ensure an incentive structure supporting savings and later retirement. The sustainability of the system depends critically on retirement ages increasing alongside increased longevity of life. The heterogeneity in work career and health has raised debates on more flexible exit routes from the labour market in order to get people to work for a longer time.

Moreover, it remains a challenge that still not all groups are covered by occupational pension arrangements just as the ongoing debate regarding work-contra-leisure requires attention.

Historically, the returns have been high, on average close to a real return of 5% after tax over the past 10-15 years (if we disregard 2022). The pension sector has been able to handle major crises such as the financial crisis, the period with low interest rates and the corona crisis. So although we have periodically seen declines, for example in connection with the corona crisis, the political situation with the trade war between the USA and China, Brexit (and currently with the war in Ukraine, where we do not yet know the effects), even significant losses have proven to be more than compensated. The largest investment losses are typically observed within the market interest-based pension schemes, while the guaranteed pension schemes typically achieved a result of just below zero. It illustrates a more cautious investment policy for the guaranteed products.

Pension system in Denmark: An overview

The Danish pension system is a three-pillar system:

- The aim of the first pillar (Pillar I) is to prevent poverty in old age. Pillar I provides all Danish pensioners with a minimum pension throughout life, and the size of the pension depends on the individual pensioner's income and assets. In addition to the national pension, pillar I consists of ATP (labor market supplementary pension). ATP is legally binding for all wage earners. The contribution is the same for everyone and therefore not dependent on salary but dependent on one's working hours. The employer pays 2/3 and the employee 1/3. The pension benefit is a guaranteed annuity.

- The second pillar (Pillar II) is based on collective agreements in the labour market or employment contract ensuring that the individual contributes to a defined contribution, funded pension scheme. Collective agreements determine the contribution rates, and the pension therefore depends on income earned throughout the work career. Pillar II aims to secure a standard of living reflecting the level of income before retirement.

- The third pillar (Pillar III) provides individual opportunities for supplementary saving based on individual needs both in explicit pension saving schemes with special tax treatment and in general voluntary savings.

Statutory ages in the pension system (for public pensions, for early retirement, and age limits for payment of funds from pension schemes) are established by law and thus regulated at political level. The effective retirement age has been gradually increasing over the years, and it is currently set at 67 years old. A sequence of reforms has tightened the possibilities for early retirement and increased the statutory pension age (and early retirement age). The statutory pension age has increased in steps from 65 years old to reach 67 years old in 2022. Hereafter the statutory retirement age is indexed to the evolution of life expectancy. There is a "speed limit" stipulating that the statutory retirement can be increased by more than one year every fifth year. In accordance with the indexation rules, parliament decided in 2015 to raise the statutory retirement to 68 years old in 2030, and in 2020 it was increased to 69 years old in 2035. The next decision comes up in 2025, and according to the evolution of longevity of life, the statutory retirement age will increase to 70 years old.

The sustainability of the system depends critically on this development in retirement ages (increasing alongside increases in longevity).

Nevertheless the indexation scheme has recently been debated, and it has been questioned whether it is too tough, especially when implying a statutory pension age above 70 years.

This can be a challenge, as many want to retire much earlier as they become richer due to the occupational pensions and debates has raised on more flexible exit routes from the labour market in order to get people working longer.

The higher statutory pension age has also prompted a discussion of early exit options from the labour market for those who have a reduced work capability, but not so severely that they are eligible for a disability pension. In 2020 the so-called senior pension was introduced giving an option to retire six years prior to reaching the statutory retirement age, provided work capability is reduced (unable to work at least 15 hours per week) and a sufficiently strong work record. A new scheme "early pension" (*tidlig* pension) was introduced January 2022 available for persons who at the age of 61 have worked at least 42 years in the labour market.

For the moment it is unclear whether the government still wants to keep the senior and the early pension or make a new "early pension plus".

Finally, early retirement (*efterløn*) remains a possibility to retire in a window (after reforms reduced from five to three years) prior to the statutory pension age for persons who have contributed to the scheme for at least 30 years. The number of persons eligible for early retirement is decreasing.

Pillar I

Pillar I basically consists of two pension plans: the tax financed public pension (*Folkepension*) and the ATP, a mandatory pension scheme including the larger part of the population. Both schemes are regulated by law. The state pension (*Folkepension*) includes a basic amount (flat-rate pension) and means-tested supplements (I: supplementary pension (*pensionstillægget*) and II: supplementary pension benefit (*ældrecheck*)). In addition, there are needs-based supplement, e.g., housing, medical expenses. The supplements are means-tested on a family basis.

All are entitled to the public pension when reaching the statutory retirement age provided a residence requirement is satisfied and earned income is below a certain threshold. Public pensions are indexed to wages. The state pension consists of a basic pension and a personal supplementary pension. For 2022 the base pension is DKK 78.500 a year (€ 10 500), and the maximum supplement (for a single) is DKK 89 600 (€ 12 000). The means-testing is relatively complicated depending on family situation and other sources of income.

ATP (The Labour Market Supplementary Pension Scheme)

ATP is part of the Danish welfare system for old-age pensioners (introduced in 1964). By law, all wage earners and recipients of transfer income contribute to the supplementary labour market pension. It is a contribution funded scheme to which all contribute the same monthly amount (depending on working hours) in 2022 DKK 3 408 (€ 458) The contribution has been unchanged nominally since 2016. The pension benefit is a guaranteed life-annuity. For a person with full-time employment, the pension benefit corresponds to about 1/3 of the base pension in the public pension system.

As of 2020, a mandatory pension scheme has been introduced for recipients of public transfers. The contribution rate, paid by the state, starts at 0.3% and increases in steps to 3.3% in 2030. The contributions are part of the ATP-pension.

Pillar II

Occupational pensions are an outcome of collective bargaining. Before 1990, Pillar II schemes were almost exclusively for civil servants and white-collar workers in the private sector. A tripartite agreement between the government and the social partners in the late 1980s resulted in occupational pension schemes for the larger part of the labour market.

Pillar II DB schemes: Previously, it was common for civil servants in the state and in local governments to be entitled to a tax-financed DB pension (*Tjenestemandspension*). These schemes are being phased out.

Pillar III

In principle, Pillar III pension schemes provide the same opportunities for the individual citizen as occupational schemes. Products available and tax rules are approximately identical. Individual schemes are offered by banks, insurance companies and most pension funds, but only if the saver is already enrolled through his job. The strong growth of Pillar II schemes has, to some degree, diminished the interest for individual savings in explicit pension schemes. Also, changes in tax regulation have negatively influenced the demand for Pillar III schemes. Moreover, many households hold assets outside the pension scheme, primarily in the form of real estate and in shares.

Long-term and pension savings vehicles in Denmark

Private pension schemes are administered by pension funds, insurance companies or in banks. This goes for Pillar II as well as for Pillar III.

A Danish industry-wide pension fund (*pensionskasse*) is a legal entity owned and governed by its members. A *pensionskasse* can provide the same kind of products as a life insurance company and it is subject to the same kind of regulation as a life insurance company—specifically, the Solvency II Directive.

The first occupational schemes for civil servants were established in *pensionskasser*, which provided pension schemes for a specific profession, e.g. nurses, whereas occupational pension schemes in the private sector originally covered employees with different professional backgrounds working in the same company. Such schemes used a life insurance company as a vehicle.

Today, the differences between the legal forms have lost importance. Many occupational pension schemes for the private sector are industry-wide and are administered by life insurance companies. But still, a distinction is often made between industry-wide schemes and company schemes.

Industry-wide schemes are often more standardized and with little freedom of choice left to the single member. All decisions are made collectively. The pension provider is only indirectly exposed to competition since customer mobility is low. These characteristics make in general the schemes relatively cheap.

Insurance companies administering company schemes are more exposed to competition. Company schemes more often change pension providers. In general, company schemes offer more individual possibilities, e.g., concerning insurance coverage and choosing between a guaranteed or none-guaranteed scheme. Therefore—as a general trend—the insurance companies have higher costs, especially related to acquisition and to individual counselling.

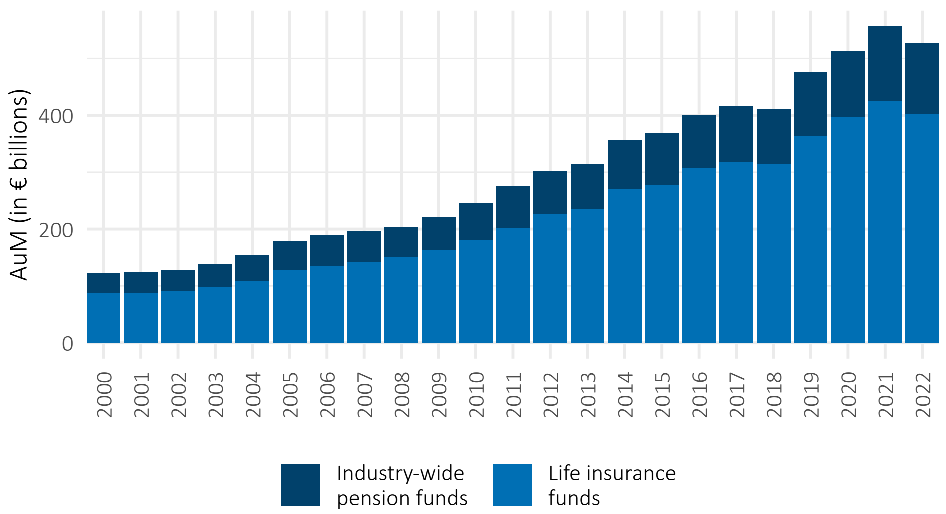
An occupational pension scheme normally provides coverage for old age, disability and early death. Critical illness and even health care are other insurance risks that have become typical to offer. Typically, 15%-25% of the contributions are spent on coverage for social risks other than old age.

The supply of pension products is regulated partly by tax law and partly by the general regulation for insurance and banking. The regulation is the same for Pillar II and Pillar III. This means that insurance companies and pension funds on the one hand and banks on the other hand provide competing products to the market. Products offered by life insurance companies and pension funds may accumulate savings but must also cover some kind of insurance risk—longevity, death, disability etc.—whereas banks can only act as an intermediary of insurance coverage supplementary to a saving product.

As can be seen from Figure DK.1 life Insurance has grown quite significantly over the past 20 years and today has by far the largest assets under management (due to the fact that many occupational pension schemes are administered by life insurance companies). Less and less is managed by Banks while the Industry wide pensions is more or less the same. Pensions company have throughout the years had the smallest share and today only manage around 1%.

ATP is not included in the table due to its special role being established by law with statutory pensions and being a pillar I pension. However, ATP is in fact today the largest pension and administration company. They have grown steadily and today have almost as much asset under management all the Industry wide pension companies together.

Figure DK.1 – AuM of Danish long-term and pension savings vehicles



Data: Danmarks Nationalbank; *Calculations:* BETTER FINANCE.

Pillar II: Occupational pension funds

Occupational pensions are an outcome of collective bargaining.[1] Before 1990, Pillar II schemes were almost exclusively for civil servants and white-collar workers in the private sector. A tripartite agreement between the government and the social partners in the late 1980s resulted in occupational pension schemes for the larger part of the labour market.

Contribution rates were increased over a sequence of years, and they have remained constant at their current level since 2010. Contribution rates differ across groups and is 12% for blue collar workers and 15-18% for white collar workers (reflecting their longer longevity). Normally, 2/3 is paid by the employer and 1/3 by the employee. As a result of the phasing in of the occupational pension scheme most pension funds are still in a building up phase with contributions exceeding

[1]Collective agreements cover a large part of the labour market. There is a tradition for tripartite consultations between the Government, unions and employers' organizations, and labour market issues are generally settled by collective agreement rather than law. The establishment of occupational pensions is an example of this. An agreement of the three parties was made in 1989 and it marked the start of introduction of occupational pension schemes to more of the private labour market (most public employees were already covered)

pay-outs.

Total contributions to occupational pension schemes amounted to DKK 127 billion (€ 17 billion) in 2022 which is a new record, and more than double the amount from 20 years ago (Forskiring & Pension, 2023). The increase in 2022 is linked to the growth in employment of 60 000 people during 2022. This has caused contributions to occupational pension to grow. Payments to privately subscribed pension schemes fell slightly.

All private pension schemes are fully funded. The vast majority are DC schemes. Even in the very few DB schemes, where the employer guarantees a pension proportional to the salary, the guarantee must be funded in a pension fund or a life insurance company.

Between 80 and 90% of all working people contribute to a Pillar II scheme within a year. However, there is a so-called residual group comprising i) persons not covered by an occupational pension, ii) persons with interrupted working careers (unemployment, sickness, parental leave etc), and thus not contributing consistently through working ages, and iii) self-employed. There are ongoing discussions on how to address this problem. The mandatory pension recently introduced (see above) is a partial solution to the problem. Pillar II schemes are established in either life insurance companies, in pension funds (*pensionskasser*) or—not very commonly—in banks (around 3,5%).

Pillar DC: Today, only about 30 000 civil servants in the state are still entitled to a pension of this type when they retire. Civil servants in local governments now enrol in a DC scheme, and the very few remaining DB schemes are typically funded in an insurance company. A small number of private companies still offer DB schemes for some of their employees. These schemes are funded in specific pension funds – Pensions company funds *firmapensionskasser*. Their importance has been decreasing for many years and so have their number of total assets and number of people insured. Today, only four *firmapensionskasser* hold assets of more than DKK 1 000 million (€ 134 million), and they only constitute around 1% of the total market, and most of the funds do not enrol new members anymore.

Pillar III

In principle, Pillar III pension schemes provide the same opportunities for the individual citizen as occupational schemes. Products available and tax rules are approximately identical. Individual schemes are offered by banks, insurance companies and most pension funds.

As mentioned earlier the strong growth of Pillar II schemes has diminished the interest for individual savings in explicit pension schemes. While the number of occupational schemes increased by 34% from 2000 till 2022 individual schemes fell by 36%.

In 2000, 1 064 million persons contributed to an individual scheme, but this number has steadily declined until 2013 (0,574 million persons, and since then increased somewhat to about 676.000 persons in 2021. The huge fall in 2013 is due to a shift in the lump sum pension from *kapitalpension* to *alderopsparing*. It might take time to get acquainted with the new scheme, and upon of that a cap on the contributions to the periodic instalments or fixed term annuities (ratepension) was introduced in 2012 which also explain the decline. In 2000, contributions to individual schemes amounted to DKK 16 209 mln. (€ 2 177 mln), or around 30% of total contributions for pension schemes. The figure decreased until 2013 and has been growing slowly thereafter.

In 2022, contributions to individual schemes were nominally DKK 17 101 mln. (€ 2 280 mln). Tax rules have changed, as already mentioned, especially for periodic instalments and lump sum pensions. This may also have had an impact on the demand for Pillar III schemes. In Pillar II schemes, the change of regulations has led to growing contributions to lifelong annuities, but the same substitution has not been seen in Pillar III. Savings in banks used to play more important role for individual schemes than for occupational schemes. Until 2013, when the tax regulation for lump sum pension was changed, individual pension saving schemes were predominantly held in banks, rather than in insurance companies and pension funds. Today, around 60% of contributions are in insurance companies or pension funds and 40% are in banks.

Charges

The level of costs has received increasing attention in recent years. This is partly due to the low rate of interest in the market until mid-2022.

The Money and Pension Panel—a Council under the Ministry of Industry, Business and Financial Affairs—has calculated that, under realistic assumptions, an increase of costs of 50% of total savings/provisions reduces of life-time consumption by 1.2% for low-income groups and 2.3% for high-income groups. The same increase makes it necessary to postpone retirement by two years for life-time consumption to remain unchanged.

The Danish FSA has analysed the development of administration costs, including costs related to acquisitions and sales, but not including investment costs. The administration costs have declined over the last 10 years to 0,19% of total provisions in 2017 and then raised a bit again. The FSA distinguishes between market-oriented insurance companies (running mainly company pension schemes) and non-market-oriented insurance companies/pension funds (running mainly industry-wide pension schemes). Since industry-wide pension schemes are typically governed by customer representatives, and since their schemes are often very standardized, they are in general cheaper to run than company schemes.

Transparency of costs has increased. Since 2011, life insurance companies and pension funds have agreed to inform all their customers of their total charges in DKK (ÅOK) and their total charges in percentage of the value of their pension (ÅOP) on a yearly basis.

These key figures include direct and indirect administration costs, direct and indirect investment costs, charges to the company for any guarantees and other kinds of risks as well as any charges paid by the life insurance company to intermediaries. How total costs are allocated to the individual customers is decided by each insurance company or pension fund, but the key for distribution is controlled by the external auditor to ensure equivalence between the figures of the annual report and total distributed charges (ÅOK/ÅOP).

For market comparisons between life-insurance companies and pension funds, key figures for several standardized examples are published on the website www.faktaompension.dk. While higher administration costs always lead to lower pension benefits, it is difficult to evaluate investment costs. Investing in government bonds is very cheap – but it might not be the most profitable investment. On the other hand investing in foreign equities is more expensive – but might have a higher expected return. So, the relationship between investment costs, investments risks and expected investment return is not straightforward. Furthermore, the pension compa-

Table DK.3 – **Comparative examples of charges between different pension products and types**

	Pension Danmark			Danica Pension			PFA		
	I	II	III	I	II	III	I	II	III
Total costs %	1.5	0.5	0.4	4.3	1.3	1.1	2.1	0.9	0.7
Total costs €	57.1	375.0	1 189.9	161.9	994.1	3 076.9	77.9	708.4	2 151.5
Total costs DKK	425.0	2 790.0	8 854.0	1 205.0	7 397.0	22 895.0	580.0	5 271.0	16 009.0
Of which Administration	297.0	297.0	297.0	852.0	852.0	1 049.0	345.0	575.0	920.0
Of which Investment	128.0	2 493.0	8 557.0	353.0	6 545.0	21 846.0	235.0	4 696.0	15 089.0

Data: faktaompension.dk, 2023.

nies' investment management must take their liabilities into consideration. Some investments are made to hedge the risk against, for example, changes in interest rates. When comparing investment costs, one must consider the existence of guarantees.

The website www.faktaompension.dk offers the possibility to compare total charges of various pension companies and for various types of customers. All figures are calculated and reported by the pension companies and the website is run by the Danish Insurance Association. Furthermore the website www.pensionsinfo.dk gives the individual access to information on all pension entitlement—public and private—and thus essential information to assess the adequacy of pension savings. The website also includes facilities such that the consequences of the retirement age for pension benefits can be assessed. To increase transparency and facilitate comparisons, projections of future pension level are also presented using common return expectations determined by the Council for Return Expectations.[2]

Table DK.3 illustrates cost levels and costs structures for three typical different persons at different positions in the life-cycle (average for the 5 biggest companies).[3] Costs in % (ÅOP) are relative higher for young than older contributors, reflecting their lower level of accumulated assets. Administrative costs are relatively constant across types and hence matters relatively less, but investment costs are higher for older contributors with larger accumulated assets. In general charges are lower in the industry-wide schemes (Pillar II companies) with the highest degree of standardization and with no acquisition costs. Charges in Life-Insurance (Pillar III) is about double the charges in Pension companies, see Tables DK.4 and DK.5.

[2] https://www.afkastforventninger.dk/en/

[3] Type I: Age below 40, annual contribution DKK 30 000, assets= 0, Type II: Age 40-55, annual contribution DKK 30-80 000, assets DKK 500 000, Type III: Age above 55, annual contribution at least DKK 80 000, Assets DKK 2. mio.

Table DK.4 – Costs and charges of Danish industry-wide pension funds (% of assets)

Year	Total ongoing charges	Contract mgt. fees
2005	0.27%	€131.34
2006	0.19%	€94.87
2007	0.25%	€107.64
2008	0.21%	€109.19
2009	0.20%	€122.05
2010	0.19%	€106.10
2011	0.21%	€122.21
2012	0.20%	€107.02
2013	0.17%	€103.43
2014	0.16%	€97.34
2015	0.15%	€95.20
2016	0.10%	€86.23
2017	0.09%	€77.76
2018	0.09%	€78.88
2019	0.08%	€63.31
2020	0.07%	€57.89
2021	0.06%	€57.76
2022	0.37%	€58.80

Data: Finanstilsynet.

Table DK.5 – Costs and charges of Danish life insurance funds (% of assets)

Year	Total ongoing charges	Contract mgt. fees
2003	0.80%	€139.83
2004	0.74%	€144.58
2005	0.74%	€144.16
2006	0.70%	€142.97
2007	0.70%	€149.77
2008	0.69%	€145.63
2009	0.61%	€152.79
2010	0.70%	€150.94
2011	0.71%	€182.27
2012	0.70%	€179.73
2013	0.56%	€145.59
2014	0.54%	€147.21
2015	0.45%	€157.99
2016	0.30%	€128.86
2017	0.30%	€107.72
2018	0.30%	€93.34
2019	0.35%	€76.02
2020	0.35%	€73.38
2021	0.30%	€52.04
2022	0.40%	€79.88

Data: Finanstilsynet.

Taxation

Numerous changes in taxation have affected pension savings. The general trend has been to decrease marginal income taxes and broaden tax bases. The ETT scheme implies that the tax value of the deduction of a marginal increase in the contribution depends on the marginal tax rate when contributions are made, while the taxation of the resulting pension depends on the marginal tax rate when retired. With a progressive tax system, the latter marginal tax tends to be lower than the former (especially for middle-income groups), which is an implicit tax subsidy to pension savings. The tax reforms reducing the progressivity of the tax system have thus reduced this subsidy. Taxation of the return was introduced as early as 1984. From this year, all interest earnings in pension schemes were taxed at a variable tax rate aiming to tax all real interest above 3.5%. From 1998, this real interest rate taxation was replaced by a proportional tax rate on all yields from pension assets. The tax rate is currently 15.3% and lower than the general taxation of capital income. For example, the personal income tax rates on dividends and capital gains are both taxed at 42% for income above 7 853 euro and with 27% for income up till € 7 853 (which is well above the OECD averages of 24.2 percent).

A difficult design issue is how to match public and private pensions. The former are means-tested to target the least well-off pensioners. This distributional consideration creates a disincentive effect for individuals affected by means-testing. Increasing pension savings and thus private pension will via means-testing lower public pensions. This is an implicit tax which increases the effective tax beyond the tax-rates applying in the ETT-scheme, especially for contributions made close to retirement. Hence, higher savings or later retirement (implying larger contributions via occupational scheme) may result in high effective tax rates – in some cases even exceeding 100%. This is counter-productive to the aim of strengthening savings incentives and providing incentives for later retirement, and this dilemma has prompted several reforms.

Numerous changes in the tax rules for contribution to lump-sum and periodic instalment schemes have been made, especially on the cap on contributions. For individuals—e.g. self-employed—with variable income and thus scope for making pension contributions there is an argument for allowing large contributions in a single year. However, it is also a way for high-income groups to lower effective taxation. These two concerns have influenced policies in this area. As discussed above, the lump-sum pension scheme was closed for contributions in 2013 and was replaced by the *aldersopsparing*. This scheme follows a TTE principle, and pension payments are not included in means-testing of public pension. This scheme was introduced primarily to reduce high effective tax rates on pension savings made close to retirement. Therefore, there is a cap on contributions depending on age relative to the statutory retirement age (see above) with a low cap for contributions made between 15 and 10 years prior to reaching the statutory retirement age, and a higher cap for contribution made 5 years or less before reaching the statutory retirement age. In addition, age-dependent tax premia for pension contributions have been introduced, also to reduce effective taxation of pension savings involving a two-step age dependent tax rebate for pension contributions. Specifically, the rebate equals 12% for contributions made in a window of 15 to 5 years before reaching the statutory pension age, and 32% for contributions made no more than 5 years before reaching the statutory retirement age. All these changes have added extra layers of complications to an already complex system and imply that the taxation principles have evolved into a hybrid combining both ETT and a TTE schemes.

Table DK.6 – Taxation of pension savings in Denmark

Product	Phase			Regime
	Contributions	*Investment returns*	*Payouts*	
Industry-wide pension funds	Exempted	Taxed	Taxed	ETT
Life Insurance funds	Exempted	Taxed	Taxed	ETT
”Aldersopsparing”	Taxed	Taxed	Exempted	TTE

Data: Danish tax authority.

Performance of Danish long-term and pension savings

Real net returns of Danish long-term and pension savings

In this section, we analyse the returns obtained by the members and policyholders of Danish industry-wide pension funds—since 2005—and life insurance—since 2003. On the basis of firm-level nominal gross returns data and costs from the Danish FSA, we first calculate nominal net returns, that is, annual returns after deducting the average annual costs and charges. Returns are aggregated for each year at the level of the product category by computing the simple average of returns reported by individual firms for the year. An asset-weighted average would, of course, better reflect the aggregate performance, but firm-level data about AuM is unfortunately not available. For industry-wide pension funds, we deduct for each year the average value of costs as a percentage of AuM reported by individual pension funds. For life insurance companies, extreme outliers make the average an unreliable measure; we then opt for the median value of costs reported by life insurance companies.

Second, we correct these nominal net returns for inflation, thereby obtaining real net returns. The inflation rates that we use for this are calculated on the basis of Eurostat's HICP index for Denmark, as per the methodology explained in the introductory chapter. As can be observed in Figure DK.2, in terms of inflation, Denmark ranks below the EU average, with an annualised inflation rate of 1.9% over the period 2000–2022, which amounts to a 52.7% inflation cumulated over the same period, vs. 67.5% for the EU.

Figure DK.3 displays the returns of industry-wide pension funds over the period 2005–2022. As we can see, despite the market downturn in 2022, which resulted in losses in nominal terms (-7.6%), the strong results of the previous years mean that for a holding period as short as 3 years, nominal annualised results are positive. The generally low fees levied by pension funds translate into nominal net returns that are very close to the nominal gross returns: As we can see, fees only reduce the annualised performance over 18 years by 0.2 pp, and the cumulated performance over the same period by only 7.1 pp.

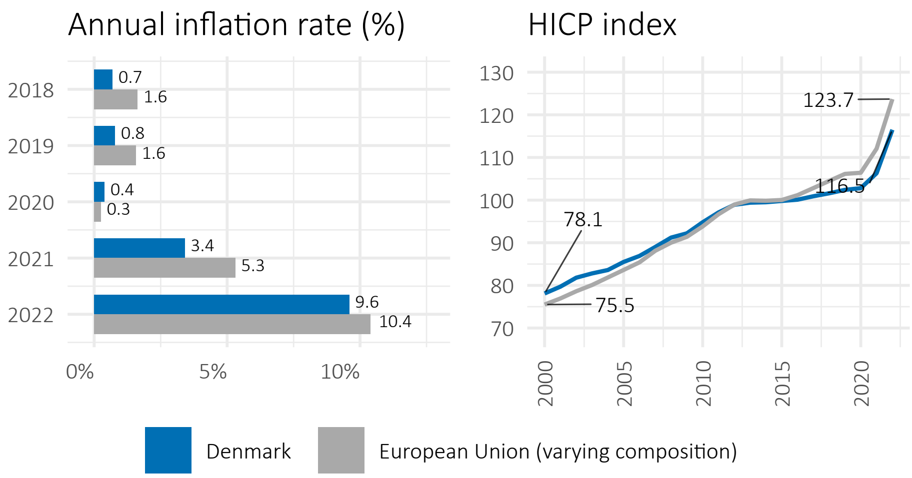
Inflation is the factor that most affect pension funds' performance, as we can see in the annualised returns over all holding periods as well as in the cumulated returns in the lower pane of Figure DK.3. Inflation alone reduces the cumulated 18-year returns by 67.4 pp, almost half of the cumulated nominal net returns.

Figure DK.4 shows the returns obtained by life insurance policyholders over the period 2003–2023. The generally higher fees of life insurance policies translate into a slightly larger gap be-

Figure DK.2 – Inflation in Denmark

Period 2000–2022

	Annualised	Compounded
Denmark	1.9%	52.7%
European Union (varying composition)	2.3%	67.5%



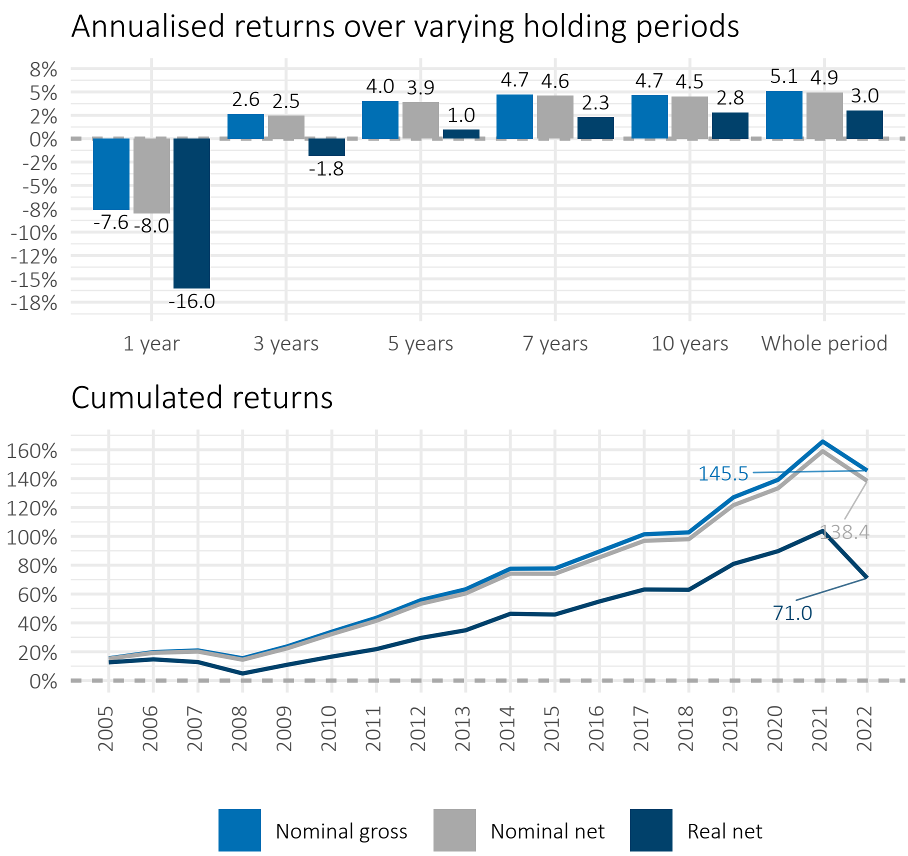
Data: Eurostat, HICP monthly index (2015 = 100); *Calculations:* BETTER FINANCE

tween nominal returns before and after charges. Over the 20 years of the reporting period, charges eat away 0.5 pp of average annual performance, which, in cumulated terms, amounts to a 16.4 pp reduction in returns.

Inflation, here again, the factor that most depresses long-term returns: Over the 20-year holding period, it reduces the 1.9% nominal net annual average to just 0.1%, a reduction in performance of 43.2 pp over the period.

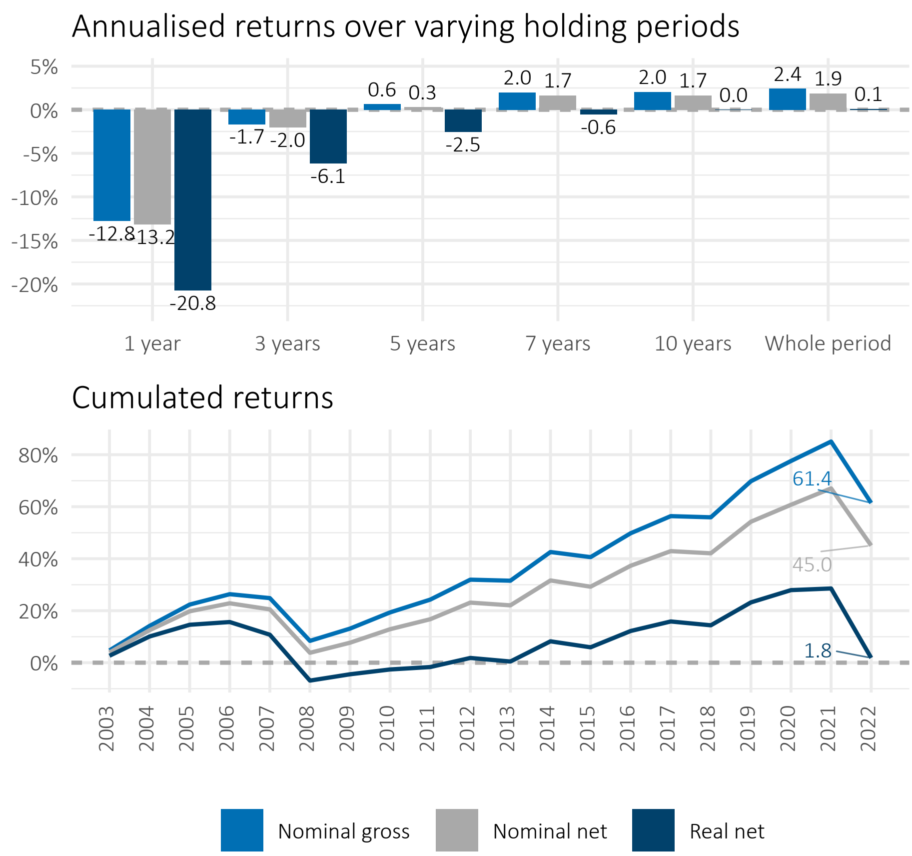
Figures DK.5 and DK.6 compare the annualised and cumulated returns of the two product categories. The comparison is cruel for life insurance, which barely manages to preserve the purchasing power of the initial investment, while the industry-wide pension funds sector on average manages to increase the wealth of its members by 71%.

Figure DK.3 – Returns of Danish industry-wide pension funds (before tax, % of AuM)



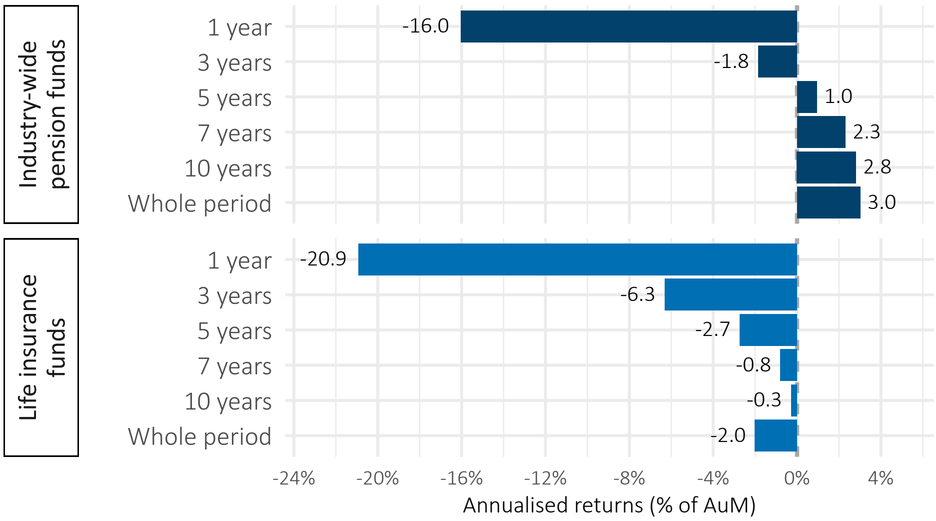
Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Figure DK.4 – Returns of Danish life insurance funds (before tax, % of AuM)



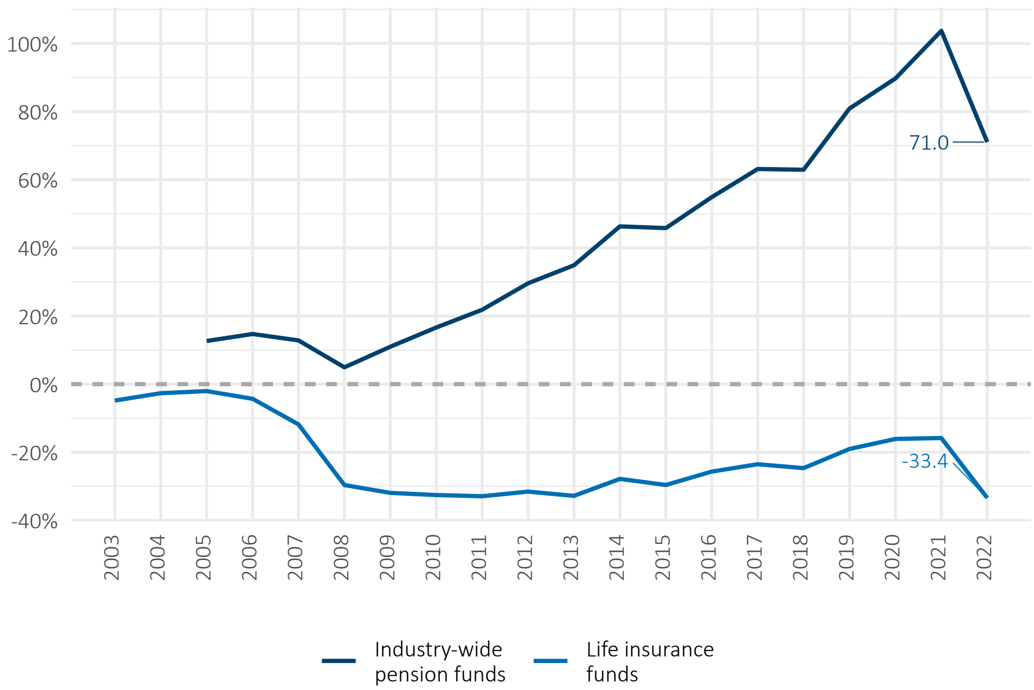
Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Figure DK.5 – Annualised returns of Danish long-term and pension vehicles over varying holding periods (before tax, % of AuM)



Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Figure DK.6 – Cumulated returns of Danish long-term and pension savings vehicles (2002–2022, before tax, % of AuM)



Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Do Danish savings products beat capital markets?

In this last section, we compare the computed returns to the "default" 50% equity–50% bond benchmark portfolio presented in the introductory chapter of the report.

Table DK.7 – Capital market benchmarks to assess the performance of Danish pension vehicles

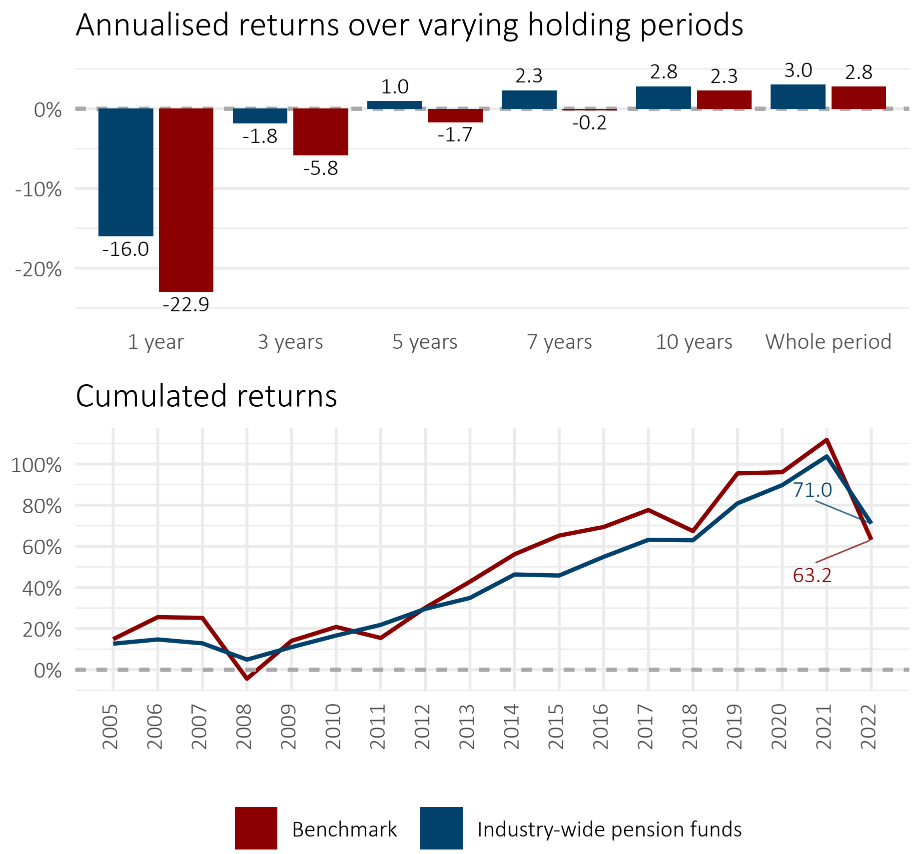
Product	Equity index	Bonds index	Allocation
Industry-wide pension funds	STOXX All Europe Total Market	Barclays Pan-European Aggregate Index	50.0%–50.0%
Life Insurance funds	STOXX All Europe Total Market	Barclays Pan-European Aggregate Index	50.0%–50.0%

Note: Benchmark porfolios are rebalanced annually.

The comparison is favourable for industry wide pension funds (Figure DK.7): Over all holding periods, these funds manage to beat the benchmark. Over 18 years, the funds return, in real net terms, 7.8 pp more than the capital market benchmark.

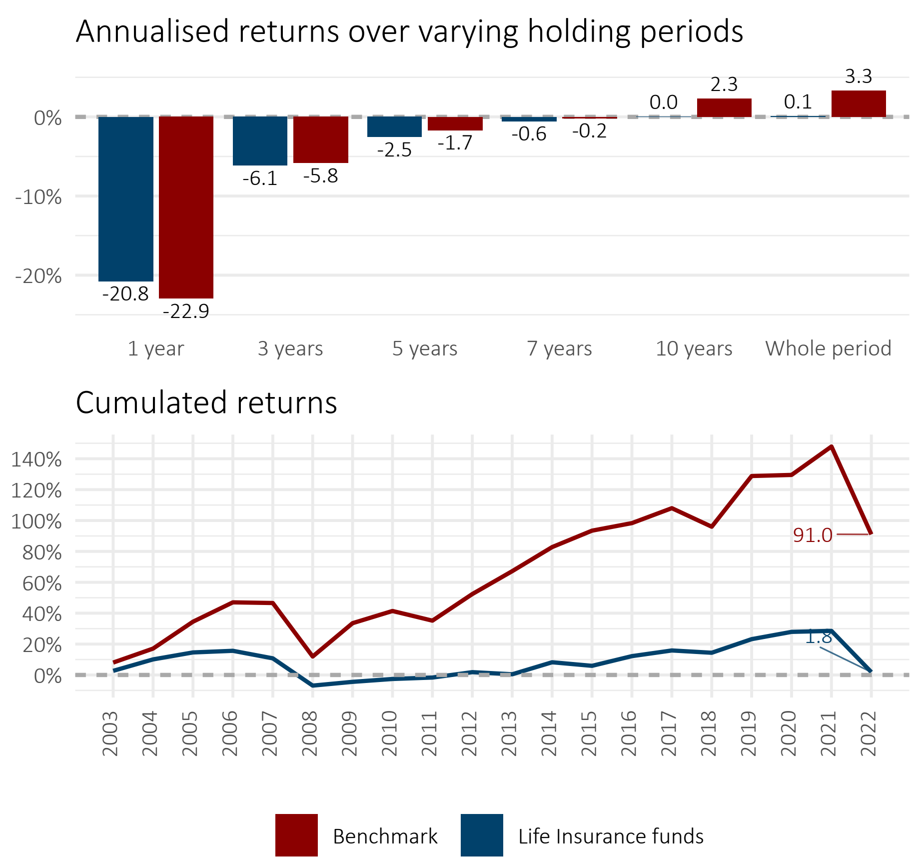
The comparison is much less flattering for life insurance funds, that fail to beat the benchmark by a wide margin: -3.2 pp in average annual performance, amounting to a 89.2 pp difference over 20 years.

Figure DK.7 – Performance of Danish industry-wide pension funds against a capital market benchmark (returns before tax, after inflation, % of AuM)



Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Figure DK.8 – Performance of Danish life insurance funds against a capital market benchmark (returns before tax, after inflation, % of AuM)



Data: Finanstilsynet, Eurostat; *Calculations:* BETTER FINANCE.

Conclusions

The Danish pension system has been strong and well-established for many years which has resulted in being ranked consistently in the top A-tier in the Melbourne Mercer Global Pension Index 2023

The system consists of 3 pillar and comprises tax financed public pensions with funded occupational pensions to deliver pensions preventing poverty among pensioners and high replacement for the larger part of the population. The first pillar—PAYG—still provides the basic income for most elderly, but occupational pensions (Pillar II) and other private pension schemes (Pillar 3) have become increasingly important over the past 30 years. Today, nine out of ten Danes have an occupational pension, and the majority of employers have, either via collective agreements or company agreements, undertaken to pay into the employees' pension schemes. As early as 2030-2040 it is expected that the payments from the labour market pension will overtake the national pension.

The system is financially viable and public finances satisfy sustainability criteria taking into account an ageing population. Denmark is therefore in a relatively good position and there is no urgent need for reforms. However, the system despite the attractive track record, faces a number of challenges.

Combining public and private pensions addresses distributional objectives but also leaves important incentive problems. Having a goal of minimizing public pension spending creates high effective tax rates to the detriment of savings incentives and later retirement. Several reforms – especially tax reforms – have reduced this problem, but also significantly complicated an already complex system. Another challenge (or disadvantage) is the "remaining" groups of individuals who do not contribute (or not significantly) to an occupational pension scheme. This group is heterogeneous, but it is important to address the problem. The recently introduced compulsory pension scheme for transfer income recipients is a step in this direction, but it is not sufficient to solve the problem. Perhaps the biggest challenge is that the increased life expectancy requires a higher retirement age. Not only for the sustainability of public finances, but also to maintain high replacement rates. The formal statutory retirement age is indexed to life expectancy. This is key to the financial viability of the system, but there is an ongoing debate and a certain desire to retire earlier as well as not everyone is able to extend working life along with increased longevity.

Recently introduced schemes—*seniorpension* and *tidlig pension*—are addressing these issues, but it is too early to assess whether they adequately cope with the problem and it is still unclear whether the government still wants to keep the senior and the early pension or make a new "early pension plus".

The total Danish pension saving is considerable and has for several years accounted for more than 150% of GDP. However, the total pension assets fell noticeably during 2022 despite higher pension contributions. 2022 was indeed challenging and the worst since 2008 financial crisis. The insurance and pension sector lost a total of € 92-93 billion. All asset classes simply suffered losses due to the tough years on the financial markets primarily from the rising interest rate.

In the first 6 months of 2023, the results looked better and were no longer in the red. Despite the losses in 2022, the overall return since 2018 is € 57 billion due to the high returns in 2019–2021
.

The pension system's high degree of funding is an attractive part of the system, and in the past the returns on pension savings have been high, which has added to the support to the scheme. Looking forward to a new normal with low real rate of return, pension funds cannot deliver the same returns as seen historically, unless more risks are accepted. However, it is not clear if this is in the interest of pension savers, especially since they now more directly carry the risk. In a system with mandatory pension contributions, governance structures are particularly important to ensure that pension funds are administered in the interest of their members. This also applies in relation to charges. They have been decreasing for a long period of time and it is important to keep focusing on this aspect.

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