

Pension contribution levels and cost-sharing in statutory and occupational pensions

A cross-national study of eight European countries

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Foreword

This report provides an overview of comprehensive information on pension contribution levels in eight different European countries. It is an updated and extended version of previous comparisons published by the Finnish Centre for Pensions in 2003, 2008 and 2016 (see e.g., Vidlund et al. 2016). The comparison is based on country data compiled by the authors of this report.

The country fiches at the end of the report are compiled by a working group whose members were assigned to cover the eight countries as follows:

Meeri Kesälä: Finland

Anne Lavigne: France

Antti Mielonen: Germany, the Netherlands and Norway

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As the authors of this report, we take sole responsibility for the interpretations presented herein and for any possible inaccuracies.

Summary

Population ageing across Europe is forcing governments to spend a significant and increasing share of national income to finance current and future pension benefits. Although pension costs in general are on a rising trend, it is not always clear just how much is being paid in pension contributions and by whom. The task of comparison is complicated by country differences in pension provision, the role of public and private pensions, and the financing of pensions.

This report aims to provide a comprehensive view on how much is being contributed and by whom into pension systems in eight European countries: Denmark, Finland, France, Germany, Italy, Netherlands, Norway and Sweden.

In cross-national studies, it is important to take account of the different structures of pension provision and differences in total pension provision. Both significantly affect the results. A straightforward comparison of statutory pensions will not suffice since there are comprehensive supplementary pension schemes that are of growing importance in many countries and, in some countries, even broadly equivalent to earnings-related statutory pension schemes.

Therefore, to obtain comparable results, the pension systems addressed in this report include basic and earnings-related pensions organised in statutory (first-pillar) and occupational (second-pillar) pension schemes. Individual retirement savings, i.e. third-pillar pension provision, is not covered. The base year for our analysis is 2020, and our main interest is in total contribution income from employees, employers and the self-employed as well as from tax revenues. The data are obtained from national statistics, accounts and budget data, and from EU and OECD official reports, publications and databases.

Contribution income is compared to GDP and wage statistics to obtain aggregate pension contribution levels for each country. We also look at how the share of contributions is divided between employers and employees and the share of general tax revenues in pension financing.

In addition, we provide theoretical calculations on pension contributions in relation to average employees' wages and twice the average wage. Details about scheme-specific differences in pension financing together with time series on contribution incomes and expenditures can be found in the country fiches.

One of the key results of the report is that contribution levels have converged significantly in Europe, especially with respect to GDP, when all relevant pension schemes are considered. The average pension contribution level was 11 per cent of GDP when considering only statutory pension provision. The level was clearly highest in Italy (16 %), followed by Germany (12.5 %) and Finland (12.4 %). It was lowest in Sweden (7.5 %), the Netherlands (8.1 %) and Denmark (9.3 %).

When occupational pensions are also included, the average level rises to 14.6 per cent of GDP and country differences are reduced. This catch-up effect is most evident in Denmark

and the Netherlands, both of which have flat-rate statutory pensions and well-developed occupational schemes. The contribution level remains highest in Italy at 16.8 per cent, but Denmark is at almost the same level (16.7 %). Total contribution income is lowest in Sweden (12.1 %) and Finland (12.5 %).

A breakdown of contributions reveals significant country variation. Employers' contributions generally account for the greatest share, around 50 per cent of total contribution income. The employers' share is largest in Sweden, over two-thirds, and least in Denmark, just over one-fourth. Tax revenue accounts for around 30 per cent of total contribution income. The figure is highest in Denmark at 60 per cent, but tax revenues also account for a significant share in Germany and Italy. Employees generally have the lowest share of pension financing, around 20 per cent on average. The contribution of employees is highest in the Netherlands (30 %) and lowest in Denmark (10 %).

Tiivistelmä

Euroopan väestön ikääntyminen pakottaa maat käyttämään merkittävän osuuden kansantulostaan rahoittamaan nykyiset ja tulevat eläke-etuudet. Eläkemenot ovat kasvussa, mutta ei ole aina selvää, kuinka paljon maksutuloa kerätään ja keneltä sitä kerätään. Kokonaisvertailu on vaikeaa, koska eri maiden eläkejärjestelmät, lakisääteisen eläkkeen ja työmarkkinaeläkkeen roolit sekä eläkkeiden rahoitus eroavat maittain.

Tämän raportin tarkoitus on tarjota kattava yleiskuva eläkemaksutulosta kahdeksassa Euroopan maassa vuonna 2020. Raportin maat ovat Alankomaat, Italia, Norja, Saksa, Suomi, Ranska, Ruotsi sekä Tanska.

Kansainvälisissä vertailuissa on tärkeä huomioida eläkejärjestelmien rakenteelliset erot, jotka vaikuttavat merkittävästi tuloksiin. Lakisääteisten järjestelmien suoraviivainen vertailu ei ole riittävä, sillä lisä- tai työmarkkinaeläkkeiden merkityksessä on eroja, ja niiden rooli on kasvamassa monessa maassa. Joissain maissa ne toteuttavat ansiosidonnaisen eläkkeen tehtävän.

Tässä raportissa on huomioitu sekä vähimmäiseläkkeet että ansiosidonnaiset eläkkeet, jotka on järjestetty lakisääteisesti (ensimmäinen pilari) tai työmarkkinaperusteisesti (toinen pilari). Näin maita voidaan vertailla keskenään. Yksilöllinen eläkesäästäminen eli niin sanottu kolmospilari on jätetty vertailun ulkopuolelle. Vertailun perusvuosi on 2020. Mielenkiinnon kohteena on palkansaajilta, työnantajilta sekä yrittäjiltä kerätty kokonaismaksutulo. Tämän lisäksi huomioidaan eläketurvan rahoitukseen käytettyjen verotulojen määrä. Aineisto on kerätty kansallisista tilastoista ja budjettitiedoista, myös EU:n ja OECD:n raportteja ja tietokantoja on käytetty hyväksi.

Kokonaiseläkemaksutulo, eli eläkemaksut ja verotulot, on suhteutettu kunkin maan palkansaajakorvauksiin, palkkasummaan sekä bruttokansantuotteeseen. Raportissa tarkastellaan myös eläkemaksujen jakaantumista, toisin sanoen sitä kuka eläkemaksut maksaa, ja missä suhteessa maksut ovat toisiinsa, kun verrataan työntekijöiden, työnantajien ja verotulojen osuuksia kokonaismaksutulosta.

Näiden tulosten lisäksi, raportissa on esimerkkilaskelmia keskipalkkaisen ja hyvätuloisen työntekijän eläkemaksuprosentista. Tarkemmat tiedot maiden eläkejärjestelmien rakenteesta sekä aikasarjat eläkemaksutuloista ja eläkemenoista löytyvät maaliitteistä.

Raportin keskeisimpiä tuloksia on se, että maiden eläkemaksutulot lähestyvät toisiaan huomattavasti, etenkin tarkasteltaessa maksutuloja suhteessa BKT:hen. Lakisääteisten eläkkeiden maksutulo oli 11 prosenttia suhteessa BKT:hen. Suurin maksutulo oli Italiassa (16 %), seuraavina olivat Saksa (12,5 %) ja Suomi (12,4 %). Maksutulo oli matalin Ruotsissa (7,5 %), Alankomaissa (8,1 %) ja Tanskassa (9,3 %).

Kun myös työmarkkinaeläkkeet otetaan huomioon, maksutaso nousee 14,6 %:iin BKT:sta, ja maiden väliset erot pienenevät. Suurin muutos on havaittavissa Tanskassa ja Alankomaissa, joissa molemmissa on tasaeläkkeet ja varsin kehittyneet työmarkkinaeläkkeet. Kokonaismaksutulo on edelleen korkein Italiassa (16,8 %) mutta Tanska on lähes samassa tasossa (16,7 %). Kokonaismaksutulo on matalin Ruotsissa (12,1 %) ja Suomessa (12,5 %).

Kun tarkastellaan eläkemaksutulon jakaantumista eri lähteisiin, havaitaan maiden välillä merkittäviä eroavaisuuksia. Työnantajien osuus on suurin, noin 50 % kokonaismaksutulosta. Työnantajien osuus on suurin Ruotsissa, yli kaksi kolmasosaa, ja pienin Tanskassa, vain vähän yli neljännes. Verotulojen osuus on noin 30 % kokonaismaksutulosta. Osuus on suurin Tanskassa, noin 60 %, mutta verotulojen osuus on merkittävä myös Saksassa ja Italiassa. Työntekijöillä on yleensä pienin osuus kokonaismaksutulossa, noin 20 %. Työntekijöiden osuus on suurin Alankomaissa (30 %) ja pienin Tanskassa (10 %).

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1 Introduction

Europe is ageing and expected to continue to age rapidly. In 1990, the over 65-year-olds accounted for 20 per cent of the working-age population in OECD countries, and by 2020 that figure had soared to 30 per cent. And the pace is quickening: current projections are that by 2050, those over the age of 65 will account for over 50 per cent of the countries' working-age populations.¹

The changing population structure is affecting our societies in many ways – both socially and economically. In the economic context, it is imperative that we can provide for the care and income of the increasing numbers of older people with a stagnant, if not declining workforce (Eurostat 2020; European Commission 2021).

As far as ageing-related expenditure is concerned, pensions are already the single largest spending item in European welfare states, and its expenditure is projected to increase in the coming decades (European Commission 2021). This spending must be financed somehow, and by someone. As pension systems differ from country to country and their financing almost always involves multiple schemes and parties, it is not easy to make relevant comparisons of just how much is set aside and by whom to finance our pensions.

The aim of our study is to shed more light on this question: Just how much do we pay for our pension provision in a given year, and who is making those payments? To make just and fair comparisons, we need to:

- a) consider relevant pension schemes that provide for similar pension provision in each country,
- b) identify the parties that are paying for the pension benefits and
- c) use appropriate and comparable metrics for measuring pension contributions.

With respect to the above-mentioned points, in this report we take into account statutory (referred also as public or first-pillar pension schemes) and collectively organised occupational schemes (second pillar schemes). Individual savings or personal pension provision (third pillar) is not included in the report due to availability of comparable statistics.²

Statutory pension schemes include basic poverty protection and possibly income insurance or earnings-related pensions. However, income insurance can also be arranged through occupational pension schemes. Comparing both the statutory and occupational pensions provides a more comprehensive picture of total revenues and costs of pensions in cross-national studies. This is especially important from the point of view of the Finnish pension system, which relies heavily on the first pillar for the whole pension provision, whereas in the Netherlands the income maintenance is arranged through the second

1 OECD Pensions at a Glance 2021

2 Statutory pensions are stipulated in law and therefore negotiated and agreed in the parliament. By occupational pensions we refer to pension arrangements that are traditionally negotiated between labour market organisations. In some countries the division is not that straightforward. For example, in Finland the first pillar earnings-related pension is based on a tripartite arrangement, consisting of employees, employers and the government.

pillar pension provision. Typically, international statistics and comparisons concentrate on the statutory pension schemes. A more accurate and comparable picture of the pension provision is obtained by analyzing both statutory and occupational pension schemes.

In this report we compare pension contributions in eight European countries between 2015 and 2020: Denmark, Finland, France, Germany, Italy, the Netherlands, Norway and Sweden. These countries represent a good cross section of different ways of arranging pension coverage, with a varying mixture of public and private pension provision and varying financing responsibilities. They also fall under different types of welfare regimes (Esping-Andersen 1993).

This report presents country comparisons of aggregate pension contribution income covering both pillars. It considers all contribution income collected of the different schemes covering old-age, disability and survivor's pensions to finance current and future pension benefits in a certain year. These are usually covered within pensions schemes but for example in Sweden and France disability benefits comparable to disability pensions are provided through sickness insurance and thus included into comparison.

To identify who is contributing and how much, we look at how the total contribution is divided between employers and employees. As regards the measurement of the level of pension contributions, it is not enough simply to examine only on the nominal contribution rates as they will not tell us about the actual level of contributions paid. For example, contributions vary depending on the scheme and the limits set on pensionable earnings.

Not only contributions but also tax revenues can have a significant role in financing pensions, either through state subsidies or by covering costs on pension accruals for unpaid periods. The EU Pension Adequacy Report (2021) predicts that the share of tax financing is going to grow in the future. In Denmark, for example, public pensions are already mostly paid out of tax revenues.

Some countries have also accumulated significant pension assets. However, within this report we do not explicitly analyse assets and returns, but in as much as the main purpose of funds is to cushion increases in pension contributions, they are implicitly included. The same applies to the possible use of debt that is issued by pension institutions as a means of pension financing.³

This does not of course explain the actual incidence of contributions (who ultimately pays for the pensions). The actual incidence of contributions may differ greatly from the notional source. In economic theory, the balance between employer and employee contributions is neutral (or irrelevant) in the long run because both are part of the total remuneration, so higher employer contributions could eventually mean lower salaries (or other benefits) (Blommestein 2009; Melguizo and González-Páramo 2013; Sjögren-Lindquist et al. 2011).

The data on pension contributions and income flows are mainly based on national statistics, accounts, and budget data, as well as different official reports, and recent EU

³ This report does not present data on returns from financial markets or the financing of pension schemes by issuing debt. We understand that if these were included, our results would be different.

publications. For maximum reliability we have requested some of the figures directly from the national authorities. The data on GDP and wage sums have been obtained from the OECD database (OECD.Stat).

The report is divided into two parts: the first part provides a comparative summary of the main results in the countries studied, while the second part consists of more detailed country fiches. In chapter 2, we present the main driving forces of the pension contribution levels. Then, in chapter 3, we turn to an examination of how the overall pension provision is structured and financed. In chapter 4, we present the main results and compare them with those from earlier years. The concluding summary in chapter 5 is followed by the Annexes and country fiches.

2 Driving forces of the pension contribution levels

The main driving forces in the development of pension expenditures can be identified as population structure, the level of pension benefits and time spent in retirement. Although these affect the required contributions, the direct effects can be mitigated by the use of assets.

2.1 Population structure

One of the main explanatory factors for pension expenditure is the population structure. The larger the number of old-age pension recipients, the more likely it is that the country will have a high pension expenditure and possibly also a high contribution level.

The most critical measures of population structure with respect to pension expenditure are median age and old-age dependency ratio. Higher median age is related to a higher old-age dependency ratio, pushing up the numbers of pensioners relative to workers and increasing pension expenditure.

The ratio of pension expenditure to GDP tends to be lower in countries with more youthful demographics and vice versa. The youngest country in our comparison is Norway, which has a median age of 39.9 years. Italy has the highest median age, 47.2 years.

The old-age dependency ratio (65+ / 20–64) is also highest in Italy, which together with Finland records a figure of 39 per cent. The lowest old-age dependency ratios are found in Norway at 29.4 per cent and Denmark at 30.9 per cent.

Among the countries in this comparison, the highest statutory pension expenditure in relation to GDP is recorded for Italy, France and Finland and the lowest for the Netherlands and Sweden.

2.2 Average pension levels

Although pension financing is sensitive to the population age structure, the level of spending on old-age pensions cannot be fully explained by age structure alone. Pension benefit levels also enter the equation. This can be seen by comparing pension spending to old-age dependency ratios. There is a strong relationship, but it is far from deterministic.

OECD (2021) provides information about the replacement rates of pension in relation to pre-retirement wage. Even though the calculations are theoretical, the strength of the comparison is that it covers both statutory and occupational pensions and thus provides a good overall picture of the generosity of pensions systems. The OECD measures the replacement rate of pensions under the assumption that a person's working life extends from age 22 to the national retirement age. Based on these calculations the Danish pension system has the highest replacement rate (80 %). The pension systems in Italy (75 %), the Netherlands (70 %) and France (60 %) also provide benefit levels higher than

the OECD -average (58 %) benefit levels. Finland (57 %), Germany (56 %) and Sweden (53 %) are close to the level of OECD -average. In Sweden the statutory pension is lower than average but supplemented by occupational pensions. The equivalent rate for Norway is 46 per cent, including mandatory occupational pension (7 percentage points) based on a minimum contribution.

As the replacement rate calculations are based on current legislation and on average wage earnings-earner, they do not reflect fully the pensions in payment nor income-tested minimum pensions. However, when we consult statistics on pensions in payment, which also reflect previous rules and include the minimum pensions in those countries where these are income-tested, the emerging picture is rather similar, albeit with minor exceptions. According to Eurostat (2022), the biggest contrast to the theoretical calculations can be seen with Norway where the average pension expenditure per beneficiary for old-age pensions is among the highest, even when taking into account the price level in the country.

2.3 Effective retirement age

Pension expenditure and required contribution income is dependent on how long people spend time in retirement. All the countries in our comparison have recently changed their policies with respect to early retirement. Traditionally Denmark and Finland have provided several early routes to early retirement but these have been significantly curtailed in recent reforms. The main driving forces behind recent pension reforms have mainly been geared to adjust the pension systems to the fact that people are living longer. Countries have raised the retirement age, reduced the (future) generosity of pension benefits and closed early routes to retirement (OECD 2021). These reforms have reduced the projected increase in pension expenditure. Furthermore, they have increased the fiscal sustainability of the statutory pension systems and eased pressure to increase contribution rates, which is no longer thought to be as feasible an option as it was a few decades ago. The recent developments in the contributions levied from employees and employers verifies this finding (see e.g. OECD 2007; 2011).

Increasing the effective age of retirement would alleviate the burden of ageing populations. Raising the retirement age would not necessarily translate into later retirement. It may also increase the number of disability pension beneficiaries. According to the OECD's SOCR -database, there are significant differences in the number of disability pensioners differs significantly between the countries studied. The number of disability beneficiaries relative to the working population is lowest in Italy and highest in Norway, where the figure is almost three times as high.

2.4 Pension assets

Pensions can be financed solely by current contributions and tax revenues. Also, use of assets can help to even out or lower the level of costs for employers, employees and self-employed. In this way pre-funding eases pressures to increase contribution rates despite of population ageing. It also relaxes the constraint of equal contribution income and pension expenditure within a certain year.

Even though statutory earnings-related pensions are mainly based on the PAYG principle, all the Nordic countries have continued to accumulate funds since the introduction of their schemes. In Finland, for example, the statutory earnings-related pension system is partly funded. Investment income from pension assets is an important element in financing the Finnish public pension system. Assets are increasingly used for keeping the contribution rate stable. Since 2012 expenditure has exceeded contribution income and the difference is financed through returns on pension assets. In recent years, approximately one-fifth of private sector pension expenditure has been financed with pre-funded pension assets (Tikanmäki et al. 2019).

In Sweden, too, surpluses generated in buffer funds are used to balance financial strains on the old-age pension system. Since 2009 these funds have been net contributors to the pension system, i.e. pension expenditures have exceeded contributions. Funds are expected to continue to make net disbursements to the pension system for another 20 years or so. Thereafter, the buffer funds are expected to receive net inflows again. (MoF 2021.)

Germany, France and Italy have chosen a different path as their statutory pension systems rely on the pay-as-you-go (PAYG) principle without significant pre-funding.

Occupational pension schemes are usually funded. For example, the extensive pension assets of Denmark and the Netherlands are a result of comprehensive, fully funded supplementary pensions. The French mandatory supplementary pensions (AGIRC-ARRCO) form an exception in that they are based on the PAYG principle.

Table 1.
Key factors influencing pension expenditure and contributions.

	Denmark	Finland	France	Germany	Italy	Netherlands	Norway	Sweden
Demographic factors								
Old-age dependency ratio (65+/20–64) in 2019 (European Commission 2021)	30.9	38.9	36.5	36.1	38.9	32.9	29.4	35.2
Population median age, years (Eurostat 2020)	42.1	43.1	41.9	45.9	47.2	42.7	39.9	40.5
System specific factors								
Average old-age pension in 2019 (Eurostat 2022)								
€ /month ¹	2,222	1,639	1,458	1,362	1,487	1,833	2,352	1,651
€ /month in PPS ²	1,561	1,278	1,314 (2018)	1,264	1,443	1,541	1,514	1,254
Pension expenditure (own calculations 2020)								
Total, %	12.8	13.8	14.7	13.8	16.5	11.7	13.8	12.5
Statutory, %	9.5	13.5	–	12.5	16.0	7.3	11.2	8.0
Occupational, %	3.3	0.3	–	1.3	0.5	4.4	2.6	4.5
Statutory and occupational pension funds /GDP, % (Finnish Centre for Pensions 2019)								
	190	100	<10	20	10	220	350	130
Retirement age (2020)								
	66 y	63 y 9 m – 68 y	62 – 67 y	65 y 8–9 m	67 y	66 y 4 m	62 – 75 y	62 – 68 y
Effective retirement age (OECD 2020), years								
men	63.8	63.0	60.4	63.1	62.3	63.9	64.9	65.8
women	63.5	63.6	60.9	63.2	61.3	62.8	63.1	64.9
Disability pensioners / working age population, % (OECD SOCR 2018 or latest available) ³								
	5.4	5.9	7.0	6.9	4.5	6.8	13.3	4.6
Self-employed as a share of workforce 2020, % (OECD)								
	8	12	11	9	20	17	6	9

1) Calculated as old-age pension expenditure/ old-age pension beneficiaries.

2) PPS, Purchasing Power Standard.

3) Does not include disability allowances for disabled persons (FI, SE).

3 Overall structure and financing of pension schemes

Statutory pensions constitute the main part of total pension provision in all the countries reviewed. However, there are significant differences in terms of who is entitled to pension benefits and how pension accrues or is calculated.

For example, Denmark and the Netherlands can be considered to represent typical Beveridgean countries in the sense that public pension schemes provide a universal flat-rate pension based on residence. In other countries statutory pensions include earnings-related pension benefits with a more Bismarckian role of income maintenance. The significance of these earnings-related schemes may, however, vary as they may involve earnings limits or benefit ceilings.

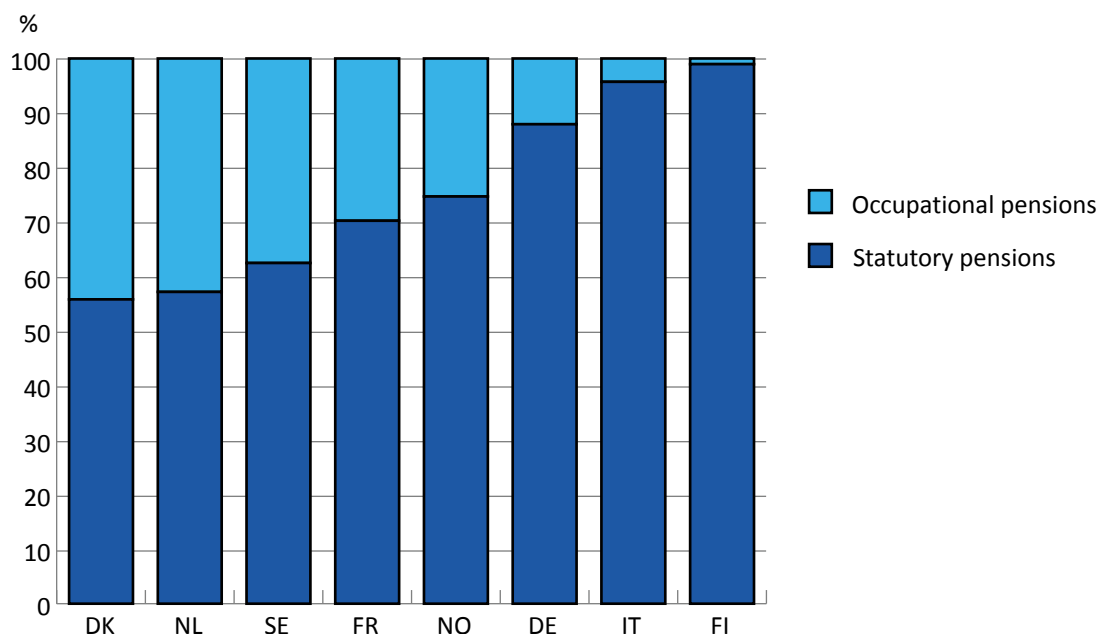
Another important aspect is how well pension schemes cover different occupational groups. The self-employed in particular are less well covered in statutory and occupational pension arrangements than typical private sector workers. As a rule, the self-employed have lower insured earnings than workers.

The scope of occupational pensions reflects the role and level of statutory schemes. Hence, the relative importance of occupational pensions in old-age income is especially significant in Denmark and the Netherlands, where earnings-related pensions are arranged solely through collective occupational pensions. In Sweden, too, occupational pensions have a significant role as statutory earnings-related benefits are limited in level and the occupational pensions are made quasi-mandatory for nearly all employees based on extensive collective labour agreements. In Norway and France, occupational pensions are compulsory, but despite the high coverage (90 % of employees) they are supplementary in relation to statutory pensions.

In Germany, the coverage rate of occupational pensions is around 50 per cent of employees, which means they have limited importance on an aggregate level, although they can be more significant for individuals or specific occupational groups. In Italy and Finland, occupational pension coverage is around 10 per cent. In these countries the scope and generosity of statutory pensions have left little room for the development of occupational pensions.

These structural country differences can be seen in Figure 1, which shows how contribution income is divided between statutory and occupational pensions.

Figure 1.
Statutory and occupational pension contribution income shares in 2020, %.



3.1 Financing of minimum pensions

Most of the countries studied have a statutory first-pillar pension scheme providing basic benefits, but the level of these benefits varies considerably. In Germany the minimum benefit for pensioners is provided through means-tested social assistance that is not part of the pension scheme. It is therefore not included in the comparison. In Italy the minimum pension has not been available to new entrants since 1996. Targeted tax-financed social assistance schemes are available to all old people with insufficient financial means which is not included in calculations.

In France, the general social security scheme includes a minimum pension. In addition, minimum old-age provision (ASPA) is guaranteed by a means-tested benefit which is financed by tax revenues.

Denmark and the Netherlands have a universal, residence-based flat rate pension that is paid to all regardless of the amount of earnings-related pension. In Denmark, however, this only applies to the basic amount, and the pension supplement depends on the pensioner's and his or her spouse's combined earned, capital and pension income. In Denmark it is expected that in the longer run, public pensions will have a more limited role in income replacement beyond low-income groups.

In Finland, Norway and Sweden, the residence-based national pension and guarantee pensions are proportional to the amount of statutory earnings-related pension received. In Denmark, Finland, Norway and Sweden, residence-based minimum pensions (old-age, disability, survivor's) are financed from general taxation.

In the Netherlands, the minimum wage-based and income-tested disability benefit for young disabled persons (Wajong) is financed solely through general taxation. However, the residence-based old-age pension scheme (AOW) is a PAYG system financed by employee contributions and tax revenues. The government decided to cap the

contribution rate for the AOW scheme to a maximum of 18.25 per cent as early as 1997. However, the contribution rate has remained stable, just below the cap, at 17.9 per cent since 1999. Coupled with increasing pension expenditure, the fixed AOW contribution rate has resulted in a deficit between contributions received and expenditure since 2000. The government covers the shortfall between old-age pension expenditure and the contribution income. In 2020 the respective shares of income from contributions and tax revenue were roughly equal. There is also a separate, minimum wage-related survivors' pension scheme (Anw), which is financed with employee contributions. Because of declining beneficiary numbers, the contribution rate is only 0.1 per cent.

3.2 Financing of earnings-related pensions

3.2.1 Statutory pensions

Denmark

The Danish Labour Market Supplementary Pension Scheme (ATP) is a fully-funded DC scheme that covers all wage earners. Self-employed persons can join the scheme voluntarily. The employment-related ATP is financed by small nominal contributions from all employed persons. The amount of ATP contribution is adjusted to correspond to the projected rate of one per cent of average earnings. The employer pays two-thirds of the contributions and the employee one-third. ATP does not provide disability pensions, and survivors' benefits are paid as a lump sum.

In addition, the Danish unemployment insurance fund provides a voluntary early retirement pension (efterløn) that is mainly financed by state revenues. Employees must pay flat-rate contributions to be eligible for early retirement.

Finland

In Finland the contribution rate is not fixed but intended to develop steadily and appropriately to secure adequate financing for the benefits in the long run. There are no ceilings on pension accrual, contributions, or employees' earnings in the earnings-related scheme.

The average earnings-related pension contribution rate in the private sector (TyEL, Employees Pensions Act) has been 24.4 per cent of wages since the 2017 reform.⁴ The share payable by employers was set at 17.35 per cent and that by employees at 7.05 per cent⁵. The pension contribution covers old-age, disability and survivors' pensions.

4 Finnish earnings-related pension consists of five sector-specific schemes that are based on different legal acts. In addition to TyEL, these are the pension scheme for public sector employees, the scheme for the self-employed, the scheme for seafarers, and the scheme for farmers. Despite their different legal bases, the pension rights under these schemes have more or less been harmonised following pension reforms in the 1990s and the 2000s. There still remain differences in how these schemes are financed.

5 Employees aged 53 to 62 are required to pay a higher contribution (8.25 %) until the end of 2025. Otherwise the contribution rate is 6.75 per cent. The increased contribution rate is due to the higher accrual rates for employees aged 53–62 introduced in the 2005 pension reform.

France

The French pension system is basically composed of two major pay-as-you-go schemes, the general basic scheme – Régime général or CNAV covering old-age and survivors' pensions – for most wage earners working in the private sector (representing 67 % of the employed labour force in 2020), and the public pension scheme that applies to civil servants and military personnel (representing about 21 % of the labour force). Disability pensions are financed through health insurance contributions.

The ceiling on eligible earnings in the basic scheme was EUR 41,136 in 2020.

Germany

In Germany, the statutory pension scheme (Gesetzliche Rentenversicherung) consists of the general scheme (Allgemeine Rentenversicherung) and a separate, small scheme for miners and, railway and seafaring personnel (Knappschaft-Bahn-See, KBS). Together these schemes cover around 85 % of the working population.

The schemes are earnings-related, points-based systems covering old-age, disability and survivors' benefits as well as rehabilitation. Financing is based on the PAYG principle with employer and employee contributions as well as transfers from the federal government. The state finances unpaid insurance periods, such as staying at home to raise children, and provides general subsidies to ensure the long-term functionality and reasonable contribution rates and the long-term sustainability of the system.

The pension contribution in the general system is split into equal employer and employee components. In 2020, the total contribution rate was 18.6 per cent, with 9.3 per cent components for employers and employees alike, subject to an income ceiling of EUR 6,900 per month in the old states and EUR 6,450 per month in the new states.

The contribution rate has been statutorily limited since 2002 to a maximum of 20 per cent (until 2025) and 22 per cent (until 2030). Since 2018, there has also been a lower limit of 18.6 per cent. Together with a (theoretical) benefit level guarantee of at least 48 per cent until 2025 and 43 per cent until 2030, they form the so-called “double limit” (Doppelte Haltelinie). In order to stay within these limits, the government has increased the availability of tax-funding.

The rise in the expenditures of the system is mitigated by an indexation system that links the development of the pension system dependency-ratio (pensioners relative to contributors) and contribution rate changes to the annual benefit increases. In addition, there is also a sustainability reserve (Nachhaltigkeitsrücklage) that steers the contribution rate upwards or downwards depending on the size of the reserve.

For some groups there are separate, compulsory pension schemes that replace membership in the statutory scheme. These schemes include the Civil Service Pension Scheme (Beamtenversorgung), the Farmers' Pension Scheme (Alterssicherung der Landwirte) and liberal professions' pension schemes (Berufsständige Versorgung). The Civil Service Pension Scheme is a PAYG scheme funded by the relevant organisations' contributions (employer) and state subsidies. The farmers' scheme is also PAYG, financed mainly by tax revenues but with accompanying member contributions. The liberal professions' pension schemes are fully or partly funded through contributions paid mainly by members.

Italy

Benefit calculation rules are based on a notional defined contribution (NDC) system. The pension contribution rate is 33 per cent of wages, with employees paying 9.19 per cent and the employer 23.81 per cent. The rate for self-employed persons (including shopkeepers, craftsmen and farmers) is 24 per cent.⁶ The pension contribution rate covers against the risks of old -age, disability and the death of a spouse or breadwinner. The contributions paid are virtually transferred each year to a notional account, and the accumulated pension capital is uprated annually with the five-year average growth of nominal GDP.

At retirement, the accumulated pension capital is transformed into an annuity by using a transformation coefficient, which is a function based on the probabilities of death, the probabilities of leaving a widow or widower behind and the expected number of years for which a survivor's benefit will be withdrawn. Thus, the transformation coefficient increases with age. The coefficients are revised every two years. Period life expectancy is used to calculate the transformation coefficients.

In 2020 the maximum earnings base for pension benefits was EUR 103,055 per year, with the minimum set at EUR 15,953 per year. Equally, no contributions are levied above this ceiling. On the other hand, minimum income for pension contribution in 2020 for self-employed is EUR 15,953 per year. Those self-employed who earn less must pay the contribution by applying the rate to this minimum amount.

Netherlands

The disability benefit scheme for employees (WIA) is the only earnings-related statutory pension scheme in the Netherlands. WIA replaced the old disability scheme WAO in 2006. It is financed solely by employer contributions on a PAYG basis.

The contribution is divided into two parts: the basic contribution is intended to cover the financing of the permanently and fully disabled (IVA) and the benefits paid out under the former, now defunct disability scheme WAO. The basic contribution rate is the same for all employers. In 2020, it was 6.77 per cent. The second part, i.e. the differentiated contribution, is intended to finance temporary benefits (WGA) and the contribution rate varies depending on the employer's size, disability history and business sector. The average contribution rate was 0.76 per cent in 2020. Employers can decide to opt out of the WGA scheme and carry this disability risk themselves or insure it privately. In this case, the employer does not have to pay the differentiated WGA contribution.

The contributions are only payable only under the annual salary ceiling of EUR 57,232.

Norway

The National Insurance Scheme is financed by contributions and tax revenues. The scheme is PAYG financed, although the Government Pension Fund directs revenue to the state budget that is used as part of financing.

⁶ In Italy, different groups of self-employed have slightly different rules. The contribution base for the self-employed is linked to the actual income that is validated for tax purposes.

Contributions are levied on the total wage sum. However, the ceiling on pensionable earnings is about 114 % of the average wage. As there is no separate pension contribution, the pension contribution income has been calculated according to the pension expenditure on old-age, disability and survivors' pensions.

The contractual AFP-retirement pension is financed through employer contributions and state subsidies. AFP-pension is currently supplementary old age pensions that are payable for life as earlier it was a fixed term early retirement benefit, payable from 62 to 67.

In addition, Norway has supplementary pensions for seamen and fishermen which are financed by contributions and tax revenues.

Sweden

In Sweden the old-age pension scheme has an autonomous structure and is financially separated from other pension insurance benefits, that is, from disability and survivors' benefits, which are financed from budget funds and employer contributions. Disability benefits, which are equivalent to disability pensions in most European countries, are financed as part of employers' sickness insurance contribution.

The earnings-related old-age pension system is financed by contributions levied on earnings subject to a ceiling amounting to around 108 % of the average wage. Employer contributions are paid also over the ceiling. However, contributions over the pension ceiling are transferred to the central government budget and is actually general tax, having no effect to the financing of the earnings-related pension system. In this report we have not counted that part as a contribution income either.

The old-age contribution rate is fixed, for employees it is 7 per cent of gross earnings and for the employers 10.21 per cent. Out of the effective contribution rate on gross earnings of 17.21 per cent, 14.88 % percentage points is paid to the NDC system and 2.33 percentage points to the DC-funded pensions.⁷

The pension system secures financial balance only by changing the value of benefits since the option to increase the contributions (or subsidise by tax subsidies) is ruled out. The PAYG old-age pension scheme has two important features which are intended to ensure its financial stability. The first is an automatic balancing mechanism which reduces current and future pensions by as much as is necessary to maintain the stability of the system (see e.g. OECD 2021.) The second feature are the buffer funds, which in 2020 amounted to 30 per cent in relation to GDP.

3.2.2 Occupational pensions

The Netherlands, Sweden and France have mature multi-pillar systems. There is also a multi-pillar pension system in Denmark, although the current occupational pensions

⁷ The old-age pension contribution is 18.5 per cent of pensionable income: 16 percentage points are paid to the NDC PAYG system and 2.5 percentage points to the funded DC premium pension system. This is the rate used for establishing pension rights, and it is also the figure most commonly used also when discussing contributions. However, pensionable income is defined as earnings less the employee contribution to the pension system.

model has only been in place since the late 1980s. Norway has recently moved towards a multi-pillar structure after the pension reforms in 2006 and 2011.

In Germany around every second employee is covered by an occupational pension scheme. Coverage rates increased in the early 2000s with the introduction of employees' right to convert part of their salary to a pension scheme, but in recent years the coverage rates have shown little change.

Italy's multi-pillarisation plan was launched in the 1990s to compensate for the expected decline of public pension levels. Some 30 years on, there is marked variation in coverage rates between occupational categories and across economic sectors. In 2020, one-third of the workforce were enrolled in supplementary schemes (Jessoula 2018).

Finland stands out from other countries. Despite the projected decline in the generosity of the first pillar pensions, no measures have been taken to increase the importance of supplementary pensions. This is in opposite that has been done, for example in Germany and Norway, where declining replacement rates of statutory pensions are planned to be compensated with supplementary pensions.

Denmark

Denmark's occupational pensions are of the defined contribution type, with the notable exception of civil servants' pension scheme, which is a defined benefit system. Civil servant pensions are mainly tax financed and currently being phased out. Statutory pensions still account for almost two-thirds of all pension income (European Commission 2021b; ATP 2019). Contribution rates usually range between 12 and 19 per cent depending on collective labour agreements. Rates tend to be higher in highly educated groups (European Commission 2021b; Andersen 2015). As a rule, employers pay two-thirds and employees one-third of the contribution. Contribution rates have been progressively raised through an integrated element of periodic collective bargaining (see e.g., Industriens Pension 2022).

Finland

In Finland occupational pensions are provided for employees on a voluntary basis by employers. However, they play only a modest role in topping up public pensions. Benefits can be defined benefit or defined contribution; most new group pension plans are of the defined contribution type. Contributions are paid by the employer and, in some cases, the employee. Employee contributions may amount to half of the total annual contribution payment.

France

Most private-sector wage earners are members of complementary pay-as-you-go scheme (AGIRC-ARRCO). In addition to AGIRC-ARRCO, separate occupational schemes exist for many sectors and occupational groups (see country Annex). Contributions are paid up to a ceiling that are specific for each scheme.

The contribution rates for a major pension plan i.e. AGIRC-ARRCO are dependent on income brackets: for annual salaries of up to EUR 41,136 in 2020, the rate is 6.20 %,

shared between the employee (2.48 %) and the employer (3.72 %); for annual salaries ranging from EUR 41,136 to EUR 329,088 (in 2020), the rate is 17 %, shared between the employee (6.8 %) and the employer (10.2 %).

The benefits are determined by a system of points acquired according to the contributions paid during the career.

Germany

Traditionally, most occupational schemes in Germany have been defined benefit schemes, although hybrid pension schemes have become more popular. Since 2018, also pure defined contribution schemes have been allowed in the occupational pension legislation. In the private sector occupational pension provision is mostly funded whereas in the public sector the schemes are usually based on the PAYG principle.

Private sector pension schemes can be paid by employer or shared between employer and employees, or by employees alone, depending among other things on collective agreements. If the employee contributes to financing, there is an obligatory minimum of employer participation, which has been of 15 per cent of the employee contribution since 2019. Traditionally most of the contributions are covered by employers, but the employee participation in financing has increased since 2002 after the introduction of the right of salary conversion.

The private sector pension contributions are directed by tax- or social security contribution exemption limits that differ depending on the vehicle used. Direct pension schemes have no limits for tax-exempt contributions and neither have the support fund schemes, if the liabilities are reinsured. Contributions to other vehicles, i.e. Pensionskassen, direct insurance and pension funds are exempted from social security contributions by up to 4 per cent of the statutory pension contribution ceiling (82,800e in 2020) and from taxes by up to 8 per cent.

In public sector supplementary pension schemes (ZÖD), the employee contributions were introduced in connection with the 1999 reform, but the (public) employer is still primarily responsible for financing the scheme. In the largest ZÖD -scheme, the VBL (Versorgungsanstalt des Bundes und Länder), the contribution rate was 8.26 per cent of the insured earnings, with the employer paying 6.45 per cent and the employees 1.41 per cent.

Italy

In Italy, approximately one-third of the workforce are covered by voluntary supplementary pension schemes. Participation in these schemes is incentivised by tax reliefs. The share of the workforce participating has increased in recent years: in 2015 the figure was 28 per cent.

The majority of the schemes are of the defined contribution type. Defined benefit plans exist in pre-existing pension funds. Most supplementary pension assets are held in contractual (which can be industry-wide, regional or company funds) and pre-existing pension funds. There are a total of 372 private pension funds in operation.

Netherlands

In the Netherlands, the Pensions Act (Pensioenwet) stipulates that occupational pension have to be financed by capital funding. The schemes are still mostly defined benefit schemes, although the indexation and in worst case scenarios also the benefit levels are usually linked to the funding levels of the systems.

The contributions are paid by the employers and employees, with an average split of around 70:30 per cent. The pension schemes are also closely regulated by tax laws. These define the tax-exempt limits for the minimum retirement ages, accrual percentages (defined benefit schemes) and contribution rates (defined contribution schemes) as well as minimum and maximum salaries for pension accrual and contribution purposes (see country annex). In 2020, the lower threshold for the annual salary ranges from EUR 14,167 to EUR 16,030, with the maximum salary set at EUR 110,111. Within these salary limits, the average combined employer and employee contribution rate was 24 %.

Norway

In Norway employers have been required since 2006 to make a minimum contribution of 2 per cent of the earnings of their employees' annual salary between EUR 9,400 and EUR 112,870 to a defined contribution pension plan. The maximum contribution rate is 7 % below the earnings-ceiling used in the statutory pension scheme (EUR 66,780) and 25.1 % above this ceiling up to maximum salary at EUR 112,870.

If employers offer a defined benefit scheme instead, then the benefits must be at least the same level as the expected benefits under the mandatory 2 per cent contribution. The majority of the pension plans are defined contribution schemes. Approximately 24 per cent of the insured have minimum coverage, while about 3 per cent of DC scheme members are in schemes with maximum savings rates. The schemes are fully funded in both the private sector and in the public sector, except for the state employees' pension schemes, which are PAYG-financed.

Sweden

In Sweden all occupational pension contributions are paid by employers. There is some variation in contribution rates among occupational pension schemes. In general, however, employers in all four major public-private sectoral schemes pay a contribution of 4.5 per cent of wages below the statutory pension ceiling, and 30 per cent of wages above that ceiling without upper limit. Most occupational pension schemes have been renegotiated from the defined benefit to the defined contribution type. Consequently, the cost and replacement rate increase as the contribution rate to the occupational pension increases for earnings above the ceiling.

4 Main results

4.1 Pension contributions in relation to wages and GDP

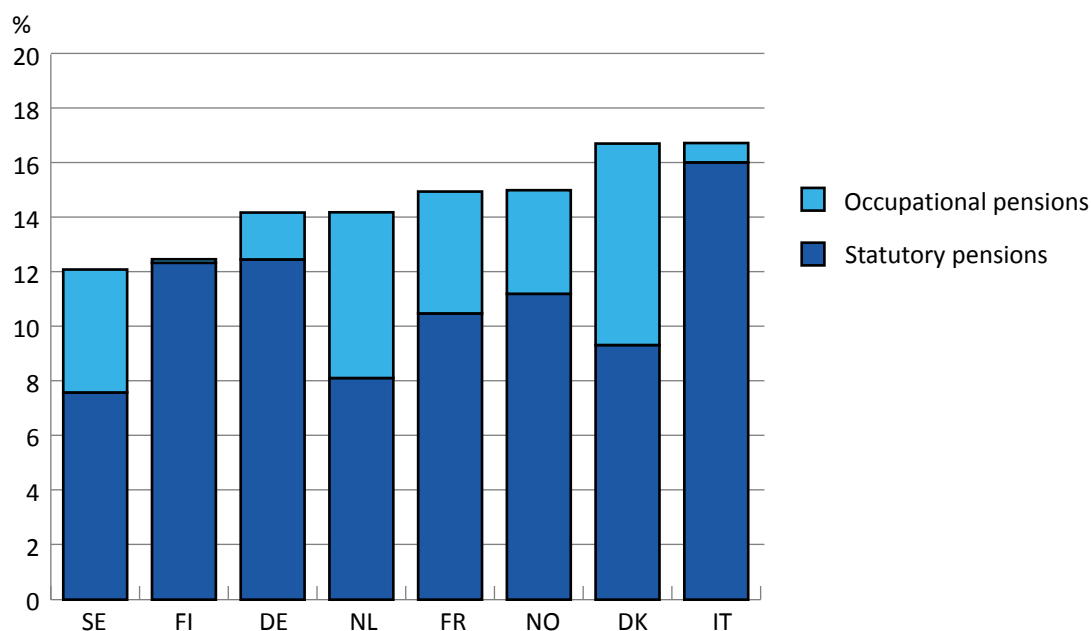
In the following, we report the results for two economy-wide aggregates: GDP at market prices and compensation of employees (for more details about the indicators used, see Annex 3).⁸

For statutory revenues only, the average contribution income is 11 per cent of GDP. It is clearly highest in Italy (16 %), followed by Germany (12.5 %) and Finland (12.4 %). The results are not surprising in view of the importance of statutory pensions in these countries.

When occupational pensions are also considered, the country differences are reduced. The catch-up effect is most evident in countries with flat-rate statutory pensions, i.e. Denmark and the Netherlands. On average, the total pension contribution rate increases to 14.6 per cent. It is still highest in Italy at 16.8 per cent, but the figure for Denmark is almost the same at 16.7 per cent of GDP. The ratio of contribution income to GDP is lowest in Sweden (12.1 %) and Finland (12.5 %).

Figure 2.

Income from contributions and tax revenues in relation to GDP market prices in 2020, %.

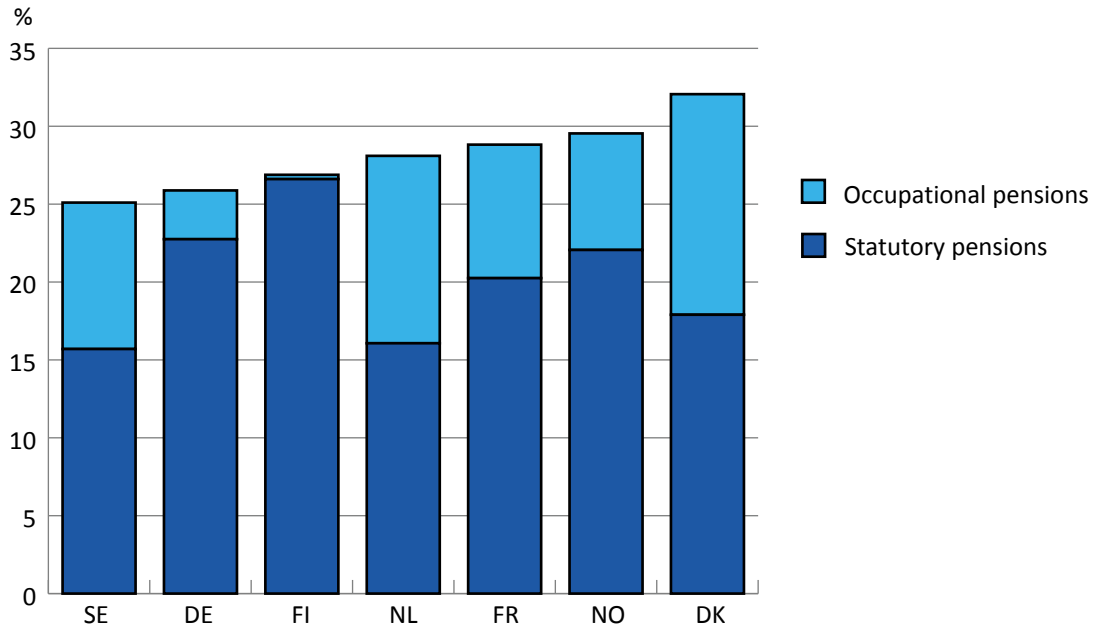


⁸ Although the wage sum is a more commonly used indicator, compensation of employees is better suited for pension contribution comparisons as it also includes social security contributions paid by the employer. Employers' social security contributions differ widely among the countries studied and this indicator provides more comparable results. GDP at market prices has its own shortcomings but as it is a more widely used and more familiar indicator than GDP at basic prices, we have chosen it as our main indicator.

The results based on compensation of employees are similar to those using the GDP ratio. In Sweden contributions are paid at a rate of 25.1 per cent. The figure for Germany is 25.9 per cent and for Finland 26.9 per cent, whereas in Denmark the contribution level reaches 32 per cent.

Figure 3.

Income from contributions and tax revenues in relation to compensation of employees in 2020, %*.



* Comparable data for compensation of employees are not available for Italy and therefore its results are not analysed in relation to compensation of employees (or to wage sum).

4.2 Who carries the bill?

From the employers' and employees' point of view and against the background of the discussion about labour costs, the key question is: Who pays the contributions? It should be noted that our results are based on statistics, and we do not consider the theoretical view on what is the actual incidence of contributions.

Overall, in all the countries included in our comparison, the employers' share in financing the pension provision is larger than employees'⁹. This is most evident in countries where occupational pension provision is high as they are mostly employer-financed. In total, the employers' share is the largest in Sweden and Finland.

Employees pay the largest share in the Netherlands where around one half of the residence-based national insurance scheme is financed through employee contributions; the other half is covered by tax revenues. Employees account for the smallest part of contribution income in Denmark and Italy. In Germany and the Netherlands the shares are more evenly balanced between employers and employees.

⁹ In Norway, no separate pension contribution is levied. In these calculations, the formal incidence of the pension contribution is estimated to correspond to the incidence of the general social insurance contribution.

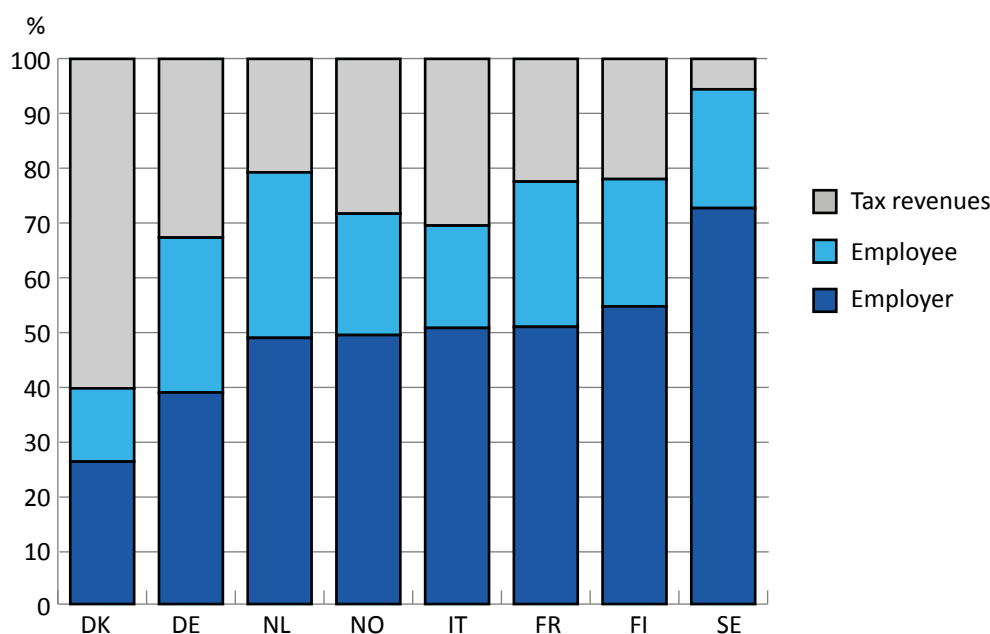
It is noteworthy that the share of tax revenues exceeds 30 per cent in Italy and Germany. Contributions to statutory pension insurance are not enough to cover the costs of entitlements and the difference is made up with tax revenues.

In Denmark, statutory pensions are mainly financed by general tax revenues. Employers and employees pay only flat-rate contributions. These contributions consist mainly of payments for occupational pensions. In recent years the general trend has been for these payments to rise, but their share of around 40 per cent of total contribution income is modest in comparison to many other countries.

The role of the state in pension financing has multiple facets. As an employer through central and local government and non-commercial public corporations, the state participates in pension financing by paying explicit employer contributions. In such cases, the state's revenues are considered as employer contributions. However, the state is also involved in the financing of certain benefits (e.g. minimum pension, unpaid periods) or pension systems by covering the deficits. In our report, this income is counted as general tax revenue.

Figure 4.

Share of employer and employee contributions and tax revenues in the financing of total pension provision in 2020, %.



The following figures summarise the results of our analysis, showing both the level of contributions and the incidence of payments in both statutory and occupational pensions (Figures 5 and 6).

Figure 5.

Pension contribution income in relation to GDP at market prices in 2020, %.

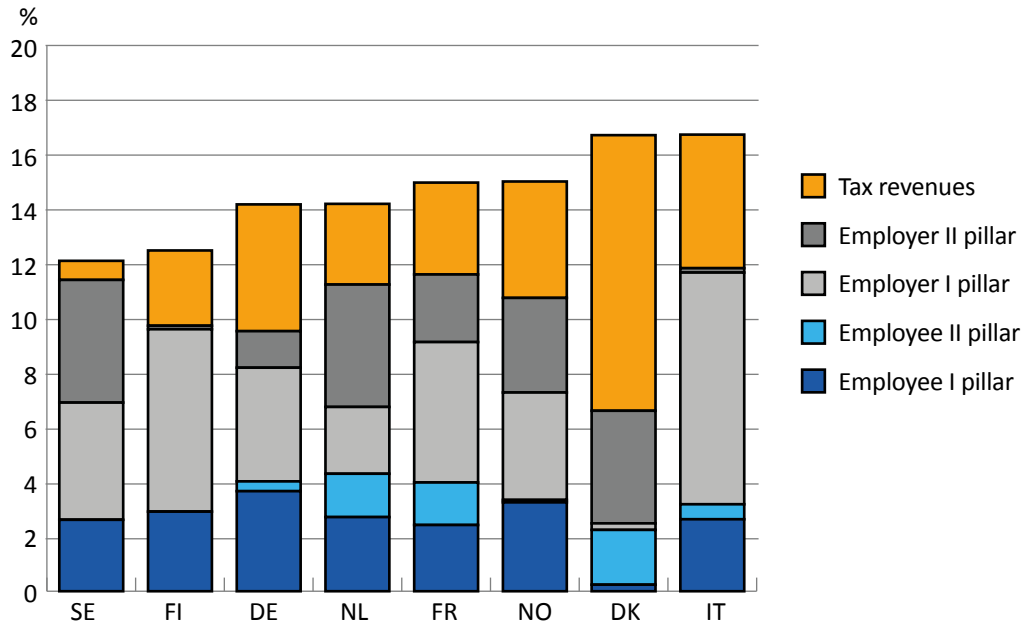
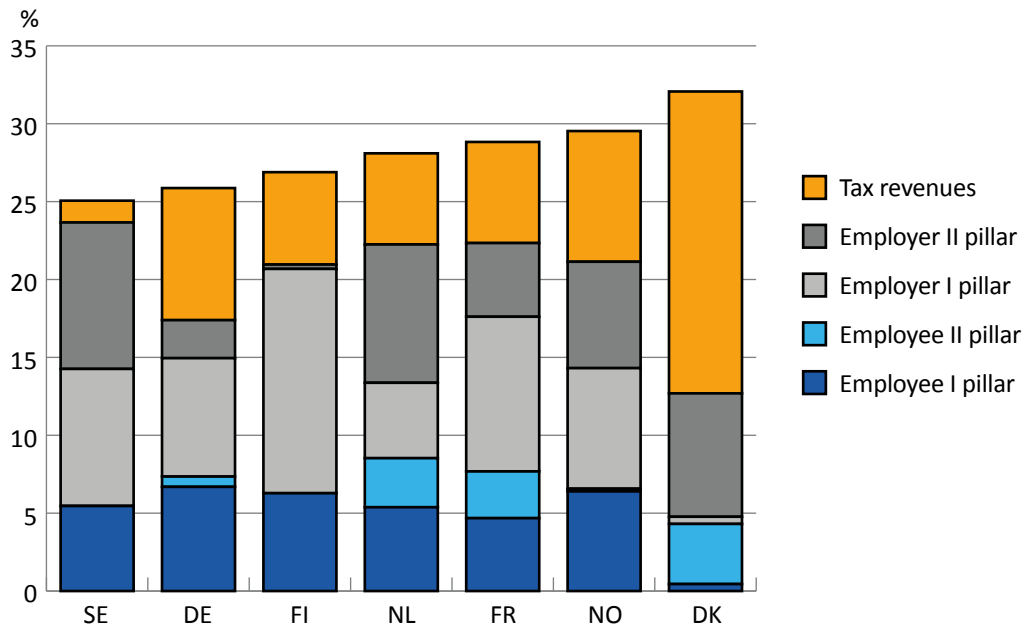


Figure 6.

Pension contribution income in relation to compensation of employees in 2020, %.



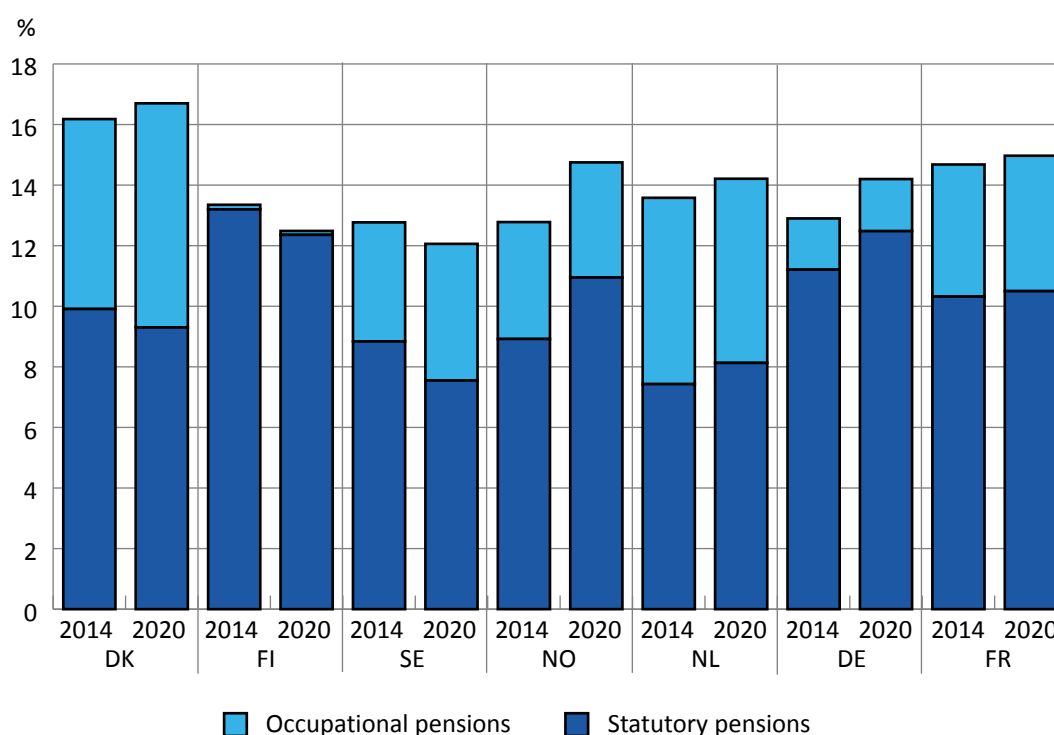
4.3 Comparison to earlier results

In Sweden and Finland, total contribution levels have decreased since the previous study almost a decade ago in 2014 (Vidlund et al. 2016). A closer look reveals that statutory pension income has also diminished in Denmark. However, this has been offset by higher occupational pension contribution income especially in Denmark and to some extent in Sweden.

In other countries the contribution levels have increased somewhat. Norway has seen a sharper increase, reflecting the rise in pension expenditures but also weak GDP growth from 2014 to 2020. Otherwise, the levels have been rising more moderately.

Figure 7.

Contribution levels in 2020 and 2014 in relation to GDP at market prices, %.



The share of tax revenues has increased in Norway, the Netherlands, Germany and France. A slight increase can also be seen in Finland, which is mainly due to the increased state contribution both in self-employed persons' pension scheme and in State pension scheme and the temporary discount for private sector employers due to COVID pandemic.

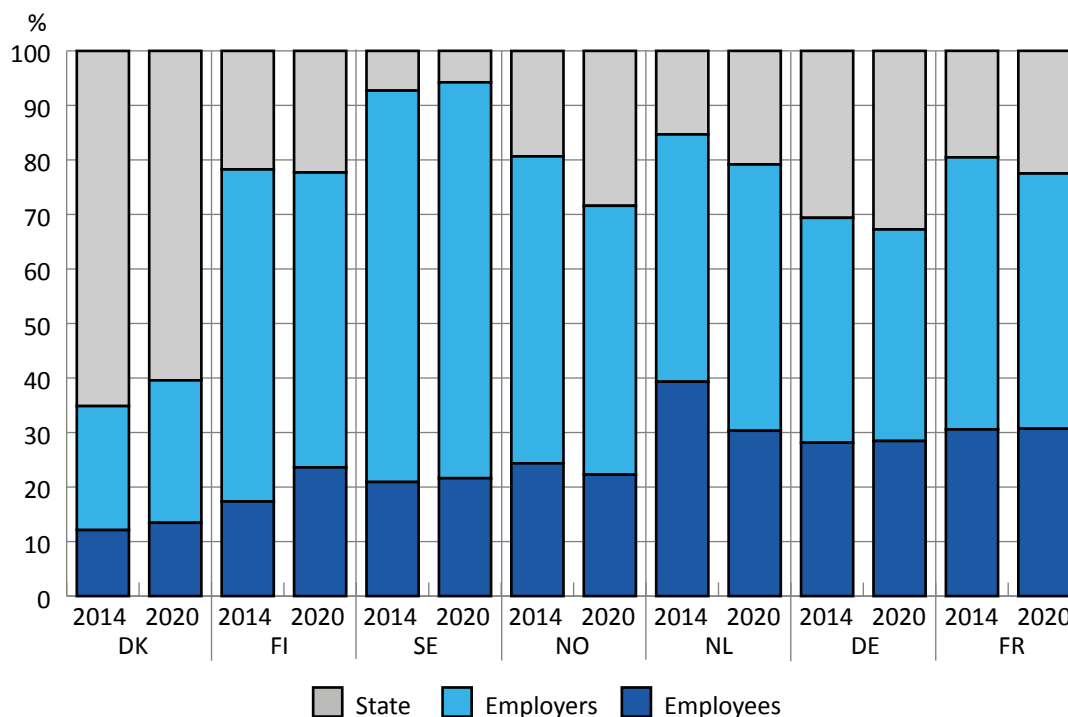
In the Netherlands the increase in tax revenues is connected to the higher level of state financing of minimum pensions, thus also reflecting a relative decline in employees' contribution. In the Netherlands this is part of a pension policy plan, whereas in Norway the state decided temporarily to reduce social security contributions due to the COVID pandemic. (see chapter 4.5.)

The only country where the share of employees has increased is Finland. This has its background in a tripartite competitiveness pact between the labour market organisations and the state in 2016, which was aimed at getting employees to work more for less compensation. The main pension content of the pact was to transfer part of the liability for social security contributions from employers to employees. (Eurofound 2016.)

In general, the share of employers has been on the decline, but in Denmark and the Netherlands and to some extent in Sweden, that share has increased between 2014 and 2020. The main reason for this lies in the increased costs of occupational pensions.

Figure 8.

Shares of total contribution income in 2020 and 2014, %.



4.4 Pension contributions in relation to average employee wages and twice the average wage

In the following we shift our focus from the aggregate system-wide level to the individual level and calculate the costs of the pension system for the typical employee. The calculations present the employer and employee pension contributions paid for average and high-income employees (twice the average wage) in 2020.¹⁰ As the aim is to describe the impact of pensions on labour costs, the proportion financed through tax revenues is not included. Some of the aggregate level results – for instance those for Denmark – differ significantly from these results.

The calculations of contribution levels take into account any upper and lower wage limits applied when levying contributions. The effect of these earnings limitations becomes apparent when comparing average-wage and high-income employees. For high-income earners, the statutory pension contribution level is usually lower, but occupational pension contribution levels are respectively higher (Figures 9a and 9b).

¹⁰ Wage levels are based on OECD data (OECD 2021).

Table 2.
Earnings ceilings for pension contributions and representative employee in 2020.

Countries	Earnings ceiling applied for contributions, €/year	Representative employee
Denmark	–	Employee covered in DC scheme
Finland	–	Private sector employee under TyEL scheme
France	Statutory pensions 41,136 € Occupational pensions 329,040 €	Employee covered in general pension scheme and mandatory occupational scheme
Germany	Statutory pensions: 82,800 € (old states)	Employee in transportation and warehousing sector (average earner) and financial services sector (high-income earner).
Italy	103,055 €	Not a member of occupational scheme
Netherlands	Statutory old-age pensions: 34,712 € Statutory disability pension: 57,232 € Occupational pension: 110,111 €	Member of the public sector ABP pension scheme
Norway	112,870 €	Employee covered in mandatory DC scheme
Sweden	47,800 €	Private employee covered in DC scheme

In Finland, the calculations include the average contribution under the Employees Pensions Act (TyEL) and a share of Employment Fund assets used for pension financing. Occupational pension contributions are not included given the narrow scope of the schemes. For Italy, too, occupational pension contributions are not included since less than one-third of the workforce actively contributed in 2020.

The theoretical calculations for the Netherlands cover employees under the statutory pension schemes (AOW, Anw, WIA) and the public sector occupational scheme (ABP). The contributions for old-age (AOW) and survivors' (Anw) pension schemes are subject to several discounts, i.e. tax credits, as the contributions are integrated into the personal income tax system. Thus, we have taken into account the general tax credit (algemene heffingskorting) and the work credit (arbeidskorting). Old-age and survivors' contributions in the ABP scheme are payable on annual earnings from EUR 14,200 up to the earnings ceiling and similarly for disability contributions from EUR 21,400 up to the ceiling.

In Norway the statutory pension contribution is based on an estimate calculated on pension expenditure. For occupational pensions, the contribution is the average contribution paid by employers to the defined contribution scheme in both examples.

In France the statutory contribution includes an old-age and survivors' pension contribution as well as a disability pension contribution, which has been estimated on the basis of health insurance expenditures. The statutory contribution further includes other contributions levied from employers and employees to finance pensions. In addition, employees are covered by the mandatory occupational pension scheme (AGIRC-ARRCO).

For Sweden, the calculations include statutory old-age and survivors' pension contributions as well as the share estimated as disability pension contribution on the basis of sickness insurance expenditure. Employees are also covered by an employer-financed DC occupational pension. Employers also pay contributions over the earnings ceiling. However, the part of the statutory contribution that exceeds the ceiling is not considered as a pension contribution but rather as a tax since it is transferred to the central government budget and does not affect the earnings-related pension system.

In Denmark statutory contributions include payments for early retirement pension and ATP employment pension. Occupational pension contributions vary between different schemes, and the contribution rates are based on the most typical occupational pension contribution rates, i.e. 12 per cent for average earners and 18 per cent for higher income earners.

For Germany, the calculations concern employees insured under the general scheme financed by equal contributions (9.3 %) from employees and employers under the earnings ceiling. As regards the contribution for occupational pensions, we have applied the data available at aba.de on average contribution rates for the transportation and warehousing sector (average-income) and the financial services sector (high-income earners). The employer contribution rates are 4.8 per cent for average wage earners and 6.5 per cent for high-income earners; and the employee contribution rates 0.8 per cent for average-wage earners and 0.9 per cent for high earners.

The calculation examples support the macro-level finding that, when both statutory pension contributions and contributions for occupational pensions are considered, the pension cost burden on employers and employees in different countries is much more evenly shared than indicated by a comparison of statutory contributions alone. The importance of occupational pensions increases at higher income levels.

Figure 9a.

Employer and employee pension contributions in relation to average wage in 2020, %.

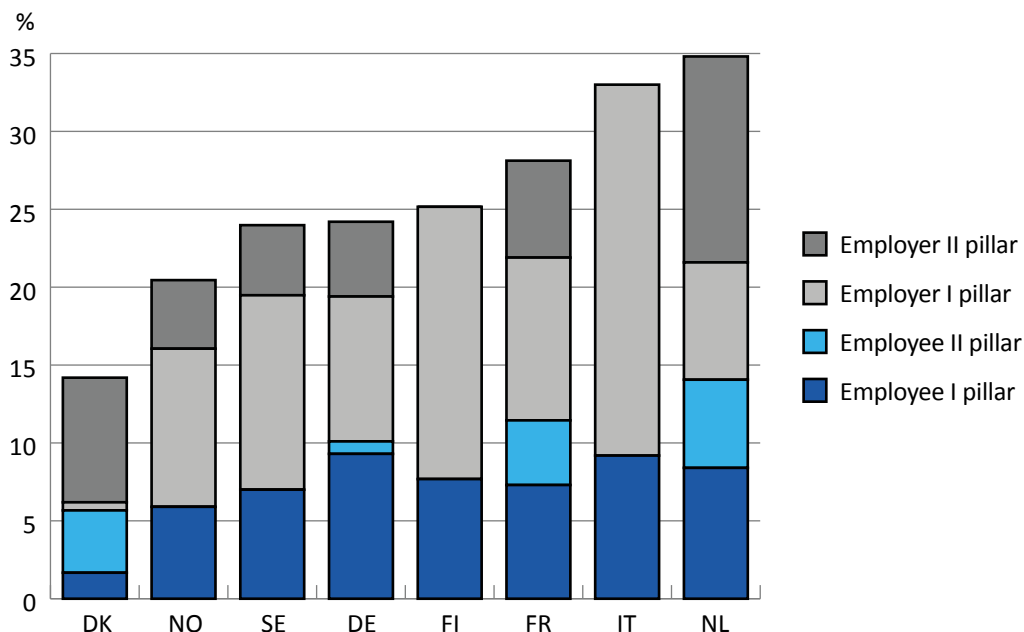
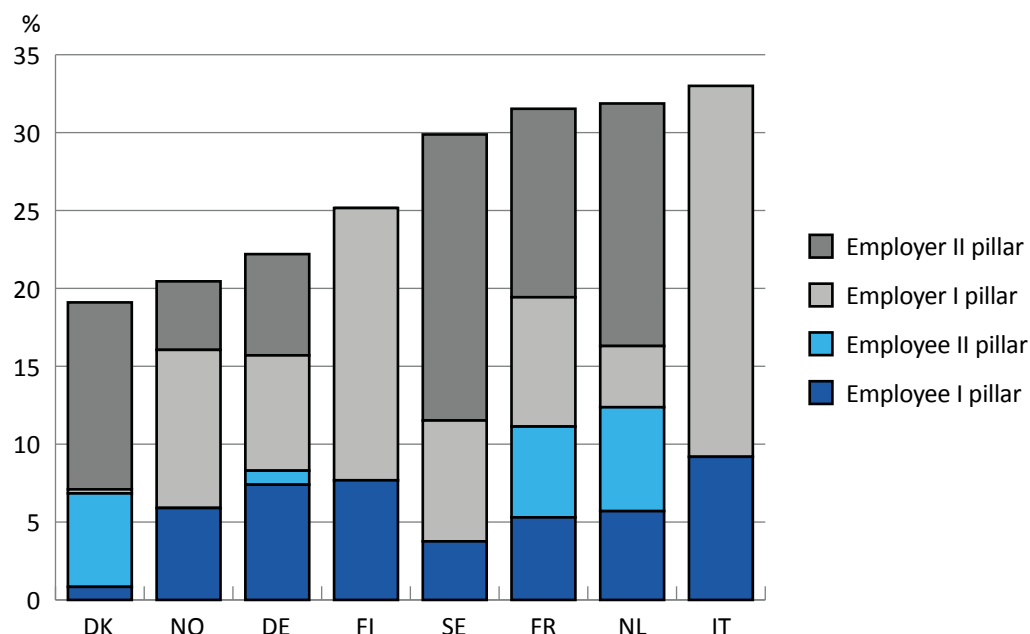


Figure 9b.

Employer and employee pension contributions in relation to twice the average wage in 2020, %.



4.5 Comparison between 2019 and 2020

The COVID-19 pandemic hit Europe in early 2020. It had a twofold impact on pension systems. Firstly, the health shock of COVID-19 caused excess mortality, especially in some vulnerable groups such as older people. To protect the health of their citizens, governments introduced distancing measures and various restrictions and lockdowns, with severe adverse effects on economies and employment. Some countries suffered more than others.

Secondly, the excess mortality in older age groups had a direct impact on pension spending. The OECD (2021) reported that on average, the number of people over 65 declined by 0.8 per cent between January 2020 and August 2021, which would result in a temporary proportional fall in pension spending. In the short term, therefore, the impact is rather limited.

In Europe many countries relied on job retention schemes (JRS) during the pandemic. According to the OECD (2021), many countries subsidized pension contributions and wages through the state budget or other public funds. For example, Germany supported job retention schemes, and workers on JRS accrued full pension entitlements. In Italy, pension entitlements accrued on full wages even though the subsidized part of wage was not subject to pension contributions. In France, a separate fund paid contributions on subsidized wages.

Some countries took measures to temporarily lower pension contributions. Finland lowered the employer's part of statutory pension contributions from May to December 2020 by 2.6 percentage points, without lowering future pensions. Norway temporarily reduced social security contributions by 4 percentage points, again without any effects on NDC entitlements. France subsidized employers' contributions in selected sectors without

lowering individual accruals. Italy allowed the deferral of pension contributions that were due between February and May 2020. These contributions are to be repaid by the end of 2022. (OECD 2021.)

In addition, Finland, France, the Netherlands and Norway allowed the deferral of pension contributions for a few months, and temporarily lowered or removed penalties for delays in contribution payments (OECD 2021).

The pandemic shock caused a slowdown in economic activity. This reversed or at least slowed the growth trend of GDP and the wage sum.

Table 3.

Nominal change in the compensation of employees (national currency) in 2019–2020, %.

Country	Change
Netherlands	3.4
Denmark	1.1
Sweden	0.8
Norway	0.4
Finland	-0.3
Germany	-0.7
France	-3.8

In four of the countries in this study the total compensation of employees rose between 2019 and 2020. The largest increase at 3.4 per cent was recorded in the Netherlands, followed by Denmark and Sweden. In France the compensation of employees dropped by 3.8 per cent, in Germany by less than one per cent.

Table 4.

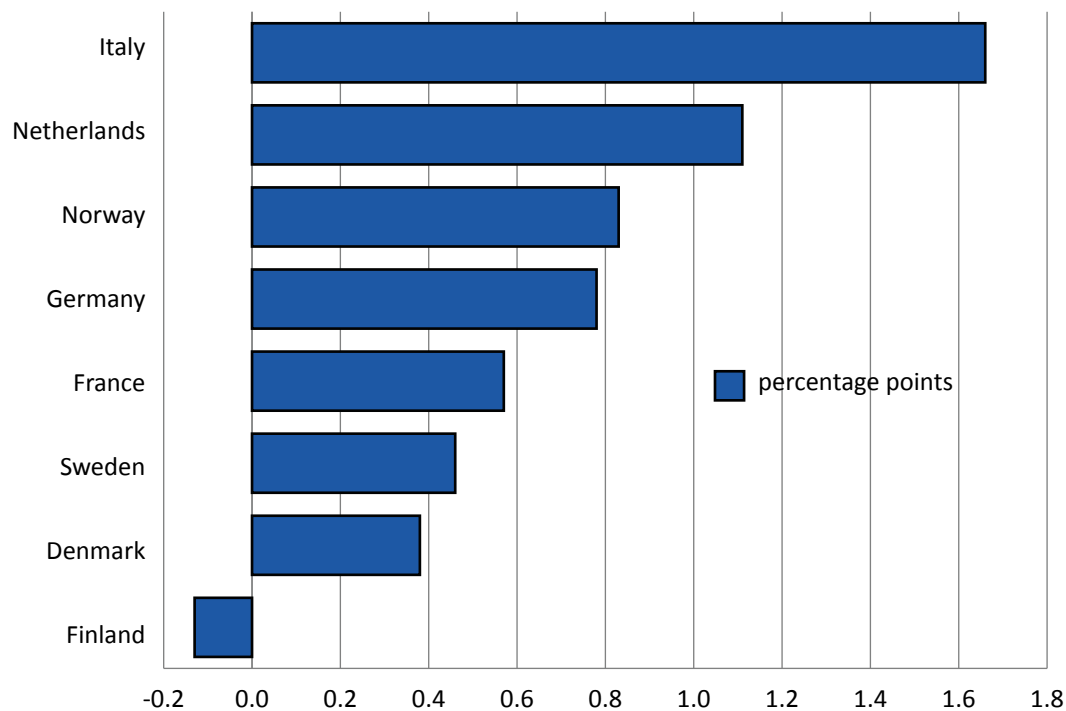
Relative change in GDP at market prices in 2019–2020, %.

Country	Change
Denmark	0.6
Sweden	-0.2
Finland	-0.8
Netherlands	-2.1
Germany	-3.0
Norway	-4.3
France	-5.2
Italy	-7.8

GDP at market prices decreased in all other countries except Denmark, which recorded growth of 0.6 per cent. The biggest decreases in GDP were witnessed in Italy (7.8 %), Norway (5.2 %) and France (4.3 %). Finland and Sweden saw relatively small decreases of less than one percentage point each.

Figure 10.

Pension contribution income change from previous year, 2019–2020 in percentage points (GDP, market price).



An examination of changes in pension contribution income in relation to GDP at market prices shows that Italy recorded the strongest growth from 15.1 per cent to 16.8 per cent in 2020. In the Netherlands the ratio increased by 1.1 percentage points from 13.1 per cent to 14.2 %. In Norway it rose by 0.8 percentage points from 14.2 per cent by to 15 per cent in 2020.

Perhaps a bit surprisingly, Finland's pension income to GDP ratio decreased by 0.1 percentage points from 12.6 per cent to 12.5 per cent in 2020.

5 Conclusions

The aim of our study was to shed light on how much we pay for our pension provision in a given year and who is making those payments when all relevant pension schemes and all contributing parties are taken into account. With this in mind we have compared pension contribution income streams in eight selected European countries.

One of the key results of our comparison points at a convergence of contribution levels especially in relation to GDP, despite very significant differences in the structures and ways of pension financing. One of the reasons for this, it can be argued, is that all countries share similar objectives of providing a sufficient level of income during retirement. This can be achieved through extensive statutory pensions or a combination of a more limited statutory pension complemented by supplementary schemes.

Statutory schemes represent over half of total contributions in the compared countries. In Finland and Italy, their share is over 90 per cent. In Germany, too, statutory pensions are clearly predominant, although occupational pensions have been increasing in importance. Occupational pensions already have a significant role in the Netherlands, Denmark and Sweden where contributions to these schemes are substantial.

Against this background it is clear that to produce a solid cross-country comparison, both pension pillars must be included in the analysis, especially when discussing the labour costs of pension provision or total costs within the national economy.

From the point of view of those financing the pension system, what matters most for employers and employees, but also for the state, is not whether the payments are divided into a statutory and an occupational contribution, but rather the total level of contribution income and who bears the costs of a pension system.

A breakdown of pension contributions between the parties sharing the cost burden reveals significant country variation. Employers tend to account for the largest share, around 50 per cent of contributions. The figure is highest in Sweden, where the share of employers is over two-thirds. This is explained by employers' high share in statutory pension financing and their 100 per cent share of occupational pension financing.

The second largest source of income are taxes, which on average account for around 30 per cent of total revenues. Minimum benefits and pensions are generally covered by taxes, so it is unsurprising that Denmark, given its extensive basic pension provision, has the highest share of tax revenues (60 %). Germany and the Netherlands also depend heavily on tax revenues, even though their pension systems differ significantly. In the Netherlands around half of the costs of minimum old-age pensions are covered from the budget, and in Germany the state contributes significantly to financing the statutory earnings-related pension system. The use of tax revenues is lowest in Sweden where they account for no more than around 5 per cent of contribution incomes.

The cost burden is lowest for employees: on average their share of the cost of pension provision is slightly over 20 per cent. This figure does not vary very much from country to

country. Danish employees account for just over 10 per cent, whereas Dutch employees cover the highest share, 30 per cent of total costs.

A complex set of factors explain the country differences in contribution levels. These factors include the population age structure, the benefits, the existence of pension assets, the effective retirement age and the number of retirees in relation to the active population. According to our results the country with the highest contribution income is Italy, which has one of the highest old-age dependency ratios and an entirely PAYG-financed pension system that provides relatively generous benefits. Denmark has the second highest contribution level even though its old-age dependency ratio is among the lowest. This can be seen to reflect the high level of occupational pension revenues as well as the country's universal and relatively high level of basic pension.

At the other end of the spectrum, the lowest contributions are found in Sweden, reflecting a low old-age dependency ratio and low statutory pension expenditure. Finland comes close to Sweden even though its old-age dependency ratio is comparable to Italy's and pension expenditure is higher than in any other of the countries studied. However, partial funding means that the contribution level is significantly lower than expenditure. The contribution level is also affected by the relatively moderate pension level.

The European Commission's publications on pension expenditure (i.e. Ageing reports) provide a useful point of comparison for our results, although the focus in the EC calculations is on statutory pension expenditures and on how these are projected to change in the future. Countries report on private pension expenditure on a voluntary basis and only a minority of countries have delivered comprehensive data on occupational pensions. The focus in our country comparisons is on contributions and the division of costs at the current moment. In this respect these two sets of reports can be seen to complement each other.

Based on the diverse and changing pension landscape and the various recent reforms it is fair to conclude that pension provision in European countries continues to remain in flux. The most recent example is the German government's proposal to improve the coverage of supplementary pension schemes. The Dutch process of occupational pension reform and turning DB plans into DC plans also fits into a broader international pattern driven by fixed contribution rates. It is therefore more important than ever to continue to explore and analyse systems of pension provision. If we fail to do that, we risk losing essential parts of the pension puzzle.

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Annex

Annex 1. Compensation of employees, wages and salaries, and GDP in 2015–2020

Annex table 1.1.

Compensation of employees, wages and salaries in 2015–2020.

	2015	2016	2017	2018	2019	2020
Compensation of employees, million (national currency)						
DE	1 561 976	1 622 728	1 693 096	1 771 221	1 852 846	1 847 868
DK	1 049 061	1 083 211	1 118 479	1 154 314	1 194 836	1 212 599
FI	102 084.0	103 757.0	104 558.0	108 633.0	112 001.0	110 539.0
FR	1 141 421.0	1 163 287.0	1 199 841.0	1 231 533.0	1 242 871.0	1 196 595.0
IT	651 583.2	667 222.2	684 054.1	706 977.7	721 522.6	672 802.2
NL	330 267	340 586	352 818	369 840	388 869	402 735
NO	1 485 846	1 510 360	1 559 747	1 638 831	1 733 247	1 734 928
SE	1 987 350	2 085 848	2 185 563	2 309 070	2 394 671	2 420 002
Wages and salaries, million (national currency)						
DE	1 282 598	1 334 927	1 392 095	1 459 993	1 521 123	1 509 837
DK	970 650	997 696	1 031 914	1 065 749	1 100 748	1 112 927
FI	82 861.0	84 053.0	86 073.0	90 067.0	93 216.0	92 902.0
FR	832 686.0	850 931.0	879 421.0	903 178.0	931 770.0	895 912.0
IT	476 964.1	490 652.7	502 727.4	517 601.0	527 059.2	488 410.5
NL	260 690	268 805	278 473	290 635	304 470	314 737
NO	1 188 640	1 210 941	1 251 966	1 312 956	1 383 145	1 389 313
SE	1 663 118	1 744 574	1 832 353	1 921 130	1 994 533	2 010 077

Source: OECD.Stat (2022a).

Annex table 1.2.

GDP in 2015–2020.

	2015	2016	2017	2018	2019	2020
GDP at basic prices, million (national currency)						
DE	2722020	2822443	2944074	3035165	3130661	3050322
DK	1 767 126	1 829 138	1 906 874	1 955 159	2 011 579	2 018 981
FI	182 599.0,	187 394.0	195 707.0	201 308.0	207 291.0	206 107.0
FR	1 967 466.0	1 996 790.0	2 046 129.0	2 101 770.0	2 169 269.0	2 061 470.0
IT	1 488 049.0	1 522 753.8	1 557 795.8	1 589 576.2	1 611 353.8	1 498 429.7
NL	620835	634824	661566	692632	724960	709628
NO	2768846	2739686	2919814	3161544	3164843	3006610
SE	3 788 043	3 910 818	4 100 646	4 278 918	4 484 615	4 472 395
GDP at market prices, million (national currency)						
DE	3026180	3134740	3267160	3367860	3473350	3367560
DK	2 036 356	2 107 808	2 192 960	2 253 316	2 310 954	2 323 919
FI	211 385.0	217 518.0	226 301.0	233 462.0,	239 858.0	237 987.0
FR	2 198 432.0	2 234 129.0	2 297 242.0	2 363 306.0	2 437 635.0	2 310 469.0
IT	1 655 355.0	1 695 786.8	1 736 592.8	1 771 391.2	1 796 633.8	1 656 960.7
NL	690008	708337	738146	773987	813055	796530
NO	3111168	3098148	3295382	3553900	3563484	3410399
SE	4 260 470	4 415 031	4 625 094	4 828 306	5 049 619	5 038 538

Source: OECD.Stat (2022a).

Annex 2. Pension schemes covered in the study

Annex table 2.1.

Pension schemes covered in the study.

	Statutory (I pillar) pensions	Occupational (II pillar) pensions
DK	Old-age pension (Folkepension), Disability pensions (Førtidspension, Seniorpension), ATP, Early retirement pension (Efterløn)	Life insurance companies, company and multi-employer pension funds, banks, Civil Service Pension Scheme
NO	National Insurance Scheme, Pension Insurance for Seamen, Pension Insurance for Fishermen	AFP pension, obligatory occupational schemes
SE	Old-age, survivors' pensions, activity and sickness compensation (disability pensions)	Life insurance companies, funds, The National Government Employee Pensions Board (SPV) (e.g. ITP, SAF-LO, AKAP-KL, PA03 schemes)
NL	General old-age (AOW) and Survivors' pension (ANW), Disability benefit scheme for employees (WIA), Disability benefit scheme for the young disabled people (WAJONG)	Pension funds (industry-wide, occupational and company), insurance company schemes, Premium Pension Institutions
DE	Statutory pension provision (Gesetzliche Rentenversicherung), Civil service pension scheme (Beamtenversorgung), Farmers' Pension Scheme, Pension Scheme for Artists, professional pension schemes (Berufständige Versorgungswerke)	Occupational schemes in private sector (Pensionskassen, Direktversicherung, Unterstützungskasse, Pensionsfonds), Public sector schemes (ZÖD)
FR	Social Security Scheme (CNAMTS, CNAV & FSV), Civil Servants (FPE), Agricultural sector (MSA), Entrepreneurs (RSI), Regional civil service and hospitals (CNRACL), and others (incl. FSPOEIE, SNCF, RATP, CNIEG, CANSSM, ENIM, CRPCEN, CNAVPL, CNBF, SASPA.)	Private sector (AGIRC, ARRCO) and public sector (IRCANTEC, RAFF) salaried employees, entrepreneurs (RSI), liberal professions (CNAVPL), farmers (MSA RCO), aviation (CNRPAC), barristers' (CNBF) and supplementary pensions (incl. Article 82, 39 & 82, Madelin contracts etc.)
FI	Earnings-related pensions, National pension, Guarantee pension	Voluntary occupational pensions
IT	Old-age, survivors' and disability pensions managed by INPS	Contractual pension funds, Open pension funds, pre-existing pension funds

Annex 3. Differences between indicators

In contrast to the wage sum, the compensation of employees includes not only wages and salaries but also social security contributions paid by employers. The wage sum is a commonly used indicator but may give rise to inaccurate interpretations when comparing countries where employers' and employees' shares of social security contributions differ. Such a situation arises especially when comparing two countries where the employer's social security contributions are high in one country (e.g., in France) and low in the other country (e.g., in Denmark). In the latter, social security schemes are generally financed by taxes or employee contributions, which are included in the wage sum. International statistics do not differentiate employee contributions from the wage sum (so-called net wages), and therefore the wage sum is proportionally higher in Denmark than in France.

The following example is illustrative: in the first country, the social security contribution is paid in full by the employer and in the second country, the payment is divided equally between the employer and employee. Even though the pension contribution is the same size in both countries, a comparison to the wage sum gives different results (Table 1).

Annex table 3.1.

Example of comparison of contributions in relation to wages.

	Country 1	Country 2
GDP	200	200
Compensation of employees	100	100
Social security contributions	40	40
Employer contributions	40	20
Employee contributions	0	20
Wage sum	60	80
Pension contributions	20	20
% of wage sum	33	25
% of compensation of employees	20	20
% of wage sum excl. employee's share	33	33
% of GDP	10	10

Source: Olsson 2007

Corresponding differences between countries may occur when comparing contribution incomes in relation to GDP at market prices and GDP at basic prices. GDP at market prices, which describes the total production, includes commodity taxes (VAT, excise taxes). GDP at basic prices corresponds to GDP calculated at market prices, reduced by commodity taxes and increased by commodity subsidies (e.g., export subsidies).

GDP at market prices is the most common indicator in comparisons, but due to the different taxation structures, differences may occur. We may assume, for instance, that country 2 in the following table starts financing social expenditure through increased VAT instead of direct income taxation. In that case, even if the pension contribution is of the same size in the two countries, a comparison in relation to GDP at market prices, which includes commodity taxes, leads to a different interpretation of the pension contribution amounts of these countries.

Annex table 3.2.

Example of comparison of contributions in relation to GDP.

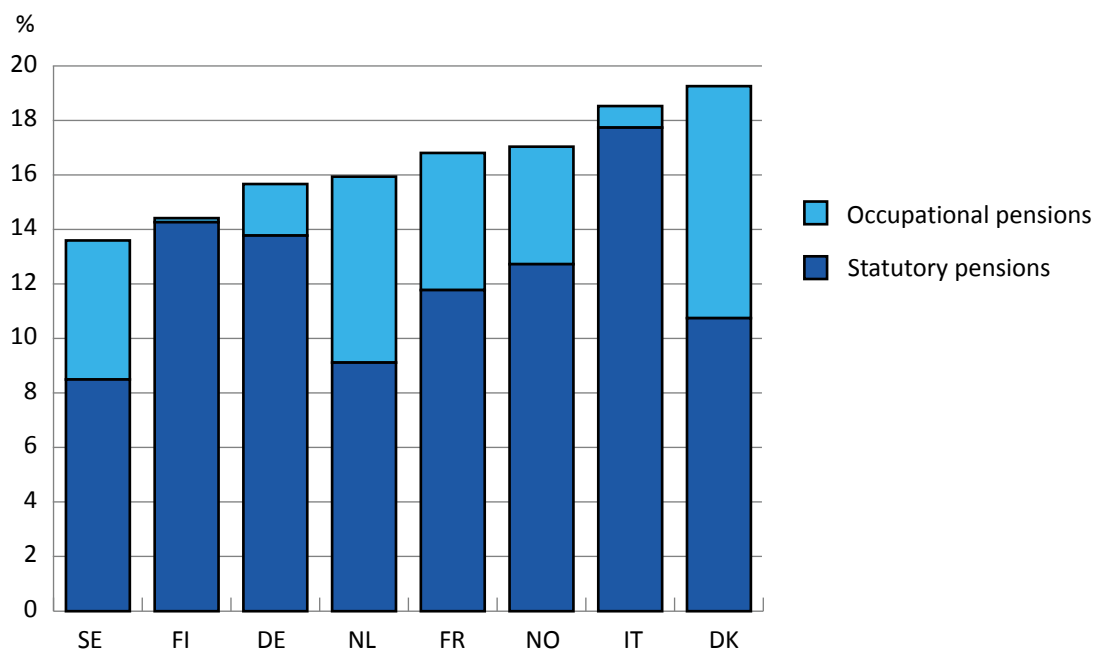
	Country 1	Country 2
GDP, market prices	200	220
Value added tax	0	20
GDP, basic (factor) prices	200	200
Pension contributions	20	20
% of GDP at market prices	10	9
% of GDP at basic prices	10	10

Source: Olsson 2007.

Annex 4. Pension contribution income in relation to GDP at basic prices and wage sum in 2020

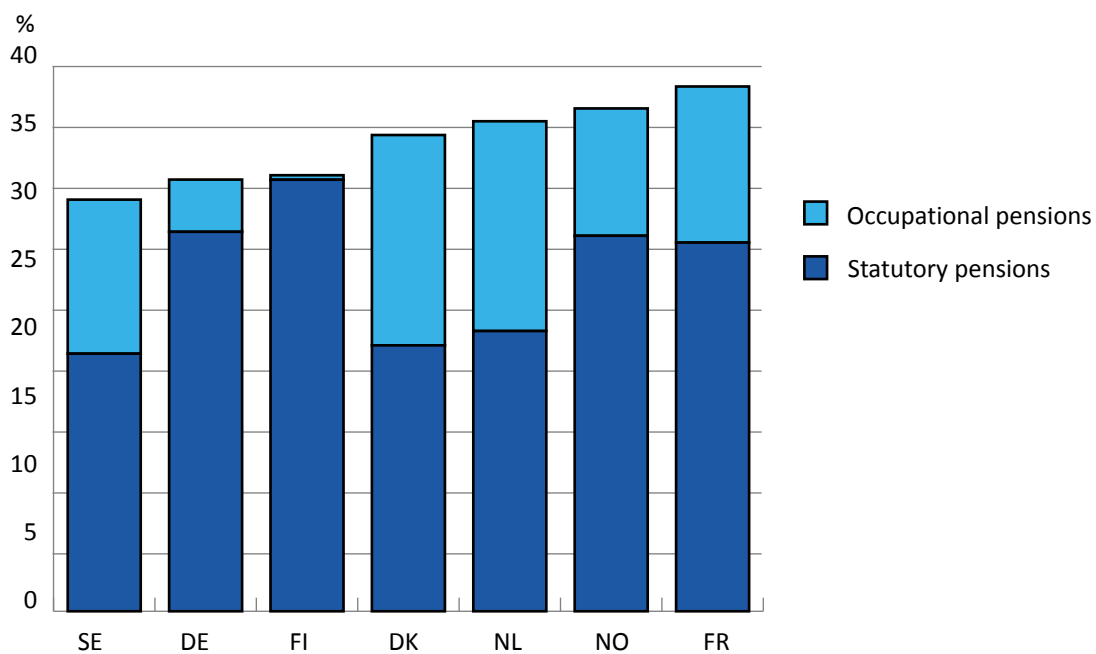
Annex figure 1.

Income from contributions and tax revenues in relation to GDP basic prices in 2020, %.



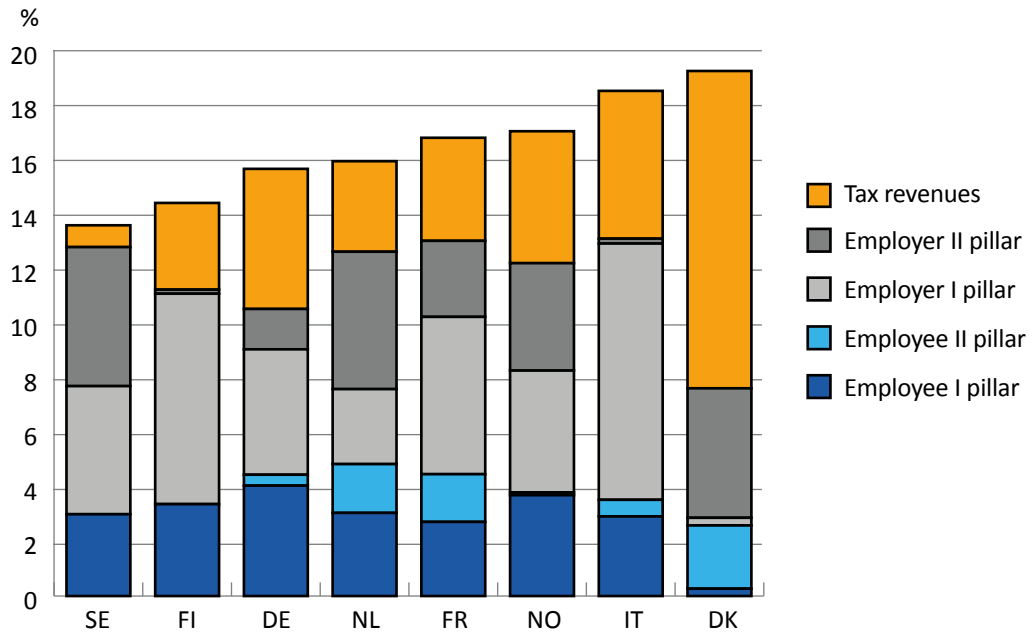
Annex figure 2.

Income from contributions and tax revenues in relation to wages and salaries (wage sum) in 2020, %.

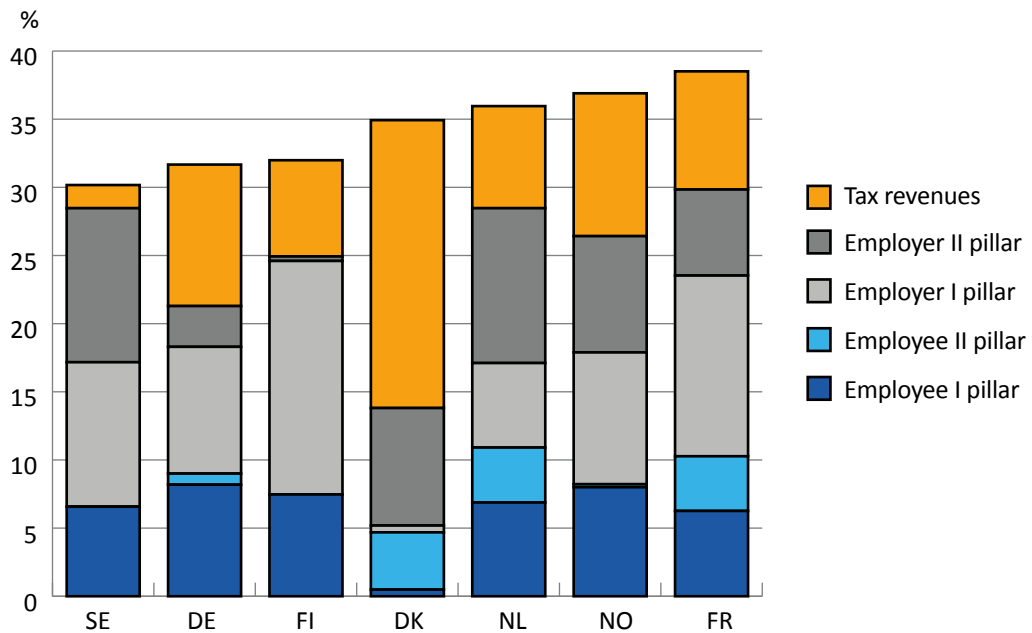


Annex figure 3.

Pension contribution income in relation to GDP at basic prices in 2020, %.

**Annex figure 4.**

Pension contribution income in relation to wages and salaries in 2020, %.



Country fiches

Denmark	50
Finland	60
France	70
Germany	83
Italy	95
Netherlands	103
Norway	114
Sweden	126

Pension contribution level in Denmark

Mika Vidlund

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1 Pension contribution level in 2020

The following table presents Denmark's total pension contribution income for statutory and occupational pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.
Pension contributions in relation to wages and GDP in 2020, %.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage earners				
ATP	0.30	0.33	0.16	0.18
Efterløn	0.15	0.16	0.08	0.09
Occupational pensions	3.86	4.20	2.01	2.32
Total	4.31	4.69	2.25	2.59
Employers				
ATP	0.46	0.50	0.24	0.28
Occupational pensions	7.71	8.40	4.02	4.63
Civil Service Pension Scheme	0.21	0.22	0.11	0.12
Total	8.38	9.13	4.37	5.03
Tax financing				
Folkepension (incl. survivors)	12.29	13.39	6.41	7.38
Efterløn	0.89	0.97	0.46	0.53
Førtidspension	3.64	3.97	1.90	2.19
Seniorpension	0.05	0.06	0.03	0.03
ATP	0.13	0.14	0.07	0.08
Civil Service Pension Scheme	2.39	2.60	1.25	1.43
Total	19.38	21.12	10.11	11.64
Statutory pensions	17.90	19.51	9.34	10.75
Occupational pensions	14.16	15.43	7.39	8.51
All in total	32.07	34.94	16.73	19.26

2 Statutory pension scheme

The residence-based national pension scheme is a central part of statutory pension provision in Denmark. The benefits paid from the national pension scheme are the old-age pension (folkepension), supplementary pension benefit (Ældrecheck) and the disability pension (førtidspension). Survivors' pensions as such are not paid out, but if both spouses receive a benefit from the national pension scheme, the aggregate pensions of both spouses are paid as a surviving spouse's pension (efterlevelsespension) for three months after the death of one spouse. A person who is not entitled to a surviving spouse's pension may apply for a surviving spouse's benefit (efterlevelseshjælp), which is paid as a lump sum.¹

There are no statutory earnings-related pensions in Denmark. The labour market supplementary pension scheme (Arbejdsmarkedets Tillægspension, ATP), which covers wage earners and people receiving a transfer payment, is a defined contribution scheme, but the contributions are not determined in relation to earnings but in relation to the length of time spent in employment. The benefits paid from the ATP scheme are the old-age pension and the lump-sum survivors' pension. No disability pension is provided.

In addition, early retirement benefits are provided through the voluntary early retirement pension VERP (efterløn), which is paid through the unemployment scheme. VERP has been a common exit route from the labour market.

2.1 National pension scheme

The national pension scheme is financed on a pay-as-you-go basis from state and local government budgets. Total pension expenditure under the national pension scheme amounted to 8.3 per cent of GDP in 2020, including old-age, survivors' and disability pensions.

2.1.1 Old-age and survivors' pension scheme

The standard old-age pension consists of a basic amount (grundbeløb) and a pension supplement (pensionstillæg). Almost all pensioners receive the basic amount. It is subject to means testing based on the pensioner's earnings. The pension supplement, on the other hand, depends on the combined income of both the pensioner's and his/her spouse's earned, capital and pension income. In addition, pensioners with a small or no income alongside their full old-age pension may receive a supplementary benefit for pensioners (ældrecheck). All benefits are taxable income.

Old-age pension and survivors' pension expenditure under the national pension scheme amounted to approximately DKK 149 billion, or 6.4 per cent of GDP in 2020 (see Table 2).

¹ Expenditure on surviving spouse's benefits (efterlevelseshjælp) was DKK 153,000 million in 2020 (DST 2022).

Table 2.

Old-age pension and survivors' pension expenditure in 2015–2020, DKK million*.

	2015	2016	2017	2018	2019	2020
Old-age pension	122,689	126,435	130,740	135,407	141,318	143,600
Survivors' pension	5,079	4,276	4,871	5,066	5,335	5,368

*(incl. pension supplement and supplementary benefits).

Source: DST 2022.

2.1.2 Disability pension scheme

There has been a steady movement away from passive income support under the disability pension scheme (førtidspension) towards more active efforts through the flexjob (fleksjob) scheme and interdisciplinary rehabilitation programmes. The disability pension and the flexjob scheme underwent a major reform on 1 January 2013. As a result, access to disability pensions is now limited to persons under 40 years of age. Citizens under 40 and at risk of ending up on a disability pension are assigned to a “resource process” through an individual, interdisciplinary rehabilitation programme in order to improve their working capacity. At the same time, the flexjob scheme has been made more inclusive and targeted at persons with very limited working capacity. The way subsidies are awarded in the scheme has been restructured and, as a rule, flexjobs are now more temporary.

A new senior pension was introduced on 1 January 2020 to replace the disability pension for seniors (seniorførtidspension). Eligibility rules were relaxed, giving more people the opportunity to retire through this route. The scheme is targeted at citizens who, due to attrition, need to be able to retire earlier than others. The senior pension can be awarded to citizens who are six years or less away from the old-age retirement age, who had a long-term connection to the labour market and who can work 15 hours or less per week, as assessed on the basis of their most recent job.

The restructuring of the disability pension scheme and changes to other benefit schemes (e.g. sickness and unemployment insurance), including rehabilitation measures, means that the disability pension is more a mix of different benefits than it used to be: the spectrum of benefits includes much more than just the disability pension. One example is the temporary unemployment benefit (ledighedsydelse) for persons enrolled in a subsidised flexible employment scheme. Flexjobs are not taken into account in the calculations presented in this report.

In 2020 disability pension expenditure amounted to 1.9 per cent of GDP (Table 3).

Table 3.

Disability pension expenditure in 2015–2020, DKK million.

	2015	2016	2017	2018	2019	2020
	40,244	41,241	40,518	40,208	40,224	41,916

Source: DST 2022.

2.2 Early retirement pension scheme (Efterløn) in unemployment insurance

Early retirement pensions (efterløn) are mainly financed from state funds. One eligibility criterion is that the employee has paid voluntary early retirement contributions to the unemployment fund. In 2020 expenditure on early retirement pensions amounted to approximately DKK 10.8 billion, about 0.5 per cent of GDP (Table 4). The state financed approximately 83 per cent of this, the rest is covered by employee contributions for early retirement pensions (efterlønsbidrag) (Table 5). Flexjob holders are entitled to an early retirement allowance/flex benefit (fleksydelse), which is comparable to the benefit received by members of the early retirement scheme. In addition, a tax-free benefit (skattefri præmie) is paid if retirement is postponed.

Table 4.
Early retirement pension expenditure in 2015–2020, DKK million.

	2015	2016	2017	2018	2019	2020
Early retirement pension (efterløn)	14,426	12,718	11,447	9,008	8,191	8,912
Early retirement allowance (fleksydelse)	1,036	980	780	784	526	591
Tax free benefit for later retirement (skattefri præmie)	2,329	2,378	2,362	2,404	1,209	1,281
All total	17,791	16,076	14,589	12,196	9,927	10,784

Sources: MoF 2017; 2021; DST 2022.

Eligible claimants must have been a member of an unemployment insurance fund and paid voluntary early retirement contributions for 30 years. Unemployment is not required, however. In 2020, the contribution for a full-time insured was DKK 514 and for a part-time insured DKK 3338 per month.

Table 5.
Contribution income for early retirement pension in 2015–2020, DKK million.

2015	2016	2017	2018	2019	2020
2,609	2,447	2,364	2,301	1,964	1,825

Source: MoF 2021.

2.3 Employment-based pension scheme

Labour market supplementary pensions (ATP) are fully-funded defined contribution pensions.

ATP is a mandatory scheme for all wage earners and the vast majority of transfer income recipients. With 5.4 million members in total, ATP is Denmark's biggest supplementary pension scheme. A few groups – including the self-employed – are not members of ATP, but can opt to pay voluntary contributions. In addition to old-age pension, a lump-sum benefit is paid to surviving spouses, cohabitants and children. The ATP scheme does not provide disability pensions.

Contributions are paid for periods of work, for periods of unemployment, sickness and maternity allowance, and for periods of rehabilitation, activity and various training benefits. Recipients of early retirement pensions and disability pensions (førtidspension) as well as recipients of early retirement pensions under the unemployment insurance scheme also pay ATP contributions. The insured person pays one-third of the contribution and the employer – the municipality, the state or the unemployment fund (depending on the payer of the benefit) – pays two-thirds. The contribution is determined in different ways depending on the benefit. The contributions levied are based on working hours, not on earnings.

The ATP contribution is a fixed amount (i.e. independent of income) set by the social partners.² It is adjusted as and when agreed by the social partners. It has been agreed that the contribution will be adjusted to correspond to the projected rate of one per cent of the average wage. Typically, however, the contribution rate remains unchanged for several years and has decreased to about 0.8 per cent of average earnings for a blue-collar worker. The ATP annual contribution was increased to the current level of DKK 3,408 from January 2016, as recommended by the Danish Confederation of Trade Unions (LO) and the Confederation of Danish Employers (DA) (ATP 2014). Before this the contribution remained unchanged at DKK 3,240 (EUR 435) from 2009 to 2015.

For a typical wage earner, DKK 3,408 per year or DKK 284 per month is paid into ATP (Table 6). Most of the amount – 80 per cent – is placed into a hedging portfolio designed to guarantee future pension payments. The rest – 20 per cent – is placed in an investment portfolio, which is used to cover unforeseen expenses, for example to ensure sufficient funds if members live longer than expected and to allow for an increase in payments to keep up with inflation. Under a new business model introduced in 2022, 20 percentage points of the guaranteed pension is now invested at a higher risk³ (ATP 2022).

Not only the payable contributions but also the benefits are low. The annual pension of persons who retired at 66 in 2020 averaged EUR 2,300 (DKK 17,000). The full annual ATP pension for a 66-year-old who has contributed to ATP from the age of 18 until retirement was around EUR 3,400 (DKK 25,200) in 2020.

2 The ATP is administered by the independent ATP pension provider. Employer and employee organisations are equally represented in the administration.

3 <https://www.atp.dk/en/our-tasks/atp-livslang-pension-lifelong-pension/protecting-atps-business-model>

Table 6.

ATP standard contribution rates in 2016–2022, DKK.

Monthly working hours, contribution/month:	Employee share	Employer share	Total per month
Min. 117 hours/month	94.65	189.35	284.00
78 – 116 hours/month	63.10	126.25	189.35
39 – 77 hours/month	31.55	63.10	94.65
Under 39 hours/month	0.00	0.00	0.00

Sources: ATP 2022; Borger.dk (2022).

ATP received contributions totalling DKK 10.7 billion from wage earners and recipients of transfer income in 2020. Approximately 22 per cent of this was paid by recipients of transfer income. Beneficiaries of early retirement pension have to pay the contributions in full themselves. In other cases, the insured person pays one-third of the contribution and the employer – the municipality, state or unemployment fund (depending on who pays the benefit) – two-thirds.

Table 7.

ATP contribution income by sources in 2020, DKK.

	Employer	Employee	State	Total
People in employment	5,587	2,793	-	8,380
Recipients of unemployment, sickness or maternity/paternity benefits	-	315	630	945
Recipients of disability pension	-	203	377	580
Recipients of early retirement pension	-	50	-	50
Recipients of other transfer income	-	263	525	788
Total	5,587	3,624	1,533	10,744

Source: ATP 2020; Finansministeriet 2022; Borger.dk 2022.

In total, contribution income and pensions paid amounted to 0.5 and 0.7 per cent of GDP in 2020, respectively. As the ATP scheme has reached a mature stage, payouts from ATP exceed contributions. The maturing process will continue over the coming decades and the gap between ATP contributions and payouts will gradually widen (ATP 2014).

Table 8.

ATP contribution income and pension expenditure in 2015–2020, DKK million.

ATP	2015	2016	2017	2018	2019	2020
Contributions	9,055	9,572	9,703	9,871	10,061	10,744
Expenditure	14,566	15,454	16,075	16,878	17,054	17,180

Source: ATP 2015–2020.

3 Occupational pension schemes

Occupational pension schemes are based on collective agreements and cover about 90 per cent of employees. Civil servants have their own pension scheme (tjenestemandspension). With the exception of that scheme, occupational pension schemes are fully funded and of the defined contribution type. As a rule, the employer pays two-thirds and the insured person one-third of the total contribution. The contributions, and thus also the benefits, differ considerably from each other, reflecting industry- or sector-specific factors, among others.

The majority of occupational pension schemes are administered by life insurance companies (livsforsikringsselskaber). These are shareholder-owned joint stock companies, some operating on a commercial basis (with shareholders demanding a return) and some on a non-commercial basis. Together with multiemployer pension funds (tvaergående pensionskasser), they control the lion's share of the occupational pensions market. Multiemployer pension funds are member-owned pension institutions and cover industry-wide plans, for example those for nurses. To a minor extent, occupational pension schemes are also administered by company pension funds (firmapensionskassor) and banks. Company pension funds cover the employees of single companies but play a marginal and declining role. Many of them have been closed to new members and, in some cases, to new contributions. (Andersen and Skjodt 2011.) The role of banks has also been on the decline over the past ten years, and they now account for less than 2 per cent of total occupational contributions (Forsikring & Pension 2022).

Occupational pensions are set to gain increasing importance as a source of income for retirees in the near future, primarily because contribution rates in occupational pension schemes established in the late 1980s and early 1990s have been rising steadily as part of successive collective agreements. In addition, the schemes are beginning to mature.

The composition of benefits in different occupational pension schemes varies considerably. Typically, they provide a life-long current retirement pension, which may be combined with a rate pension (paid out over 10–25 years) and/or a capital pension (paid out as a lump-sum benefit). These may be complemented by a disability pension and survivors' pensions. (MoF 2020.)

In 2020, benefits paid from occupational pension schemes, excluding the civil service pension, amounted to 2 per cent of GDP.

Table 9.

Occupational pension contribution income and expenditure in 2010–2014, DKK million.

	2015	2016	2017	2018	2019	2020
Contribution income	118,081	122,224	126,716	131,221	136,087	140,294
Pension expenditure	38,223	37,354	39,335	39,976	46,026	47,651

Source: Forsikring & Pension 2022.

3.1 Civil service pension scheme

Central and local government civil servants are entitled to benefits under the civil service pension scheme (Tjenestemandspension). This is a defined benefit scheme with special retirement ages. The civil service pension scheme has diminishing importance in central government administration since central government employees are increasingly covered under contribution-financed and contribution-defined occupational pension schemes. This is due to changes in employment form: new public employees are only hired as civil servants within a narrow set of jobs (primarily in the armed forces and the police). Civil servant pensions were paid to 160,000 persons in 2020 (MoF 2020).

The civil service pension scheme is unfunded, as benefits are paid out as part of the expenditure of central and local governments and are thus financed mainly through general tax revenues. The employer pays a pension contribution ranging from 15 to 27 per cent (e.g. Denmark Radio's civil servants; NAVIAIR's air traffic controllers) of wages (MoF 2022). In 2020, civil service pension expenditure amounted to 1.25 per cent of GDP.

Table 10.

Contribution income and pension expenditure for civil servants' pension scheme in 2015–2020, DKK million.

	2015	2016	2017	2018	2019	2020
Contribution income	3,076	2,999	2,874	3,150	2,538	2,487
Expenditure	27,114	27,668	28,350	29,398	29,977	30,639

Source: DST 2022; MoF 2022 (§ 36 Pensionsvæsenet).

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Pension contribution level in Finland

Meeri Kesälä

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Pension contribution level in Finland in 2020

The following table presents Finland's total pension contribution income for statutory and occupational pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.

Pension contributions in relation to wages and GDP in 2020, %.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage earners				
Private sector	4.12	4.90	1.91	2.21
Public sector	1.75	2.08	0.81	0.94
Contribution by Employment Fund	0.41	0.49	0.19	0.22
Total	6.28	7.47	2.92	3.37
Employers				
Private sector	8.29	9.86	3.85	4.44
Public sector	4.61	5.48	2.14	2.47
Self-employed persons	0.97	1.15	0.45	0.52
Farmers	0.15	0.18	0.07	0.08
Contribution by Employment Fund	0.38	0.45	0.18	0.20
Total	14.40	17.13	6.69	7.72
State shares and other tax financing				
under Seafarer's Pensions Act	0.06	0.07	0.03	0.03
under Self-employed Persons' Pensions Act	0.34	0.40	0.16	0.18
under Farmers' Pensions Act	0.64	0.77	0.30	0.35
under State Employees' Pensions Act	2.62	3.12	1.22	1.41
Kela pensions	2.28	2.71	1.06	1.22
Total	5.93	7.06	2.75	3.18
Statutory pensions, total	26.61	31.66	12.36	14.27
Occupational pensions, total	0.28	0.33	0.13	0.15
All in total	26.88	31.99	12.49	14.42

Table 2 shows the pension contributions collected in 2015 -2020 to finance statutory earnings-related pensions and so-called Kela pensions (national and guarantee pensions), as well as the contribution income for occupational earnings-related pensions. For comparison, it also includes the pensions paid out under the same categories for the respective years.

Table 2.
Pension contributions and pension expenditure in 2015–2020.

	2015	2016	2017	2018	2019	2020
Wage earners						
Private sector	3 224	3 314	3 651	3 916	4 360	4 551
Public sector	1 476	1 475	1 554	1 644	1 800	1 935
Contribution by Employment Fund	226	243	314	292	309	453
Total	4 926	5 032	5 518	5 852	6 468	6 940
Employers						
Private sector	9 501	9 790	9 936	10 324	10 666	9 161
Public sector	5 411	5 217	4 897	4 962	5 076	5 095
Self-employed persons	1 083	1 065	1 076	1 066	1 076	1 070
Farmers	188	182	180	175	173	171
Contribution by Employment Fund	749	570	446	280	277	420
Total	16 932	16 825	16 536	16 806	17 267	15 916
State shares and other tax financing						
under Seafarer's Pensions Act	60	57	58	58	59	61
under Self-employed Persons' Pensions Act	83	143	190	253	288	371
under Farmers' Pensions Act	620	638	658	680	702	712
under State Employees' Pensions Act	2 143	2 685	2 741	2 789	2 841	2 897
Kela pensions	2 505	2 470	2 391	2 357	2 324	2 515
Total	5 410	5 993	6 037	6 137	6 213	6 556
Statutory pensions, total	27 268	27 851	28 092	28 795	29 949	29 412
Occupational pensions, total	289	270	254	276	343	307
All in total	27 557	28 120	28 346	29 071	30 292	29 718
Pension expenditure 2015–2020, EUR million						
Statutory earnings-related pensions						
Private sector	15 863	16 372	17 025	17 566	18 198	18 709
Public sector	9 321	9 593	9 947	10 246	10 612	10 920
Total	25 184	25 965	26 972	27 812	28 810	29 629
Kela pensions, total	2 505	2 470	2 391	2 357	2 324	2 515
Statutory pensions, total	27 689	28 435	29 363	30 169	31 134	32 144
Occupational pensions, total	642	661	650	614	673	637
All in total	28 331	29 096	30 013	30 783	31 807	32 781

The pension contributions for private-sector statutory earnings-related pensions, including the State's share of pensions paid under the Self-employed Persons' Pensions Act, the Farmers' Pensions Act and the Seafarer's Pensions Act, as well as the Employment Fund, have been lower than the pension expenditure since the year 2013. The difference is covered by assets from pension funds and their investment returns. For the local government pensions, pension expenditure exceeded the contribution income in 2017 and again the difference is covered from pension funds.

1 Data and methodology

The calculations are based on statistics published by the Finnish Centre for Pensions and data from the Financial Supervisory Authority.

The pension schemes included in the study are the statutory pension schemes and supplementary pension provision in the occupational pension schemes. Individual pension provision (so called third pillar) are not included in the calculations. The farmers' special pensions, compensations for military injuries and compensations based on the accident and motor liability insurance have been excluded from the calculations and statistics. The Farmers' Social Insurance Institution paid out farmers' early retirement aids and former farm closure pensions to the amount of EUR 42 million in 2020. The combined amount of military injuries, accidents and motor liability compensations was EUR 448 million. The State funds the farmers' special pensions and the compensations for military injuries. Benefits based on accident and motor liability insurance are covered with insurance companies' or state assets.

2 The statutory pension scheme

The Finnish statutory pension system consists of the statutory earnings-related and the national pension systems. The guarantee pension offers a minimum pension.

The earnings-related pension scheme covers all persons who work in Finland under an employment contract or as self-employed persons or farmers. The national pension scheme covers all persons who are permanently residing in Finland and whose earnings-related pension does not exceed a given limit. At the end of the year under review, a total of 1.6 million pension recipients lived in Finland. Their average total monthly pension amounted to EUR 1,762. Of all pension recipients, slightly more than 60 per cent received only an earnings-related pension and 6 per cent only a national pension paid by the Social Insurance Institution of Finland (Kela). Roughly 31 per cent received both an earnings-related and a Kela pension.

Earnings-related pension accrues based on valid legislation for nearly all gainful employment and self-employment for the period during which insurance contributions are paid. Both the employer and the employee pay an earnings-related pension insurance contribution. The pension amount depends on the earnings accrued during employment. No upper limit or pension ceiling applies to the paid pension, apart from the limits relating to the insurance of self-employed persons' income from work.

The pensions are financed under various principles, depending on the applicable pension act. The earnings-related pension assets currently amount to over twice the amount of the wage sum, so the return on investments is a considerable source of income. The national and the guarantee pensions are financed with tax revenues. In addition, the State finances part of the self-employed persons', farmers' and seafarers' pension expenditure, as well as the State pensions and pensions accrued under the Pensions Act for periods of child care and study. The Employment Fund contributes to the earnings-related pension scheme with a statutory annual component based on the paid unemployment allowances, the job alternation compensations and the adult education subsidies.

Earnings-related pension contributions

Both private and public sector employees pay the employee's contribution. The contribution is higher for persons of age between 53 and 62. Correspondingly, the employer's share of the contribution for these employees is lower. The higher contribution is used to finance the age groups' higher pension accrual during the transition period 2017 – 2025. The higher accrual compensates the effect of the 2017 pension reform for those age cohorts. The contributions of older self-employed persons and farmers also differ based on age.

Table 3 presents the statutory contribution rates, relative to earnings, for the years 2015 to 2020.

Table 3.
Average assessed earnings-related pension contributions in 2015–2020, %.

	2015	2016	2017	2018	2019	2020
Employees Pensions Act, Total	24.0	24.0	24.4	24.4	24.4	24.4/ 21.8 ²
Employees Pensions Act, Employer	18.00	18.00	17.95	17.75	17.35	16.95/ 14.35 ²
Public Sector Pensions Act, Keva's member organisations, Total	29.81	29.40		28.26	28.29	28.39
Public Sector Pensions Act, State, Total	26.36	24.08	23.64	23.77	24.40	24.40
Employee, under 53, 63 and above	5.70	5.70	6.15	6.35	6.75	7.15
Employee, years 53–62 ¹	7.20	7.20	7.65	7.85	8.25	8.65
Self-employed Persons' Pensions Act, Average	22.6	22.6	23.1	23.1	23.2	23.1
Farmers' Pensions Act, Farmers, Average	13.7	13.6	13.9	13.8	13.9	13.9
Farmers' Pensions Act, Grant Recipients, Average	13.4	13.4	13.4	13.3	13.4	13.3
Self-employed Persons' Pensions Act / Farmers' Pensions Act						
under 53, 63 and above	23.7	23.6	24.1	24.1	24.1	24.1
years 53–62 ¹	25.2	25.1	25.6	25.6	25.6	25.6

1) Before 2017 years 53 and above.

2) Temporary reduction in 2020.

Private sector

The average contribution rate for private sector employees reached 24.4 per cent during the years 2017–2019. However, due to the 2020 corona pandemic the contribution rate was temporarily reduced to 21.8 per cent starting from May 2020. The reduction concerned only the employer's contribution. The amount of the reduction was decided to cover by and increased contribution during years 2022 – 2025.

All private-sector wage earners are covered by the Employees Pensions Act, except for the seafarers. Their share of the total private-sector premium income from wage earners is less than one per cent. The State finances approximately one third of the seafarers' pension expenditure.

The main part of the paid contributions is used to finance pensions currently in payment, but part of the contributions is funded and invested for future pension liabilities. The funded assets are used to pay pensions.

The pensions of self-employed persons and farmers are not funded in advance. Instead, they are based on the pay-as-you-go principle. The contribution levels under the Self-employed Persons' Pensions Act and the Farmers' Pensions Act are linked to the average level of contributions under the Employees Pensions Act. Pensions for the self-employed are also financed from the State budget. Each year, the State pays the components of the statutory pension expenditure for the self-employed and farmers that are not covered by insurance contributions. The average contribution rates for the self-employed presented in Table 3 are considerably higher than those of the farmers' contributions. In addition, total contribution income under both acts is clearly lower than the confirmed basic contribution rate. This is mainly explained by the deduction granted to the newly self-employed and the high number of low-income farmers who pay contributions according to the lowest rate.

Public sectors

Keva's member organizations, State and Evangelical-Lutheran Church employees gain their pension benefits according to the Public Sector Pensions Act. However, the financing of the pensions and the contribution levels are different for these three types of employers. Other pension arrangements cover a small minority of public sector pension recipients.

Since 2019 both state and Keva member organizations including local government employers have paid a wage-based contribution equal in size to the average private sector contribution. However, the temporary deduction in 2020 was not applied. In addition, local government corporations that were established before the year 2005 (the municipalities, the federations of municipalities, communal corporations) pay an additional contribution based on pension expenditure. The funding is not done on an individual level as in the private sector, but collectively in order to avoid individual pension liabilities.

Partial funding with private sector pension financing

The average private sector contribution includes separate components for funding and for the pooled pension expenditure. Assets for future old-age pensions are collected through the old-age pension component of the contribution. The non-funded component will be covered, in time, by the pool. Disability pensions are funded only once the pension starts. No separate contributions are collected in advance for survivors' or partial old-age pensions, which are financed with the provisions for pooled claims. The same provisions are used to cover other disability pension expenses than those covered through funding.

Table 4a presents the main average components of the contributions under the Employees Pensions Act from 2015 to 2020. The total contributions are smaller due to deductions granted to the policyholders and temporary contribution deductions. The temporary deduction in 2020 was from the pay-as-you-go-component and it reduced the buffer fund.

Table 4a.

Average components of the contribution under the Employees Pensions Act, 2015–2020, %.

	2015	2016	2017	2018	2019	2020
Old-age pension component (funded)	2.9	2.9	3.5	3.5	3.5	3.5
Disability pension component (funded)	0.8	0.9	0.9	1.0	0.9	1.0
Pooling component (payg)*	19.9	20.2	19.7	19.8	19.8	19.9/17.3
Other components**	0.9	0.9	0.8	0.8	0.8	0.7
Estimated bonuses	-0.5	-0.5	-0.5	-0.7	-0.6	-0.7
Temporary deduction***	-	-0.4	-	-	-	-
Average pension contribution	24.0	24.0	24.4	24.4	24.4	24.4/21.8

*Temporary deduction from May to December 2020

** Includes the component for contribution losses, cost shares and statutory fees.

*** Restitution of the surplus of disability contributions.

The components of the contribution under the Employees Pensions Act presented in Table 4a have been classified according to the partially funded technique. Table 4b presents the 2020 projection of the Finnish Centre for Pensions on the insurance contribution classified by pension type, taking no other special financing technique features into account than the customer bonuses and the deduction from pay-as-you go buffer fund. In the assessment, the pooling component of the contribution under the Employees Pensions Act has been separated into different components. The total contribution under the Act has been presented according to how the expenses are covered by pension type.

Table 4b.

The projected pension-specific components of the average contribution under the Employees Pensions Act in 2020, %.

	2020
Old age pension	20.9
Disability pension	1.8
Survivors' pension	1.6
Other components*	0.7
Estimated bonus	-0.7
Deduction May – December 2020	-1.8
Average pension contribution	22.6

* Includes the component for contribution losses, cost shares and statutory fees.

3 Occupational pensions

Statutory pensions are supplemented with voluntary supplementary pensions arranged for by employers or the employees themselves. At the moment, the employer can take out supplementary pension insurance for its employees with a life insurance company. Usually, the pension is a group pension insurance but, occasionally, it is individual pension insurance. Several company pension funds and industry-wide pension funds also pay out supplementary pensions. However, the compensation paid based on them count for only a fraction of the total annual pension expenditure. The voluntary pension insurance is not linked to the statutory basic pension provision and the conditions for receiving the pension may be determined more flexibly.

Table 5 includes the aforementioned contribution income and pension expenditure data for the period 2015–2020 that relate to supplementary pensions and that are included in this report.

Table 5.
Contribution income and pension expenditure for occupational pension insurance, 2015–2020, EUR million.

	2015	2016	2017	2018	2019	2020
Pension contribution income for occupational pensions 2015–2020						
Occupational pensions (group pension insurance)						
Life insurance companies	274	266	247	257	324	285
Company pension funds	14	3	6	18	19	21
Industry-wide pension funds	1	1	2	1	0	0
Total	289	270	254	276	343	307
Pension expenditure for occupational pensions 2015–2020						
Occupational pensions (group pension insurance)						
Life insurance companies	388	412	400	403	445	412
Company pension funds	226	221	223	219	202	199
Industry-wide pension funds	28	28	27	26	26	26
Total	642	661	650	648	673	637

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Pension contribution level in France

Anne Lavigne

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1 Pension contribution level in 2020

Table 1 presents France's total pension contribution income for statutory and occupational pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.

Pension contribution income in relation to the compensation of employees, the wage sum and GDP in 2020, %.

2020 (current prices)	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Employee contributions				
Statutory	4.68	6.26	2.43	2.72
Occupational	2.55	3.41	1.32	1.48
Supplementary	0.45	0.60	0.23	0.26
Sub-total	7.69	10.27	3.99	4.47
Self-employed contributions				
Statutory	0.36	0.48	0.19	0.21
Occupational	0.57	0.77	0.30	0.33
Supplementary	0.20	0.26	0.13	0.16
Sub-total	1.13	1.51	0.61	0.70
Employers' contributions				
Statutory	9.57	12.78	4.96	5.56
Occupational	3.82	5.10	1.98	2.22
Supplementary	0.14	0.18	0.07	0.08
Sub-total	13.52	18.06	7.01	7.86
State & Taxes & Other contributions				
Statutory	5.64	7.53	2.93	3.28
Occupational	0.85	1.14	0.44	0.49
Sub-total	6.49	8.67	3.37	3.78
All in total	28.82	38.50	14.98	16.81

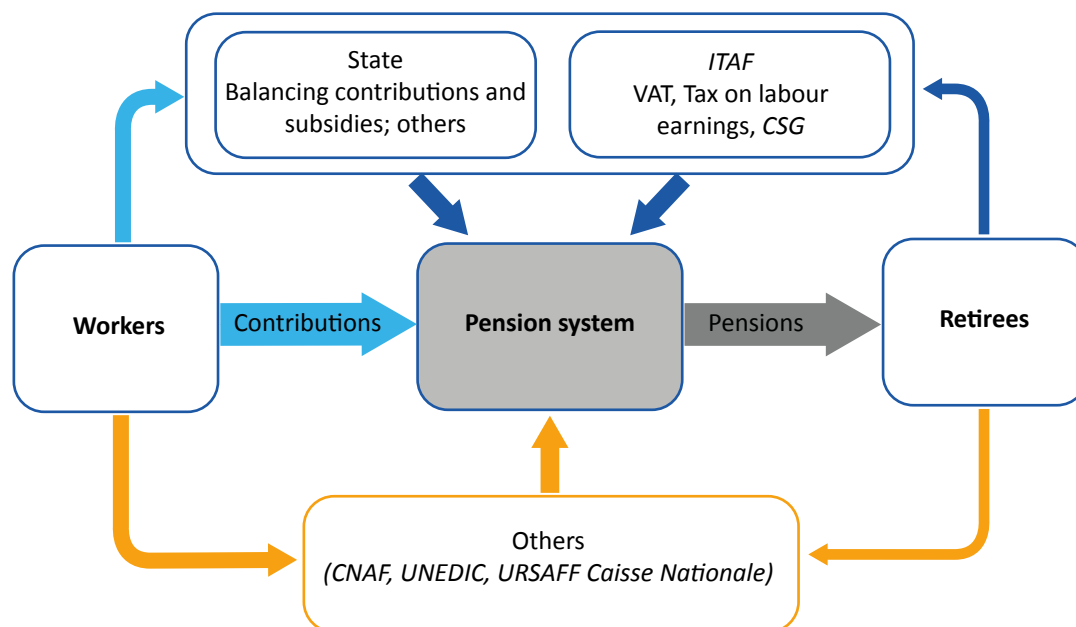
Source: CCSS reports, DSS.

Total pension contribution income amounts to nearly 40 per cent of the wage sum. The figure is highest for basic pension schemes (27.05 %), followed by occupational schemes (10.41 %) and supplementary schemes (1.05 %). In relation to GDP at market prices, total pension contribution income is approximately 15 per cent. Supplementary pensions do not have a very significant role in overall pension provision. However, the supplementary contribution component is much bigger for the self-employed than for wage earners. This suggests that supplementary pensions are more important in old-age provision for the self-employed than for wage earners.

2 Overview of the French pension system

The French pension system is often depicted as complex and fragmented, but participation is in fact straightforward for all citizens. It is basically composed of two major pay-as-you-go schemes, the general basic scheme – Régime général or CNAV – for most wage earners working in the private sector (representing 67 % of the employed labour force in 2020), and the public pension scheme that applies to civil servants and military personnel (representing about 21 % of the labour force). The apparent complexity arises from the existence of mirror institutions for particular groups of workers such as agricultural and self-employed workers, and special schemes for workers in state-owned companies. There are financial equalisation mechanisms between the various first-pillar schemes to account for different demographic situations.¹ For private-sector employees, the first-pillar pay-as-you-go scheme is complemented by a workplace pay-as-you-go points-based scheme. This second-pillar scheme is mandatory and its rules are set at the national level (not the workplace level). In national accounts, it is included as part of social security administration. In the European pension landscape, France is characterised by its high level of coverage through the state-managed pension system and its very low level of pension funding, both at the individual level and at the workplace level.

Figure 1.
Financing of the French PAYG pension system.



Note: Contributions = contributions paid by employees, employers and the self-employed. ITAF = impôts et taxes affectés (assigned taxes and levies)

Source: SG-COR.

¹ The schemes with better contributor-to-pensioner ratios contribute to finance those with worse contributor-to-pensioner ratios.

The first-pillar basic scheme – Régime général, or CNAV – provides a guaranteed annual income in retirement to all private sector wage earners. At retirement, a retiree receives a pension proportionate to the years of contribution and to a reference wage. The full-rate basic pension entitles pension claimants to up to 50 % of their reference wage; it can be obtained either at age 62 with a contributory record of 42 years for the age group born in 1961 – although the contribution record will progressively increase up to 43 years for age groups born after 1972 – or at the age of 67, whatever the contributory record.²

A complementary pay-as-you-go scheme (ARRCO-AGIRC) provides additional pensions for private sector employees that top up their basic pension. This scheme is mandatory and managed by the social partners (trade unions and employers). Contributions to these schemes allow workers to buy points throughout their career. The purchase price of a point is set by the scheme and determines how many points can be bought for yearly contributions. The service value of the point determines the level of pension derived from the amount of points accumulated by the time of retirement.

An equivalent two-pillar structure exists for self-employed persons, with the same rules applying to the first-pillar pension as in the régime général and complementary points-based pensions provided by a wide array of dedicated professional schemes.

There are two public sector pension schemes. Both are integrated, which means that they provide both a basic and a complementary (occupational) pension. The first scheme (FPE) covers military personnel and civil servants in central administration and the second one (CNRACL) covers civil servants in local and hospital administrations. It also includes a dozen special schemes (régimes spéciaux) that are a historical heritage from the former state-owned industries, such as public transportation (railways, Paris underground), mines, electricity and gas industries. In the tables below, all public sector pension schemes are aggregated in the first-pillar component of the pension system. In addition to their index-related salary, civil servants and military personnel receive an additional pension outside the integrated pay-as-you-go scheme, in a mandatory fully-funded pension fund (Retraite additionnelle de la fonction publique or RAFP). RAFP is therefore part of the second-pillar component of the pension system. A civil servant's pension at full rate equals 75 % of the last six months' grid-based salary, plus the pension received through the RAFP scheme, which represents a very small percentage of their pension income.

Supplementary pension schemes in France are provided on a voluntary basis by employers. In our study, we have included schemes of an occupational character, that is, in which pensions are financed by the employers or both employers and employees.³ We have also included supplementary pension schemes for the self-employed.

In addition, minimum old-age provision is guaranteed by a means-tested benefit Allocation de solidarité aux personnes âgées (ASPA) for older people over 65 who do not qualify for a contributory pension or whose pensions are low.

2 In this latter case, the pensioner gets the full rate (50 % of the reference wage), but the pension is proportionate to their insurance record.

3 On a legal basis, some supplementary pension schemes are “employee stock ownership plans” or “profit-sharing plans” (plan d'épargne salariale). Due to the lack of a “pension fund culture” in France, these profit-sharing plans are considered as retirement savings plans.

3 Data and methodology

The tables in this section present detailed data on pension contribution income in the first-pillar (statutory) and second-pillar (occupational) pension schemes in France. We have taken into account the contributions paid for old-age, disability and survivors' pensions. The data are drawn from the publication series *Les comptes de la sécurité sociale* published by the Direction de la sécurité sociale (DSS). We have used the September reports for the years 2016 through to 2021. The data on supplementary pension arrangements stem from the series *Les retraités et les retraites* by the Direction de la recherche, des études, de l'évaluation et des statistiques (DREES) of the Ministry of Social Affairs and Health.

We start by looking at the total income for statutory, occupational and supplementary pensions. Then, we move on to a more detailed analysis of the different schemes and examine incomes in relation to GDP and the wage sum.⁴ Income from pension funds is not taken into account in this study as it is a compound of contributions that have been paid into the system earlier. Similarly, we have ignored the fact that France finances the deficit of its private sector basic scheme (*régime général*) by issuing bonds. In the same vein, we have not taken into account internal transfers between the pension schemes, as they are not new pension income but constitute transfers of pension contributions from one scheme to another. We have mainly concentrated on the paid benefits and have omitted administrative costs when assessing the expenditure of the statutory schemes.

Given the multitude of pension schemes in France, we have chosen to group some of them under a common denominator (e.g. the self-employed) for the tables in this section. We have looked more closely at the origin of the contributions and traced them to four different sources:

1. employee contributions
2. self-employed persons' contributions
3. employer contributions
4. taxes and other social contributions (including FSV and external funding by AVPF⁵).

⁴ All GDP, compensation of employees and wage figures in this study are drawn from the OECD database.

⁵ FSV (Fonds de solidarité vieillesse) is a special fund backed to CNAV that finances minimum pension, unemployment periods in the basic scheme and pension top-ups for children. AVPF (Assurance vieillesse du parent au foyer) is an old-age insurance provided by Caisse Nationale d'Allocations familiales that covers stay-at-home parents who interrupt their career to care for children or disabled relatives.

4 Financing the pension system

4.1 Total pension contribution

Direct comparisons of pension contribution rates in different French schemes are not meaningful as the calculation base differs and the contributions cover different social risks. However, to get a general idea of the size of the average contribution, Table 2 presents the contribution rates in mandatory schemes for an average private sector wage earner.

Table 2.
Contribution rates (mandatory schemes) in 2020.

Total old-age contribution	Employee %	Employer %	Total %
Statutory old-age (basic scheme, CNAV)			
Capped contribution	6.90	8.55	15.45
Additional contribution on the whole wage	0.40	1.90	2.30
Total contribution under social security ceiling	7.30	10.45	17.75
Occupational (AGIRC-ARRCO)			
Tier 1 (contractual)	2.48	3.72	6.20
Tier 2 (contractual)	6.80	10.20	17.00
Tier 1 (paid)	3.15	4.72	7.87
Tier 2 (paid)	8.64	12.95	21.59
CET (above the social security ceiling)	0.14	0.21	0.35
CEG			
Tier 1	0.86	1.29	2.15
Tier 2	1.08	1.62	2.70
Total contribution rate (paid) for an average wage earner	11.45	16.67	27.77

Notes:

Social security ceiling in euros per month: 3 428,00.

Average wage in euros per month (2019): 2 422,50.

Median wage in euros per month (2019): 1 975.99.

Tier 1 (Agirc-Arrco): From 0 up to 1 SS ceiling.

Tier 2 (Agirc-Arrco): From SS ceiling up to 8*SS ceiling.

Sources: LFSS, Agirc-Arrco agreements.

The average private sector wage earner's wage is below the social security ceiling. Their contribution is made up of two parts: one paid to the statutory old-age basic scheme (CNAV) and one to the mandatory occupational scheme (AGIRC-ARRCO). The basic part has two components: one paid on the part of the wage below the social security ceiling and an additional component on the whole wage. The capped contribution is split between employee (40 %) and employer (60 %).

The occupational contribution has four components, depending on the wage level. There are two contribution brackets: tier 1 applies to wage levels below the social security ceiling and tier 2 to wage levels between 1 and 8 social security ceilings. The contribution rates on tier 2 wages are much higher than on tier 1 wages. On top of that,

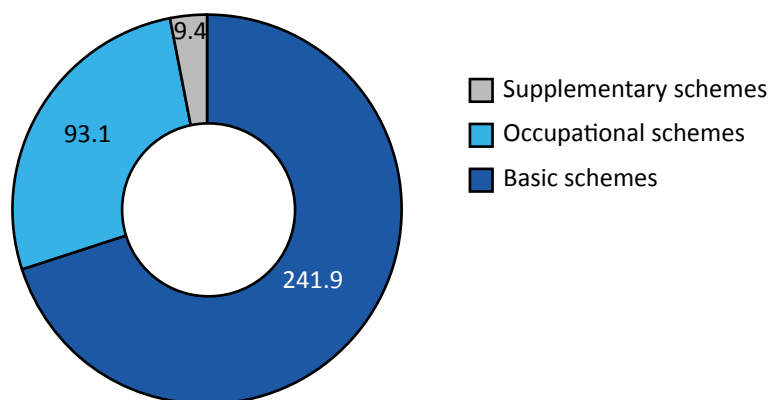
there is a difference between “contractual” and “called” (meaning “paid”) contributions: the contributions paid represent 127 % of the contractual contributions: the “27 % add-on” does not accrue personal pension rights but only contributes to finance the AGIRC-ARRCO scheme. Then there is a unique Contribution d’équilibre technique (CET – Technical balancing contribution) only paid by wage earners whose wages are above the social security ceiling (the basis being their whole salary). Finally, AGIRC-ARRCO collects a Contribution d’équilibre general (CEG – General balancing contribution) levied on the same wage brackets as the standard contribution.

Overall, the total contribution rate paid for an average private sector wage earner is equal to 27.77 %, and the total contribution rate paid for a private-sector wage earner at the social security ceiling is 28.12 %. This last figure is the one calculated by the Conseil d’orientation des retraites in its annual reports.

Total contribution income in 2020 amounted to EUR 344.3 billion. The bulk of this comes from statutory basic pension schemes that account for EUR 241.9 billion (70 % of total income), while the total occupational contribution income is EUR 93.1 billion (27 % of total income). The total contribution income under supplementary schemes amounts to EUR 9.4 billion (3 % of total income, see Figure 2).

Figure 2.

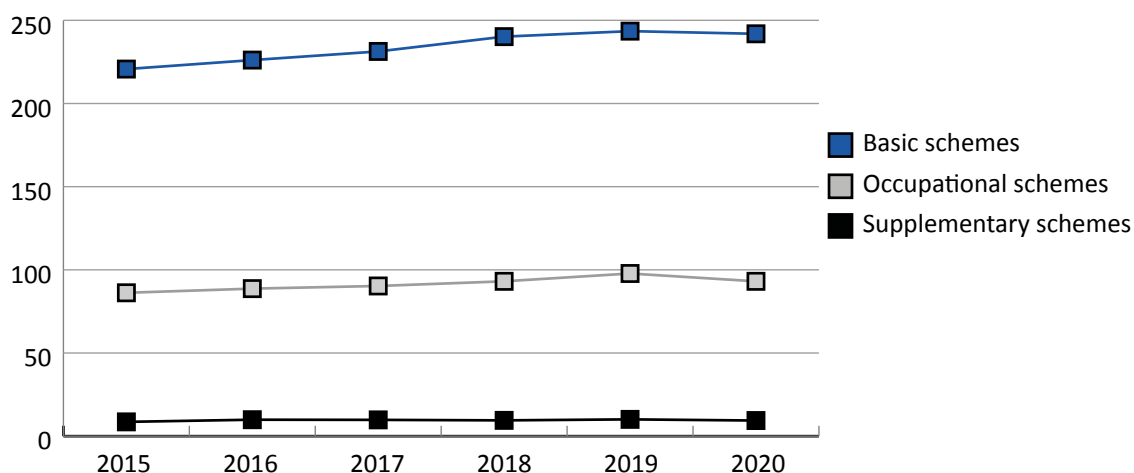
Basic, occupational and supplementary pension contribution income in 2020 (EUR billion).



Sources: DSS, DREES.

Pension contribution income has increased from 2015 to 2019. In 2020, though, pension income fell back due to the COVID-19 crisis (see Figure 3).

Figure 3.
Resources of basic, occupational and supplementary pension schemes in 2015–2020 (EUR billion).



Sources: DSS, DREES.

4.2 Statutory basic schemes

The basic French pension schemes are financed from a variety of sources. Most importantly, employees and employers pay pension and other social contributions. Some unemployment periods are financed by employer and employee contributions through Unédic.⁶ In addition, revenue from taxes is used to finance social security. The state finances the deficit of public sector pension schemes through “balancing contributions” (for the civil and military servant schemes) and “balancing subsidies” (for some special schemes). In the social security system, the disability pension is paid from health insurance. Therefore we have taken into account income from the body responsible for health insurance, Caisse nationale de l’assurance maladie des travailleurs salariés (CNAMTS), which corresponds to the share of paid disability benefits (pension d’invalidité).

The private sector basic scheme (régime général) finances its deficit through a dedicated social security agency, Urssaf Caisse Nationale (formerly known as Acof). Deficits in each branch of social security (old-age, health, family and long-term care) are transferred to Urssaf Caisse Nationale, which issues short-term bonds such as Negotiable European Commercial Papers or Euro Commercial Papers. The accumulated debt is taken over by Caisse d’amortissement de la dette sociale (CADES), which issues long-term bonds. In addition, the reserve fund (Fonds de réserve pour les retraites, FRR) finances the pension system out of the capital assets it is allocated. As financing through the financial markets falls out of the scope of our report, these organisations and their role in securing the financing of the system are not analysed in further detail.⁷ However, these external financing mechanisms explain why the pension expenditure of the basic schemes is higher than pension income.

⁶ Unédic is a paritarian unemployment insurance association established in 1958 by social partners and managed by them.

⁷ For more details, see Lavigne, A. (2022), “The evolution of the pension system’s financing and its determinants”, mimeo, Secrétariat général du Conseil d’orientation des retraites, 17p.

There is also one major fund, the Old-age Solidarity Fund (Fonds de solidarité vieillesse) that finances mandatory pension schemes. A 2015 judgement of the EU Court of Justice ruled out levying contributions on the capital income received by persons affiliated to a social security system of another EU Member State if these contributions finance social security benefits. Between 2016 and 2018, FSV has therefore been almost exclusively funded by social contributions levied on capital income to finance non-contributory benefits. The previous sources of FSV financing have been reallocated to other funds. In 2019, all taxes levied on capital income (except CSG) have been transferred to the state budget. FSV, for its part, received a higher amount of CSG. FSV is used to finance minimum pensions, unemployment periods both in the régime général and occupational schemes, and pension top-ups for children.

In the future, the creation of a new branch of social security devoted to the financing of long-term care could induce a reallocation of levies on capital income between FSV and long-term care financing.

The social insurance body responsible for family benefits, CAF, pays the contributions for stay-at-home parents who would otherwise not acquire pension rights. This insurance for stay-at-home parents is called Assurance vieillesse du parent au foyer (AVPF). In Table 3, the income paid into the system by CAF is allocated to other social contributions, taxes and state financing. The state takes in charge contributions for low-wage earners, workers in low-income regions and some other cases (e.g. young entrepreneurs).

Main contributions and taxes allocated to social security

- Social security deductions on capital income (excluding CSG): social deduction on employee savings plans until 2018, solidarity deduction until 2017, CRDS (contribution to the repayment of social debt), social deduction on life insurance contracts. These are levied on income from wealth (income from land, income from annuities, capital gains on securities and real estate, dividends, interest income);
- Forfait social is a contribution paid by employers and levied on non-wage earnings such as profit-sharing plans;
- Taxes on tobacco comprise taxes on sales of tobacco and taxes on the earnings of tobacco sellers and providers;
- Tax on wages (taxe sur les salaires) is paid by employers that are not liable for VAT (mostly employers in the medical sector, banks, insurance companies, some liberal professions and non-profit organisations);
- Contribution sociale de solidarité des sociétés (CSSS) is levied on the sales turnover of companies beyond a threshold;
- Additional solidary tax (taxe de solidarité additionnelle - TSA) is levied on health insurance premiums (second tier of health insurance coverage);
- A fraction of net VAT is allotted to social security.

Table 3 shows that employer contributions (including contributions of the state as an employer) are the major source of financing the basic schemes and represent 47 per cent of total income in 2020. The second biggest source are other social contributions, taxes and state subsidies that account for 28 per cent. Employee contributions represent 23 per cent and self-employed contributions approximately 2 per cent.

Table 3.

Sources of pension contributions in statutory basic pension schemes.

Basic pension schemes	2015	2016	2017	2018	2019	2020
Employee contributions						
EUR billion	48.5	50.4	52.9	58.4	59.0	56.0
% of total	22.0	22.3	22.9	24.3	24.2	23.1
Self-employed contributions						
EUR billion	3.8	4.2	4.1	4.2	4.3	4.3
% of total	1.7	1.9	1.8	1.7	1.8	1.8
Employer contributions						
EUR billion	107.3	109.4	111.8	113.9	115.8	114.3
% of total	48.6	48.4	48.3	47.4	47.6	47.2
Other social contributions (AVPF, CSG), taxes & state financing						
EUR billion	61.1	62.2	62.5	63.7	64.4	67.4
% of total	27.7	27.5	27.0	26.5	26.4	27.9
Total						
EUR billion	220.7	226.1	231.3	240.2	243.5	241.9

Source: CCSS reports, DSS.

Total income into the basic schemes represents 27 per cent of the wage sum and 10.5 per cent of GDP at market prices in 2020. In the basic pension schemes, employee contributions account for approximately 6.3 per cent of the wage sum and employer contributions for 12.8 per cent. Taxes and other revenues allotted to basic schemes amount to 7.5 per cent of the wage sum.

Total income into the basic schemes has steadily increased for two decades, except in 2020 due to the COVID-19 crisis. In 2020, the share of state financing, taxes and other contributions increased to offset the fall in other contributions (from employees, employers and the self-employed).

4.3 Mandatory occupational schemes

France's occupational pension schemes are one of a kind in the European pension landscape. First, they are quasi exclusively financed on a pay-as-you-go basis⁸ and more closely resemble basic schemes according to ESSPROS standards (mandatory, not regulated on a branch or industry basis).

Total pension contribution income in the occupational schemes is EUR 93.1 billion, representing 10.4 per cent of the wage sum and 4 per cent of GDP at market prices.

Employee, employer and self-employed contributions account for 90 per cent of total income in occupational schemes. As in the basic schemes, there are other sources of income, mainly from the state and public funds such as FSV (which finances minimum pensions and child credits) and Unédic (which finances unemployment periods), but at a lower level. The farmers' occupational scheme is also financed by taxes on alcohol and other beverages.

⁸ The exception being the occupational schemes for pharmacists (CAVP) and for civil servants, military staff and judges (RAFP).

Table 4.
Sources of pension contributions in occupational pension schemes (EUR billion).

Pension schemes	2015	2016	2017	2018	2019	2020
Employee contributions						
Agirc-Arrco	22.9	23.7	24.4	24.8	29.5	28.0
Other (IRCANTEC, CRPNPAC, RAFFP)	2.1	2.2	2.3	2.3	2.4	2.5
Sub-total	25.0	25.9	26.7	27.2	31.9	30.5
Self-employed contributions						
RCI & NSA_RCO	2.9	2.5	2.6	2.7	2.9	1.9
CNAVPL_RCO & CNBF_RCO	3.8	4.1	4.4	4.7	4.9	4.9
Sub-total	6.7	6.6	7.0	7.3	7.8	6.9
Employer contributions						
Agirc-Arrco	41.4	42.1	43.8	45.2	44.2	42.0
Other (IRCANTEC, CRNPAC, RAFFP)	2.9	2.9	3.1	3.6	3.7	3.6
Sub-total	44.2	45.0	46.9	48.8	47.9	45.6
Other social contributions (Unédic), taxes and state financing						
Agirc-Arrco	9.6	10.5	9.0	9.1	9.5	9.4
Other (CNAVPL)	0.6	0.6	0.7	0.7	0.7	0.8
Sub-total	10.2	11.1	9.7	9.8	10.2	10.2
Total	86.2	88.7	90.3	93.1	97.8	93.1

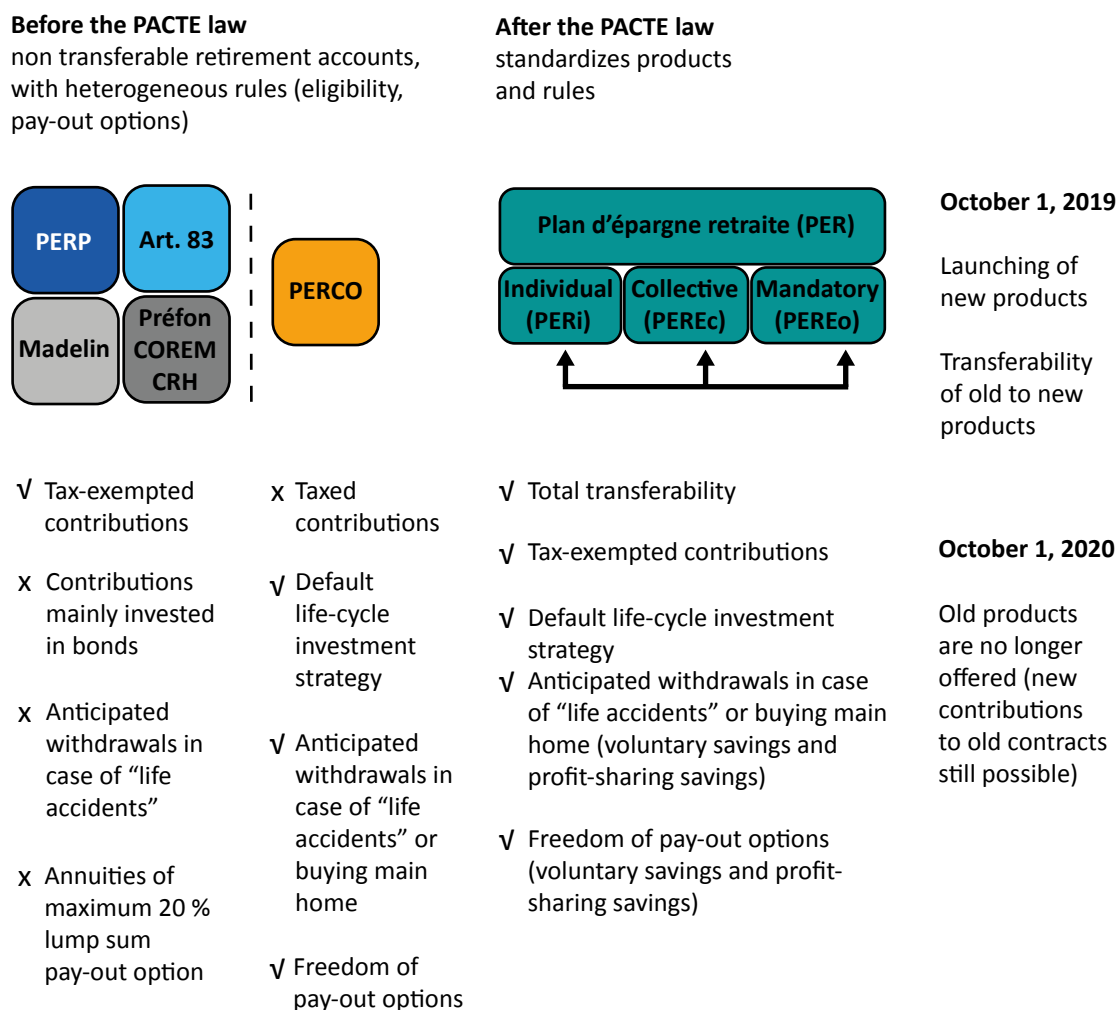
Source: CCSS reports, DSS.

4.4 Supplementary pension arrangements

In addition to the statutory and mandatory occupational schemes, employers can offer supplementary pension plans to their employees. There are also two pension insurance plans for self-employed persons. In this study, we have included the supplementary pension arrangements that have an occupational character (i.e. in which contributions are paid by the employer alone or together with employees).

The supplementary pension landscape in France changed with the implementation of the PACTE Law on 1 October 2019. Figure 4 sums up the differences between the former arrangements and the new retirement savings products. The transition has been smooth, allowing the transfer of savings from one discontinued arrangement to a new one.

Figure 4.
PACTE Law and new supplementary pension arrangements.



Source : Direction générale du Trésor, plenary session of COR, 18 March 2021.

Payments to pension arrangements under former 'Article 82' and 'Article 39'⁹ are made by employers only. There are some other supplementary pension arrangements for civil servants (PREFON, COREM, CRH) and wage earners (former PERP and PERi) but because of their individual and non-occupational nature, they fall outside the scope of this study.

Only total contribution amounts are reported and therefore it is impossible to specify the relative shares paid by employers and the employees. The one exception in this regard is Perco, where 28 per cent of the contribution income in 2020 came from the employer. As information for all other schemes is missing, we use this same ratio for them as well (with the exception of arrangements under Article 39 and Article 82, which are fully sponsored

⁹ 'Article 82' and 'Article 39' contracts, named after the General Tax Code, are retirement savings contracts under which only employers pay contributions. 'Article 39' contracts are collective defined benefit pension contracts in which employers offer supplementary pension benefits to employees. These contracts are tax exempted for employers and benefits are paid only in taxed life annuities. 'Article 82' contracts are collective defined contribution pension contracts. These contracts are tax exempted for employers. Contributions are calculated as a proportion of employees' wages, and benefits can be paid in taxed life annuities or as a lump sum (partially tax-exempted).

by the employer). Our data for supplementary pension schemes is thus not accurate but nonetheless provides an overview of how contribution income is divided.

Table 5.

Sources of pension contribution income in supplementary occupational pension schemes (EUR billion).

Pension schemes	2015	2016	2017	2018	2019	2020
Employee contributions						
PERCO, PERE and other	1.5	2.3	2.3	2.5	3.0	3.3
Article 83	2.4	2.1	2.6	2.4	2.4	2.1
Sub-total	3.9	4.4	4.9	4.9	5.3	5.4
Self-employed contributions						
Madelin Contracts	2.8	2.8	2.9	2.6	2.5	2.1
Farmers' Contracts	0.3	0.2	0.2	0.2	0.2	0.2
Sub-total	3.1	3.1	3.1	2.8	2.7	2.3
Employer contributions						
PERCO, PERE, and other	0.6	0.6	0.7	0.7	0.8	0.9
Article 83	0.0	0.0	0.0	0.0	0.0	0.0
Article 39 & Article 82	1.6	2.4	1.7	1.8	2.0	1.6
Sub-total	2.2	3.0	2.4	2.5	2.8	2.6
Total	8.6	9.9	9.8	9.5	10.1	9.4

Source: DREES, données sur la retraite supplémentaire.

The contributions paid in these supplementary pension schemes amounted to EUR 9.4 billion in 2020, representing only 1 per cent of the wage sum and less than 0.5 per cent of GDP at market prices. The PACTE law was expected to boost these contributions, but the COVID-19 crisis slowed progress especially for the self-employed.

To sum up, contribution income in supplementary occupational pension schemes is very low in France, accounting for only 2.7 per cent of total pension contribution income in 2020.

Pension contribution level in Germany

Antti Mielonen

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1 Pension contribution level in 2020

The following table presents Germany's total pension contribution income for statutory and special pension schemes as well as occupational pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.

Pension contributions in relation to wages and GDP in 2020, %.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage-earners and self-employed				
Statutory pension schemes	5.98	7.32	3.28	3.62
Special pension schemes	0.71	0.87	0.39	0.43
Occupational schemes	0.66	0.81	0.36	0.40
Total	7.36	9.00	4.04	4.46
Employers				
Statutory pension schemes	6.20	7.59	3.40	3.76
Special pension schemes	1.40	1.72	0.77	0.85
Occupational schemes	2.44	2.99	1.34	1.48
Total	10.04	12.29	5.51	6.08
Tax financing				
Statutory pension schemes	6.26	7.66	3.43	3.79
Special pension schemes	2.20	2.69	1.20	1.33
Occupational schemes	0.02	0.03	0.01	0.01
Total	8.48	10.38	4.65	5.14
All in total	25.88	31.67	14.20	15.68

Statutory schemes: general pension scheme (Allgemeine RV), miners (Knappschaftlichen RV) and artists (Künstler und Publizisten).

Special schemes: farmers (Landwirte), liberal professions (Versorgungswerke), public sector officials (Beamtenversorgung).

Occupational schemes: private sector employees (Betriebliche altersversorgung) and public sector employees (Zusatzversorgung).

2 Statutory pension schemes

Statutory pension provision (Gesetzliche Rentenversicherung) forms the backbone of the German pension system. It covers approximately 85 per cent of the working population with around 39.1 million active members at the end of 2019. Statutory pension provision is divided into two branches: the general pension scheme (Allgemeine Rentenversicherung) that includes the main part of the working population and a separate scheme for miners, railway and seafaring personnel (Knappschaft-Bahn-See, KBS) with a small number of insured members (0.4 million) (DRV Bund 2021; Statistisches Bundesamt 2022).

Statutory pension provision also includes a pension scheme for self-employed artists and writers, authors and journalists (Künstlersozialversicherung). At the end of 2019 there were around 0.2 million active members in the Künstlersozialkasse (BMAS 2020a).

2.1 Benefit structure

Statutory pension benefits include old-age, disability and survivors' benefits. There are several different early old-age pensions in which the retirement age depends mainly on career length (i.e. length of insurance period). Counselling, medical and vocational rehabilitative measures as well as partial coverage for the costs of pensioners' sickness insurance are also included among the available benefits.

Pension benefits are based on the insured person's total career. No basic pension based on residence or other criteria is available.¹ The amount of pension is determined based on the number of pension points accumulated during the person's career. One point is accrued with an annual wage equal to the average wage in the economy. However, there is a ceiling of around twice the average wage for pensionable earnings. KBS old-age benefits can be withdrawn earlier than in the general scheme, and the pensionable earnings ceiling is higher. In 2020, the average benefit amounted from around EUR 700 per month for regular old-age pension (Regelaltersrente) to close to EUR 2,250 per month for the old-age pension for miners (Altersrente für langjährig unter Tage beschäftigte Bergleute) in the KBS scheme (DRV Bund 2021a).

2.2 Financing

Statutory pension schemes are financed on a pay-as-you-go (PAYG) basis, with employer and employee contributions and transfers from the federal government. The general pension scheme has a small buffer fund (Nachhaltigkeitsrücklage) to ensure the liquidity of the system, as revenue from the contributions is affected by seasonal and cyclical fluctuations.²

1 The new minimum benefit (Grundrente) is a supplementary benefit paid to those with long careers in low-paid employment. This benefit has been available since 2021 and is therefore not included in the calculations. Also, the social assistance for the elderly (Grundsicherung im Alter) is not included in the calculations as it is organized outside of the pension system and not considered a pension benefit in this report.

2 The size of the buffer fund is limited to 0.2–1.5 times the monthly expenditure.

The pension contribution in the general system is split into equal employer and employee components. In 2020, the total contribution rate was 18.6 per cent, with 9.3 per cent components for both employers and employees, subject to an income ceiling (Beitragsbemessungsgrenze) of EUR 6,900 per month (EUR 82,800 per year) in the old states and EUR 6,450 per month (EUR 77,400 per year) in the new states (DRV Bund 2021a).

In the general scheme, those with monthly earnings of less than EUR 450 (Minijobs) pay lower contributions, but the overall rate is the same: employers pay 15 per cent and employees 3.6 per cent of earnings. Those with a Minijob in private households pay 13.6 per cent as an employee contribution and the employer pays 5 per cent. Minijob employees can apply for an exemption, but this means reduced benefits.

Different employee contribution rates also apply to work with regular monthly earnings between EUR 450 and 1,300 EUR (Übergangsbereich/Gleitzone). The reduced employee component ranges from 4.7 per cent (EUR 450.01/month) to 9.3 per cent (1,300 EUR/month). Contrary to Minijobs, employees within the Gleitzone cannot be exempted from contribution payment (DRV Bund 2021b).

Temporary employment (kurzfristige Beschäftigung) lasting less than 70 working days or 3 months in a calendar year is totally exempt from contributions and pension insurance coverage.

The self-employed who are mandatorily covered by the statutory scheme pay a fixed amount contribution or an income-related contribution. The fixed amount is EUR 592 (EUR 560 in the new states), corresponding to the contribution amount paid for an average wage employee. However, for the first three years after starting a business, the fixed contribution can be paid in half amounts. If net income differs significantly from the average wage, the contribution can be paid according to the general contribution rate of 18.6 per cent within the limits of EUR 84–1,283. Those self-employed persons who are voluntarily insured under the statutory scheme can pay contributions according to their choosing, subject to the same minimum and maximum amounts (DRV Bund 2021c).

The KBS scheme has a higher total contribution rate and contribution ceilings, but employees pay the same rate as in the general scheme. In 2020, the total KBS contribution rate was 24.7 per cent, with the employer's component being 15.4 per cent and the employee's 9.3 per cent. The income ceiling for contributions was EUR 8,450 per month in the old states and EUR 7,900 per month in the new states (DRV Bund 2021a).

Those insured as artists or freelancers under the Artists' Pension scheme (Künstlersozialversicherung) pay contributions (Versichertenbeitrag) set at the same level as for employees in the general scheme. There is also a 4.2 per cent levy on client companies and customers (Künstlersozialabgabe). The state covers the remaining costs (KSK 2022).

Table 2.
Contribution rates and income limits for contributions in statutory schemes in 2015–2020.

	2015	2016	2017	2018	2019	2020
General scheme						
Employee contribution rate, %	9.35	9.35	9.35	9.30	9.30	9.30
Employer contribution rate, %	9.35	9.35	9.35	9.30	9.30	9.30
Total rate, %	18.7	18.7	18.7	18.6	18.6	18.6
Maximum income (EUR/month)*	6,050 /5,200	6,200 /5,400	6,350 /5,700	6,500 /5,800	6,700 /6,150	6,900 /6,450
Knappschaft-Bahn-See						
Employee contribution rate, %	9.35	9.35	9.35	9.30	9.30	9.30
Employer contribution rate, %	15.45	15.45	15.45	15.40	15.40	15.40
Total rate, %	24.80	24.80	24.80	24.70	24.70	24.70
Maximum income (EUR/month)*	7,450 /6,350	7,650 /6,650	7,850 /7,000	8,000 /7,150	8,200 /7,600	8,450 /7,900

* Old states / New states.

The state's role is based on financing unpaid insurance periods, such as periods of child rearing and unemployment. Also, state subsidies ensure the long-term viability of the pension system under changing economic and demographic conditions and protect contributors against excessive contribution rates (BMAS 2022b).

The state contributes to the pension system in two main ways: a) through a direct federal state subsidy and b) contribution income paid by the federal government or social security institutions. The direct state subsidy consists of a general subsidy (allgemeiner Bundeszuschuss), additional subsidy (zusätzlicher Bundeszuschuss) and increased additional subsidy (Erhöhungsbetrag zum zusätzlichen Bundeszuschuss). The direct subsidy also includes deficit coverage for the KBS scheme (Bundeszuschuss zur Knappschaft) and reimbursements resulting from the AAÜG Act, which regulates pension entitlements derived from special and supplementary pension benefits of the former GDR (BMAS 2022b).

The general subsidy amount is linked to the development of average wages and to the contribution rate of the general pension scheme. The additional subsidy amount comprises a percentage point of VAT, and the increased additional subsidy is linked to changes in average wages (DRV Bund 2021d).

The contribution income paid by the state includes contributions for insurance coverage during child rearing periods (Kindererziehungszeiten). Also, contributions paid by social insurance institutions, such as public employment services and sickness and care funds on behalf of their beneficiaries, are considered as contribution income paid by the state.

The data on contribution income collected for this report are drawn from the Sozialbudget.³ The Sozialbudget provides information separately on contributions paid by the insured (Versicherten), employers (Arbeitgeber) and the state. The data for the insured category are included in the calculations as employee contributions, although

³ The DRV Bund data available does not provide separate figures for contributions paid by the insured and the employers. It does, however, include a finer sub-categorisation of state subsidies, but for the purposes of this report the categorisation used in the Sozialbudget is sufficient.

it also includes contribution income paid by the self-employed. The state contributions include contribution income (Beiträge des Staates) as well as subsidies (Zuschüsse des Staates). It should be noted that we have not included other income (Sonstige Einnahmen, Verrechnungen) in the calculations.⁴

Table 3.

Contribution income and expenditure for the general and KBS schemes, EUR million.

	2015	2016	2017	2018	2019	2020
Employee	93,549	97,196	101,522	106,684	111,539	110,557
Employer	94,273	97,921	102,000	106,610	111,134	114,540
State	93,340	96,426	101,433	104,888	109,777	115,665
Total	281,162	291,543	304,955	318,182	332,450	340,762
Expenditure	283,094	293,906	304,717	313,737	330,880	344,500

Source: BMAS Sozialbudget 2015–2021.

⁴ Combined, these usually amount to less than EUR 500 million annually.

3 Special pension schemes

For some special groups there are separate, compulsory pension schemes that replace membership of statutory schemes. These schemes include the Civil Service Pension Scheme (Beamtenversorgung), the Farmers' Pension Scheme (Alterssicherung der Landwirte) and several professional pension schemes

(Berufständige Versorgungswerke) that cover, among others, physicians, pharmacists, architects, notaries and lawyers.

3.1 Civil Service Pension Scheme

The Civil Service Pension Scheme covers local and central government civil servants as well as military personnel, judges and officials of privatised companies in Post, Postbank, Telekom and Bahn. At the end of June 2019, the Beamtenversorgung had 1.76 million active members (BMAS 2020a).

The Civil Service Pension Scheme is basically a PAYG scheme funded by the relevant organisations' contributions (employer) and state subsidies. Civil servants are not required to pay pension contributions, but a very small part of revenue nevertheless comes from this source. Although this is essentially a PAYG scheme, financing has expanded towards capital funding since 1999, with three different funds created to assist in the funding of the benefits.⁵

3.2 Farmers' Pension Scheme

The Farmers' Pension Scheme (Alterssicherung der Landwirte) provides a basic, relatively low pension benefit, which is expected to be supplemented by private or statutory pensions or other income. Farmers and associated workers, including family members, are compulsorily insured under the Farmers' Pension Scheme. The number of active members has been on the decline since the late 1990s. At the end of 2019, there were 0.18 million active members in the scheme (BMAS 2020a).

The scheme is nowadays PAYG-funded, with mainly state subsidies but also accompanying member contributions (classified in this context as employee contributions). Members pay a flat-rate contribution according to their membership status. Farmers and their spouses pay a full-rate contribution while other family members working on the farm pay a half-rate contribution. The contribution amount is linked to the development of the average wage in the general pension scheme. In 2020, the full contribution was EUR 261 per month in the old states and EUR 244 per month in the new states. If the member has a low income (under EUR 31,000 for married and EUR 15,500 for single members), the state covers up to 60 per cent of the contribution (SVLFG 2022).

⁵ Versorgungsrücklage des Bundes, Versorgungsfonds des Bundes and Versorgungsfonds der Bundesagentur für Arbeit had combined assets of EUR 31.7 billion at the end of 2019 (BMAS 2020a).

3.3 Professional Associations Pensions Schemes

Professional pension schemes for liberal professions provide pensions for members of different professional associations (Berufskammern). The biggest professional groups are doctors and physicians (around 50 % of all members). Lawyers and notaries also account for a large proportion of membership (around 20 %). In 2018 there were approximately 1.0 million active members in around 80 different schemes.

Professional pension schemes are fully or partly funded with contributions paid mainly by members (here classified as employees) and to some extent by employers. The combined assets of the associations reached EUR 241 billion at the end of 2020 (ABV 2022).

Table 4.

Contribution income and expenditure for special pension schemes in 2015–2020, EUR million.

	2015	2016	2017	2018	2019	2020
Civil Service Scheme						
employee	251	251	251	1,955	2,306	2,478
employer	20,882	21,509	22,359	22,807	23,951	24,877
state	30,406	31,594	33,196	35,200	36,713	38,137
sub-total	51,539	53,354	55,806	59,962	62,970	65,492
expenditure	53,108	55,139	57,679	60,023	62,797	65,124
Farmers' Pension Scheme						
employee	589	572	560	550	535	536
employer	-	-	-	-	-	-
state	2,194	2,243	2,269	2,276	2,372	2,346
sub-total	2,783	2,815	2,829	2,826	2,907	2,882
expenditure	2,790	2,736	2,833	2,829	2,914	2,885
Professional Associations Pension Schemes						
employee	8,170	8,576	9,078	9,411	9,873	10,110
employer	833	875	926	960	1,007	1,031
state	-	31	72	75	77	78
sub-total	9,003	9,482	10,076	10,446	10,957	11,219
expenditure	5,644	5,921	6,398	6,825	7,146	7,683
Total						
employee	9,010	9,399	9,889	11,916	12,714	13,124
employer	21,715	22,384	23,285	23,767	24,958	25,908
state	32,600	33,868	35,537	37,551	39,162	40,561

Source: BMAS Sozialbudget 2015–2021.

4 Occupational pension schemes

In the private sector, supplementary occupational pension provision by the employer has been voluntary, though often organised by the social partners through collective agreements. Since 2002, however, with the introduction of salary conversion (Entgeldumwandlung), all employees have a basic right to an employer-provided occupational pension. The number of active members has therefore risen considerably in the past 20 years.

There are five different vehicles for organising occupational pensions in the private sector: the Pensionskasse, Pensionfonds, direct pension promise (Direktzusage/Pensionszusage), support fund (Unterstützungskasse) and direct insurance (Direktversicherungen). Direct insurance has the highest number of entitlements/contracts (Anwartschaften), 5.2 million, followed by Pensionskassen (4.7 million) and direct promises and support funds (4.7 million combined). The Pensionfonds had 0.5 million entitlements or contracts at the end of 2019 (BMAS 2020a).⁶

In the public sector, workers or employees (Arbeiter und Angestellten) but not civil servants (Beamte) have their own occupational pension schemes – the Zusatzversorgung im öffentlichen Dienst (ZÖD). ZÖD schemes are based on collective agreements. With few exceptions, their compulsory members include all public sector workers and employees at the federal, regional and municipal level, as well as of churches. The number of active members was around 6 million at the end of 2019 (BMAS 2020a).

In all, according to BMAS (2020a), occupational pension schemes in the private and public sectors covered around 54 per cent of those compulsorily insured in the social security system at the end of 2019.

Occupational pension provision is mostly funded in the private sector. In the public sector, the schemes are usually based on the PAYG principle. However, since the 1999 pension reform some public sector ZÖD schemes have switched to capital funding.

Private sector pension schemes can be financed solely by employers, by both employers and employees or employees alone, depending among other things on collective agreements. If the employee participates in financing, the employer has been required to pay an obligatory minimum of 15 per cent of the employee contribution since 2019.

Traditionally most of the contributions have been covered by employers, but employee participation in financing has risen since 2002 after the introduction of the right for salary conversion. In 2019, only 24 per cent of the occupational schemes were solely employer-financed, while 68 per cent were financed by both employers and employees and 20 per cent were financed by employees alone (BMAS 2020a).⁷

The different vehicles for private sector pension provision have different rules for tax-effective contribution limits. Contributions to the Pensionskassen, direct insurance and pension funds are exempted from social security contributions by up to 4 per cent of the

⁶ It should be noted that a single employee may have several contracts/entitlements.

⁷ Multiple choices are possible.

statutory pension scheme contribution ceiling (old states) and from taxes by up to 8 per cent. In 2020, this resulted in a maximum amount for combined tax-exempt employer and employee contributions of EUR 6,624 and a social security contribution exempt amount of EUR 3,312. Direct pension promise has no limits for tax-effective contributions. The same applies to the support funds if the liabilities are reinsured (ABA 2021; DRV Bund 2020).

According to ABA (2021), the average employer contribution rate for the transportation and warehousing sector is 4.8 per cent and for the financial services sector 6.5 per cent. In addition, employees contribute 0.8 per cent – 0.9 per cent on average.

In the public sector ZÖD schemes, employee contributions were introduced in the reform of 1999, but the (public) employer carries the main responsibility for financing the scheme. The state also contributes a small amount. In the largest ZÖD scheme, the VBL (Versorgungsanstalt des Bundes und Länder), the contribution rate is 8.26 per cent of insured earnings, with the employer paying 6.45 per cent and employees 1.41 per cent (VBL 2021).⁸

Table 5.

Contribution income and expenditure for occupational schemes in 2015–2020, EUR million.

	2015	2016	2017	2018	2019	2020
Private sector schemes						
employee	5,472	8,555	8,780	9,166	9,335	9,235
employer	29,824	30,926	33,157	29,355	29,671	30,543
state	-	-	-	-	-	-
sub-total	35,296	39,481	41,937	38,521	39,006	39,778
expenditure	26,821	27,333	28,208	26,697	27,107	28,391
Public sector schemes						
employee	1,947	2,122	2,279	2,394	2,569	3,027
employer	11,274	12,048	12,611	13,295	14,365	14,574
state	474	464	451	444	433	424
sub-total	13,695	14,634	15,341	16,133	17,367	18,025
expenditure	11,895	12,313	12,677	13,618	13,726	14,071
Total						
employee	7,419	10,677	11,059	11,560	11,904	12,262
employer	41,098	42,974	45,768	42,650	44,036	45,117
state	474	464	451	444	433	424

Source: BMAS Sozialbudget 2015–2021.

⁸ Maximum earnings are 2.5 times the contribution income ceiling for the statutory pension scheme (old states), i.e. EUR 17,250.00 per month (2020).

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Pension contribution level in Italy

Niko Väänänen

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1 Pension contribution level in 2020

The following table presents Italy's total pension contribution income for statutory and occupational pension schemes in relation to the GDP in 2020.

Table 1.

Pension contributions in relation to wages and GDP in 2020, %.

	GDP at market prices	GDP at basic prices
Employee contributions		
Statutory	2.64	2.92
Occupational	0.55	0.61
Supplementary		
Sub-total	3.19	3.52
Self-employed contributions		
Statutory	1.67	1.84
Occupational		
Supplementary		
Sub-total	1.67	1.84
Employers' contributions		
Statutory	6.84	7.56
Occupational	0.16	0.18
Supplementary		
Sub-total	7.00	7.74
State & Taxes & Other contributions		
Statutory	1.27	1.41
Subsidy	3.63	4.01
Sub-total	4.90	5.42
Grand Total	16.75	18.53

Sources: INPS, COVIP & OECD.

2 Overview of the Italian pension system

General compulsory insurance (Assicurazione generale obbligatoria, AGO) is based on a pay-as-you-go mechanism, with benefits linked to contributions paid during the person's employment career. The public pension system in Italy is largely unified and administered by the Istituto Nazionale della Previdenza Sociale (INPS). The system covers almost the whole workforce. The scheme pays out old-age, disability, and survivors' benefits. Substantial reforms have been put in place since the early 1990s. These reforms have come with the gradual adoption of the Notional Defined Contribution (NDC) rules and a decrease in the generosity of the public pension system. The reforms harmonised the pension rules across different professional groups in both public and private sectors. Since 2012 all private sector employees, civil servants and self-employed persons under the general pension scheme have been covered by the same rules. Prior to this date older workers were insured under more generous defined benefit rules. (Hohnerlein 2020)

Minor pension schemes are allowed to deviate from the general rules. This mainly concerns liberal professions (physicians, lawyers, veterinary surgeons, actuaries, dentists, etc.) who have their own schemes and administrations. These schemes account for about 4.5 % of persons insured under the public pension system and 2.2 % of total public pension expenditure in 2019. They are not managed by INPS but by separate entities. Unfortunately, we lack more detailed data on these schemes.

Minimum protection for older persons with insufficient means to support themselves is mainly provided via means- and income-tested social assistance instruments that are managed by INPS.

In 2020, some 33 per cent of the workforce were covered by supplementary occupational and individual schemes that are incentivised by tax reliefs. The share of the workforce covered by voluntary arrangements has increased from 2015, when the figure stood at 28 per cent of the workforce. This increase is partly explained by the silent consent mechanism introduced in 2007 for transferring a statutory benefit (severance pay) to voluntary pension schemes. In 2020, Italian pension funds' total assets under management amounted to EUR 197.9 billion, representing 12 per cent of Italian GDP and 4.1 per cent of households' financial assets. (COVIP 2021)

In the European pension landscape, the Italian pension system is characterised by high coverage under the state-managed public pension pillar with largely unified rules and a modest level of occupational pension coverage.

Table 2.

Expenditure on public pensions by scheme in 2014–2020, EUR billion.

Pension scheme	2014	2015	2016	2017	2018	2019	2020
Contributory schemes							
Private sector employees	144.7	146.4	145.3	146.5	148.5	151.2	154.1
Public sector employees	65.1	66.8	67.6	68.5	70.4	73.2	76.2
Craftsmen	13.8	14.1	14.1	14.4	14.7	15.1	15.4
Atypical workers	0.7	0.8	0.9	1.0	1.2	1.4	1.5
Shopkeepers	11.0	11.2	11.2	11.3	11.6	11.8	12.1
Farmers	6.8	6.9	6.6	6.6	6.6	6.6	6.5
Grand Total	242.1	246.2	245.7	248.3	253.0	259.3	265.8

3 Rules of the public pension system

Administration of the public pension system rests mainly with the National Social Security Institution INPS. Benefit calculation rules are based on a notional defined contribution (NDC) system. In other words, paid contributions are each year virtually transferred to a notional account. The accumulated contributions in the account, pension capital, are updated annually with the five-year average growth of nominal GDP. These characteristics mean that the Italian pension system has a sustainable long-term financial outlook (Franco & Tommasino 2020).

At retirement, the accumulated pension capital is transformed into an annuity by using a transformation coefficient, which is a function based on the probabilities of death, the probabilities of leaving a widow or widower behind and the expected number of years for which a survivor's benefit will be withdrawn. Thus, the transformation coefficient increases with age. The coefficients are revised every two years. Period life expectancy is used to calculate the transformation coefficients.

The pension contribution rate is 33 per cent of wages, with employees paying 9.19 per cent and the employer 23.81 per cent. The rate for self-employed persons (including shopkeepers, craftsmen and farmers) is 24 per cent. The rates are the same for retired workers. Retirement age is 67 and it is linked to increases in life expectancy. There are also early retirement schemes, especially for those who have started their careers early. Eligibility for old-age pensions requires a minimum of 20 years of contribution payments and that the pension amount is not less than 1.5 times the amount of old-age social assistance.

Pension benefits are indexed to the cost-of-living index, but higher pensions are only partially updated. As mentioned, the NDC scheme does not guarantee a minimum pension income. Separate means-tested schemes¹ exist to guarantee the income of older people without adequate pension benefits based on their work history. These minimum schemes are not included in the figures of our study.

1 The schemes are social allowance (assegno sociale e pensione sociale), social increase (Maggiorazioni sociali) and citizenship pension (Pensione di cittadinanza).

Table 3.

Income to public pensions by source of income in 2014–2020, bn EUR.

	2014	2015	2016	2017	2018	2019	2020
Private sector contributions							
Employers' and employees' contributions	99,8	102,7	107,2	109,5	109,9	116,1	106,4
Public sector contributions							
Employers' and employees' contributions	49	48,7	49,1	48,8	53,7	50,4	50,6
Self-employed contributions (including atypical workers)	27	27,4	27,6	28	27,7	28,5	27,6
Tax revenues and other contributions							
Transfers from other social security organisations (e.g. unemployment insurance)	20,9	17,8	15,9	14,8	14	14,6	21,1
Grand Total	196,7	196,6	199,8	201,1	205,3	209,6	205,7

4 Supplementary occupational pensions

In recent decades improvements have been made to the institutional framework of the supplementary pension pillar. Jessoula (2018) describes Italy as a latecomer to supplementary pension provision. The generosity of the compulsory pension scheme, offering replacement rates of around 75 per cent after a 40-year career, made redundant the need for supplementary private pensions (Jessoula 2011). Nevertheless, to offset the anticipated decline in public pension levels, Italy's multi-pillarisation plan was launched in the 1990s. Since 2005, the rules have been streamlined and clarified, the guidelines for pension funds harmonised and a new regulatory agency (COVIP) has been created (Franco & Tommasino 2020).

This report uses data provided by COVIP on contractual pension funds, open pension funds and pre-existing pension funds. We have excluded purely individual third-pillar PIPs (Piano Individuale Pensionistico) in which there is no employer involvement.

Some 30 years after the start of the process of multi-pillarisation, there remains marked variation in coverage rates between occupational categories and across economic sectors (Jessoula 2018). At the end of 2020, about 8.4 million workers (33 % of the workforce, or 24.1 % when individual accounts are excluded that received no contributions during the year) were enrolled in supplementary schemes. Yet, 3.6 million of these workers were members of third-pillar PIPs which fall outside the scope of our study. In other words, coverage remains limited. Enrolment rates are gradually rising but are still limited among the self-employed, women, small firms' employees, young people and people in Southern Italy (Franco & Tommasino 2020).

In 2020, contributions to pension funds amounted to EUR 13.5 billion, excluding PIPs. Total funded pension outflows came to EUR 8.6 billion. Contributions to pension funds (excluding PIPs) have risen significantly, reaching 10 billion in 2015. In 2015 funded pension gross outflows were EUR 7 billion (COVIP 2021).

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Pension contribution level in Netherlands

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1 Pension contribution level in 2020

The following table presents the Netherland's total pension contribution income for statutory and occupational pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.

Pension contributions in relation to wages and GDP in 2020, %.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage earners and self-employed				
Statutory pension schemes	5.38	6.88	2.72	3.05
Occupational schemes	3.15	4.03	1.59	1.79
Total	8.53	10.91	4.31	4.84
Employers				
Statutory pension schemes	4.84	6.20	2.45	2.75
Occupational schemes	8.88	11.36	4.49	5.04
Total	13.72	17.56	6.94	7.79
Tax financing				
Statutory pension schemes	5.85	7.49	2.96	3.32
Occupational schemes	0.00	0.00	0.00	0.00
Total	5.85	7.49	2.96	3.32
All in total	28.10	35.95	14.21	15.95

Statutory schemes: AOW, Anw, WIA/WAO, Wajong.

Occupational schemes: Pension funds, PPI, Insurance contracts.

2 Statutory pension schemes

Statutory pension provision consists of the old-age pension scheme AOW (Algemene Ouderdomswet), the survivor benefit scheme Anw (Algemene nabestaandenwet) and the disability benefit scheme for young persons Wajong (Wet arbeidsongeschiktheidsvoorziening jonggehandicapten). The employee insurance scheme WIA (Wet werk en inkomen naar arbeidsvermogen), which replaced the old WAO scheme in 2006, provides disability benefits for the working population.

2.1 Old-age pension scheme AOW and survivors' pension scheme Anw

AOW provides a basic old-age pension benefit for people who have lived or worked in the Netherlands and have reached the AOW retirement age. Pension accrues at a rate of 2 per cent per year, with a full pension after 50 years of coverage. The benefit is not reduced by supplementary pensions or work income, and the amount is tied to the net minimum wage, with a 70 per cent rate for single persons and 50 per cent for married or cohabiting persons.¹

The survivors' pension scheme (Anw) provides surviving dependents under the AOW retirement age with a basic benefit under certain conditions. Every resident of the Netherlands is automatically insured under Anw. The Anw benefit is income-dependent, meaning that income from work or social security benefits is deducted from the Anw. As in the case of AOW, the full widow(er)'s benefit is based on 70 per cent of the net minimum wage.

The old-age pension and survivors' pension schemes are both PAYG-financed from contributions paid by those with earned income (work, pensions, housing income, etc.); AOW is also financed from state subsidies. The pension contributions are part of the income taxation system, with the lowest tax bracket (1a) consisting of income tax, contributions to the long-term care scheme (Wlz) and contributions to the AOW and Anw schemes. The AOW contribution is levied only on persons under the AOW retirement age (66 years and 4 months in 2020) and with an income under EUR 34,712. The Anw contribution, however, is levied on all persons with earned income, subject to the income limits (see Table 2).²

1 In 2020, the full pension benefit for a single person amounted to EUR 1,302.28 and for cohabiting persons EUR 885.34 per month (gross, including holiday allowance of EUR 72.04 per month that is paid out in May).

2 It should be noted that the nominal contribution rates of 17.9 per cent for the AOW scheme and 0.1 per cent for the Anw scheme do not represent the effective rates in general, as several tax credits apply to income taxation and to AOW and Anw contributions.

Table 2.
Income tax rates and social security contribution rates in 2020.

	Annual income (EUR)	Income tax (%)	AOW contribution (%)	Anw contribution (%)	Wlz contribution (%)
Younger than AOW age					
1a bracket	0–34,712	9.7	17.9	0.1	9.65
1b bracket	34,713–68,507	37.35	-	-	-
2 bracket	68,508–	49.50	-	-	-
Older than AOW age					
1a bracket	0–35,375	9.7	-	0.1	9.65
1b bracket	35,376–68,507	37.35	-	-	-
2 bracket	68,508–	49.50	-	-	-

Source: Belastingdienst (2020).

The AOW contribution rate has remained stable at 17.9 per cent since 1999. As early as 1997 it was decided to cap the AOW contribution rate at a maximum of 18.25 per cent. The fixed contribution rate has resulted in a deficit between contributions and expenditure from 2000 onwards, which has been covered by state subsidies.

The state's share of AOW financing has increased substantially in the past 20 years. In 2002, the state covered just over one-tenth of the expenditure. In 2014 that share was close to one-third and by 2020, the state covered more than half of the costs for AOW. The increasing role of general budget financing has been motivated, in part, by intergenerational solidarity, as pension beneficiaries will thus also contribute towards the increasing costs of the ageing society (CBS 2010; 2018).

Anw scheme contributions are also levied only under the contribution base. Contributions are, however, also paid by those over the AOW age. As the number of beneficiaries has declined significantly, it has been possible to lower the contribution rate from 1.25 per cent in 2006 to 0.6 per cent in 2014 and further to 0.1 per cent in 2017, which is where it still remains. No state subsidy has been required since 2013.

2.2 Disability pension schemes Wajong and WIA/WAO

The Wajong scheme is a disability benefit scheme for young persons who have an illness or disability before they turn 18 or during their studies. The benefit is intended for persons whose disability is permanent and who cannot work at all or only with help or guidance. The Wajong benefit is up to 75 per cent of the age-dependent minimum wage. The benefit is means-tested (UWV 2022a).

Wajong is financed by the state, i.e., through general taxation, with no contributions from employees or employers. Our calculations of the contribution level are based on benefit expenditure data as they provide comparable results with a contribution-financed scheme.

The disability benefit scheme for employees (Wet werk inkomen naar arbeidsvermogen, WIA) is the only earnings-related statutory pension scheme in the Netherlands. WIA replaced the old disability scheme WAO in 2006.³

WIA is divided into two separate systems: the WGA system is for the temporarily and/or partially disabled with an incapacity rate of at least 35 per cent, while the IVA system is for those with a permanent incapacity rate of at least 80 per cent. The IVA benefit is 75 per cent of previous income, with a maximum monthly salary of EUR 4,769 in 2020 for benefit calculations. The WGA benefit is 70–75 per cent of previous earnings, subject to the same maximum limit as for the IVA benefit (Rijksoverheid 2019b).

The WIA scheme is financed solely by employer contributions on a PAYG basis. There are two separate contributions for financing the WIA/WAO benefits: the basic contribution (basispremie WAO/WIA) and the differentiated contribution (gedifferentieerde premie WGA). The basic contribution is used to finance the IVA benefit and benefits paid under the former, now defunct disability scheme WAO. This basic contribution is the same for all employers. In 2020, it was 6.77 per cent under the annual contribution base of EUR 57,232.

The differentiated contribution is used to finance the WGA benefits for those employers who remain in the public system (UWV). Employers can also opt out and carry this disability risk themselves or insure it privately. In this case, the employer does not have to pay the differentiated contribution. The differentiated contribution depends on the employer's size, disability history and business sector. For small businesses, it is determined according to the business sector. For medium-sized businesses, the contribution depends partly on the business sector and partly on the individual WGA benefit history. For large businesses, the contribution is determined individually with an average base rate and an individual discount or surcharge. The average contribution rate was 0.76 per cent in 2020 (not including the sickness insurance component). There are lower and upper limits for the individual contribution rate at 0.25 and 4 times the base rate (UWV 2020).

³ Approximately 0.2 million beneficiaries still received a WAO benefit in 2020, while 0.35 million beneficiaries were receiving a WIA benefit and around 0.24 million a Wajong benefit (UWV 2022b).

Table 3.
Contribution income and expenditure for statutory schemes 2015–2020, EUR million.

	2015	2016	2017	2018	2019	2020
AOW and Anw						
employee	25,415	26,710	24,021	25,300	23,705	21,631
employer	-	-	-	-	-	-
state	12,967	12,559	12,198	13,628	17,091	19,881
sub-total	38,382	39,269	36,219	38,928	40,796	41,512
expenditure	37,172	37,974	38,428	39,145	40,505	42,259
Wajong						
employee	-	-	-	-	-	-
employer	-	-	-	-	-	-
state	3,321	3,412	3,462	3,519	3,598	3,681
expenditure	3,321	3,412	3,462	3,519	3,598	3,681
WIA/WAO						
employee	-	-	-	-	-	-
employer	12,829	14,596	15,585	16,901	18,201	19,503
state	-	-	-	-	-	-
sub-total	12,829	14,596	15,585	16,901	18,201	19,503
expenditure*	10,673	10,930	11,166	11,670	12,214	12,442
Total						
employee	25,415	26,710	24,021	25,300	23,705	21,631
employer	12,829	14,596	15,585	16,901	18,201	19,503
state	16,288	15,971	15,660	17,147	20,689	23,562
expenditure	51,166	52,316	53,056	54,334	56,317	58,382

* Includes expenditure on the WAZ scheme that was discontinued in 2004. Sources: SVB (2016–2021); UWV (2016–2021).

3 Occupational schemes

Occupational pension provision covers approximately 90 per cent of the employed population in the Netherlands. In other words, almost every working person in the Netherlands is covered under a pension scheme that supplements statutory pension provision (European Commission 2018).

Occupational pensions are negotiated between the social partners at industry level, and they are usually legally binding for all companies in that industry. Individual companies can be exempted if they offer a company-specific pension scheme of comparable or better quality.

Occupational pension provision is administered by:

- industry-wide pension funds that administer pension schemes for the whole branch of industry;
- company-specific pension funds that administer pension schemes for single enterprises;
- professional group pension funds for self-employed persons within a particular profession;
- insurance providers with group life insurance contracts for separate enterprises;
- Premium Pension Institutions.⁴

Pension schemes must comply with occupational pension laws, the most important being the Pension Act (Pensioenwet)⁵, which entered into force in 2007. The Pension Act defines the principles and minimum standards that the systems must follow. Among other things, it specifies the allowed financing method (pre-funding), investment activities, the obligations of employees and employers and the pension administration, the structure of pension fund administration and the permitted types of pension systems (defined benefit, defined contribution or capital-based).

For the time being, most of the schemes are of the defined benefit type, where the pension accrues as a certain percentage of the career average salary or final salary. However, in these schemes benefits can be cut if the funding situation so requires. Occupational pensions organised in life insurance companies are more evenly distributed between defined benefit and defined contribution schemes.⁶

Supplementary pensions are also closely regulated by tax laws. These define the tax-efficient limits for minimum retirement ages, accrual percentages and contribution

4 The premium pension institutions only invest and manage the pension contributions but cannot pay out pensions. When the employee retires, the pension capital accrued in the PPI must be used to purchase pension benefits, for example, from an insurer.

5 <https://wetten.overheid.nl/BWBR0020809/2022-07-07>

6 In 2020, around 88 per cent of the active members of pension funds were members of a career-average defined benefit scheme and around 8 per cent were members of a defined contribution scheme. The remaining active members were in final-pay defined benefit schemes and DB/DC mixed schemes. In pension schemes organised by life insurance companies (direct pension schemes), 52 per cent of active members were in defined contribution schemes in 2019 (DNB 2022).

rates as well as minimum and maximum salaries for pension accrual and contribution purposes.

In 2020, the lower threshold for the annual salary (AOW franchise) ranged from EUR 14,167 (career average schemes) to EUR 16,030 (final pay schemes). The maximum salary is EUR 110,111 for all pension schemes. The maximum accrual rates for defined benefit schemes range from 1.675 % (final pay) to 1.875 % (average pay) with a fiscal retirement age of 68. Lower limits are applied for lower retirement ages. These limits produce a full pension in 40 years with a 75 per cent replacement rate for an average wage scheme and a 66.28 per cent rate for final salary schemes. The rates also include the statutory AOW pension (Belastingdienst 2022a,b).

For defined contribution schemes, the lower salary thresholds and maximum contribution rates are linked to the full pension rates in the reference defined benefit schemes used for calculating the comparable benefit levels. They rise with age from around 3 per cent for under 19-year-olds to up to around 30 per cent for those aged 65–67 depending on the scheme properties.⁷

The pension contribution rates for defined benefit schemes amount to 24 per cent on average above the lower threshold (European Commission 2021). The contribution rate for the largest pension fund in the Netherlands, the ABP, is close to the average, although it has risen quite steadily during 2015–2020.

Table 4.

Contribution rates for ABP pension scheme in 2015–2020, %*.

	2015	2016	2017	2018	2019	2020
employee	6.57	5.85	6.57	7.02	7.59	7.68
employer	13.63	13.65	15.33	16.38	17.71	17.92
total	20.2	19.5	21.9	23.4	25.3	25.6

* Total of ABP KeuzePensioen - OP / NP, ABP ArbeidsOngeschiktheidsPensioen (Rijk), Anw compensatie. Source: abp.nl.

Table 5 shows the aggregate contribution income and expenditure for pension funds as well as contribution income for Premium Pension Institutions and insurance company schemes.

⁷ This refers to schemes with only old-age benefits. For the complete range of maximum allowed contribution rates, see Belastingdienst (2022c).

Table 5.
Contribution income and expenditure for occupational pension schemes in 2015–2020, EUR million.

	2015	2016	2017	2018	2019	2020
Industry-wide pension funds						
employer	14,466	15,181	17,357	18,582	20,735	22,840
employee	7,974	7,987	9,077	8,584	9,266	10,751
Company funds						
employer	4,874	4,570	4,505	4,171	4,027	5,029
employee	810	788	792	589	534	517
Occupational / other funds						
employer	40	46	82	194	320	437
employee	461	463	496	514	535	585
Expenditure pension funds	29,961	30,195	30,954	32,035	33,308	35,163
Insurance company schemes*						
employer	6,120	5,400	5,400	5,400	6,030	5,490
employee	680	600	600	600	670	610
PPI*						
employer	613,8	709,2	1066,5	1278	1584,9	1955,7
employee	68,2	78,8	118,5	142	176,1	217,3
Total occupational pensions						
employer	26,114	25,906	28,411	29,625	32,697	35,752
employee	9,993	9,917	11,084	10,429	11,181	12,680
total	36,107	35,823	39,495	40,054	43,878	48,432

* Shares of employer and employee contributions based on the distribution for company funds due to lack of data. Sources: DNB (2022).

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Pension contribution level in Norway

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1 Pension contribution level in 2020

The following table presents Norway's total pension contribution income for statutory, supplementary and early retirement pension schemes in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.
Pension contribution levels in 2020, %*.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage earners				
National insurance pension	6.40	8.00	3.26	3.70
Seamen and Fishermen	0.02	0.03	0.01	0.01
Occupational pensions (SPK)	0.15	0.19	0.08	0.09
Total	6.59	8.22	3.35	3.80
Employers				
National insurance pension	7.74	9.67	3.94	4.47
Seamen and Fishermen	0.04	0.05	0.02	0.02
AFP -pension	0.39	0.48	0.20	0.22
Occupational pensions	6.40	7.99	3.26	3.69
Total	14.57	18.19	7.41	8.41
Tax revenues				
National insurance pension	7.92	9.89	4.03	4.57
Seamen and Fishermen	0.01	0.01	0.00	0.00
AFP pension	0.16	0.20	0.08	0.09
Occupational pensions (SPK)	0.31	0.38	0.16	0.18
Total	8.39	10.48	4.27	4.84
Total	29.54	36.89	15.03	17.05
Statutory	22.06	27.55	11.22	12.73
Occupational pensions + AFP + Seamen and Fishermen	7.48	9.34	3.80	4.31

*Due to rounding some figures may not add up precisely.

2 Statutory pension scheme

The national insurance scheme (Folketrygd - NIS) is financed by contributions from employees, self-employed persons and other members, employer contributions and contributions from the state. The scheme is PAYG-financed, although the Government Pension Fund directs revenue to the state budget that can be used as part of NIS financing.

In addition to pension benefits, NIS includes other social security benefits such as unemployment and sickness allowances.

The national insurance contribution is divided into employee (trygdeavgift) and employer contributions (arbeidsgiveravgift). Also, self-employed persons and pensioners pay national insurance contributions. The employer contribution rate depends on the place and type of business (Table 2). Municipalities are divided into insurance zones according to their geographical location and financial situation. The employee, pensioner or self-employed contribution is levied on total income when it exceeds NOK 54,650 (EUR 5,100). However, the total contribution cannot exceed 25 per cent of income above this threshold. The employer contribution is levied on the total wage sum.

Table 2.

National insurance contribution in 2020, % of income or wage sum.

2020		
Employee		
17–69 years	8.2	
Under 17 or over 69	5.1	
Pension income, etc.	5.1	
Employer	Regular business	Agriculture and fishing
Zone 1	14.1	14.1
Zone 1a	14.1	10.6
Zone 2	10.6	10.6
Zone 3	6.4	6.4
Zone 4	5.1	5.1
Zone 4a	7.9	5.1
Zone 5	0	0
Self-employed		
Normal contribution	11.4	
Fishing, hunting or childcare	8.2	

Source: Skatteetaten.

Table 3.

National insurance (Folketrygd) income in 2015–2020, NOK million.

	2015	2016	2017	2018	2019	2020
Employee (trygdeavgift)	129807	133599	137747	144130	148508	154541
Employer (arbeidsgiveravgift)	169628	171325	175773	183272	194253	186804
Tax revenues*	121026	132163	136311	132817	134693	191051
Total	420461	437087	449831	460219	477454	532396

*Difference between social insurance expenditure according to the state budget and contribution income. Sources: 2015–2020 Stadsbudjettet (Gul bok); NAV Årsrapport 2015–2020.

The national insurance scheme includes old-age, disability and survivors' pension benefits. Since 2011 pensionable age has been between ages 62 and 75, but there is a minimum pension accrual requirement when the pension is drawn before age 67. The pension can also be drawn fully or partially while still working, with no deductions to the pension. The disability pension scheme was reformed in 2010 when the temporary disability benefit, rehabilitation allowance and occupational rehabilitation benefits were merged into a single work assessment benefit.

Even though the work assessment allowance is not a pure pension benefit, we have chosen to include it in our calculations of pension contribution level. The following table lists the national insurance benefits and respective expenditure included in our contribution level calculations.

Table 4.

National insurance pension benefit expenditure in 2015–2020, NOK million.

	2015	2016	2017	2018	2019	2020
Old-age pension ¹	190,563	201,709	211,187	221,068	232,107	241,254
Disability benefits ²	111,653	115,039	117,871	121,175	124,717	129,709
Survivors' benefits	2,243	2,157	2,085	2,031	2,019	1,992
War pension (Krigspensjon)	385	341	288	249	219	179
Administration costs ³	8,854	8,768	9,078	9,624	9,746	9,634
Total	313,698	328,014	340,509	354,147	368,808	382,768

1) Basic pension (Grunnpensjon), earnings-related pensions (Inntektpensjon, Tilleggspensjon), pension credit (Sært tillegg).

2) Disability benefit (Uføretrygd), work assessment allowance (Arbeidsavklaringspenger).

3) Estimate calculated as a fraction of total NAV administration costs. In reality, the fraction used to administer pensions is much lower than the fraction of total expenditure spent on pensions.

Source: NAV.

Statutory pension scheme contribution income has been calculated on the basis of pension expenditure, as there is no separate pension contribution in Norway and the national insurance contribution is used to finance other social security benefits in addition to the pension scheme benefits.

As regards the question of who carries the costs, we have calculated the shares for employee contributions, employer contributions and tax revenues according to the distribution of social insurance revenues as represented in the state budget. Pension expenditure and at the same time pension contribution income amounted to 72 per cent of total social insurance expenditure and contribution income (Table 5).

Table 5.

Adjusted pension contribution income in 2015–2020, NOK million.

	2015	2016	2017	2018	2019	2020
Employer	126,556	128,572	133,055	141,031	150,050	134,303
Employee	96,847	100,260	104,270	110,911	114,714	111,108
Tax revenues	90,295	99,182	103,183	102,205	104,043	137,357
Total	313,698	328,014	340,509	354,147	368,808	382,768

3 Supplementary pension schemes

Supplementary pension schemes include private and public sector occupational pension schemes and collectively agreed labour market pensions (AFP). In addition, seamen and fishermen have early retirement pension schemes.

3.1 Occupational pension schemes

Since 1 January 2006, occupational pension scheme membership has been obligatory for all private sector employees. In the public sector, membership of an occupational scheme was obligatory even before. The coverage of these schemes is thus close to universal; only self-employed persons and some small companies are exempt from the membership requirement.

Private sector schemes are nowadays mostly of the defined contribution (DC) type, which were first allowed (taxwise) from the beginning of 2001. Public sector schemes are still predominantly DB systems. However, following a reform of public occupational pensions that entered into force on 1 January 2020, the same rules now apply to all occupational public pensions.

Public and private schemes have differed with respect to integration with the national pension scheme. Public pension benefits have been integrated, i.e. the occupational pension was calculated so that it guaranteed a total pension benefit of 66 per cent of the final salary for a full 30-year career, including the national pension. Private sector pensions, on the other hand, have been supplementary to the national pension. Since 2020 public sector occupational pensions have also turned to similar supplementary arrangements for cohorts born in 1963 or later.

Occupational pension benefits always include old-age pension, and in the case of DB schemes usually disability and survivors' benefits as well. The latter two benefits are, however, not mandatory and depend on the employer's insurance contract with the insurance provider. Public sector schemes offer the complete set of benefits.

The schemes are fully funded in the private sector and also in the public sector, except for the state employees' pension schemes, which are pay-as-you-go financed.

3.1.1 Private sector occupational pension schemes

Life insurance companies control most of the market share, accounting for 90 per cent of the private sector's total contribution income (Table 7).

Private sector schemes are regulated in separate laws for DC schemes (Lov om innskuddspensjon - LOI) and DB schemes (Lov om foretakspensjon – LOF). In addition, since the beginning of 2014 companies have been able to opt for a hybrid pension scheme, regulated under new dedicated legislation (Lov om tjenestepensjon). Together with the law for obligatory membership (OTP), these laws define the (minimum)

contributions and other conditions that a scheme must fulfill to qualify as an occupational pension scheme with tax deductibility. The maximum annual insured wage for all the schemes is 12 G (National Insurance Scheme's base rate¹), which was NOK 1,210,236 (EUR 112,870) in 2020.

Table 6.
Private sector pension scheme contribution rules*.

	Defined contribution (innskuddspensjon)	Hybrid (tjenestepensjon)	Defined benefit (ytelsespensjon)
Total contribution	Min. contribution: 2 % of wage between 1–12 G (0–12 G since 2022) Max. contribution: 7 % between 0–12 G and 25.1 % between 7.1–12 G	Similar limits to DC but higher contribution requirement for women to compensate for longer life expectancy.	The amount that is required to finance the current year's accrued pension rights.
Employee's share	Usually not applied. Max. 4 % of wage and half of total contribution.	Max. half of total contribution.	Usually not applied. Max. 4 % of wage and half of the employer's share.
Self-employed/ freelance workers (voluntary)	Max. 7 % of 1–12 G income	-	-

* G refers to National Insurance Scheme's base rate that was NOK 100,853 (9,405 €) on average in 2020.

The limits for the DC schemes were adjusted at the beginning of 2014 with the aim of raising the eventual maximum benefit level of defined contribution (and hybrid) schemes to the level of defined benefit schemes, that is, around 66 per cent of wages. Besides the higher level of the benefit, the new, higher limits are better suited to the reformed national pension scheme that was adopted in 2011.

According to Finance Norway (2022), some 24 per cent of the insured (1/3 of the insurances) have minimum coverage while about 3 per cent of DC scheme members are in schemes with maximum savings rates.

Table 7.
Private sector occupational pension contribution income according to provider and scheme type in 2015–2020, NOK million.

	2015	2016	2017	2018	2019	2020
Life insurance companies	35,996	35,107	36,215	37,886	41,140	42,308
Pension funds	7,942	6,168	5,704	5,959	6,361	5,070
DC	20,417	23,199	26,787	28,971	32,288	34,058
DB	23,521	18,076	15,132	14,874	15,213	13,320
Total	43,938	41,275	41,919	43,845	47,501	47,378
Expenditure	18,912	20,070	21,472	22,718	23,998	25,376

Source: SSB (2022).

1 The wage-indexed basic amount 'G' (grunnbeløpet) plays a central role in calculating contributions and benefits under the pension system. 1 G amounts to around 1/6 of average annual full-time labour income.

3.1.2 Public sector occupational pension schemes

Public sector occupational pension provision is obligatory and covers the state and local government sectors as well as employees in public corporations. There are different pension schemes for different sectors and employee groups. Pension schemes are based either on law, as in the case of state employees, or on collective agreements, as in the case of municipal employees.² Although there are a multitude of pension schemes, the pension benefits and rules are quite similar for each of the groups.

According to new uniform calculation rules, 5.7 per cent of pensionable annual income between 0 and 12 G and an additional 18.1 per cent (23.8 % in total) between 7.1 and 12 G are added to the accumulated individual pension accounts for cohorts born in or after 1963.

Public sector occupational pension provision is arranged through pension funds and life insurance companies. There are two main pension providers in this market. These are the Kommunal Landspensjonskasse (KLP), a mutual life insurance company that administers mostly local government pension schemes, and the State Pension Fund (SPK), which administers state and school personnel pension schemes and some other employee groups.³

There is a basic difference in how the state and local government pension schemes are financed: state occupational pension benefits are mainly PAYG-financed, whereas local government pensions are pre-funded. Pension contribution rules for the public sector schemes are defined in collective agreements and relevant laws.⁴ Usually, employees are required to pay two per cent of their salary into the pension schemes. The employer covers the rest of the contribution in local government schemes, but in PAYG-financed SPK schemes the employer contribution can be non-existent or insufficient to cover the remaining expenditure. In this case, any shortfalls are covered from the state budget and considered tax revenues in our calculations. According to SPK, the employer contribution is 16–20 per cent of salary. The rates are similar in KLP schemes.

Table 8 presents the public sector pension contribution income for public sector pension providers in 2015–2020. The amounts are total contributions as no data is available for employee and employer shares.

2 The State Pension Fund law (Lov om Statens pensjonskasse) applies to state employees and the current main collective agreement (KS Hovedtariffavtalen) applies to the local government sector.

3 SPK administers schemes for state employees, teaching personnel, pharmacists (private and public) and members of parliament and the government as well as those employed in state-owned corporations and in the research sector. KLP administers pension schemes for counties, municipalities and municipal corporations, health organisations, nurses (private and public sector), and hospital doctors. In addition, the pension providers administer, together with NAV, public sector AFP early retirement schemes.

4 KLP and local government pension funds apply insurance law (Lov om forsikringsvirksomhet), and the State Pension Fund law has provisions for pension contributions in SPK schemes.

Table 8.

Public sector occupational contribution income and pension expenditure in 2015–2020, NOK million.

	2015	2016	2017	2018	2019	2020
Contribution income						
Statens Pensjonskasse (SPK)	14,900	14,432	20,740	22,580	23,773	24,251
Life insurance companies (incl. KLP)	34,108	37,752	36,330	43,679	45,540	38,442
Local government pension funds	7,449	8,637	8,262	9,198	10,177	8,954
Total	56,457	60,821	65,332	75,457	79,490	71,647
Pension expenditure						
Statens Pensjonskasse (SPK)	24,909	25,529	26,386	27,552	29,044	29,558
Life insurance companies (incl. KLP)	18,077	18,989	19,940	21,257	22,936	24,089
Local government pension funds	3,507	3,746	3,938	4,208	4,464	4,916
Total	46,493	48,264	50,264	53,017	56,444	58,563

Source: SSB (2022).

3.2 Contractual AFP retirement pension

Contractual retirement pension, AFP (avtalefestet pensjon) is a collective agreement based supplementary pension scheme. Before 2011, the private sector AFP pension was a fixed-term early retirement benefit payable from 62 to 67 years of age, but the new AFP benefits granted from 2011 are supplementary old-age pensions that are payable for life. A similar agreement was reached between the government and unions for public sector employees in 2018. The new rules apply to cohorts born in or after 1963. The AFP scheme covers all public sector employees, while the coverage rate in the private sector is around 50 per cent.

Public sector AFP pension expenditure is included in the occupational pension contribution or covered by the state, whereas on the private side, financing is separate from the occupational schemes. The private sector AFP scheme is financed through employer contributions and state subsidies. Table 9 presents the total contribution income and pension expenditure divided between employer and state shares.

Table 9.

Private sector AFP scheme income and pension expenditure in 2020, NOK million.

	2015	2016	2017	2018	2019	2020
Contribution income*						
Employers	6,175	5,994	6,087	6,223	6,673	6,729
State subsidy	1,478	1,637	1,923	2,207	2,492	2,755
Pension expenditure						
New AFP	1,872	1,999	2,324	2,668	3,035	3,385
State subsidy	1,478	1,637	1,923	2,207	2,492	2,755

Source: Fellesordningen for AFP (2022).

3.3 Seamen's pension scheme

The Pension Insurance for Seamen (Pensjonstrygden for sjømenn - PTS) is a mandatory pension scheme for those working as seamen or on offshore duties. The primary purpose of the pension scheme is to pay a seaman's pension to sailors. A new income-based pension scheme for employees at sea was introduced at the beginning of 2020. The new scheme allows for flexible pension withdrawal between ages 62 and 70. This applies to those who have not turned 50 before 2020 and to all new members who register after that date. According to the old rules, the pension was payable between 60 and 67 years of age.

The pension scheme is PAYG-financed with contributions from employees and shipping companies. Also, the state finances some of the pension expenditure and guarantees the scheme. As of 2020, employees pay 1.7 % of their earnings up to a ceiling (12 G). Earlier the employee contribution was divided into two groups depending on whether the employee worked in a superior or subordinate position. Crewmen's monthly contribution was 0.91 per cent of the basic amount (G) and officers' 1.17 per cent of the basic amount. The shipping company pays the employer's contribution, which is 3.3 per cent of gross salary or 1.5 times the employee contribution for those working on fishing or hunting vessels.

Table 10.

Seamen's pension scheme income and pension expenditure, NOK million.

	2015	2016	2017	2018	2019	2020
Contribution income						
Employee	353	336	317	334	351	362
Employer	723	643	587	620	668	698
Tax revenues	71	62	53	46	40	35
Total	1,147	1,041	957	1,000	1,059	1,095
Pension expenditure	1,094	1,049	1,022	1,010	1,015	1,032

Source: Pensjonstrygden for sjømenn.

3.4 Fishermen's pension scheme

The pension scheme for fishermen (Pensjonstrygden for fiskere - PFF) is a mandatory, early retirement pension scheme similar to that for seamen. The pension benefit is payable between 60 and 67 years of age for those with an adequate insurance period (around 15 years).

The pension scheme is currently PAYG-financed through member premiums at a fixed rate (NOK 9,254 in 2020) and fish sales duties (0.30 % of the first-hand value of raw material). The liquidity fund (Likviditesfond – LF) was exhausted in September 2020 and benefits are guaranteed by the state budget.

Table 11.

Fishermen's pension scheme income and pension expenditure, NOK million.

	2015	2016	2017	2018	2019	2020
Contribution income	68	75	82	81	86	129
Employees (Members)	32	33	35	35	35	44
Tax revenues	36	42	47	46	51	85
Expenditure	143	137	139	143	145	148

Source: Garantikassen for Fiskere.

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Pension contribution level in Sweden

Mika Vidlund

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1 Pension contribution level in 2020

The following table presents Sweden's total pension contribution income in relation to the compensation of employees, the wage sum and GDP in 2020.

Table 1.

Pension contributions in relation to wages and GDP in 2020, %.

	Compensation of employees	Wage sum	GDP at market prices	GDP at basic prices
Wage earners				
General pension contribution	5.5	6.6	2.6	3.0
On earnings	5.1	6.1	2.4	2.8
On income transfers	0.4	0.4	0.2	0.2
Occupational pensions	0	0	0	0
Sub-total	5.46	6.57	2.62	2.95
Employers (incl. self-employed persons)				
Old-age pension	7.4	8.9	3.6	4
On income transfers	0.7	0.9	0.4	0.4
Disability pension	1	1.2	0.5	0.5
Survivors' pension	0.4	0.5	0.2	0.2
Occupational pensions	9.4	11.3	4.5	5.1
Sub-total	18.2	22	8.8	9.9
State's shares and other tax financing				
Guarantee pension (old-age and survivors' pension)	0.6	0.7	0.3	0.3
Disability pension	0.3	0.4	0.2	0.2
Unpaid periods (pensionsgrundande belopp) + share paid by the state for income transfers	0.5	0.6	0.2	0.3
Sub-total	1.4	1.7	0.7	0.8
Statutory pensions	15.7	18.9	7.5	8.5
Occupational pensions	9.4	11.3	4.5	5.1
All in total	25.1	30.2	12.1	13.6

2 Financing of statutory pension scheme

2.1 Old-age pension scheme

2.1.1 Earnings-related pension

The earnings-related old-age pension scheme has an autonomous structure and is financially separated from other pension insurance benefits, that is, from disability and survivors' benefits, which are financed with budget funds and employer contributions.

The old-age pension contribution rate is fixed and connected to the flexibility of the benefits. The plan is for the contribution rate to remain unchanged into the indefinite future at 18.5 per cent of pensionable income: 16 percentage points are paid to the NDC PAYG system and 2.5 percentage points to the funded DC premium pension system. This is the rate used for establishing pension rights, and it is also the figure most commonly used when discussing contributions. However, pensionable income is defined as earnings less the employee contribution to the pension system. The old-age contribution rate for employees is 7 per cent of gross earnings and for the employer 10.21 per cent. The self-employed pay this contribution as a fixed share on their net business income. Giving an effective contribution rate on gross earnings of 17.21 per cent, 14.88 percentage points is paid to the NDC system and 2.33 percentage points to the DC funded pensions.

The earnings-related old-age pension system is financed by contributions levied on earnings subject to an earnings ceiling (approximately SEK 501,000 per annum in 2020), amounting to around 108 per cent of the average wage. Employer contributions are also payable over the ceiling. However, contribution income over the ceiling is transferred to the central government budget. This share of contribution income can be seen as a general tax as it is not used to finance the earnings-related pension system.

In addition, the state finances pensions for periods during which pension accrues on the basis of calculated earnings (e.g. periods of childcare, study and military service).

The PAYG old-age pension scheme includes a buffer fund – that is, the First–Fourth and Sixth National Pension Funds. In 2020 this buffer fund amounted to some 30 per cent of GDP. All contributions to the PAYG scheme are paid into this fund, and all pensions are paid out of it. The surpluses generated are used to balance financial strains on the old-age pension system. Since 2009 these funds have been net contributors to the pension system, i.e. pension expenditures have exceeded contributions. These payments from the funds have been necessitated mainly by demographic factors, such as the large number of people born during the 1940s, who are now pensioners. The funds are expected to continue making net disbursements to the pension system for another 20 years or so. Thereafter, the funds are expected to receive net inflows again. (MoF 2021.)

In 2020 the contribution income of the income pension scheme totalled SEK 295,753 million, or about 5.9 per cent of GDP. Contribution incomes allocated to the premium pension scheme (SEK 45,727 million) amounted to approximately 0.9 per cent of GDP.

Table 2.

Contribution income and expenditure for old-age pensions in the income pension scheme in 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
Employer contributions	111,527	116,399	122,354	128,952	134,241	135,573
Contributions for the self-employed	2,406	3,113	3,351	3,153	3,064	3,168
Employee's general pension contribution	108,142	112,164	118,111	122,866	129,503	132,033
Central government old-age pension contribution	22,459	24,718	23,602	22,557	21,675	24,999
Final settlements	969	306	-11	690	903	-20
Total	245,503	256,700	267,407	278,218	289,386	295,753
Expenditure	264,565	282,379	295,994	304,439	314,724	326,257

Source: Pensionsmyndigheten.

Table 3.

Contribution income and expenditure for old-age pensions in the premium pension scheme in 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
Employer contributions	32,695	34,467	36,007	37,722	39,663	40,096
Contributions for the self-employed	707	918	987	927	906	936
Employee's general pension contribution	0	0	0	0	0	0
Central government old-age pension contribution	3,656	3,825	3,842	3,856	3,765	4,103
Final settlements	1,642	645	45	2078	806	592
Total	38,700	39,855	40,881	44,583	45,140	45,727
Expenditure	6,006	7,598	9,079	10,140	11,715	15,014

Source: Pensionsmyndigheten.

Table 4.

Employer's old-age contribution for the share exceeding the earnings ceiling 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
From old-age contribution to the budget	17,450	18,710	19,670	19,870	20,424	20,619

Source: Pensionsmyndigheten.

Income from the wage earner's general pension contribution totalled SEK 132,033 million, including the wage earner's share of the contribution income levied on income transfers: SEK 8,988 million in 2020 (Table 2). The contribution income from income transfers (e.g. sickness allowance, unemployment allowance, parental allowance) totalled SEK 22,119 million (see Table 5 below).

Pension also accrues for certain periods during which the insured person has no income of the aforementioned type. In that case, the pension and pension contribution is determined on the basis of calculated earnings (pensionable amount). Pension-qualifying amounts or unpaid periods, that is, periods of childcare, study and military service, totalled SEK 10,775 million in 2020 (Table 5). Up until 2010, pension-qualifying amounts were granted for compulsory military service, but were ceased up until 2018 when compulsory military service was reintroduced.

In addition, calculated contribution incomes for pensions also accumulate for periods of sickness and activity compensation (corresponding to disability pension in other countries). Calculated earnings are determined on the basis of the difference between the earnings on which the earnings-related compensation was based and the paid compensation. Calculated contribution income amounted to SEK 5,196 million in 2020 (Table 5). In the calculations presented in this report, this contribution income is included as part of the employer contribution that is levied in order to finance disability pensions.

Table 5.

Contribution income for transfer payments and pension-qualifying amounts in 2020, SEK million.

	Employee	Employer	State	Total
Income transfers	8,988	12,674	457	22,119
Pension-qualifying amounts (unpaid periods)	0	5,196	10,775	15,971
Total	8,988	17,870	11,232	38,090

Source: Pensionsmyndigheten.

2.1.2 Guaranteed pension

The guaranteed pension based on residence criteria for those aged over 65 with an insufficient income-related pension is financed from general tax revenues. Old-age pension expenditure amounted to SEK 14,386 million in 2020 (approx. 0.3 % of GDP).

Table 6.

Old-age pension expenditure for guaranteed pension scheme financed from the national budget in 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
Old-age pension expenditure for guaranteed pension scheme	15,761	14,112	13,339	13,142	13,175	14,386

Source: Pensionsmyndigheten.

2.2 Disability insurance scheme

Sweden has no dedicated disability pension scheme. Since the beginning of 2003 sickness compensation (sjukersättning) and young people's activity compensation (aktivitetsersättning), which are paid from the sickness insurance scheme, have replaced the previous disability pension (förtidspension) payable from the pension scheme and the sickness benefit (sjukbidrag) paid as a temporary disability pension. Earnings-related sickness and activity compensations are financed through sickness insurance contributions.

In order to estimate the contribution income for disability pensions, the expenditure component that can be classified as disability pensions has been separated from the total expenditure for the sickness insurance scheme. Disability pension expenditure, and at the same time contribution income, has significantly reduced in the past ten years and amounted to approximately 0.7 per cent of GDP in 2020.

Table 7.

Disability pension expenditure payable from the sickness insurance scheme in 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
Sickness and activity cash benefits (sjuk- och aktivitetsersättning)	38,634	37,153	35,852	34,492	33,822	31,939
Pension-qualifying amounts (Statliga ålderspensionsavgifter)	7,083	7,386	6,876	6,176	5,561	5,196
Total	45,717	44,539	42,728	40,668	39,018	37,500

Sources: Försäkringskassans årsredovisning 2022; Pensionsmyndigheten.

2.3 Survivor's pension scheme

Survivor's pensions are financed through the state budget. The survivor's pension contribution rate is 0.6 per cent and levied from employers and self-employed persons (Skatteverket 2022). Since 2003 the contribution has only been used to cover earnings-related survivor's pensions. The contribution also covers most of the administrative costs. The guaranteed component of the survivor's pension is financed through tax revenues.

However, in recent years contribution income has exceeded pension expenditure, and the surplus is annually allocated to the general budget. As this surplus is not funded nor used for pensions, the contribution income has been adjusted to the level of expenditure in the calculations of this report. The survivor's pension expenditure amounted to 0.2 per cent of GDP in 2020.

Table 8.

Total contribution income and expenditure for survivor's pension scheme in 2010–2014, SEK million.

	2015	2016	2017	2018	2019	2020
Survivor's pension (employer)	n/a	12,324	11,949	11,346	10,893	10,518
State (guarantee component)	n/a	507	477	475	488	481
Total expenditure	12,825	12,831	12,426	11,821	11,381	10,999

Source: Pensionsmyndighetens årsredovisning 2015–2020; Regeringskansliet.

3 Financing of occupational pension schemes

Occupational pensions are determined by collective bargaining agreements. Contributions to all types of occupational pension schemes are paid by employers. Employees can choose how their defined-contribution pension contribution is invested. Occupational pension schemes are not mandatory by law, but employers who are bound by collective agreements have to apply these rules, and therefore their employees are covered. Those not covered by collective agreements can be voluntarily insured in occupational schemes.

Over 90 per cent of employees are covered by occupational pension plans. Both private and public sector employees have their own arrangements, and around 85 per cent are covered by the following four major collective schemes: the scheme for private sector manual workers (SAF-LO), the scheme for industry and trade (ITP), the scheme for government employees (PA 16), and the scheme for persons employed by municipalities or regions (KAP-KL and IKAP-KL) (Arbetsgivarverket 2022; Erhag 2021; KPA 2022; SOU 2011; Svenskt Näringsliv 2019).

All sector agreements are defined contribution schemes offering either investment in a premium reserve account or a defined contribution scheme with a guaranteed benefit level. However, there is variation both with respect to contribution levels and the extent to which premium reserve investments are offered. There are, for example, no upper limits on the earning of pension rights. State employees, depending on age, can also have the right to pension from a defined benefit scheme (see e.g. Erhag 2021; Svenskt Näringsliv 2019; Alecta 2022; AMF 2022).

Most occupational pension schemes are fully funded. Contribution rates differ to some extent among occupational pension schemes but in general, employers in all four public-private sectoral schemes pay a contribution of 4.5 per cent of wages below the statutory earnings ceiling, and 30 per cent of wages above that ceiling (SEK 41,750/month in 2020, i.e., 7.5 income base amount, IB). The pension contribution is thus based on the entire salary. As a consequence, the cost and replacement rate actually increase as the contribution rate is higher for earnings above the ceiling, and most occupational pensions have been renegotiated from defined-benefit to defined-contribution schemes.^{1,2} The

1 While DB plans are being phased out in the private sector, they are still available, for example, to employees within ITP for those born before 1979. The ITP scheme has two plans: ITP1 is a new DC plan for employees born in 1979 or later, while ITP2 is the original DB plan for employees born in 1978 or earlier. In ITP1 (DC) the contribution rates are similar to those in the SAF-LO pension plan. However, in ITP2 (DB) the contribution amount is calculated on an individual basis. On average, it amounted to 14 per cent of the pensionable payroll in 2019. The contribution normally varies between 5 and 20 per cent. (Svenskt Näringsliv 2019.) The amount of the contribution to be paid depends on the age of the employee, the income level, the retirement age and whether the employee has previous pension rights. Salaries up to a ceiling (SEK 2,000,000 in a year, i.e. 30 IB) are covered.

2 In addition, in ITP1 an employer may agree with a salaried employee who receives a pensionable wage exceeding ten times the income base amount (approximately SEK 700,000 in 2020) that a different pension system is applied to the portions of the wage between 7.5 and 30 times the income base amount, known as an alternative ITP. This means that the traditional ITP plan is partially replaced. This is known as a "tiotaggarlösning" (ten-fold earner solution) (Pensionsmyndigheten 2022; Svenskt Näringsliv 2019; 2020).

reforms in the public sector have been more gradual than in the private sector but are moving in the same direction.³

Contribution income is calculated using data from the Swedish Pensions Agency (for details, see Johannisson 2022). The contribution income for occupational pension schemes totalled SEK 227 billion and was 4.5 per cent of GDP in 2020 (Table 9).

Table 9.

Contribution income for occupational pensions in 2015–2020, SEK million.

	2015	2016	2017	2018	2019	2020
Contributions	172,732	169,566	184,350	210,416	212,887	227,447
Expenditure	115,131	118,082	121,000	127,000	134,000	143,365

Sources: Johannisson 2022; Pensionsmyndigheten.

³ For municipal employees born after 1985 and for state-sector employees born after 1987, the DC principle applies to all components. For older employees with high incomes, however, some DB elements remain. (European Commission 2021; Svenskt Näringsliv 2019.)

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