Commission staff working document

Articles 83 and 83a and Annex XII of the Staff Regulations

**Report on the 2017 actuarial assessment of the
Pension Scheme for European Officials (PSEO)**

REPORT

Item 5.2 of the agenda

Eurostat
Unit C3 - Statistics for administrative purposes

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Articles 83 and 83a and Annex XII of the Staff Regulations

**Report on the 2017 actuarial assessment of the
Pension Scheme for European Officials (PSEO)**

Reference date: 31 December 2016

REPORT

Luxembourg, 1 September 2017

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1   Introduction

Article 83a and Annex XII of the Staff Regulations (SR) set out rules to guarantee the equilibrium of the PSEO (Pension Scheme of European Officials).

Annex XII lays down rules for implementing Article 83a of the Staff Regulations. In particular, it stipulates that:

- Eurostat is the authority responsible for the technical implementation of the Annex (see Article 13(1)),

- Eurostat will be assisted by one or more qualified independent experts in carrying out the actuarial assessments (see Article 13(2)),

- each year on 1 September, Eurostat is to submit a report on the assessment and updating referred to in Article 1 of the Annex (see Article 13(3)),

- any question of methodology raised by the implementation of the Annex shall be dealt with by Eurostat in cooperation with national experts from the relevant departments of the Member States and the qualified independent expert or experts (see Article 13(4)).

Certain articles of Annex XII have been amended effective from 1 January 2014. Eurostat has drawn up the present report in accordance with the new legal requirements.

Five-yearly actuarial assessments of the pension scheme of the European civil service were carried out in 2004, 2008 and 2013 in accordance with Article 1 of Annex XII of the SR.

This report sets out the results of the 2017 update of the 2013 five-yearly actuarial assessment, based on the population of European officials as at 31 December 2016. The report provides the information needed by the Commission to propose, if necessary, changes to the staff contribution rate in order to ensure the balance of the scheme.

For any further information concerning this report, please contact Eurostat in Luxembourg:

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2   PSEO Population used in the present assessment

The reference population is made up of contributing members of the PSEO including:

➢ active officials,

➢ members whose pension contribution is optional (e.g. officials who have taken leave on personal grounds or parental leave),

➢ invalids who receive an invalidity allowance under Article 78 of the Staff Regulations,

➢ beneficiaries of an allowance for termination of service.

The number of contributing members (actives and beneficiaries of an invalidity allowance) at 31.12.2016, was **62 049** compared to 60 619 of the previous year with a net increase of 2.3% (please refer to Table II below).

 Annex XII, Article 1 of the Staff Regulations stipulates that the actuarial assessment shall be carried out in each year "*n*", on the basis of the population of active members of the PSEO at 31 December of the previous year "*n-1*".

Article 9 of Annex XII indicates that the population of participants in the scheme is to be collected annually by the Commission using information received from the different institutions and agencies whose staff are members of the scheme.

In accordance with those rules, the reference population is taken to be the staff at 31 December 2016 of the 61 institutions and agencies whose officials are members of the PSEO.

Table I.   Institutions and Agencies in the PSEO

Abbr.	Institutions or assimilated organisations
COR	COMMITEE OF THE REGIONS
CONSIL	COUNCIL OF THE EUROPEAN UNION
CDCE	COURT OF AUDITORS
COJED	COURT OF JUSTICE OF EUROPEAN COMMUNITIES
CSC	ECONOMIC AND SOCIAL COMMITTEE
CEC	EUROPEAN COMMISSION
EDPS	EUROPEAN DATA PROTECTION SUPERVISOR
EO	EUROPEAN OMBUDSMAN
EUROPARL	EUROPEAN PARLIAMENT

Abbr.	Agencies
ACER	AGENCY FOR THE COOPERATION OF ENERGY REGULATORS
FRONTEX	AGENCY FOR THE MANAGEMENT OF OPERATIONAL CO-OPERATION AT EXTERNAL BORDERS OF MEMB
ARTEMIS	ARTEMIS
SKY	CLEAN SKY JOINT UNDERTAKING
CFCA	COMMUNITY FISHERIES CONTROL AGENCY
CPVO	COMMUNITY PLANT VARIETIES OFFICE
EACEA	EDUCATION, AUDIOVISUAL AND CULTURE EXECUTIVE AGENCY
ENIAC	ENIAC JOINT UNDERTAKING
ITA	EU AGENCY FOR LARGE-SCALE IT SYSTEMS
ESA	EURATOM SUPLY AGENCY
EAR	EUROPEAN AGENCY FOR RECONSTRUCTION
OSHA	EUROPEAN AGENCY FOR SAFETY AND HEALTH AT WORK
EMEA	EUROPEAN AGENCY FOR THE EVALUATION OF MEDICAL PRODUCTS
EASO	EUROPEAN ASYLUM SUPPORT OFFICE
EASA	EUROPEAN AVIATION SAFETY AGENCY
EBA	EUROPEAN BANKING AUTHORITY
ECDC	EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL
CEDEFOP	EUROPEAN CENTRE FOR THE DEVELOPMENT OF VOCATIONAL TRAINING
AEE	EUROPEAN ENVIRONMENT AGENCY
EEAS	EUROPEAN EXTERNAL ACTION SERVICE

Abbr.	Agencies (next)
EFSA	EUROPEAN FOOD SECURITY AUTHORITY
EUROFOUND	EUROPEAN FOUNDATION FOR THE IMPROVEMENT OF LIVING AND WORKING CONDITIONS
GSA	EUROPEAN GNSS AGENCY
EIGE	EUROPEAN INSTITUTE FOR GENDER EQUALITY
EIT	EUROPEAN INSTITUTE OF INNOVATION AND TECHNOLOGY
EIOBA	EUROPEAN INSURANCE AND OCCUPATIONAL PENSION AUTHORITY
EMSA	EUROPEAN MARITIME SAFETY AGENCY
EMCDDA	EUROPEAN MONITORING CENTRE FOR DRUGS AND DRUG-ADDICTION
EFRA	EUROPEAN MONITORING CENTRE FOR RACISM AND XENOPHOBIA
ENISA	EUROPEAN NETWORK AND INFORMATION SECURITY AGENCY
CEPOL	EUROPEAN POLICE COLLEGE
EUROPOL	EUROPEAN POLICE OFFICE
ERA	EUROPEAN RAILWAYS AGENCY
ERC	EUROPEAN RESEARCH COUNCIL EXECUTIVE AGENCY
ESMA	EUROPEAN SECURITIES AND MARKET AUTHORITY
ETF	EUROPEAN TRAINING FOUNDATION
EACI	EXECUTIVE AGENCY FOR CONPETITIVENESS AND INNOVATION
EAHC	EXECUTIVE AGENCY FOR THE PUBLIC HEALTH PROGRAM
FCH	FUEL CELLS AND HYDROGEN JOINT UNDERTAKING
IMI	INNOVATIVE MEDICAMENTS INITIATIVE JOINT UNDERTAKING
JET	JOINT EUROPEAN TORUS (J.E.T.)
EUROJUST	JUDICIAL COOPERATION
OHIM	OFFICE FOR HARMONISATION IN THE INTERNAL MARKET
REA	RESEARCH EXECUTIVE AGENCY
SESAR	SESAR JOINT UNDERTAKING
BEREC	THE BODY OF EUROPEAN REGULATORS FOR ELECTRONIC COMMUNICATIONS
ECHA	THE EUROPEAN CHEMICALS AGENCY
ITER	THE EUROPEAN JOINT UNDERTAKING FOR ITER AND THE DEVELOPMENT OF FUSION ENERGY
TENEA	THE TRANS-EUROPEAN TRASNPORT NETWORK EXECUTIVE AGENCY
CDT	TRANSLATION CENTRE FOR BODIES OF THE EUROPEAN UNION

As approved by the Article 83 Working Group at its meeting of 7 June 2004, the term "*active members of the PSEO*" is considered in the wide sense to be synonymous with "contributing members of the PSEO". Consequently, the reference population includes not only officials in "active employment" but also officials in one of the other administrative statuses set out in Article 35 of the Staff Regulations, plus invalids who receive an invalidity allowance and beneficiaries of an allowance for termination of service.

Personnel data were collected from the NAP[1], from Sysper2[2] and directly from institutions and agencies, and imported into the Eurostat database. The data were checked to ensure a high level of quality. The actuarial assessment is based on the output from the Eurostat database at the reference date.

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[1]   The NAP (New Application for Pay) application is a centralised database that has been created to produce the monthly salary and pension forms for all institutions and agencies. This database contains a large part of the personnel data, in particular the amounts paid and the pension contributions.

[2]   Sysper2 is the IT system to manage personal data of the Commission staff. It is also used by PMO (Pay Master Office) to manage pensions and transfers of pension rights of the staff of EU institutions and agencies.

Graph I gives an overview of the PSEO reference population for assessment (members obliged to pay a pension contribution i.e. actives, beneficiaries of an invalidity allowance and minor cases): age brackets with the highest participation are the 35-39 and 40-44 ones.

Graph I.   Reference Population by Age & Sex

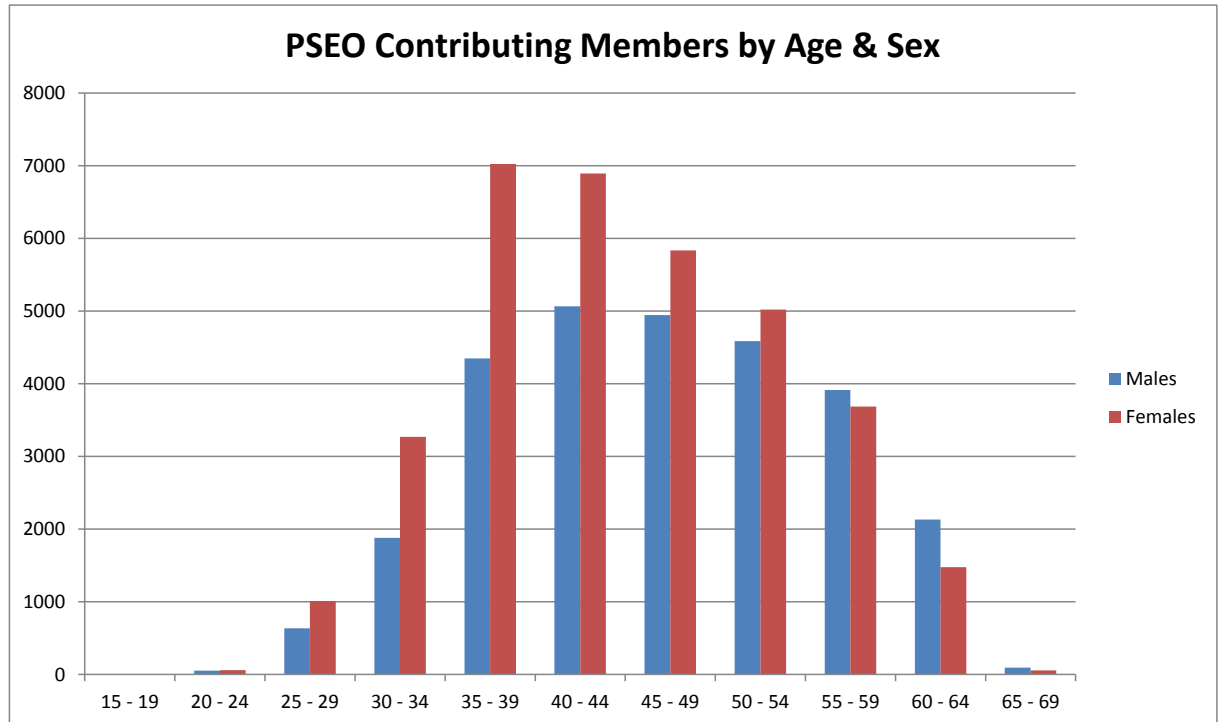Table II shows the evolution of the reference population between 2015 and 2016.

Table II.   Reference population change

PSEO Contributing Members	2016	2015	Change	Change (%)
Actives	61,049	59,761	1,288	2.2%
Invalids	984	854	130	15.2%
Other Contributing Members	3	4	-1	-25.0%
Total	**62,036**	**60,619**	**1,417**	**2.3%**

3   Actuarial assumptions used in the present assessment

Two kinds of variables are used in the actuarial calculation:

- ➢ <u>Parameters:</u> These are values mainly linked to the application of the Staff Regulations. These values change according to certain conditions related to the individual situation of each official (e.g. the annual accrual rate depends on the recruitment rate and ranges from 1.8% to 2%). These values can be clearly established.

- ➢ <u>Actuarial assumptions:</u> These are values that are not known and cannot be established exactly, such as the invalidity table, the ISP table, the probability of being married at the retirement date, the loading factor for orphans and divorced spouses. The values of these actuarial assumptions are estimated in accordance with general actuarial practices. They were discussed with national experts from the Member States at the annual meetings of the Article 83 Working Group, and reviewed by independent actuarial consultants.

The following tables show the values of the main parameters (see Table III) and actuarial assumptions (see Table IV). The tables only present an overview of the main variables and are not exhaustive. The Staff Regulations provide for further relevant information.

Table III.   Parameters used in the actuarial assessment

Parameter	Value
Legal source	Staff Regulations in force from 01.01.2014
Reference date for the population (Annex XII Article 1)	31.12.2016
Maximum retirement age (Staff Regulations Article 52)	65 (automaticaly officials in service before 01.01.2014), 66 (automatically new officials) or 67 (at the staff' request) or until 70 (exceptionally)
Normal retirement age (Staff Regulations Article 52 and Annex XIII Article 22)	60 to 66 depending on years' service, age and entry date in service
Minimum retirement age (Staff Regulations Article 52(b), Annex VIII Article 9 and Annex XIII Article 23)	55 to 58 (officials in service before 01.01.2014), 58 (new officials)
Category and grade for the minimum subsistence figure (Annex VIII Article 6)	first step of grade 1
Maximum retirement pension (Staff Regulations Article 77)	70% of the basic salary at the retirement date
Annual accrual rate (Article 77 of the Staff Regulations and Article 21 of Annex XIII)	1.8% (officials in service from 1.01.2014) 1.9% (officials in service from 1.05.2004), or 2% (officials in service before 01.05.2004), of BS
Bonus for officials in service after the normal retirement age (Annex VIII Article 5 and Annex XIII Article 22)	1.5% (new officials) or 2.5% of the BS, or 5% of the amount of the pension rights acquired at 60, depending on the entry date in service, the years of service at 1st May 2004 and the age on 1st May 2004 of the official
Penalty for early retirement (Annex VIII, Article 9 and Annex XIII, Article 22, point 3)	3.5% (new offfcials) or 1.75% (former officials) of the pension, for every year before the normal retirement age
Minimum retirement pension (Staff Regulations Article 77)	4% of the minimum subsistence figure per year of service
Invalidity allowance (Staff Regulations Article 78)	70% of the basic salary
Minimum invalidity allowance (Staff Regulations Article 78)	100% of the minimum subsistence figure
Reversion pension (Staff Regulations Article 79 and Annex VIII Article 18)	60% of the retirement pension
Minimum reversionary pension (Staff Regulations Article 79 and Annex VIII Article 18)	35% of the last basic salary
Survivor's pension (Staff Regulations Article 79 and Annex VIII Article 17)	60% of the retirement pension that would have been payable to the official
Minimum survivor's pension (Staff Regulations Article 79)	35% of the last basic salary or minimum subsistence figure

Table IV.   Actuarial assumptions

Economic assumptions	Value	Adjustment frequency	Observation years
Salary Grid	In force from 01.07.2016	1y	1y
Duration	21y	1y	1y
Nominal Discount Rate (NDR)	4.8%	1y	22y
Inflation Rate (IR)	1.7%	1y	22y
Real Discount Rate (RDR)	3.1%	1y	22y
General Salary Growth (GSG)	0.0%	1y	22y
General Pension Revaluation (GPR) (equal to GSG)	0.0%	1y	22y
Individual Salary Progression (ISP)	2014 ISP Table	5y	5y
Loading Coefficient for orphan's and divorced spouse's pension	13%	5y	5y
Correction Coefficients (art. 3.5 of Annex XI & art. 20 of Annex XIII)	0.0%	1y	1y
Demographic assumptions	**Value**	**Adjustment frequency**	**Observation years**
Life Table (healthy people)	ICSLT2013	5y	5y
Life Table (disabled people)	ICSLT2013 + 3 years	5y	5y
Invalidity Table	2014 EU Invalidity Table	5y	5y
Current Marital Status	Marital Status at evaluation date	1y	1y
Probability of being married at retirement age, for men	81%	5y	5y
Probability of being married at retirement age, for women	49%	5y	5y
Average age difference between an official and his/her partner	2 years	5y	5y
Assumed Retirement Age	63, 64 or 65 (depending on the date of entry into service, pensionable years, age)	5y	5y
Turnover	2014 T1 and T2 tables	5y	5y
The update of most assumptions will occur in 2018, at five-yearly actuarial assessment			
referred to in Annex XII of the SR, in compliance with past decisions of the Art. 83 WG			

3.1.   Economic assumptions

To comply with the recent amendments to the Staff Regulations effective 1 January 2014, for some actuarial assumptions a recalculation is required because of the relevant transitory provisions.

In particular the Real Discount Rate (RDR) and the General Salary Growth (GSG) had to be calculated as a moving average of the corresponding rates for the 22 years previous to 2017.

The reference period for the computation of those two key parameters, will be progressively extended to reach 30 years in 2021: the ultimate effect will be to

smooth the variability of those two parameters so influential on the pension contribution rate.

At the Art83 Working Group meeting held on 27 June 2014, it was agreed a five-yearly assessment for the assumptions below listed, to comply with existing legal provisions or to be consistent with the largely employed actuarial practices.

The actuarial assumptions and their impact on the contribution rate were presented in detail at the 27 June 2017 meeting of the Article 83 Working Group (see document 20170627 Art83_05).

3.1.1   Real Discount Rate (RDR)

The combined effect of articles 10.2 and 11a in Annex XII of the Staff Regulations, requires the Real Discount Rate to be obtained from the average rates for the 22 years preceding the current year.

Consequently, Real Discount Rates (RDR) from 1995 until 2016, have to be used in the 2017 assessment of the PSEO.

Nominal discount rate (NDR): **4.8%.** This is the average of 1995 to 2016 nominal rates of euro area zero-coupon (government bonds) yield with a maturity of 21 years, 21 years being the duration of the PSEO scheme.

Inflation rate (IR): **1.7%.** This is the average of 1995 to 2016 of an appropriate consumer price index

Real discount rate (RDR): **3.1%.** It is the average of 1995 to 2016 Real Discount Rates.

Table V. Real Discount Rate (RDR)

Year	Nominal Discount Rate (NDR)	Inflation Rate (IR)	Real Discount Rate (RDR)
1995	8.3	0.9	7.4
1996	7.2	1.5	5.7
1997	6.1	1.7	4.4
1998	4.9	1.3	3.6
1999	5.6	1.2	4.4
2000	5.9	1.9	4.0
2001	5.7	2.2	3.5
2002	5.5	2.1	3.4
2003	5.1	2.0	3.1
2004	4.4	2.0	2.4
2005	4.0	2.2	1.8
2006	4.2	2.2	2.0
2007	4.5	2.3	2.2
2008	4.8	3.7	1.1
2009	4.7	1.0	3.7
2010	5.0	2.1	2.9
2011	4.9	3.1	1.8
2012	4.4	2.6	1.8
2013	3.8	1.5	2.3
2014	3.0	0.5	2.5
2015	2.0	0.0	2.0
2016	1.6	0.3	1.3
Average 22 years	**4.8**	**1.7**	**3.1**

The RDR used in 2017 calculation (3.1%) is higher than the one used in 2016 assessment (2.9%).

3.1.2   General Salary Growth (GSG)

The combined effect of articles 11.2 and 11a in Annex XII of the Staff Regulations requires the General Salary Growth to take into account the annual change in salary scales as from the moving average of the Specific Indicators (SI) for the 22 years previous to the reporting year. The SI measure the evolution of the purchasing power for the national civil servants in Central Governments.

The 22-year moving geometric average from 1995 to 2016 (GSG) was **0.0**%.

Table VI.   General Salary Growth

Year	SI (applied)
1995	0.2
1996	-0.2
1997	0.7
1998	0.4
1999	1.6
2000	-0.2
2001	0.6
2002	1.7
2003	1.0
2004	-1.2
2005	0.0
2006	0.2
2007	0.0
2008	-1.3
2009	2.7
2010	-2.2
2011	-3.5
2012	-1.9
2013	-1.5
2014	-0.9
2015	1.2
2016	1.9
Average 22 years	**0.0**

The GSG (0.0%) used in the 2017 assessment, is higher than the one used in 2016 (-0.1%).

3.1.3   Individual Salary Progression (ISP)

The Individual Salary Progression (ISP) refers to the salary increase due to the career advancement of EU officials, i.e. promotions and seniority steps.

With the introduction of the new Staff Regulations on 1.1.2014, the career progression of EU officials has been completely reviewed, in some cases even blocked. In addition a new category of staff was introduced.

Annex XIII of the Staff Regulations include also some transitional measures which made the determination of this assumption quite complicated.

The active population is divided into eight homogeneous groups according to their status.

Table VII summarises ISP averages by function group:

Table VII. Average ISP rates by group of population

Average ISP rate by group	31.12.2016
AD - Administrators	1.4%
AST - Assistants	1.4%
SC - Secretary / Clerks	1.4%
GFI - Contract agents. Function group I	1.0%
GFII - Contract agents. Function group II	1.0%
GFIII - Contract agents. Function group III	1.0%
GFVI - Contract agents. Function group IV	0.8%
PA - Parliamentary assistants	0.9%
Weighted average	**1.3%**

ISP rates in the table above are the average of ISP rates weighted by the population in each group. These average rates are calculated for publication purposes only, the detailed rates by grade and years to retire being used in computation at individual level.

Having the same ISP rates been used also for the previous year assessment, no impact on the pension contribution rate was observed.

3.2.   Demographic assumptions

3.2.1   Invalidity table

The invalidity table reflects the evolution of beneficiaries of an *invalidity allowance* (category of population created by the new Staff Regulation in force from the 1st May 2004). A first invalidity table (2004-EU Invalidity table) was used in the 2004 assessment.

A moving average of five years of invalidity observations is used: the total number of observed invalids for the 2009 to 2013 period was 499.

Table VIII shows the yearly number of invalids from 2009 to 2013.

Table VIII. Invalids by year

Year	Invalids
2009	93
2010	105
2011	96
2012	116
2013	89
Total	**499**

The 2009 to 2013 invalidity observations have been used to update the invalidity table by sex (EU-2013 Invalidity Table). Table VIII is an extract from the unisex version of the table for presentation purposes only, whereas the complete table by sex was used in computations.

Table IX. EU-2013 Invalidity Table (Extract)

Age	Invalidity probabilities of becoming invalid at age x
x	q'_x
20	0.000032
25	0.000162
30	0.000162
35	0.000435
40	0.000795
45	0.001346
50	0.002767
55	0.003874
60	0.002993
65	0.001250

Having the same Invalidity Table been used also for the previous assessment, no impact to the pension contribution rate could be observed.

3.2.2   Life Table (healthy persons)

The 2013 International Civil Servants Life Table (ICSLT2013) has been developed by Eurostat and ISRP (International Service for Remuneration and Pensions of coordinated organisation) in 2014.

The ICSL2013 is a prospective table which incorporates a trend of life expectancies over a 30 years' time horizon based on the evolution of mortality in five main EU Member States.

Table X is an extract from this table.

Table X.   ICSLT2013

Age	Men		Women	
	Dying probability	Life expectancy	Dying probability	Life expectancy
x, y	qx	ex	qy	ey
40	0.00056570	44	0.00043015	46
45	0.00094720	39	0.00072316	41
50	0.00157579	34	0.00119636	36
55	0.00252333	30	0.00190203	32
60	0.00430052	25	0.00333004	27
65	0.00758094	21	0.00668436	22
70	0.01318251	17	0.01168035	18
75	0.02673679	13	0.02025390	14
80	0.04744705	10	0.03594424	11
85	0.08048723	7	0.06342273	8
90	0.13646467	5	0.11077097	6

The methodology used to set up this life table was presented to the Article 83 Working Group at the 27 June 2014 meeting (document 20140627 Art83_06). According to the decision taken at the same 2014 meeting, this table is to be updated on occasion of the five-yearly assessment.

Having the same Life Table been used also for the previous assessment, no impact on the contribution rate could be observed.

3.2.3   Life table (invalid persons)

It is normal actuarial practice to consider life expectancy of invalids as slightly shorter than that of healthy persons (e.g. Eurocontrol applies the mortality rate corresponding to a healthy person 3 years older than an invalid's age).

Eurostat has applied this actuarial practice since the 2008 pension assessment.

Having the same Life Table of invalids been used also for the previous assessment, no impact to the pension contribution rate could be observed.

3.2.4   Turnover

Active members of the PSEO (officials, temporary staff, contract staff and parliamentary assistants) will definitely stop activity one day for several reasons and eventually leave the PSEO pension scheme. Turnover takes account of that eventuality.

To facilitate computation, turnover has been divided in two types:

➢ Turnover due to end of contract validity (**T1**),

> ➤ Turnover due to voluntary and unexpected losses (**T2**). This mainly concerns resignation before the end of a contract, dismissal for incompetence and disappearance.

Losses due to other unexpected reasons (invalidity and death) and voluntary decisions (mainly secondment, retirement, inactive status according to Article 41 of SR, leave on personal grounds, leave for military service, parental or family leave) are excluded from the definition of turnover.

<u>T1. Turnover due to contract validity expiration</u>

Two assumptions have been used:

> ➤ The ratio of indefinite contracts to fixed-length contracts.

> ➤ Average duration of contracts in years.

Table XII shows the rates of both assumptions above by contract type, these rates being based on observations.

<u>T2. Turnover due to voluntary and unexpected losses</u>

The number of active staff who left institutions due to resignation, dismissal for incompetence and disappearance in the year *n* has been compared to the active population in the year *n-1* to obtain the yearly T2 by contract type. The rate to be used in the actuarial calculation has been computed as the average of the losses in the last five years (2009 to 2013) compared to active staff in 2008 to 2012.

Table XI. Turnover rates by contract types

Contract Types		T1 (end of contract) Contract Duration Average	T2 (other cause)
		2	3
AI1	FP. Contract with indefinite duration		0.000
BF1	TA. Fixed term contract. Art 8 and Art 2 (a)	5.7	0.010
BF2	TA. Fixed term contract. Art 8 and Art 2 (b)	5.7	0.005
BF3	TA. Fixed term contract. Art 8 and Art 2 (d)	5.9	0.002
BF4	TA. Fixed contract. Art 8 and Art 2(e)	n/a	n/a
BF5	TA. Fixed contract. Art 8 and Art 2 (f)	n/a	n/a
BI1	TA. Contract with indefinite duration. Art 8 and Art 2 (a)		0.007
BI2	TA. Contract with indefinite duration. Art 8 and Art 2 (c)		0.004
BI5	TA. Indefinite contract. Art 8 and ArArt 2(f)		0.033
DF1	CA. Fixed term contract. Art 85 and Art 3a	8.9	0.005
DF2	CA. Fixed term contract. Art 88 and Art 3b	2.7	0.007
DI1	CA. Contract with indefinite duration. Art 85 and Art 3a		0.005
EF1	PA. Fixed term contract. Art 130	4.9	0.005

Column 2: Contract duration is limited to 35 in indefinite contracts (AI1, BI1, BI2 and DI1). Cells in grey colour: na to indefinite contracts
Column 3. Turnover due to reasons other than decease, retirement, invalidity and T1 (end of contract)

According to the decision taken at the Art83 Working Group at its 27th June 2014 meeting, the turnover assumption is to be updated on occasion of the five-yearly assessment.

Having the same Turnover rates been used also for the previous assessment, no impact on the pension contribution rate could be observed.

3.2.5   Assumed retirement age

As stipulated in Article 4 of Annex XII to the Staff Regulations, it is assumed that all retirements will occur at a fixed average age (r).

The **"average retirement age"**, also named **"assumed retirement age"**, is implemented in the context of the present actuarial calculation, according to provisions in Annex XII of Staff Regulations. More precisely, article 4(3) of Annex XII stipulates that: *"It is assumed that all retirements (except for invalidity) will occur at a fixed average age (r). The average retirement age shall be updated only on the occasion of the five-yearly actuarial assessment referred to in Article 1 of this Annex and may be different for different groups of staff".*

Assumed retirement ages by staff category groups were first estimated for the 2004 pension assessment, and presented at the June 2004 meeting of the Article 83 Working Group.

Eurostat has set the assumed retirement age at **63, 64,** or **65** in compliance with article 52 of the SR and Article 22 of Annex XIII. These ages are influenced by the entry date in service, the years of service at 1st May 2004, the age at 1st May 2004 and the age at 1st May 2014.

Compared to the previous assessment, no change was done: the impact observed was consequently null.

3.2.6   Average difference between men and women

An average difference of 2 years in ages of married men and women at retirement has been applied in the present actuarial calculations.

Having the same average age difference between married men and women at retirement (2 years) been used also for the previous assessment, no impact on the calculated pension contribution rate was observed.

3.2.7   Probability of being married for men and women

Eurostat has analysed the recent population of officials and ex-officials older than 59 years and calculated their probability of being married: results were 81% probability for men and 49% for women: those probabilities have been applied to the present assessment.

Having the same probabilities of being married at retirement for officials and ex-officials, been used also for the previous assessment, no impact on the calculated pension contribution rate was observed.

3.2.8   Loading factor for orphan's and divorced spouse's pension

Current actuarial practice is to apply a loading factor to a payable reversion pension to allow for the pension payable to orphans after the death of the surviving spouse (or of the official if there is no surviving spouse) and any pension payable to divorced spouses. A 13% loading factor has been applied to the present assessment.

Having the same loading factor been used also for the previous year assessment, no impact on the contribution rate could be observed.

4   PSEO Pension Contribution Rate

4.1.   2017 Assessment

The PSEO has been assessed on the basis of the computation method set out in Chapter 2 of Annex XII of the Staff Regulations[3].

The 2017 actuarial assessment of the Pension Scheme for European Officials (PSEO) indicates that, in order to guarantee the equilibrium of the scheme, the yearly pension contribution rate (PCR) necessary to finance one third of the benefits payable would be **9.8%** of the basic salary (or invalidity or termination of service allowance). This actuarial assessment has been made in accordance with the agreed methodology.

The 9.8% calculated pension contribution rate is one third of the ratio between:

➢ the service cost (1 343 million Euros), and

➢ the total of annual basic salaries and invalidity and termination allowances, 4 575 million Euros (see Tables XII and XIII).

Table XII.   Breakdown of the (calculated) contribution rate

Service cost	Total Contribution Rate (3/3)	Staff Contribution Rate (1/3)
Service cost for retirement	27.1%	9.0%
Service cost for invalidity	1.3%	0.4%
Service cost for death	0.9%	0.3%
Total service cost	**29.3%**	**9.8%**

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[3] The methodology is further explained in a separate document available at Eurostat

Table XIII.   Service cost and total amount of annual basic salaries

Service cost	Total (€ m)	%
- Service cost for retirement	1 241.2	92.4%
- Service cost for invalidity	59.7	4.4%
- Service cost for death	41.8	3.1%
Total service cost	**1 342.7**	**100.0%**
Total annual basic salaries and invalidity and termination allowances	**4 575.2**	

4.2. PCR Change

Changes to the pension contribution rate result from the combined effect of changes in the population structure and in actuarial assumptions. The separate impact of these changes in the officials' contribution rate change is not easy to determine due to their interdependency, although the analysis of the actuarial assumptions allows a better understanding of the changes in contribution rate and its sensitivity to the various actuarial assumptions.

The combined impact of:

➢ the new population of PSEO contributing members, and

➢ the amendments to certain assumptions,

was null.

In particular it has been estimated that the changes to the population of PSEO contributing members, made the pension contribution rate increase by 0.2 %.

At the same time it has been estimated that the cumulated changes to actuarial assumptions used in the present assessment, made the pension contribution rate decrease by 0.2 %:

➢ the increase of the Real Discount Rate (from 2.9% used in 2016 to 3.1% of the present assessment), has determined a -0.5% decrease of the PCR,

➢ the increase of the General Salary Growth (from -0.1% used in 2016 to 0.0% of the present assessment), has determined a +0.3% increase of the PCR.

Table XIV summarises the impact of these changes.

Table XIV. Explanation of the change between the 2016 and 2017 calculated pension contribution rates

Items	Change breakdown
2016 assessment	**9.8**
New Populaion	0.2
Real Discount Rate	-0.5
General Salary Growth	0.3
2017 assessment	**9.8**

In accordance with the art. 83a.4, the pension contribution rate paid by the staff will not be updated being the gap lower than 0.25%.

Thus the previous pension contribution rate (9.8%) will also be applied for the period between 1 July 2017 and 30 June 2018.

5   Technical implementation of Annex XII to the Staff Regulations

Technical questions raised by the implementation of Annex XII were dealt with by Eurostat in cooperation with national experts from the relevant departments of the Member States participating in the Working Group on Article 83 of the Staff Regulations.

Eurostat also exchanges relevant information on actuarial issues with international organisations such as the European Central Bank (ECB), the European Investment Bank (EIB), the ISRP (International Service for Remunerations and Pensions of the Coordinated Organisations), the EPO (European Patent Office) and Euro-Control.

6   Independent examination

In accordance with Annex XII, Article 13, of the Staff Regulations, Eurostat was assisted by a qualified independent expert with regard to the methodological implementation and the definition and calculation of the corresponding actuarial assumptions.

The independent expert conducted an actuarial examination of the contribution rate calculated by Eurostat. This examination consisted in confirming the relevance and reliability of the actuarial processes and assumptions used in accordance with the methodology described in Annex XII to the Staff Regulations.

For the aspects not described explicitly in Annex XII, the independent expert checked their compliance with generally accepted actuarial practices. Concerning actuarial assumptions, the independent expert carried out investigations to ensure that the underlying data provided by Eurostat were used correctly.

A summary of the assessment by the independent expert is included in Appendix II to this report.

An independent expert conducted an actuarial examination of the contribution rate calculated by Eurostat. This examination confirmed the relevance and reliability of the actuarial processes and assumptions used in accordance with the methodology described in Annex XII to the Staff Regulations. For the elements not described explicitly in this Annex, the independent expert checked their compliance with generally accepted actuarial practices. Regarding the actuarial assumptions, the independent expert carried out tests to ensure that the underlying data provided by Eurostat were used correctly.

The independent expert report concluded that:

"The estimated value of the (provisional) official's contribution rate calculated by Eurostat (9,8 %) corresponds to the appropriate confidence interval for the fair value of the relevant contribution rate as at 31st of December 2016, in accordance with Annex XII "Rules for implementing Article 83a of the Staff Regulations" and standard actuarial practice".

The complete independent expert report on the actuarial examination of the contribution rate is available from Eurostat.