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

LATVIA

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ANNEX 13

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

There are two funded DC pension schemes, recorded under column A in Latvia: Private pension savings (employers` supported pension schemes) and the investment phase of the State Funded Pension Scheme (2nd pillar), while the pay-out phase of the 2nd pillar is recorded under the column B.

***Private pension scheme**: According to the Law on Private Pension Funds (PPF), employers have two options for supporting their employees through private pension funds: employers can enter into a collective participating contract with an open, or closed pension fund. If persons participate in open pension funds through the intermediation of their employer who pays premiums on behalf of the respective employees, such cases may be attributed to the participation of employees in employment related pension schemes even if they are organised by open private pension funds. Statistics about pension entitlements accrued in such employment related pension schemes are included in column A, while data on individual not occupation related pension savings in open private pension funds, are excluded. There were one closed pension fund (multiemployer pension scheme) and 6 open private pension funds in 2021. Till 2018 due to specifics of recording in the PPF, data about employees covered by employment related pension schemes in open pension funds were not available. PPF can only provide data about the total amount of contributions (premiums) made by employers on behalf of employees and pension capital accrued on the basis of such contributions, as well as data on total amount of paid out capital (benefits) accrued on the basis of employers' contributions. Thus till 2018, due to the lack of sufficient statistics, values in other rows of column A concerning open pension funds are estimates. Calculations are based on the share of employers' pension capital, accrued on behalf of employees, in the total amount of the capital accrued in open pension funds. Snice 2019, data about employment related pension schemes in open pension funds are provided by the Financial and Capital Market Commission. As of January 1, 2023, the Financial and Capital Market Commission has been integrated into the Bank of Latvia.*

***State Funded Pension Scheme** (the investment phase):*
According to the Law on State Funded Pensions the mandatory (still voluntary for older generations) DC funded pension scheme (2nd pillar pension scheme) covers all employed population (all persons covered by State social insurance). It is a state organised pension scheme, managed by private investment companies and administered by the State Social Insurance Agency (SSIA). The source of financing: the part of state social insurance contributions earmarked for old age pensions. During the investment phase (till retirement of participants), the 2nd pillar scheme operates as a DC scheme. It does not provide pensions directly. When a 2nd pillar participant claims an old-age pension the accrued 2nd pillar capital is transferred, by choice of the participant, to the 1st pillar, providing state old age pensions (transfers between columns A and H), or to a life insurance company, providing life pension (transfers between columns A and B). The accrued 2nd pillar capital may be transferred to the 1st pillar also in case if 2nd pillar participant dies before reaching retirement. In that case, the transferred 2nd pillar capital is taken into account when calculating the survivor's pension. In cases when the deceased person does not have dependants, the accrued 2nd pillar capital is transferred to the state social insurance pension budget as budget revenues without earmarked pension entitlements. Therefore, transfers in column H consist only of the amounts affecting pension entitlements, i.e., transfers for old age pensions and for survivor's pensions. From January 1, 2020, a participant of scheme can make one of three choices what has to be done with his/her accrued 2nd pillar capital if he/she dies before claiming an old-age pension: transfer to the state social insurance pension budget, add to the funded pension capital of the person specified by the participant or inherit in accordance with the procedure specified in the Civil Law.

The scheme actual social contributions are recorded at the period when transferred to the scheme investment plan in full amount and divided between Employer actual social contributions (row 2.1) and Household actual social contributions (2.3) proportionally to the basic social security contribution rate. SSIA deductions from actual

social contributions for covering of scheme administration costs are recorded as Pension scheme service charges (row 2.5). Reduction of the accrued funded pension capital in the scheme are recorded in row 6 when it is withdrawn from the scheme investment plans and transferred to the SSIA account. From 2020, the SSIA transfer of the inherited funded pension capital to the heir's bank account are recorded in A column row 4 adjusting the entries in row 6. Pension entitlements accrued in the scheme at the end of the year recorded in the A column row 10 correspond to the total Net assets amount of the scheme investment plans at the end of the year.

Since column A covers two different pension schemes, each row of the column shows the total amounts covering both schemes. It should be noted that while till 2018 several data for private pension funds are considered as estimates, data concerning the state funded pension scheme are solely based on actual statistics. As a result, by summing up estimates with actual data in column A we marked the totals as estimated in the column describing the observation status for periods till 2018.

b. Institutional set-up	
Data sources/ suppliers	***Private pension scheme**:* *Annual reports of each of the private pension funds` pension plan. 4th quarter reports of operation of private pension funds and Annual report of the movement of net assets of the open private pension funds` employment – related contracts starting from 2019, prepared by the Financial and Capital Market Commission (from January 1, 2023, Bank of Latvia), data provided by Private Pension Funds` Committee and Finance Latvia Association.* ***State Funded Pension Scheme (the investment phase):*** *Annual report on the State funded pension scheme's operation and additional information on the distribution of the pension capital transferred from the scheme in the case of the participant's death, prepared by the SSIA. Annual report on the state social insurance special budget execution prepared by the Treasury. 4th quarter reports on Management of State-funded Pension Scheme Assets, prepared by the Financial and Capital Market Commission (from January 1, 2023, Bank of Latvia).*
Which institution is running/managing the calculations?	*Calculations are managed by the Central Statistical Bureau (CSB) based on information provided by data suppliers.*

2. Any other comments

***State Funded Pension Scheme** (the investment phase):*
The 2nd pillar of the old age pension system was introduced on 1 July 2001. Since the respective date, a share of all social insurance contributions has been invested in the financial market and accumulated on the personal accounts of each participant. This scheme is set as mandatory, but it is still under a transitional period, as older cohorts can participate voluntarily: any socially insured person can be a participant of the state-funded pension scheme if he/she was under the age of 50 at the beginning of the scheme on 1 July 2001. Participation is mandatory for those aged under 30 on 1 July 2001 (born after 1 July 1971).

Private pension scheme:
Due to change of the data source, the accrued pension entitlements in the employment-related part of open private pension funds` pension plans at the end of 2018 are assessed as the net assets worth at the beginning of 2019, derived from the Annual report of the movement of net assets of the open private pension funds` employment – related contracts for 2019, prepared by the Financial and Capital Market Commission (impact assessment are recorded in row 9).

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
State Funded Pension Scheme (the pay-out phase, the option of life pension provision): *Insurance companies, providing 2nd pillar life pensions, must be considered as vehicles of accrued social insurance 2nd pillar pension entitlements and thus, data of these entitlements must be shown in the table in column B. By choice of the 2nd pillar pension scheme participant, the 2nd pillar pension capital, accrued during the investment phase (column A), may be transferred to a life insurance company, selected by the participant, for life pension. Due to the short time of operation of the 2nd pillar scheme, the capital accrued over the first years was insufficient to attract life insurers. This option had been chosen for the first time only in 2013, but the coverage is gradually growing.*	
b. Institutional set-up	
Data sources/ suppliers	*Suppliers: Life insurance companies, which provide life pension service for the 2nd pillar participants.* *Since it is not possible to obtain the necessary data from administrative data sources, (it is not possible to select such specific data on life pensions from the total amounts showing life insurance companies' performance), the CSB has developed a special statistical form to be filled out annually by all life insurance companies who are providers of 2nd pillar life pension.*
Which institution is running/managing the calculations?	*Calculations are managed by CSP based on information provided by Life insurance companies which provide life pension service for 2nd pillar participants.*
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	*N/A*
Indexation of benefits	*N/A*
d. Type and structure of the calculation model	
N/A	
2. Assumptions and methodologies applied	
a. Discount rate	
N/A. Information about the household social contribution supplements is derived directly from the above-mentioned statistical forms filled out by life pension providers.	
b. Wage growth	
N/A	
c. Valuation method: ABO/PBO	
ABO	
3. Data used to run the model	
a. Mortality tables	
N/A	
b. Entitlement statistics; other relevant statistics	
N/A	
4. Reforms incorporated in the model	
N/A	
5. Specific assumptions	
a. How are careers modelled?	
N/A	
b. How are survivor pensions calculated?	
N/A	
c. How is the retirement age modelled over time?	

N/A
d. Other specific features of the model
N/A
6. Any other comments
Life insurance companies, which provide life pension to the 2nd pillar participants in case they choose such an option at retirement, receive lump-sum payments as transfers of accrued individual pension capital from the 2nd pillar investment companies. These transfers are spent for the payment of life pensions. Life pensions` scheme in this case does not have any actual contributions. Therefore, the only source for an increase in pension entitlements due to social contributions in column B is contribution supplements (row 2.4). Due to subtracting pension scheme service charges, which in the case of life pension provision in Latvia affect entitlements and therefore are shown in column B, the increase in pension entitlements due to social contribution may become negative (row 2).

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

Such scheme does not exist in Latvia.

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

Such scheme does not exist in Latvia.

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

Such scheme does not exist in Latvia.

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

1. General description of the scheme and the calculation model
a. Coverage of the scheme
Column G covers all kinds of DB service pension schemes classified in general government. Service pension schemes provide service pensions for specific categories of employees in respective institutions or economic sectors. Service pension schemes differ by source of financing (schemes financed by the state general budget and schemes financed by the state social insurance special budget). ***Service pension schemes financed by the state general budget:*** *These schemes provide pensions for militaries, employees of the institutions of internal affairs, diplomats, prosecutors (attorneys), judges, artists, employees of the Corruption Prevention and Combatting Bureau, officials of the State Security Services, employees of Emergency Medical Service. Special pensions for former Members of the Supreme Council and former Presidents of the State, provided for the rest of beneficiary's life, are also classified under these schemes. As pensions are financed by subsidies, the table shows only imputed contributions. Each of these schemes has different rules.* ***Service pension schemes financed by the state social insurance special budget:*** *Starting with 1 January 1999 the determination of insurance record entitling to service pensions has been terminated. Only persons, who by 1 January 1999 have worked in special qualifying occupations for not less than*

three fourths of the insurance period required for allocation of the service pension in accordance with special regulations, retain their entitlements. These schemes cover certain groups of employees in the air service, railway, on vessels, in public transport and certain groups of artistic trades' workers. There are also service pensions for the employees of the Ministry of the Interior (MoI) who were retired from the service before 1998 (while MoI employees who retired in 1998 and later receive service pensions from the state budget).	
b. Institutional set-up	
Data sources/ suppliers	*Aging Working Group (AWG) assumptions for the model are provided by the Ministry of Welfare (representative of the AWG). Data on the schemes, administrated by the respective institution, are provided by the SSIA and the Ministry of Defence.* *The annual reports on the state general and social insurance special budget execution prepared by the Treasury.*
Which institution is running/managing the calculations?	*CSB*
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	***Service pension schemes financed by the state general budget:*** *Service pension depends on the percentage of a person`s average monthly earnings in the last three to five years of service and the length of service. Most of the service pensions are granted several years before the statutory retirement age. When reaching the statutory retirement age, service pensions are replaced by 1st pillar old age pensions (the NDC PAYG pension). If the old age pension is smaller than the service pension, the difference is covered by the state general budget.* ***Service pension schemes financed by the state social insurance special budget:*** *Service pensions for employees of the above-mentioned professions under the service pensions insurance framework are granted in accordance with the NDC PAYG old age pension scheme formula. When reaching the statutory retirement age, service pensions are replaced by the 1st pillar old age pensions, which must not be lower than the service pension.*
Indexation of benefits	*Starting from 2014 service pension benefit not exceeding 50 % of the average contribution wage of the previous calendar year is annually indexed, taking into account the actual CPI and 25 % of the real increase of contribution wage sum (contribution wage bill). By the amendments to the Law on State Pensions, which came into force on the 1st of January 2017, the share of real growth rate of contribution wage sum has increased from 25 % to 50 %.*
d. Type and structure of the calculation model	
Calculations are provided by the dynamic macro-simulation model, developed on the basis of the Freiburg model, which is based on the average pension data for one-year cohorts differentiated by gender. The programming language - Matlab.	
2. Assumptions and methodologies applied	
a. Discount rate	
The real discount rate is used in the model. *As recommended by the AWG and agreed upon at the Eurostat pension expert group:* *Till 2016 discount rate, applied for base case, was 3 % in real terms.* *From 2016 discount rate, applied for base case, is 2 % in real terms.* *Sensitivity analysis is performed for base case discount rate in real terms minus 1 % and plus 1 %.*	
b. Wage growth	
Model projections are based on AWG assumptions of wage growth (labour productivity). The new set of AWG assumptions applied from 2016 and 2019. For years, the actual statistics of which are available, the actual growth rates are observed.	

c. Valuation method: ABO/PBO

PBO

3. Data used to run the model

a. Mortality tables

All demographic data are obtained from the Eurostat. The demographic assumptions based on EUROPOP2019 projections applied from 2016 till 2018. The demographic assumptions based on EUROPOP2023 projections applied from 2019.

b. Entitlement statistics; other relevant statistics

Entitlement statistic data are provided by the SSIA, the Ministry of Defence and the Treasury. Other relevant statistics can be derived from the database of the CSB.

4. Reforms incorporated in the model

Gradual increase of statutory retirement age from 62 in 2014 to 65 in 2025 (equal for both genders), which also affects the schedule of service pension payments, is already incorporated in the model and reflects on runs every year. There are also options for changes in the method of indexation (CPI, or partial wage indexation with choice of share of wage growth applied) incorporated in the model. The option of possible abolishment of certain pension schemes is also incorporated in the model (for policy analysis, if necessary).

5. Specific assumptions

a. How are careers modelled?

Profiles for service pensions reflect the average pension benefit per capita of population, differentiated by age and gender. The model applies the homogeneous contributions careers. It applies a constant entrance profile (i.e., assuming constant contribution careers). Two profiles are considered in the estimates: 1) for service pension schemes financed by social insurance budget and 2) for service pension schemes financed by state budget.

b. How are survivor pensions calculated?

Service pension schemes do not provide survivor pensions.

c. How is the retirement age modelled over time?

The increase of statutory retirement ages from 62 to 65 until 2025 in the general old age pension system also has an impact on the service pension entitlements (see above).

d. Other specific features of the model

There is an accrued vector incorporated in the model. It reflects the proportion of future pension benefits accrued-to-date.

6. Any other comments

The model estimates all benefits paid out in future years in prices of the base year, i.e., it calculates them in real terms.

Due to changes in annual indexation rules of the accrued NDC pension capital, set by the amendments to the Law on State Pensions, enacted in 1 January 2016 (detailed description in section 7.6 below), service pensions, financed by the state social insurance budget, benefits, affected by negative index in years of recession, were recalculated during years 2016 – 2018 as follows: in 2016 benefits granted in 2010, in 2017 benefits granted in 2011, in 2018 benefits granted in 2012, 2013, 2014 and 2015.

Impact assessments of changes in entitlements due to legislative changes in pension benefit and NDC pension capital indexation rules are recorded in row 7. Impact assessments of changes in entitlements due to AWG assumptions and demographic assumptions changes in 2016 are recorded in rows 8 and 9 (see details in the Table 1 in the ANNEX).

Accrued pension entitlements for those pension schemes at the end of 2018 and previous years re-estimated with updated model version in 2021.

Impact assessments of changes in entitlements due to AWG assumptions and demographic assumptions changes in 2019 are recorded in rows 8 and 9 (see details in the Table 3 in the ANNEX).

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Column "H" covers all kinds of pension schemes under social security, including old age pensions, survivors' pensions, disability pensions and compensations granted in case a person becomes disabled due to work injury or professional disease.	
b. Institutional set-up	
Data sources/ suppliers	*AWG assumptions are provided by the Ministry of Welfare (representative of the AWG). All demographic data are obtained from the Eurostat. Data on social security pension schemes are based, in general, on statistics, provided by the SSIA and the annual report on the social insurance special budget execution prepared by Treasury. Other statistics, necessary for modelling are taken from CSB database.*
Which institution is running/managing the calculations?	*CSB*
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	***The notional defined contribution pension scheme (NDC PAYG)*** *provides* ***old age*** *pensions. Due to the minimum guarantees incorporated in the scheme, it is attributed to DB pension schemes. The scheme covers all contributors under state social insurance.* ***General formula****:* ***P= K/G*** ***P*** *– annual pension, the twelfth part of which is the monthly pension;* ***K*** *– the insured person's accrued notional pension capital;* ***G*** *– remaining unisex life expectancy at retirement (number of years of pension payments).* *The* ***survivors`pension scheme*** *covers all contributors under the state social insurance. The following persons are entitled to receive a survivor's pension:* • *children of the deceased person;* • *family members (brothers, sisters, grandchildren) incapable of work who had been supported by the deceased person.* ***General formula****:* *Survivor's pension is calculated by taking into account the provider`s prospective old age pension:* • *for one person – 50 % of the pension;* • *for two persons – 75 % of the pension;* • *for three and more persons – 90 % of the pension.* *The prospective old-age pension shall be calculated according to the NDC PAYG old-age pension formula.* ***Disability*** *pension scheme, as well as compensation scheme in the case of* ***a job accident or occupational disease, also covers all contributors.*** *An insured person with an insurance period, the length of which is not less than three years, is entitled to a* ***disability pension*** *before reaching the retirement age, if such a*

	person has been recognised as disabled. Disabled persons who have reached the retirement age are to be granted the old-age pension instead. In the event when a newly granted old age pension is smaller than the disability pension, the old age pension shall be increased to the level of the disability pension. ***Major formulas*** *The disability pension shall be granted depending on the group of disability:* • *in the case of severe (Group I and II) disability, based on the following formula:* *Group I P= 0.45 x Vi + ASi / ASie x Vi x 0.1* *Group II P= 0.4 x Vi + ASi / ASie x Vi x 0.1* *P – the pension;* *Vi – average monthly contribution wage of the insured person for any consecutive 36 months over the previous five years before the granting of the disability pension.* *ASi – length of the insured person's individual period of insurance;* *ASie – maximum length of the insurance period possible from reaching the age specified for social insurance (age of 15) up to reaching the retirement age.* • *in the case of Group III disability – the disability pension is calculated at the base level.* *The amount of compensation for the loss of ability to work* ***in case of a job accident or occupational disease*** *depends on the severity of the damage. The compensation was introduced on 1 January 1997. The amount of compensation shall be specified as a percentage of the average monthly wage subject to insurance contributions in the following amounts:* *1) 80 % – if the loss of ability to work is 100 %;* *2) up to 80 % – if the loss of ability to work is 80 - 99 %;* *3) up to 65 % – if the loss of ability to work is 50 –79 %;* *4) up to 50 % – if the loss of ability to work is 25 – 49 %.* *If a person has suffered from a job accident or occupational disease before 1 January 1997, he/she has been granted indemnity (compensation) for the job accident. The amount of indemnity depends on the calculated amount of disability pension, or a pension of any kind (old-age pension, service pension), as well as on the scale of loss of ability to work in percentage.*
Indexation of benefits	*Starting form 2014 pension benefit not exceeding 50 % of the average contribution wage of the previous calendar year is annually indexed taking into account the actual CPI and 25 % of the real increase on contribution wage sum (contribution wage bill). By the legislative reform, enacted on 1st January 2017, the share of real growth rate of contribution wage sum has increased from 25 % to 50 %. By the legislative reform, enacted on 1st January 2018 for old age pension benefit the share of real growth rate of contribution wage sum increased to 60 % if the length of service was from 30 to 39 years, or if the old age pension was granted for work in harmful conditions; to 70 % if the length of service was 40 years or more. From 1st January 2019 for old age pension benefit this share increase to 80 % if the length of service was 45 years or more.*
d. Type and structure of the calculation model	
Calculations are provided by the dynamic macro-simulation model, developed on the basis of the Freiburg model, which is based on the average pension data for one-year cohorts differentiated by gender. The programming language – Matlab.	
2. Assumptions and methodologies applied	
a. Discount rate	
The real discount rate is used in the model.	

As recommended by the AWG and agreed upon at the Eurostat pension expert group:
Till 2016 discount rate, applied for base case, was 3 % in real terms.
From 2016 discount rate, applied for base case, is 2 % in real terms.
Sensitivity analysis is performed for base case discount rate in real terms minus 1 % and plus 1 %.

b. Wage growth

Model projections are based on AWG assumptions of wage growth (labour productivity). The new set of AWG assumptions is applied from 2016 and 2019. For years, the actual statistics of which are available, the actual growth rates are observed.

c. Valuation method: ABO/PBO

PBO

3. Data used to run the model

a. Mortality tables

All demographic data are obtained from the Eurostat. The demographic assumptions based on EUROPOP2019 projections applied from 2016 till 2018. The demographic assumptions based on EUROPOP2023 projections applied from 2019.

b. Entitlement statistics; other relevant statistics

Entitlement statistics on social security pension schemes are provided by the SSIA. The actual statistics about unisex life-expectancy at the age of retirement („G" in the benefit formula) are used for the calculation of the newly granted pension benefit. These data are available in the database of the CSB. Other relevant statistics may be also derived from the database of the CSB.

4. Reforms incorporated in the model

Gradual increase of statutory retirement age from 62 in 2014 to 65 in 2025 (equal for both genders), which corresponds with the current legislation. It also affects disability pension entitlements. Options for changes in the method of indexation (CPI, or partial wage indexation with choice of share of wage growth applied) and option of possible abolishment of certain pension schemes is also incorporated in the model.

5. Specific assumptions

a. How are careers modelled?

The pension profiles reflect the average pension benefit per capita of population, differentiated by age and gender.

A differentiation is also made between present pensioners and new pensioners. For future new old age pensioners, no profile is applied – as the calculation of these pension benefits is based on the heterogeneous contribution careers approach, i.e., the model calculates future new pension benefits based on the age and gender specific past contributions history, namely on individual NDC PAYG pension scheme accounts (for age groups 15-59). Over the base year of 2011, during which the first estimates by this model were made, the total stock of pension accounts had been estimated, differentiated by age and gender based on a micro simulation and a large micro database on individual contribution histories of (almost) the entire Latvian working population. Starting from 2012, the total stock of pension accounts has been estimated differently: in order to calculate the total stock of pension rights accrued on individual accounts, we use the stock estimated for the previous year and the flows of contributions being paid, as well as new benefits being received in the base year. The total stock of pension accounts estimates at the end of 2019 and 2020 are based on micro database of individual contribution history. For 2021, the total stock of pension accounts is estimated using the stock estimated on the end of 2020 and the flows of the contributions to being paid in 2021, as well as assessing reductions due to retirement or death of the scheme participants. For new pensioners cohorts aged 60 and older estimate of pension benefits is based on the pension payments of new retirees observed in base year+1.

For the other pension schemes (namely for disability and survivors' pensions) the model applies the homogeneous contributions careers, which is a more simplified approach. It applies a constant entrance profile (i.e., assuming constant contribution careers).

b. How are survivor pensions calculated?

The information about the survivors' pension scheme is provided above, in section 7.1.c.

c. How is the retirement age modelled over time?

Currently, the model considers the legislated increase of statutory retirement ages from 62 to 65 until 2025. Also, minimum retirement ages will increase during this period from 60 to 63 (according to the Law on State Pensions). It is assumed in the model that old age retirement probabilities will increase in line with changes of the minimum retirement age. It is possible to make different scenarios with different retirement ages.

Disability pension beneficiaries can receive their benefits up to the new increasing statutory retirement ages.

d. Other specific features of the model

The model automatically evaluates whether the pension rights estimated by the model fit to the actual pension rights accrued by new retirees in the base year +1. For this purpose, it is necessary to provide the model with data on the average old age pension benefits by age and gender of new retirees for the year following the base year (the so-called benchmark pensions).
The model incorporates the accrued vector. It reflects the proportion of future new pension benefits accrued-to-date. It is applied only for minor pension schemes in social security, namely disability and survivors' pensions. In turn, the estimates for old age pension schemes are based on the stock and flow approach, described above.

In order to simplify model estimates, the calculation of the accrued-to-date pension entitlements for compensation of the loss of capacity for work due to an accident at work or an occupational disease is incorporated within the disability pension scheme in the model. Such an approach is applied also for calculation of accrued survivors' pension entitlements if the cause of death of the provider is an accident at work or an occupational disease. In this case entitlements are incorporated within the survivors' pension scheme.

6. Any other comments

NDC PAYG pension scheme:
By choice of participant of the scheme upon retirement, the 2nd pillar pension capital (person`s individual pension capital accrued under the state funded pension scheme) can be transferred to the 1st pillar ***as a lump-sum payment for granting state funded pension scheme pension in accordance with the 1st pillar pension scheme rules.*** *In such a case, lump-sum payments are shown as transfers of pension entitlements between schemes (i.e., between columns A and H). The total amount of transfers under column H consists of 2nd pillar lump-sum payments, transfers of pension money to be paid out from other countries and transfers to/from EU pension scheme.*

The model estimates all benefits paid out in future years in prices of the base year, i.e., it calculates them in real terms.

On 1st January 2016, the amendments to the Law on State Pensions come into force, providing that NDC pension capital, affected by very negative indexes in years of recession (2009-2011), shall be recalculated. The negative indexes, applied during this period, shall be replaced with "1", as well as the positive indexes after recession shall be levelled further until the multiplication of the negative and the positive indexes is higher than "1". Then, the actual positive index is used for updating pension capital. Recalculation of indexes was applied starting from the pension capital index (contribution wage sum index), determined for 2009. According to the amendments, pension benefits granted or recalculated in 2010 were reviewed in 2016, pension benefits granted or recalculated in 2011 were reviewed in 2017 and pension benefits granted or recalculated in 2012, 2013, 2014 and 2015 were reviewed in 2018. It means, that pension benefits, which already had been granted and where negative indexes were applied, increased. At the same time, due to the levelling of positive indexes, the estimated amounts of the accrued indexed NDC pension capital for pensions not retired yet had slightly decreased. The negative impact in 2016 is explainable by recalculation of accrued entitlements of persons not retired yet.

Impact assessments of changes in entitlements due to legislative changes in pension benefit and NDC pension capital indexation rules are recorded in row 7. Impact assessments of changes in entitlements due to AWG assumptions and demographic assumptions changes in 2016 are recorded in rows 8 and 9 (see details in the Table 2 in the ANNEX).

Accrued pension entitlements for those pension schemes at the end of 2018 and previous years re-estimated with updated model version in 2021.

Impact assessments of changes in entitlements due to AWG assumptions and demographic assumptions changes in 2019 are recorded in rows 8 and 9 (see details in the Table 3 in the ANNEX).

From January 1, 2021, the amount of minimum pension was significantly increased. The minimum old-age and disability pension base is set at 136 EUR, for persons with disabilities since childhood – 163 EUR. The amount of the minimum old-age pension is determined by applying a factor of 1.1 to the minimum old-age pension calculation base, and for each subsequent year that exceeds the insurance period required for the old-age pension granted, the amount is increased by two percent of the minimum old-age pension calculation base. The amount of group I disability pension must not be less than minimum pension basis multiplied with coefficient 1.6, coefficient 1.4 is set for the II disability group. The amount of the minimum survivor's pension for each child from birth to the age of seven is set at 136 EUR, from the age of seven – 163 EUR.

Impact assessments of changes in entitlements due to increase of the amount of minimum pension in 2021 are recorded in column A row 7.

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

Pension relationships with the rest of the world are not significant. Therefore, pension entitlements, amounts of contributions and benefits, specifically addressed to non-resident households, are not counted separately.

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

https://www.vsaa.gov.lv/en/state-funded-pension-schemes-2

https://www.manapensija.lv/en/pension-system/

https://stat.gov.lv/en/statistics-themes/economy/government-finance/tables/vfp010-overview-accrued-date-entitlements

ANNEX

Table 1. Detailed information for column G positions in rows 7, 8 and 9 of Table 29 in 2016-2018, mil. EUR

scenario →	**Base case**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**0.204**	**88.741**	**4.782**
Changes in pension NDC capital indexation	0.204	1.648	4.782
Changes in pension benefit indexation	-	87.093	-
Row 8. Changes in entitlements due to revaluation	**203.094**	**-**	**-**
Changes in discount rate	206.616	-	-
Changes in AWG wage growth assumptions	-3.522	-	-
Row 9. Changes in entitlements due to other changes in volume	**-7.774**	**-**	**-**
Changes in AWG employment growth assumptions	-0.796		
Changes in demographic assumptions	-6.978	-	-
scenario →	**Sensitivity analysis 1**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**0.218**	**106.125**	**5.080**
Changes in pension NDC capital indexation	0.218	1.756	5.080
Changes in pension benefit indexation	-	104.369	-
Row 8. Changes in entitlements due to revaluation	**260.087**	**-**	**-**
Changes in discount rate	261.959	-	-
Changes in AWG wage growth assumptions	-1.872	-	-
Row 9. Changes in entitlements due to other changes in volume	**-11.128**	**-**	**-**
Changes in AWG employment growth assumptions	-2.637		
Changes in demographic assumptions	-8.491	-	-
scenario →	**Sensitivity analysis 2**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**0.193**	**75.272**	**4.519**
Changes in pension NDC capital indexation	0.193	1.554	4.519
Changes in pension benefit indexation	-	73.718	-
Row 8. Changes in entitlements due to revaluation	**161.047**	**-**	**-**
Changes in discount rate	165.487	-	-
Changes in AWG wage growth assumptions	-4.440	-	-
Row 9. Changes in entitlements due to other changes in volume	**-5.566**	**-**	**-**
Changes in AWG employment growth assumptions	0.315		
Changes in demographic assumptions	-5.881	-	-

Table 2. Detailed information for column H positions in rows 7, 8 and 9 of Table 29 in 2016-2018, mil. EUR

scenario →	**Base case**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**-290.245**	**3750.280**	**1899.148**
Changes in pension NDC capital indexation	-290.245	269.665	652.638
Changes in pension benefit indexation	-	3480.615	1246.510
Row 8. Changes in entitlements due to revaluation	**8905.453**	**-**	**-**
Changes in discount rate	8749.080	-	-
Changes in AWG wage growth assumptions	156.373	-	-
Row 9. Changes in entitlements due to other changes in volume	**181.410**	**-**	**-**
Changes in AWG employment growth assumptions	385.257	-	-
Changes in demographic assumptions	-203.847	-	-
scenario →	**Sensitivity analysis 1**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**-413.611**	**4634.031**	**2267.478**
Changes in pension NDC capital indexation	-413.611	306.818	754.394
Changes in pension benefit indexation	-	4327.213	1513.084
Row 8. Changes in entitlements due to revaluation	**12014.812**	**-**	**-**
Changes in discount rate	11689.173	-	-
Changes in AWG wage growth assumptions	325.639	-	-
Row 9. Changes in entitlements due to other changes in volume	**34.378**	**-**	**-**
Changes in AWG employment growth assumptions	351.148	-	-
Changes in demographic assumptions	-316.77	-	-
scenario →	**Sensitivity analysis 2**		
year→	**2016**	**2017**	**2018**
Row 7. Change in entitlements due to negotiated changes in scheme structure	**-206.187**	**3106.677**	**1618.141**
Changes in pension NDC capital indexation	-206.187	240.783	576.003
Changes in pension benefit indexation	-	2865.894	1042.138
Row 8. Changes in entitlements due to revaluation	**6761.826**	**-**	**-**
Changes in discount rate	6708.309	-	-
Changes in AWG wage growth assumptions	53.517	-	-
Row 9. Changes in entitlements due to other changes in volume	**247.972**	**-**	**-**
Changes in AWG employment growth assumptions	377.109	-	-
Changes in demographic assumptions	-129.137	-	-

Table 3. Detailed information for columns G and H positions in rows 8 and 9 of Table 29 in 2019, mil. EUR

scenario →	**Base case**	
column→	**G**	**H**
Row 8. Changes in entitlements due to revaluation	**-84.945**	**-2814.900**
Changes in AWG wage growth assumptions	-84.945	-2814.900
Row 9. Changes in entitlements due to other changes in volume	**15.094**	**-2753.869**
Changes in AWG employment growth assumptions	13.751	1560.400
Changes in demographic assumptions	1.343	-4314.269
scenario →	**Sensitivity analysis 1**	
column→	**G**	**H**
Row 8. Changes in entitlements due to revaluation	**-104.042**	**-3593.991**
Changes in AWG wage growth assumptions	-104.042	-3593.991
Row 9. Changes in entitlements due to other changes in volume	**15.949**	**-3526.307**
Changes in AWG employment growth assumptions	16.121	1986.160
Changes in demographic assumptions	-0.172	-5512.467
scenario →	**Sensitivity analysis 2**	
column→	**G**	**H**
Row 8. Changes in entitlements due to revaluation	**-70.165**	**-2251.624**
Changes in AWG wage growth assumptions	-70.165	-2251.624
Row 9. Changes in entitlements due to other changes in volume	**14.086**	**-2184.988**
Changes in AWG employment growth assumptions	11.844	1248.937
Changes in demographic assumptions	2.242	-3433.925