ACCRUED-TO-DATE PENSION ENTITLEMENTS IN SOCIAL INSURANCE: FACT SHEET

Finland

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1. Table 29 column A: Defined contribution schemes (funded, non-general government)

1. General description of the scheme and the calculation model

a. Coverage of the scheme

In Finland, employers may offer voluntary, supplementary occupational pension plans to their employees. These plans are shown in the columns A (defined contribution schemes) and B (defined benefit schemes and other non-defined contribution schemes, i.e. hybrid schemes), summing up to column C. The volume of the occupational pension plans is small in Finland compared to the social security pension schemes in column H (i.e. the statutory earnings-related pension schemes).

The occupational pensions are arranged with industry-wide pension funds, with company pension funds or with life insurance companies. The column A includes defined contribution schemes, which in Finland are in principal arranged with life insurance companies in a form of group or individual pension insurance.

Individual pension plans that are not linked to an employment relationship do not fall into definition of social insurance and are not shown in the table. The information of all the pension plans arranged with life insurance companies are included in the core national accounts' pension entitlements (AF.63) in insurance corporations sector (S.128). The pension plans arranged with pension funds are shown in pension funds sector (S.129).

b. Institutional set-up	
Data sources/	The information on the occupational pension plans arranged with life insurance
suppliers	corporations for the reference year 2021 is provided by The Financial Supervisory
	Authority (FIN-FSA) and the Finance Finland, a representative of the Finnish financial
	and insurance sector. The statistics on pension savings is published by the Finance
	Finland on their website <u>https://www.finanssiala.fi/julkaisut/tilasto-vakuutussaastot-</u>
	<u>yhtiokohtainen-aikasarja-3/</u>
	The data on the defined contribution, defined benefit, and hybrid pension schemes
	altogether is available in the data sources. The distribution of pension entitlements,
	social contributions, and pension benefits between columns A and B is estimated on
	the basis of the data sources of pension savings.
Which institution is	The columns A, B and C of the table are compiled by Statistics Finland using data
running/managing the	provided by the Financial Supervisory Authority (FIN-FSA) and statistics provided by
calculations?	the Finance Finland.
2. Any other comments	

• Actual social contributions (D.611) are based on national accounts and describe the pension insurance contributions paid to the pension insurance scheme.

- Households' social contribution supplements (D.614) are based on national accounts and describe the property income earned (D.4) during the accounting period on the stock of pension entitlements. The pension schemes' proportion of the life insurance companies' property income (D.4) is approximated on the basis of the pension schemes' proportion of the life insurance companies' premium income. In the national accounts, the calculation method of households' contribution supplements includes uncertainties and will be reconsidered simultaneously with the time series revision of national accounts.
- Pension scheme service charges are based on national accounts and describe the output of the pension scheme. The pension scheme's proportion of the life insurance companies' output is approximated on the basis of the pension schemes' proportion of the life insurance companies' premium income. In the national accounts, the calculation method of pension scheme service charges includes uncertainties and will be reconsidered simultaneously with the time series revision of national accounts.
- Reduction in pension entitlements due to payment of pension benefits (D.622) are based on national accounts and describe the pension benefits paid by the pension insurance scheme.
- Changes in entitlements due to other changes in volume is balancing item.
- More information of the pension system in general can be found on the website of the Finnish Centre for Pensions (FCP) [<u>http://www.etk.fi/en/]</u>

2. Table 29 column B: Defined benefit schemes and other non-defined contribution schemes (funded, non-general government)

1. General description of	f the scheme and the calculation model
a. Coverage of the schem	
	y offer voluntary, supplementary occupational pension plans to their employees. These
plans are shown in the co	olumns A (defined contribution schemes) and B (defined benefit schemes and other
-	schemes, i.e. hybrid schemes), summing up to column C. The volume of the
	ns is small in Finland compared to the social security pension schemes in column H (i.e.
the statutory earnings-re	•
	as are arranged with industry-wide pension funds, with company pension funds or with
schemes (i.e. hybrid sche	. The column B includes defined benefit schemes and other non-defined contribution mes), which in Finland are arranged with industry-wide or company pension funds or
	anies in a form of group or individual pension insurance.
	that are not linked to an employment relationship do not fall into definition of social
	own in the table. The information of all the pension plans arranged with life insurance
-	n the core national accounts' pension entitlements (AF.63) in insurance corporations
sector (S.128). The pension	on plans arranged with pension funds are shown in pension funds sector (S.129).
b. Institutional set-up	
Data sources/ suppliers	The data on the occupational pension plans arranged with industry-wide or company
	specific pension funds and insurance corporations is provided by the Financial
	Supervisory Authority (FIN-FSA). The data contains financial statements information.
	The data on the occupational pension plans arranged with life insurance companies
	for the reference year 2021 is provided by The Financial Supervisory Authority (FIN-
	FSA) and the Finance Finland, a representative of the Finnish financial and insurance
	sector. The statistics on pension savings is published by the Finance Finland on their
	website <u>https://www.finanssiala.fi/julkaisut/tilasto-vakuutussaastot-yhtiokohtainen-</u>
	<u>aikasarja-3/</u>
	Data on the pension entitlements of pension funds is based on the Solvency II data
	provided by the FIN-FSA. The data on the defined contribution, defined benefit, and
	hybrid pension schemes altogether is available in the data sources. The distribution of
	pension entitlements, social contributions, and pension benefits between columns A
	and B is estimated on the basis of the data sources of pension savings.
Which institution is	The columns A, B and C of the table are compiled by Statistics Finland using data
running/managing the	provided by the Financial Supervisory Authority (FIN-FSA) and statistics provided by
calculations?	the Finance Finland.
c. Major formulas: Benef	it formula; Indexation of benefits
Benefit formula	-
Indexation of benefits	-
d. Type and structure of t	he calculation model
- 2. Assumptions and met	hodologies applied
a. Discount rate	
-	
b. Wage growth	
c. Valuation method: ABC	D/PBO
-	
3. Data used to run the r	nodel
a. Mortality tables	
-	

b. Entitlement statistics; other relevant statistics

4. Reforms incorporated in the model

5. Specific assumptions

a. How are careers modelled?

b. How are survivor pensions calculated?

c. How is the retirement age modelled over time?

d. Other specific features of the model

6. Any other comments

- Actual social contributions (D.611) are based on national accounts and describe the pension insurance contributions paid to the pension insurance scheme.
- Households' social contribution supplements (D.614) describe a theoretical income earned on the pension entitlements. The calculation method of the contribution supplements is in accordance with ESA 2010 (European system of accounts 2010), i.e. discount rate (nominal 4 %) multiplied by the pension entitlements at the beginning of the year. In the core national accounts, the calculation method is different and describes the property income earned (D.4) during the accounting period on the stock of pension entitlements. The pension schemes' proportion of the life insurance companies' property income (D.4) is approximated on the basis of these pension schemes' proportion of the life insurance companies' contribution supplements includes uncertainties and will be reconsidered simultaneously with the time series revision of national accounts.
- Pension scheme service charges are based on national accounts and describe the output of the pension scheme. The pension scheme's proportion of the life insurance companies' output is approximated on the basis of these pension schemes' proportion of the life insurance companies' premium income. In the national accounts, the calculation method of pension scheme service charges includes uncertainties and will be reconsidered simultaneously with the time series revision of national accounts.
- Reduction in pension entitlements due to payment of pension benefits (D.622) are based on national accounts and describe the pension benefits paid by the pension insurance scheme.
- Changes in entitlements due to other changes in volume is balancing item.
- More information of the pension system in general can be found on the website of the Finnish Centre for Pensions (FCP) [<u>http://www.etk.fi/en/</u>]

3. Table 29 column D: Defined contribution schemes (funded, general government)

Schemes do not exist.

4. Table 29 column E: Defined benefit schemes (funded, for general government employees, classified in financial corporations)

Schemes do not exist.

5. Table 29 column F: Defined benefit schemes (funded, for general government employees, classified in general government)

Schemes do not exist.

6. Table 29 column G: Defined benefit schemes (unfunded, for general government employees, classified in general government)

Schemes do not exist.

7. Table 29 column H: Social security pension schemes (unfunded, partly funded)

1. General description of the scheme and the calculation model

a. Coverage of the scheme

In Finland, social security pension schemes in column H include all statutory earnings-related pension schemes covering nearly all work and the entire population including both private and public sectors. The schemes cover both wage and salary earners as well as the self-employed. The schemes in column H serve to ensure that the insured and his or her family will receive a reasonable income in relation to income earned while working in the event of old age, incapacity for work, or death. The schemes consist of several pension acts, which together cover the different sectors of the economy.

- the Employees Pensions Act (TyEL)
- the Seafarer's Pensions Act (MEL)
- the Self-employed Persons' Pensions Act (YEL)
- the Farmers' Pensions Act (MYEL)
- the Act on Farmers' Early Retirement Aid (LUTUL) and the Farm Closure Act (LUEL)
- the Act on supplementary pension provision under the Employees Pensions Act (TEL-L, closed down in the end of 2016)
- the Public Sector Pensions Act (JuEL), which combined the following public sector pension acts and a regulation since the beginning of year 2017: State Employees' Pensions Act (VaEL), Local Government Pensions Act (KuEL), Evangelical-Lutheran Church Pensions Act (KiEL), and the Pension regulation for the employees and officials of the Social Insurance Institution of Finland
- the Pension regulations for the employees of the Bank of Finland and the Regional government of Åland
- The Act on compensation for Pension Accrual from State Funds for Period of Childcare and Periods of Study (VEKL)

The national and guarantee pensions by the Social Insurance Institution (Kela) are classified as social assistance and therefore not included in the table, which describes the pensions classified as social insurance. The difference between social assistance and insurance is that social assistance benefits are payable independently of participation in social insurance scheme, i.e. without qualifying contribution payments having been made to a social insurance scheme.

The value of the accrued-to-date pension entitlements is calculated by the Finnish Centre for Pensions (FCP) using a long-term projection model. Other items than the pension entitlements are compiled by Statistics Finland (for more information on the other items, please see the part 6. below). The previous publications of the pension entitlements can be found on the FCP website as well as the latest one, Statutory Pensions in Finland – long-term projections 2022 (in the paragraph 5.2.2 Value of accrued pension rights and funding balance analysis)

<u>https://urn.fi/URN:ISBN:978-951-691-361-</u>5. The pension entitlements in the FCP publication somewhat differ from the pension entitlements of this table. The difference is due to the different background assumptions such as the discount rate, the population projection, and the economic outlook, recommended by Eurostat. Assumptions play a significant role in projections that extend far into the future. In this table the assumptions are in line with the recommended assumptions by the Ageing Working Group (AWG) of the European Commission. More information on the assumptions used in the model can be found below.

The value of pensions accrued at a particular point in time, i.e. the value of pension entitlements, is the amount of money which would be enough to cover the future expenses from pensions accrued by that particular point in time. It can be thought as a fictive situation in which all pensions that have accrued are paid to the insured and no new pensions accrue for anyone (for more information, please see the part 1 d. below).

The pension entitlements do not reflect the sustainability of the pension scheme. The amount reflects only the future expenses of the scheme and does not take into account the pension assets or the pension contributions paid to the scheme. A comparison of the pension entitlements with the pension assets can be found in the FCP

b. Institutional set-up	
Data sources/suppliers	Data sources/suppliers for accrued-to-date pension entitlements: The value of the accrued-to-date pension entitlements is calculated by the Finnish Centre for Pensions (FCP) using a long-term projection model. For more information on the data sources for the modelling of the accrued-to-date pension entitlements, please see below, the part 3) Data used to run the model. More detailed information on the calculation model can be found in the publication by the FCP: Statutory Pensions in Finland – long-term projections 2022 [https://urn.fi/URN:ISBN:978-951-691-361-5] Data sources/suppliers for social contributions and benefits: Social contributions and benefits are based on the core national accounts. The data is provided by the Finnish Financial Supervisory Authority (FIN-FSA) containing financial statements information. The units covered in the data are employment pension companies, company pension funds and industry wide pension funds, The Seafarers' Pension Fund and The Farmer's Pension Fund. In addition, the financial statements information of public-sector pension providers, the Bank of Finland's pension fund, and the pension fund of the Central
	Church Fund are used.
Which institution is running/managing the calculations?	The value of pension entitlements in the column H is calculated by the Finnish Centre for Pensions (FCP). Other information than the pension entitlements is compiled by Statistics Finland.
c. Major formulas: Benej Benefit formula	fit formula; Indexation of benefits For the most part, the rules for determining pension benefits are uniform in all pension
	acts. In most pension acts, earnings-related pension accrues from income earned up to 69 years old when born during years 1958-1961, up to 70 years old when born in 1962 or after and up to 68 years old when born earlier than 1958. A life expectancy coefficient is used. The initial amount of old-age pension and disability pension is adjusted to reflect changes in life expectancy at age 62. The starting amount of old-age pension is determined by multiplying the accrued pension by the life expectancy coefficient. The value of the coefficient is determined separately for each birth cohort, the longer the life expectancy, the smaller the monthly pension benefit. In the case of disability pensions, a one-time raise in pension is carried out after the pension has been paid for five years. The increase is 25 per cent for pensioners under the age of 32. For those over 32, the increase will be lowered by one percentage point for each year of age, until it ceases altogether. The disability pension includes the projected pension component. It is calculated from the beginning of the year in which the pension contingency occurred to your retirement age. The projected pension component is added to the amount of pension you are entitled to.
Indexation of benefits	 The pensions already in payment, i.e. the pensions of the current pensioners, are indexed with the earnings related pension index. The pensions not yet in payment, i.e. the pensions accrued to current workers and the self-employed, are indexed with wage coefficient. Wage coefficient is a weighted average equal to 80 per cent of wage changes and 20 per cent of price changes. Earnings-related pension index for those already retired, is a weighted average equal to 20 per cent of wage changes and 80 per cent of price change.
d. Type and structure of	
Pensions (FCP). The mod More information on the Finland — long-term proj	ilities have been calculated using the long-term planning model of the Finnish Centre for el is deterministic and replicates the functioning of the earnings-related pension scheme. e calculation model can be found in the publication by the FCP: Statutory Pensions in ections 2022 <u>https://urn.fi/URN:ISBN:978-951-691-361-5</u> . Earnings-related pension separately for each earnings-related pension act. Pensions are paid out to pensioners on

an annual basis, insured persons accrue future pensions, and persons move between different states (employed, unemployed, pensioner etc.) according to given probabilities.

Within the model's states, people are grouped by the age and gender. An average technique is applied in these groups. For example, all 50-year-old men working in employment contracts covered by TyEL (private sector employees' pension act) are assumed to be identical to each other. The average technique used by the model does not prevent capturing the selectiveness of transitions between different states.

When assessing the value of the accrued pensions, the discount rates used must be taken into consideration. The interest used to discount future pension has a substantial impact on the value of accrued pensions. For this purpose, the calculation has been made with 3 different discount rates (base line scenario is 2 % (real) and other scenarios 1 %, and 3 %.

In addition, a line must be drawn to determine which components of future pensions are to be interpreted as having already accrued in the past and which components as something that will accrue in the future. The type of the model is Accrued-to-date liabilities (ADL) -calculation model: Pension liabilities contain the present value of pensions to be paid in the future on the basis of accrued rights. A starting point for the following projection is a fictive situation in which all pensions that have already accrued are paid to the insured but no new pensions accrue for anyone. The following pension components are considered to have accrued in the past:

- all earnings-related pensions already in payment, including their future index increases,
- the old-age, disability and survivors' pension components that will start in the future and that are based on an already realised employment history or periods of social benefits. These pensions include future adjustments with the wage coefficient, the life expectancy coefficient and the earnings-related pension index. The pension expenditure from accrued pensions is calculated under the assumption that the retirement and termination rates are the same as they would be even if the pension accrual had not ended.

The pension entitlements at the beginning of the accounting period accrues interest income for half a year, after which the social contributions are added to the pension entitlements and the pension benefits are reduced from the pension entitlements. After this, the new value of the pension entitlements accrued interest income until the end of the year (a half a year).

2. Assumptions and methodologies applied

a. Discount rate

The pension entitlements are calculated in present value terms – i.e. they reflect the discounted sum of present and future flows compared to a certain base year. The discount rate is one of the most crucial assumptions for estimating pension entitlements, since its accumulated impact over many decades is high. Yearly nominal discount rate is a sum of yearly inflation rate and the real discount rate. The real discount rates used are in accordance with the recommendation of Eurostat. The yearly inflation rate assumptions are in line with the assumptions by the AWG (Ageing Working Group) of the European Commission.

Real discount rates

Table	T2900 base scenario	T2901 base scenario	T2902 base scenario	
		less 1 %	plus 1 %	
Real discount rate	2 %	1%	3%	

Yearly inflation rate assumptions, %

Year	2021	2022	2023	2024	2025-
					2100
Inflation	2.1	7.2	4.8	2.1	2.0

b. Wage growth

In 2021 the real wage growth 2.0 %, nominal 4,1 %, inflation being 2.1 %. The assumptions in the long-term baseline projection can be seen in the tables below. The yearly assumptions are in line with the assumptions by the AWG (Ageing Working Group) of the European Commission.

Yearly wage growth assumptions, %

		1		1				
Year	2021	2022	2023	2024	2025	2026	2027	2028-
								2030
wage	-1.3	3.7	2.0	-0.4	0	0.2	0.4	0.8
growth								

c. Valuation method: ABO/PBO

PBO (projected benefit obligations) approach is applied. General increase of wages and prices are taken into account. In addition, the pensions are indexed in accordance with indexation rules. (According to ABO – accumulated benefit obligations – approach only the present value of the benefits earned would be taken into account.)

3. Data used to run the model

a. Mortality tables

The latest EUROPOP population forecast by Eurostat is used in the projections.

b. Entitlement statistics; other relevant statistics

The projection model requires the following data to describe the initial situation, specified by pension act as well as by the age and sex of the insured: 1. population distribution over different acts and different states under the acts, 2. wages of the insured and other earnings that accrue pension, 3. amounts of pensions accrued, 4. technical provision and the amount of pension assets, 5. the size of pensions in payment, 6. transition probabilities between different states, particularly retirement rates. The data used to set the initial values for the projection come from the Finnish Centre for Pensions' employment and pension registers, the joint statistics of Kela and the Finnish Centre for Pensions, statistical information collected by as well as those of Keva and the State Treasury.

4. Reforms incorporated in the model

The projections describe the development of statutory pensions in accordance with current legislation, secondary regulations and current procedures. Pension acts and other regulations governing the system will remain unchanged throughout the projection period. The latest pension reform in Finland came into the force in 2017. In these projections people are retiring using the old rules until the end of year 2016 and the new rules 2017 onwards.

5. Specific assumptions

a. How are careers modelled?

The careers modelled hardly affect the results because the amount pension entitlements is based on lifetime earnings, not only on the earnings of the latest years. The wage growth indexation is more essential (see points 2b and 1c).

b. How are survivor pensions calculated?

Survivors' pension is payable to the surviving spouse, children and, in some cases, former spouse to whom the deceased was liable to pay alimony. The total amount of survivors' pension depends on the number of beneficiaries, being at its maximum when the beneficiaries include the surviving spouse and at least two children. In that case, the survivors' pension is equal to the amount of the pension of the deceased. If the surviving spouse is the sole beneficiary, the maximum pension is half of the pension of the deceased.

c. How is the retirement age modelled over time?

The basic principles are: a) The legislation does not change. b) The declining trend of the retirement rates will be taken into account in the old-age and disability retirement rates. These trends have a slight impact on the effective retirement age, i.e. the people postpone their retirement. c) Increasing life expectancy increases the lowest eligibility age for a pension from the late 2020's onwards. The changes in the retirement age are also taken into account in the life expectancy coefficient.

d. Other specific features of the model

For more information, please see the Appendix 6. Projection Model of the FCP's publication, Statutory Pensions in Finland – long-term projections 2022 [https://urn.fi/URN:ISBN:978-951-691-361-5]: The employment projection has been made using the cohort component method developed by the OECD (Burniaux et al. 2004). The model we have used is more detailed than the original in that we take into account both flows to and from the labour force. The benefit with OECD's model is that it can be used without age-specific labour force entry and exit rates. In Finland, this information can be estimated through the registers of the earnings-related pension system. Using that data makes the projection less sensitive regarding the source data. In the original OECD model, the temporal trends of the source data continue exaggeratedly into the future.

6. Any other comments

Information on the compilation of the other information than the pension entitlements of the column H:

- Employers' and households' actual social contributions:
 - Social contributions are based on national accounts and describe the statutory earnings-related pension contributions paid to the pension scheme by employers, employees and the self-employed during the reference year. The social contributions (D.6111 employers' actual pension contributions and D.6131 household's actual pension contributions) are based on to those of the general government (S.13) in the national accounts. In addition, the social contributions related to the Bank of Finland's pension fund are included. In the core national accounts, the Bank of Finland's pension fund is classified as part of the central bank sector (S.121). The fund manages the pensions of the employees of the Bank of Finland and is a minor unit.
 - Household social contribution supplements:

The household social contribution supplements describe a theoretical income earned on the accrued pension entitlements. They differ from the employment pension schemes' (S.13141) property income (D.4) earned on the pension assets in the national accounts. The calculation method of the contribution supplements is similar to the one in the Technical Compilation Guide for Pension Data in National Accounts by Eurostat and European Central Bank, i.e. discount rate multiplied by the pension entitlements at the beginning of the year (<u>http://ec.europa.eu/eurostat/web/pensions/manuals-and-guidelines</u>).

- Pension scheme service charges: The pension scheme service charges is null by definition, i.e. a non-zero figure is entered only if the scheme required a fixed proportion of gross contributions or gross property income to be set aside for covering the costs of operating the pension scheme.
- Reduction in pension entitlements due to payment of pension benefits: The payment of pension benefits are based on national accounts and describe the amount of pensions paid to the pensioners during the reference year. The payment of pension benefits is based on the sum of social security pension benefits in cash (D.6211) and other social insurance pension benefits (D.6221) of the central government, local government and the employment pension schemes sectors (S.1311, S.1313, S.13141) of the core national accounts. In addition, the pension benefits related to the Bank of Finland's pension fund are included. In the core national accounts, the Bank of Finland's pension fund is classified as part of the central bank sector (S.121). The fund manages the pensions of the employees of the Bank of Finland and is a minor unit.

The national and guarantee pension benefits (D.6211) by the Social Insurance Institution (Kela) in the other social security funds sector (S.13149) are classified as social assistance and are therefore not included in this table describing social insurance. According to ESA 2010 (European system of accounts, <u>http://ec.europa.eu/eurostat/web/pensions/manuals-and-guidelines</u>), social assistance benefits are payable independently of participation in a social insurance scheme, i.e. without qualifying contributions having been made.

- Other (actuarial) change of pension entitlements in social security pension schemes is balancing item.
- In the national publication by Statistics Finland, the column H is divided into private and public branches [<u>http://stat.fi/til/rtp/index_en.html</u>].

8. Table 29 column K: Entitlements of non-resident households

Entitlements of non-resident households are included in total entitlements.

9. Links to (national) publications providing further information on the pension schemes

Statistics Finland, complementary data to pension entitlements 2017 [http://stat.fi/til/rtp/index_en.html]

Finnish Centre for Pensions (FCP): Statutory Pensions in Finland – long-term projections 2022 [https://urn.fi/URN:ISBN:978-951-691-361-5]

Finnish Centre for Pensions (FCP), the pension system [http://www.etk.fi/en/]

Finance Finland, statistics on pension entitlements of life insurance companies (in Finnish) [https://www.finanssiala.fi/julkaisut/tilasto-vakuutussaastot-yhtiokohtainen-aikasarja-3/]

Eurostat, Pensions in National Accounts [http://ec.europa.eu/eurostat/web/pensions]

Eurostat, Manuals and Guidelines [<u>http://ec.europa.eu/eurostat/web/pensions/manuals-and-guidelines</u>]