



Actuarial Study for the Period 2019-2029

ILO Staff Health Insurance Fund (SHIF)

Presentation for January 2020 meeting



Table of contents

1. Executive Summary	4
1.1. Executive Summary	5
2. Introduction	6
2.1. The SHIF and its funding	7
2.2. Objectives for the study	9
2.3. Additional Analysis Added After September Meeting	10
3. Historical information and census data	11
3.1. Trend in number of SHIF members / census data	12
3.2. History of contributions and expenditure	14
3.3. History of Guarantee Fund	15
3.4. Rate of Return on Guarantee Fund	16
3.5. Impact of exchange rates	17
4. Calculation methodology and tools	19
4.1. Aon actuarial model	20
4.2. Plan definition—contributions and benefits	21
4.3. Assumptions for base-line scenario	22
5. Demographic projection results – base-line scenario	29
5.1. Projected Headcount	30
5.2. Average Age	31
6. Financial projection results	32
6.1. Base-line scenario	33
6.2. Optimistic scenario	38
6.3. Contribution Rate Increase	43
6.4. Scenario 1—Exchange rate variations	47
6.5. Scenario 2—Include Interns and Short-Term staff	51
6.6. Scenario 3—Exclude LTC Reimbursement from Supplementary Benefits	52
6.7. Scenario 4—Part-time Salary	54

7. Next steps	56
7.1. Description of next steps	57
8. Appendices	58
8.1. Appendix 1—Development of claims and contributions	59
8.2. Appendix 2—Development of Guarantee Fund.....	60
8.3. Appendix 3— Demographic Projections Base-line.....	61
8.4. Appendix 4— Claims cost—results of experience study.....	62
8.5. Appendix 5— Detailed Projections of Guarantee Fund.....	63
8.6. Appendix 6— SHIF projection assumptions.....	65
8.7. Appendix 7— Summary of benefit provisions and contribution rates.....	72
8.8. Contact details.....	76

1. Executive Summary



1.1. Executive Summary

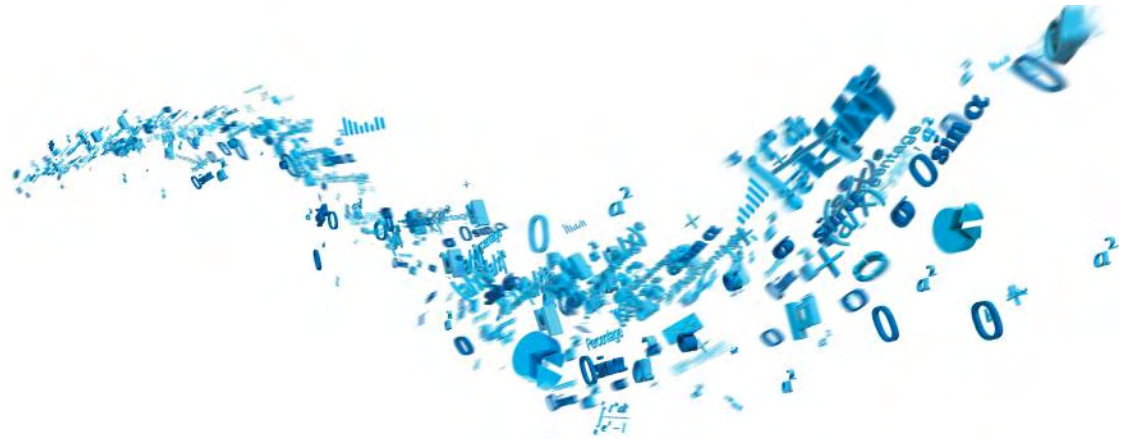
To ensure that the SHIF remains solvent in the future, the SHIF requested a projection of the cash flow and the resulting Guarantee Fund during a 10-year projection period starting on January 2019. This study follows the methods used in the previous study that was conducted in January 2016.

The projection is based on census data effective 31 October 2018 as well as historical data on contributions and cash flow. The historical data have been used in setting the assumptions for the actuarial study, together with assumptions for the After Service Health Insurance calculations produced for the United Nations' financial statements.

The projection of the SHIF Guarantee Fund shows the following key results:

- During 2016-2018, the Guarantee Fund paid out about USD 850,000 more in claims reimbursements than it received in contributions. This is in part due to an increase in the number of retirees relative to active staff in 2016.
- Based on the given assumptions, the projections show that the claims reimbursements will increase quicker than contributions resulting in a fast deterioration of the Guarantee Fund. The main reason for the rapid increase in claims reimbursements is the projected ageing of the (especially inactive) population. This ageing, combined with assumed claims costs that increase very strongly with age, results in a rapid increase of the overall claims.
- Under the base-line scenario, the Guarantee Fund is projected to fall below the minimum statutory threshold by 2027. The base-line scenario is referred to as 'conservative' later in this material as certain assumption could be viewed as having a prudent outlook of the expected developments over the next 10-years.
- Under the optimistic scenario, certain assumptions have been adjusted to reflect more favorable expectations over the next 10 years. If these favorable assumptions are realized, the Guarantee Fund is projected to remain within the statutory minimum threshold through 2029. However, there still remains a projected annual deficit of claims reimbursements in excess of contributions.
- Projection scenarios shown here include possible changes to reimbursement benefits and contribution rates which could be implemented to keep the Guarantee Fund within the statutory threshold through 2029.

2. Introduction



2.1. The SHIF and its funding

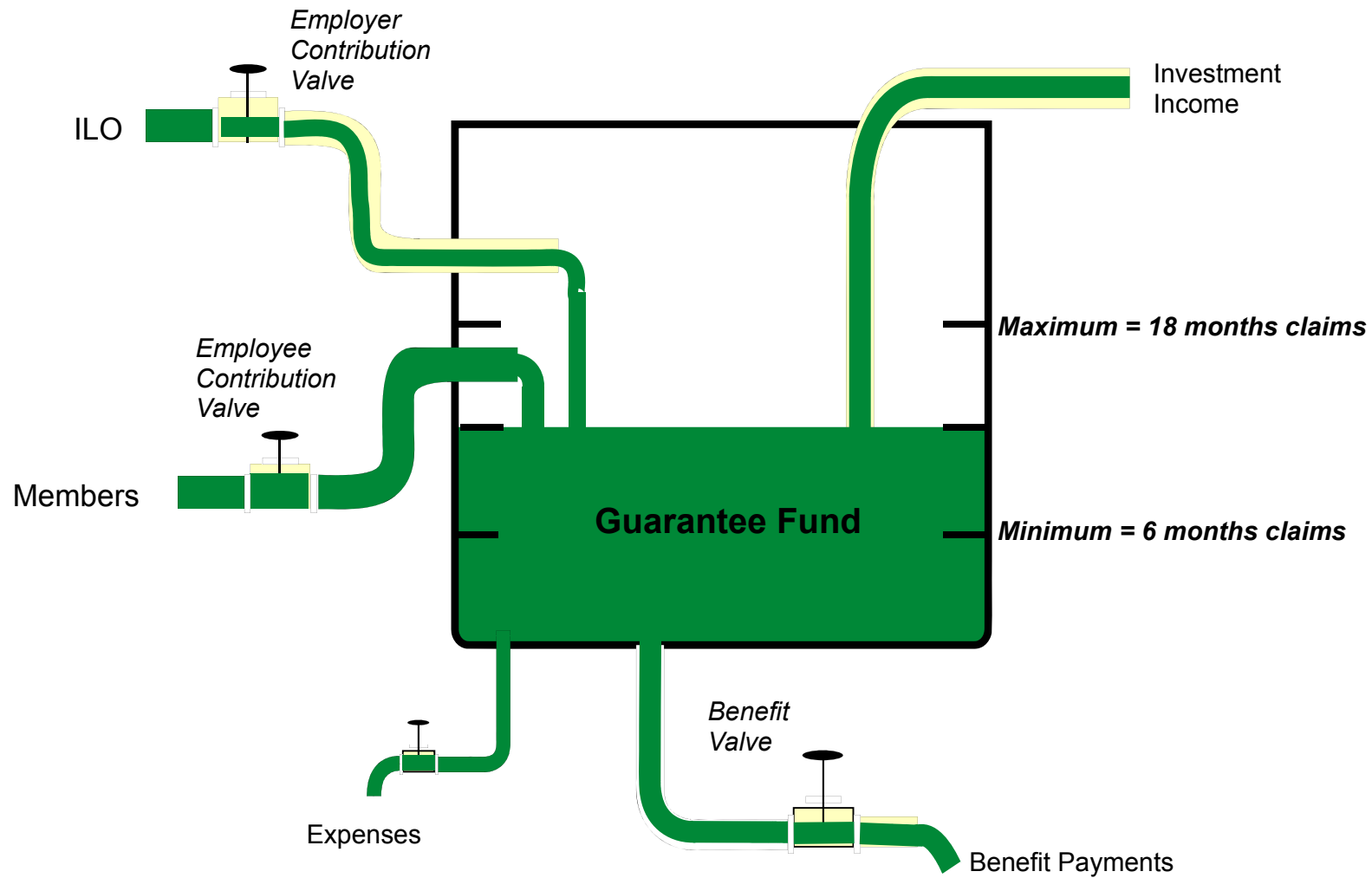
2.1.1. The SHIF

- The Staff Health Insurance Fund (“SHIF”) is a health insurance entity covering (current and former) staff members of the International Labour Organization (“ILO”) as well as their spouses, children and surviving beneficiaries.
- The SHIF is a self-administered fund.
- The purpose of the SHIF is to finance the health benefits of the SHIF members.
 - For this purpose, the SHIF receives contributions from members and from the ILO
 - The contribution rates were most recently increased as of January 1, 2017.
 - The SHIF pays the benefit claims by the staff members, eligible former staff members and their covered family members.

2.1.2. Funding policy

- The SHIF’s solvency is maintained through a Guarantee Fund, whose year-end amount must be between 1/6th and 1/2nd of total benefits paid over the last three-year period.

2.1.3. Graphical representation of the SHIF



2.2. Objectives for the study

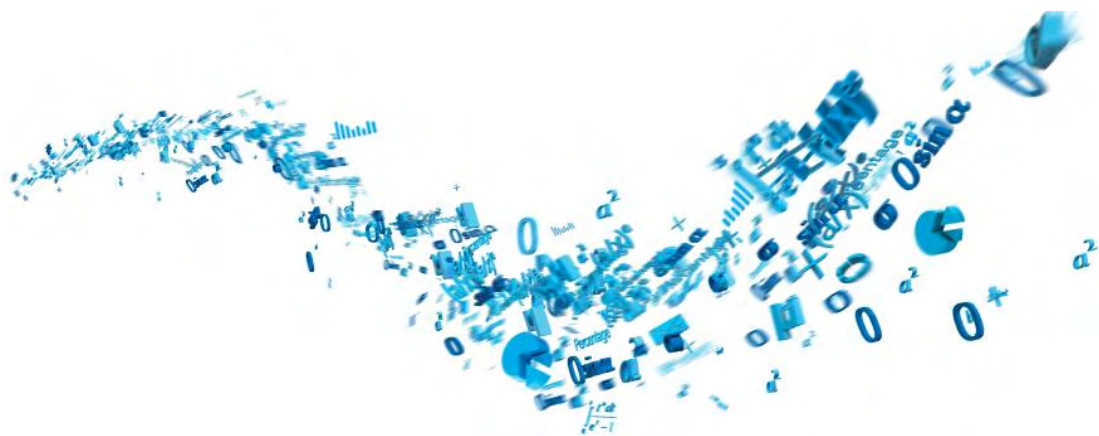
- To ensure that the SHIF remains solvent into the future, the ILO has appointed Aon to conduct an actuarial study of the Staff Health Insurance Fund (“SHIF”) to assess the level of future contributions needed to ensure that the Guarantee Fund stays within the defined corridor during a 10-year projection period beginning January 2019.
- This study includes an actuarial valuation as of January 1, 2019 with projection results for the period 2019 – 2029, and an analysis of the experience of the SHIF during the period 2015 to 2018, which has been used to establish the assumptions for the actuarial study.
- Specifically, the study shows:
 - Projected growth in the SHIF expenditure and income, and of the resulting Guarantee Fund;
 - Calculations for the period 2019 to 2029 (starting on January 1, 2019);
 - “What-if” scenarios and sensitivities as defined by the SHIF.
- Similar studies have been performed in the past. The most recent study was as of January 1, 2016, covering a projection period from 2016 to 2026.

2.3. Additional Analysis Added After September Meeting

Following the Presentation at the September 2019 meeting, ILO has requested additional analysis:

1. adjustment for actual claims reimbursements during 2019 (approximately USD 48 million) compared to the USD 49-50 million projected amount in the September analysis. The adjustments to the medical claims projection is applied to all scenarios;
2. scenario analysis for an increase in contribution rate for all members and beneficiaries by 2% per year as well as for the ILO starting in 2022 and an estimation of what increase would need to be applied only on spouse contributions to equal to global 2% increase;
3. scenario analysis if LTC (in an institution and at-home) were to be excluded from supplementary benefits;
4. scenario analysis if part-time staff were to have the threshold for supplementary benefits and contribution amount based on real part-time salary (rather than full-time salary).

3. Historical information and census data



3.1. Trend in number of SHIF members / census data

We received information from the ILO about the SHIF membership. The tables below show a summary of the data over the recent years.

3.1.1. Trend in number of paying SHIF members

Trend in the number of paying SHIF members

Number of paying members at year-end	2015	2016	2017	2018	Change over 3 years
Active staff	3,159	3,121	3,139	3,265	+3.4%
Retirees	1,911	1,960	1,971	1,946	+1.8%
Surviving spouses	406	412	412	412	+1.5%
Total	5,476	5,493	5,522	5,623	+2.7%
Ratio inactives/actives	73%	76%	76%	72%	(1.5%)

Since the end of 2015, there has been an increase in total SHIF paying members. The increase in active staff members was more significant than the increase in retirees and surviving spouses, resulting in a slight reduction in the ratio of inactives/active staff.

3.1.2. Census data

There has been an increase in the average age of all SHIF members since 2016. The average age of active staff, retirees and surviving spouses separately has also increased.

Census data

	As of 01 January 2016				As of 01 November 2018			
	Total Number	Average Age	Average Service	Percent Male	Total Number	Average Age	Average Service	Percent Male
Active staff	3,159	45.5	9.5	46	3,265	45.9	9.6	45
Retirees	1,911	73.2	-	52	1,946	73.8	-	50
Surviving spouses	406	77.0	-	5	412	78.6	-	6
Total	5,476	57.5	-	45	5,623	58.0	-	44

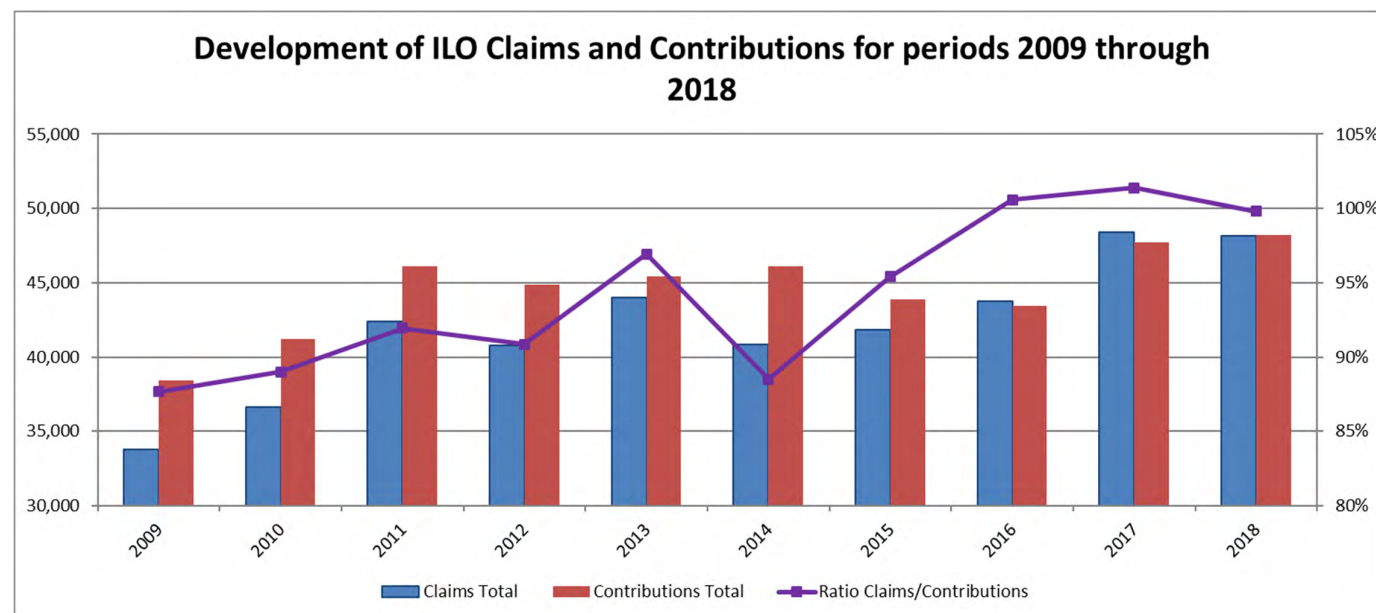
The table below splits the active staff headcount and average salary used in this actuarial study by age and sex. On average, there is a noticeably higher salary for older staff members.

Average salary for active staff members by age and sex

	Headcount as of 01 November 2018			Average Pensionable Remuneration as of 01 November 2018		
	Males	Females	Total	Males	Females	Total
Age						
less than 30	33	78	111	43,900	51,500	49,200
30-34	127	232	359	56,900	60,400	59,200
35-39	187	291	478	73,900	70,400	71,800
40-44	270	309	579	80,000	92,200	86,500
45-49	255	321	576	113,700	112,400	113,000
50-54	280	245	525	135,500	123,600	130,000
55-59	224	211	435	147,400	130,700	139,300
60+	98	104	202	178,600	135,500	156,400
Total	1,474	1,791	3,265	109,600	97,700	103,100

3.2. History of contributions and expenditure

USD x 1,000



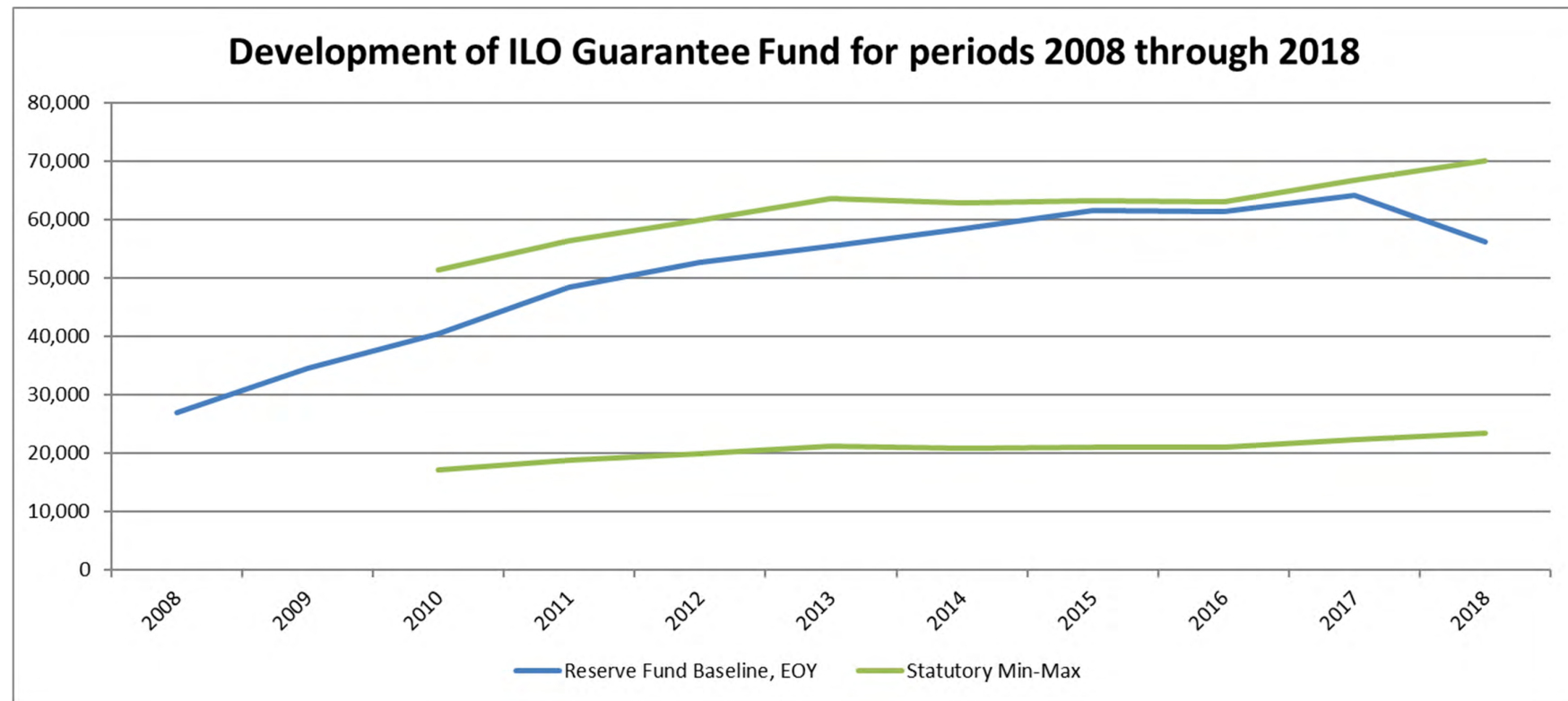
The graph above shows the actual claims and contributions from 2009-2018 (bars graphed on left axis) and the ratio of claims/contributions as a percentage (line graphed on right axis).

While the graph shows volatility in the ratio of the claims over the contributions, there is an upward trend in the ratio of reimbursements over contributions in the last 10 years. Claims reimbursements exceeds contributions in 2016 and 2017 and was slightly below 100% in 2018

The upward trend of claims over contributions is partly due to the increase in average age of the population in the recent past.

3.3. History of Guarantee Fund

USD x 1,000



The blue line on the graph below shows the historical development of the SHIF Guarantee Fund from 2008 to 2018 in comparison with the upper and lower bands of the “corridor” defined in the SHIF funding policy.

There was a transfer of funds to ITU during 2018 leading to a reduction in the Guarantee Fund assets.

3.4. Rate of Return on Guarantee Fund

USD x 1,000

Historical returns on SHIF assets

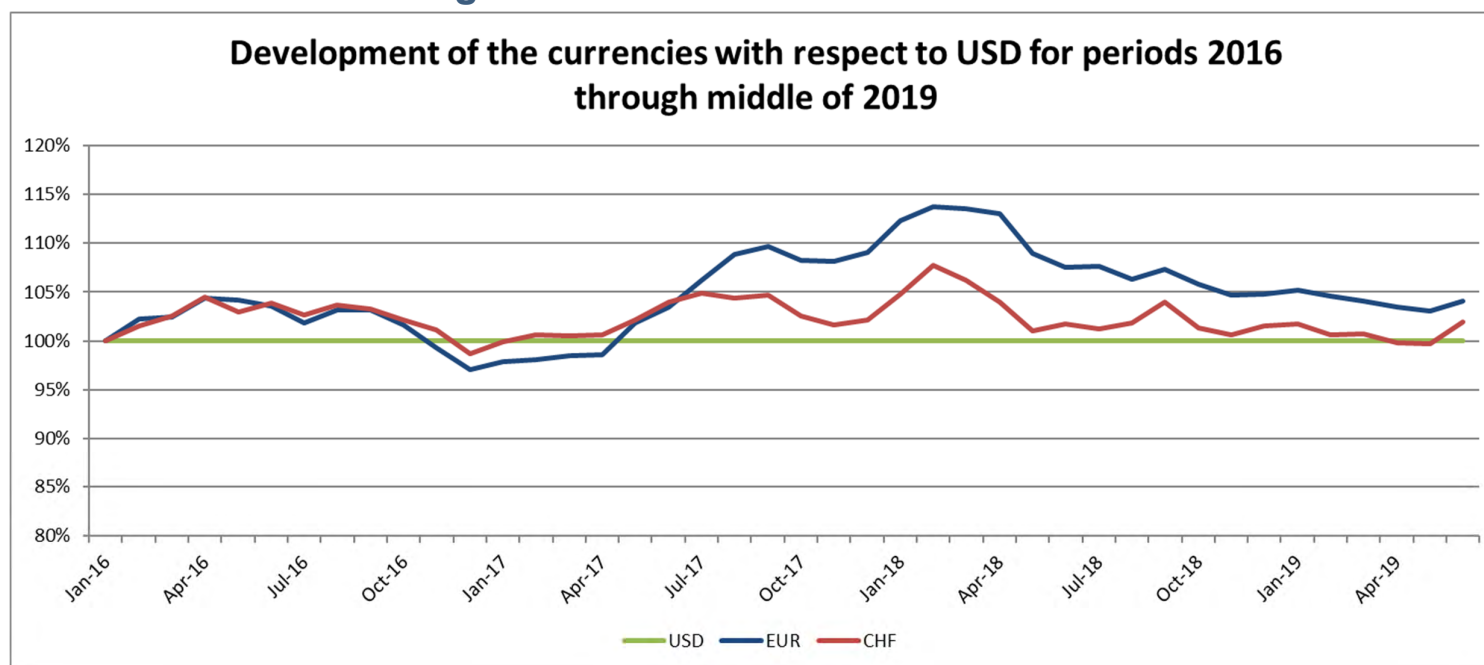
All amounts are in USD x 1,000	2016	2017	2018	2019	2016-2019
Gross Assets at start of year	78,228	77,928	79,750	70,286	78,228
Contributions	43,489	47,748	48,219		139,456
Claims reimbursements	(43,752)	(48,414)	(48,132)		(140,298)
Special Transfer Out (ITU)			(9,120)		(9,120)
Currency revaluation	(1,851)	1,693	(1,223)		(1,381)
Investment income	1,814	796	792		3,402
Actual return on assets	2.4%	1.0%	1.1%		1.7%

There was an investment income of about 1.7% per year over the past three years.

Despite the positive investment returns, the Guarantee Fund assets decreased due to a special transfer to ITU, unfavorable currency revaluation and claims reimbursements in excess of contributions.

3.5. Impact of exchange rates

3.5.1. Historical exchange rates



The contributions are levied on the salaries, which are linked to different currencies, and the claims are also paid in various currencies. The distribution of contributions and claims among the currencies differ. Therefore, the exchange rates have a significant impact on the development of the Guarantee Fund.

The graph shows the movements in the main exchange rates that affect the SHIF. It shows the depreciation of USD compared to CHF and EUR during late 2017 following by a steady appreciation through the middle of 2019.

3.5.2. Claims by exchange rate group

All amounts are in USD x 1,000	2015	2016	2017	2018
Original exchange rates				
Claims in CHF	27,474	28,658	32,102	31,025
Claims in EUR	6,270	6,331	7,200	7,916
Claims in USD	1,910	1,580	2,452	1,759
Claims in other currencies	5,783	6,042	6,537	6,799
Total	41,437	42,611	48,291	47,499
At 31 December 2018 exchange rates				
Claims in CHF	27,002	28,585	32,085	30,738
Claims in EUR	6,445	6,530	7,331	7,666
Claims in USD	1,910	1,580	2,452	1,759
Claims in other currencies	5,049	5,653	5,998	6,489
Total	40,406	42,348	47,866	46,652
Percentage difference				
Claims in CHF	-1.7%	-0.3%	-0.1%	-0.9%
Claims in EUR	2.8%	3.1%	1.8%	-3.2%
Claims in USD	0.0%	0.0%	0.0%	0.0%
Claims in other currencies	-12.7%	-6.4%	-8.2%	-4.6%
Total	-2.5%	-0.6%	-0.9%	-1.8%

4. Calculation methodology and tools



4.1. Aon actuarial model

- Aon has developed a **sophisticated actuarial model** to project future expenditure and contributions for health insurance plans of intergovernmental organizations. We have successfully applied this model for similar projections in the past, including previous ILO SHIF studies. This model has the following features:
 - It is an **open group model**, i.e. it considers new entrants either to replace staff members leaving the active workforce because of death, disability, retirement, withdrawal, or to reflect growth (or reduction) of the organization's headcount;
 - It is **deterministic**, i.e. it uses specific assumptions to project expected future cash flows;
 - It considers **different contribution rates** depending on the status of the insured person (single, married, married with children) by applying an assumption reflecting the probability of being single, married, married with children at each age. This assumption is developed as part of the experience study according to census data;
 - The model also considers standard **actuarial decrement rates** (death, disability, withdrawal, retirement/early retirement) and includes **financial assumptions such as salary increases, claims costs, medical inflation**;
 - It is **flexible** so can quantify the impact of varying changes in assumptions on the projection results.

4.2. Plan definition—contributions and benefits

4.2.1. Benefit Provisions

- We are not aware of any significant changes in the benefit provisions (e.g. medical claim reimbursement levels, etc.) since the previous SHIF study that would affect the future medical claims cost assumption.
- Medical claims assumptions will be established based on experience over the past four years (i.e., 2015 through 2018) with the assumption that this experience will be indicative of future claims levels.

4.2.2. Contributions

- The contribution level has remained at the same level since 1 January 2017.
 - Contributions paid by a member are equal to 3.55% of the base amount defined by the plan (either salary for actives or UNJSPF pension for retirees)
 - Dependent Spouses covered pay 30% of the member's contribution (i.e., 1.07% of base amount)
 - The first dependent child covered contributes 10% of the member's contribution (i.e., 0.36% of base amount). An extra flat rate of 10% of the member's contribution will need to be contributed for all other dependent children covered
- Contributions paid by the organization on behalf of actives are equal to the member contributions.
- Contributions paid by the organization on behalf of retiree are two times the member contributions.
- Certain voluntary members who do not qualify for dependent status are also allowed to be covered by the SHIF, and the member pays the full cost of coverage.

4.3. Assumptions for base-line scenario

4.3.1. About the assumptions

- The table below shows the assumptions for the base-line scenario as well as historical assumptions used to support the proposals, including:
 - The assumptions used in the ASHI valuation as of 1 January 2016;
 - The assumptions used in the SHIF study as of 1 January 2016;
 - The assumptions used in the ASHI valuation as of 1 January 2019;
 - The assumptions used in the SHIF study as of 1 January 2019.
- In general, the ASHI assumptions are prescribed by the ILO for the actuarial valuation—they are set equal to the UNJSPF pension plan long-term assumptions. SHIF projection assumptions are based on near-term expectations in order to produce appropriate best estimate of results over the 10-year projection period.
- The base-line assumptions for the 2019 study may be viewed as a prudent, or conservative, expectation of future developments. An alternative scenario with more favorable, or optimistic, assumption is described and presented later in this material.

Table with assumptions

	1 January 2016		1 January 2019		Comments
	ASHI assumptions	SHIF base-line assumptions	ASHI assumptions	SHIF base-line assumptions	
1. Economic assumptions					
Consumer price inflation	3.0%	1.5%	2.5%	2.5%	Aligned SHIF with ASHI inflation of 2.5% based on UN assumptions of inflation underlying actual UNJSPF indexation
Indexation of pensions in payment	Same as inflation	Same as inflation	Same as inflation	Same as inflation	
Expected return on plan assets	Not used	Inflation + 0.5% = 2.0% (net of investment fees)	Not used	1.0%	
Salary inflation rate	3.5%	Inflation + 0.5% = 2.0%	3.5%	3.5%	
Salary merit rate	UNJSPF 2013 age-graded tables for General and Professional Staff GS: 3.8% at age 25 - 1.5% at age 60 PS: 5.1% at age 25 - 1.0% at age 60	ASHI salary merit tables, weighted between GS and PS tables based on current split	UNJSPF 2017 age-graded tables for General and Professional Staff GS: 3.3% at age 25 - 1.0% at age 60 PS: 4.6% at age 25 – 0.5% at age 60	ASHI salary merit tables, weighted between GS and PS tables based on current split	

	1 January 2016		1 January 2019		Comments
	ASHI assumptions	SHIF base-line assumptions	ASHI assumptions	SHIF base-line assumptions	
Exchange rates	Actual rates with no projection or averaging	Rates at December 2015 projected to remain level	Actual rates with no projection or averaging	Rates at December 2018 projected to remain level	

2. Demographic assumptions

Turnover rates	Sex distinct age graded table: M: 9.55% at age 25 – 4.78% at age 55 F: 8.74% at age 25 – 2.06% at age 55	Same as ASHI assumption for ILO entity	Sex distinct age graded table: M: 9.00% at age 25 – 2.75% at age 55 F: 9.00% at age 25 – 2.00% at age 55	Same as ASHI (5.5x higher for TC members)	2017 experience study was used to set latest ASHI rates
Disability rates	Sex distinct age graded table: GS: M: 0.02% at age 25 – 0.22% at age 60 F: 0.03% at age 25 – 0.38% at age 60	ASHI disability tables, weighted between GS and PS tables based on current headcount split	Sex distinct age graded table: GS: M: 0.02% at age 25 – 0.22% at age 60 F: 0.03% at age 25 – 0.38% at age 60	ASHI disability tables, weighted between GS and PS tables based on current headcount split	No change to UNJSPF tables in 2017
Retirement rates	2013 UNJSPF retirement tables by GS / PS and NRA according to UNJSPF rules	ASHI retirement tables, weighted between GS and PS tables based on current headcount split	2017 UNJSPF retirement tables by GS / PS and NRA according to UNJSPF rules	ASHI retirement tables, weighted between GS and PS tables based on current headcount split	

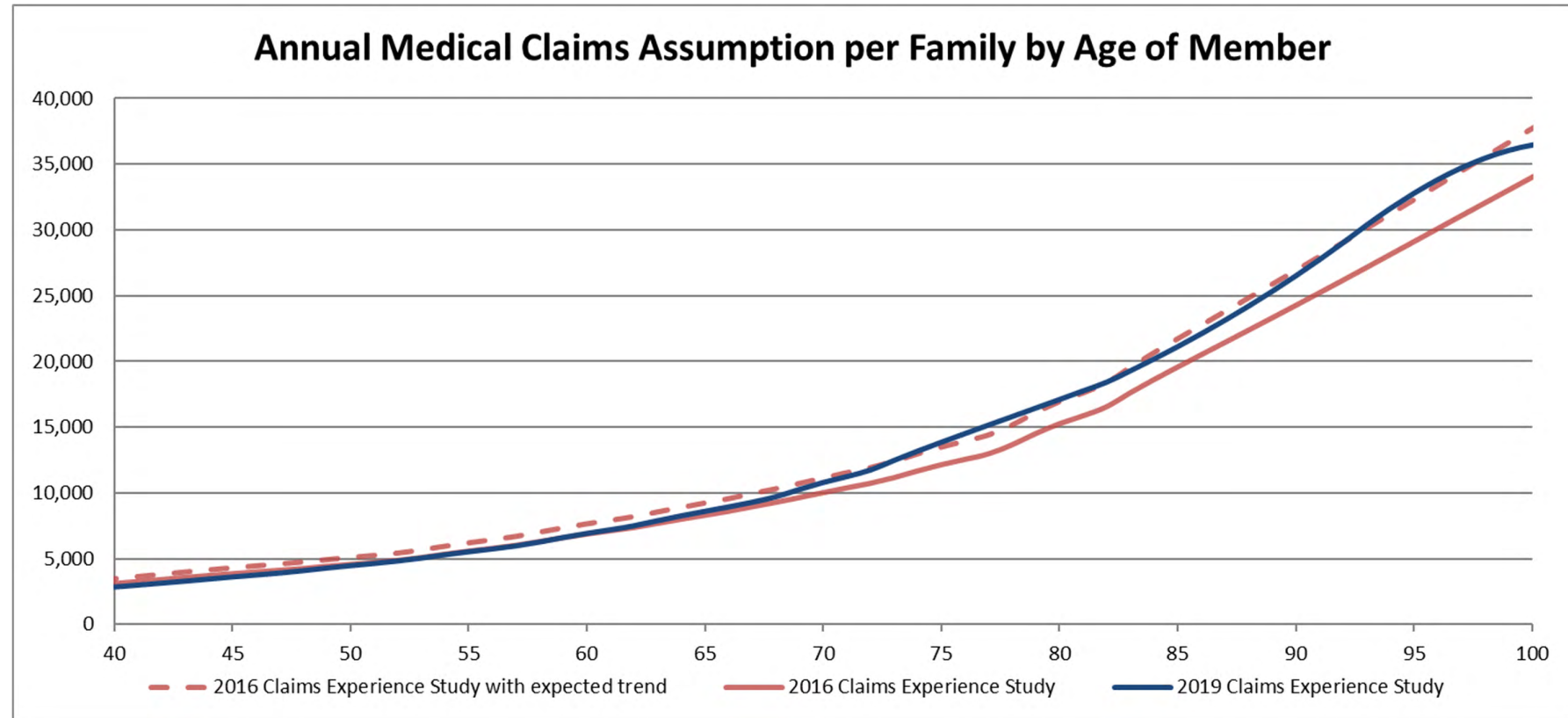
	1 January 2016		1 January 2019		Comments
	ASHI assumptions	SHIF base-line assumptions	ASHI assumptions	SHIF base-line assumptions	
Mortality rates	2013 UNJPSF Mortality table with projected improvements from base year 2007 to 2011	2013 UNJPSF Mortality table with projected improvements from base year 2007 to 2033	2017 UNJPSF Mortality table with projected improvements from base year 2017 to 2037	2017 UNJPSF Mortality table with projected improvements from base year 2017 to 2024	SHIF mortality projection only made until 2024 as the mid-point of the 10-year horizon in the study
% of actives electing retiree coverage	97.5%	97.5%	97.5%	97.5%	
Coverage status for members with spouses and children	Based on individual	Determined by participant age and distribution of actual coverage status distribution of current participants	Based on individual	Determined by participant age and distribution of actual coverage status distribution of current participants	
% Marital status	75% of males, 25% of females	75% of males, 25% of females	75% of males, 25% of females	75% of males, 25% of females	
Spouse age difference	5 years	Implicit in claims / coverage status assumption	5 years	Implicit in claims / coverage status assumption	

	1 January 2016		1 January 2019		Comments
	ASHI assumptions	SHIF base-line assumptions	ASHI assumptions	SHIF base-line assumptions	
3. Medical assumptions					
Medical inflation—initial	4.0%	Inflation + 2.0% =3.5%	3.5%	Inflation + 2.0% =3.5%	
Medical inflation—ultimate	3.0%	Inflation + 1.0% =2.5%	3.2%	Inflation + 1.0% =2.5%	
Year ultimate inflation reached	2020	2023	2021	2029	
Claims cost	For retirees by individual, trended forward from 2012 Experience Study w/ sample rates: M: \$9,018 at age 65 - \$14,164 at age 90 F: \$8,536 at age 65 - \$13,407 at age 90	For actives and retirees by family, weighted average of four years' history (2012-2016)	For retirees by individual, trended forward from 2016 Experience Study w/ sample rates: M: \$6,848 at age 65 - \$20,280 at age 90 F: \$6,503 at age 65 - \$20,280 at age 90	For actives and retirees by family, updated weighted average of four years' history (2015-2018), then adjusted for actual 2019 claims reimbursements	
Administrative expenses	\$150 per insured per year	Paid outside SHIF assets	\$151 per insured per year	Paid outside SHIF assets	
IBNR	Implicit in claims	Average IBNR over past 4 years	Implicit in claims	Average IBNR over past 4 years	

	1 January 2016		1 January 2019		Comments
	ASHI assumptions	SHIF base-line assumptions	ASHI assumptions	SHIF base-line assumptions	
4. New entrant profile					
Percent of actives who elect retiree coverage	Not used for ASHI	Weighted average based new hires in the past two years	Not used for ASHI	Weighted average based new hires in the past two years	
Population growth		0%		0%	
General salary projection		Same as inflation		Same as inflation	

4.3.2. Claims cost—results of experience study

USD x 1



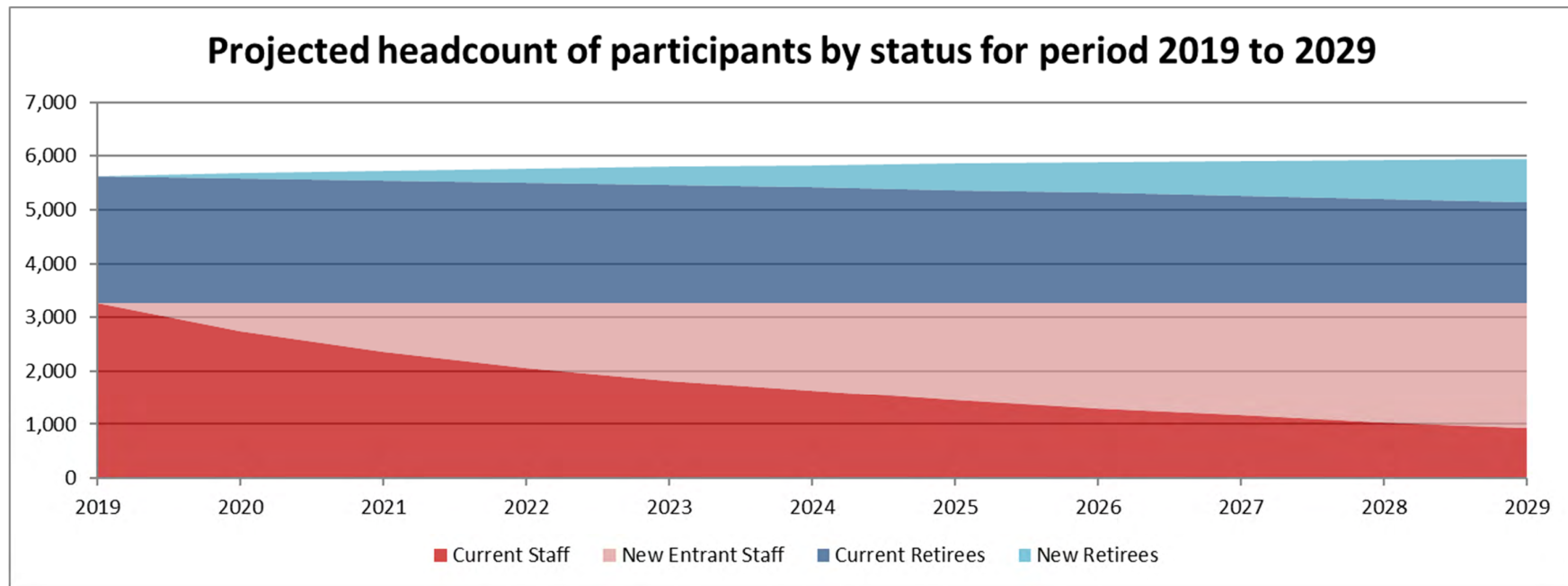
The graph above shows the result of the experience study of the claims costs conducted by Aon. Cost in USD is expressed as the medical claims per family by age of the main member.

The claims cost, expressed in USD, from the 2019 claims experience study is very similar to the previous results from the 2016 study (after adjusting for medical trend inflation). The 2019 medical claims assumption has been adjusted to be similar to actual 2019 claims reimbursement amount approx. USD 48m.

5. Demographic projection results – base-line scenario

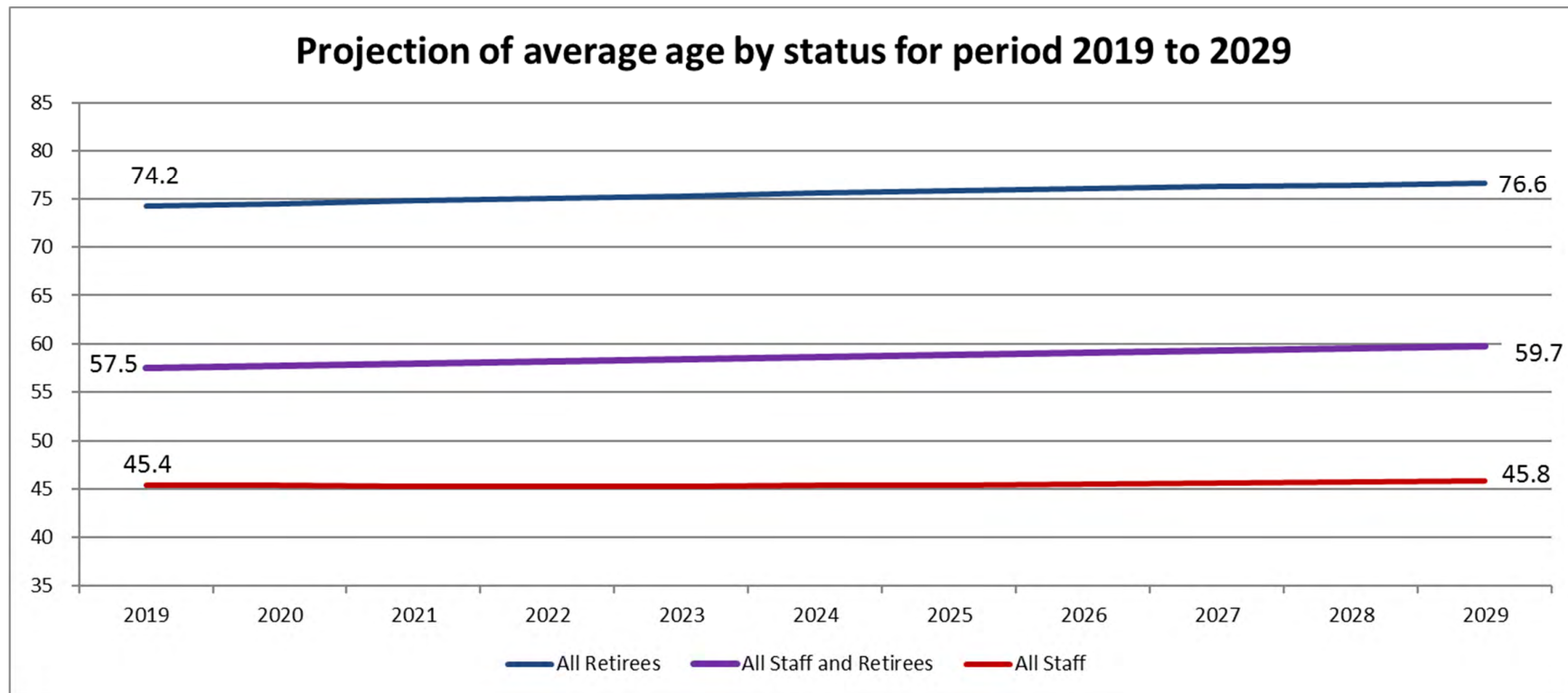


5.1. Projected Headcount



The graph above shows the breakdown of the headcount in the 10-year projection between staff members (current and future active staff), and retirees (current and new retirees) under the base-line conservative scenario, where the total number of active staff members remains constant. The number of new entrants is significant, and the assumptions for these new entrants are, therefore, quite important for the projection.

5.2. Average Age



The graph above shows the projection of the average age, separately for staff members and retirees, and the average ages stated within the graph show the increase in average age for staff members and retirees/beneficiaries each year.

The demographic projection, which is based on the assumptions outlined in section 3.3., shows a projected increase in the average age due to a greater portion of retirees and that retirees are projected to be live longer in the future.

6. Financial projection results



6.1. Base-line scenario

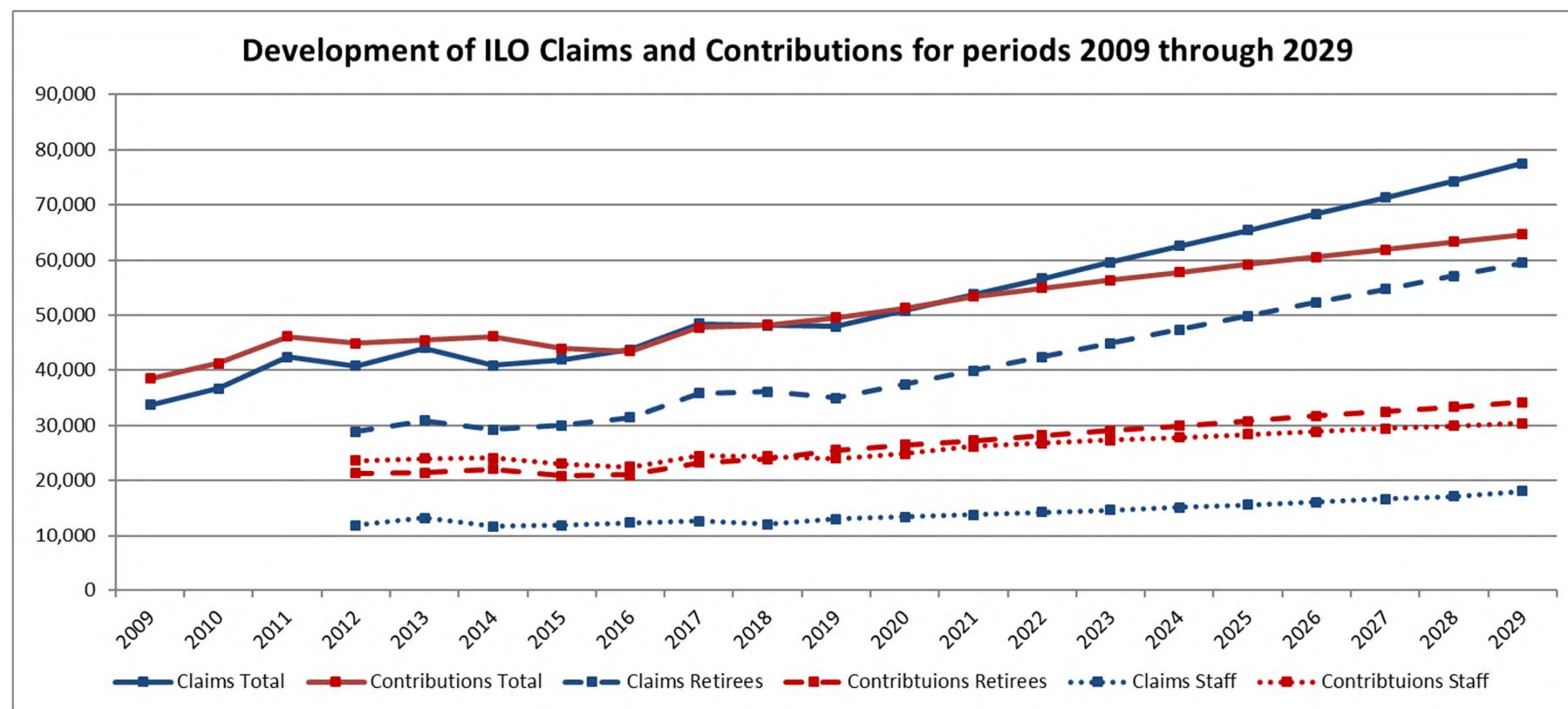
6.1.1. Description of scenario

The base-line scenario is based on the current benefit provisions and contribution levels and on the assumptions described in the assumptions section.

This scenario may be viewed as having a prudent, or conservative, outlook of developments over the next 10 years.

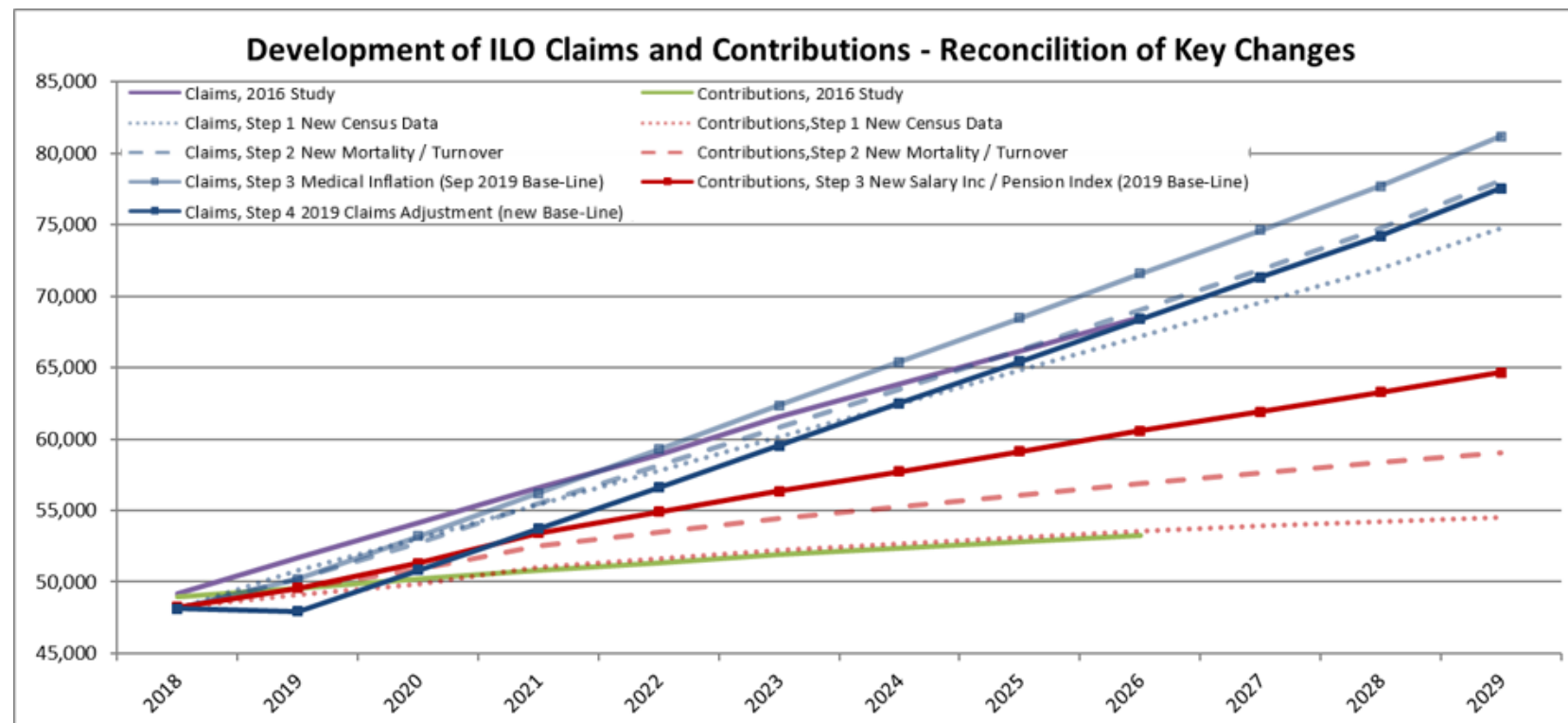
6.1.2. Contributions and expenditure

USD x 1,000



The graph above shows the projection of claims and contributions, split between staff (dotted lines) and retirees (dashed lines). The claims for the retirees are assumed to increase rapidly, mainly because of the ageing of the inactive population combined with the rapid progression of claims cost as the age increases.

USD x 1,000 (Scale of graph differs for previous slide to better show the differences)

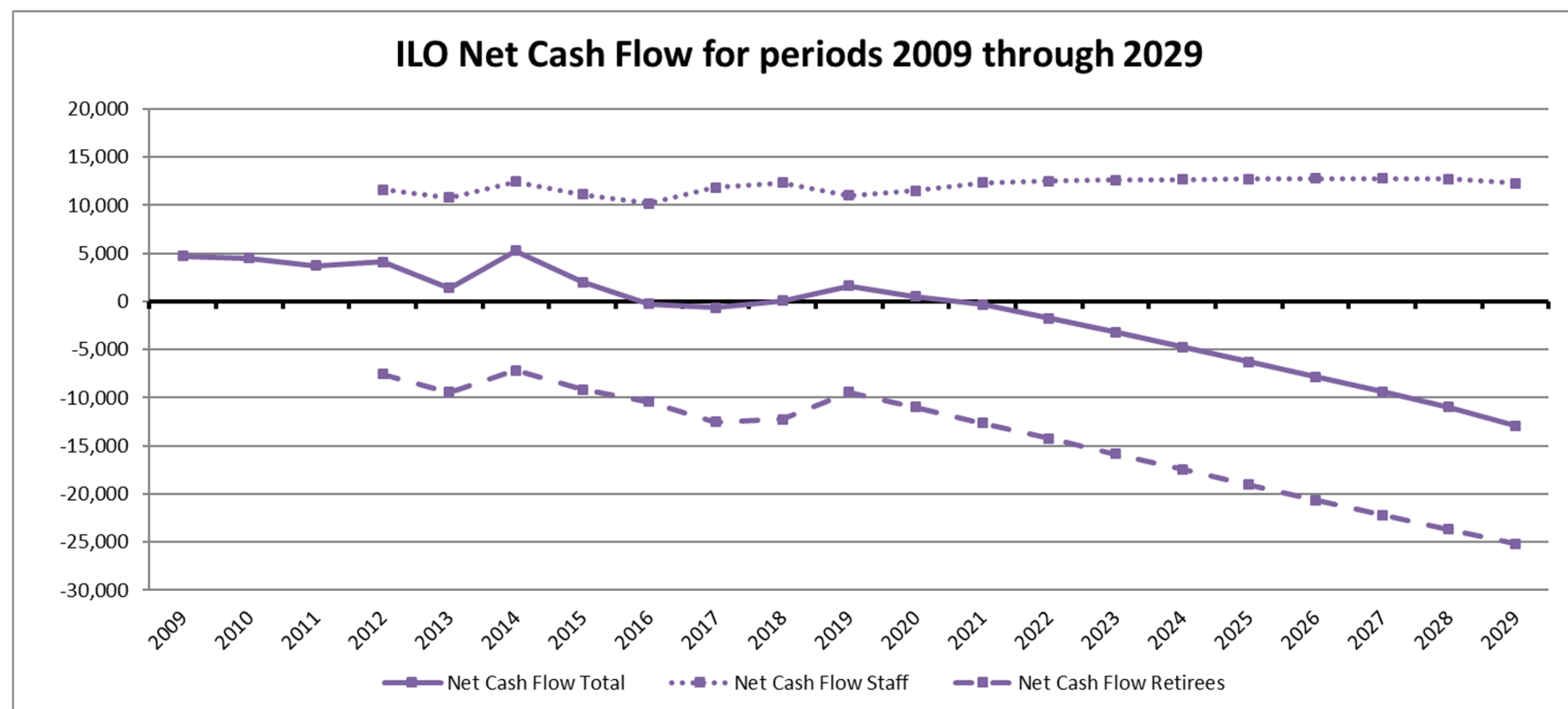


The graph above shows the key changes in the projection of claims and contributions from the 2016 study (purple/green lines) to the 2019 base-line results in the 2019 study (solid blue/red lines). Changes are shown cumulatively.

1. Dotted lines - New census data
2. Dashed lines - Demographic assumption changes - Updated UNJSPF mortality tables project a longer life expectancy and new turnover tables project more actives reach retirement net of small reduction for updated medical claims costs
3. Solid lines - Demographic assumption changes – Initial medical trend rate reset to 3.5% and salary increase rate / pension indexation aligned with ASHI assumptions.
4. Dark blue line – adjustment for actual 2019 claims reimbursement amount

6.1.3. Net cash flow

USD x 1,000

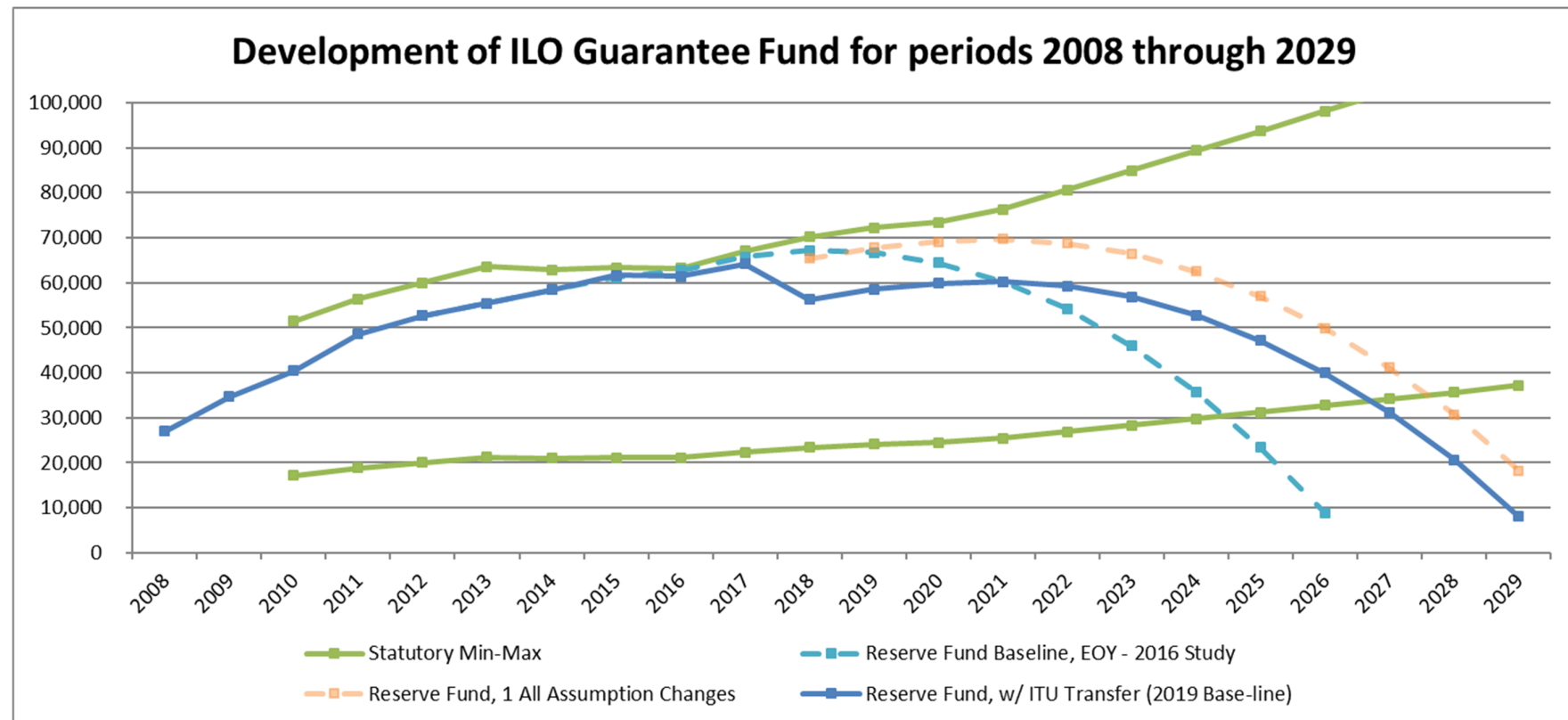


The graph above shows the net cash flow (active staff, retirees and total), which is the difference between the contributions and the claims, for the period from 2009 to 2018 (history) and from 2019 to 2029 (projection).

This highlights that the contributions for the retirees are not sufficient to cover the claims for the retirees, i.e. that there is a significant cross-subsidy between active staff and retired members.

6.1.4. Projection of Guarantee Fund

USD x 1,000



The graph above shows the development of the Guarantee Fund if the assumptions are fully realized.

The dotted lines show the projection of the Guarantee Fund based on the 2016 study (light blue), then all changes in census data and assumptions are reflected in orange. Finally, the reduction in Guarantee Fund due to the transfer to ITU is incorporated in the solid dark blue line.

The Guarantee Fund is projected to reduce below the minimum threshold around 2027.

6.2. Optimistic scenario

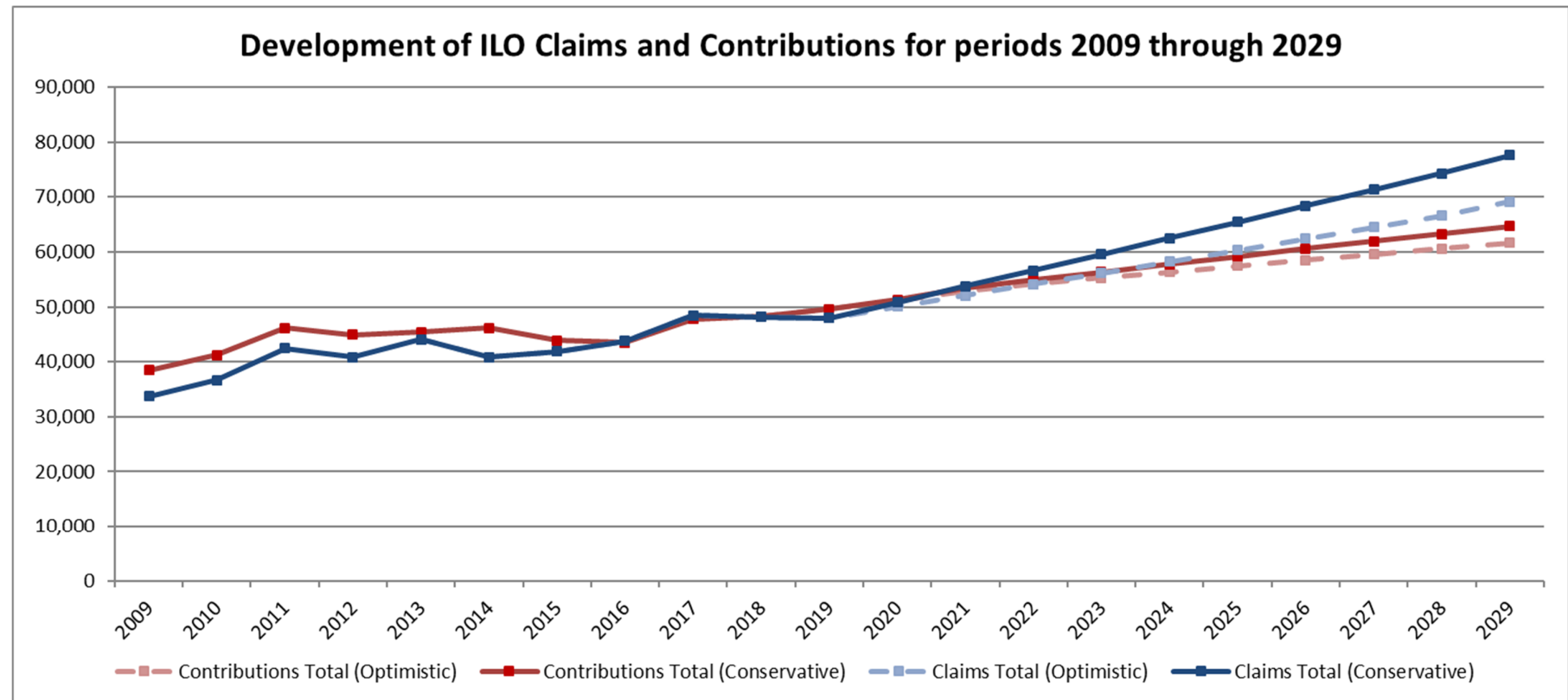
6.2.1. Description of scenario

The optimistic scenario is based on a more favorable set of actuarial assumptions compared to the base-line.

	Base-line assumptions	Optimistic assumptions
Demographic assumptions		
% of actives electing retiree coverage	97.5%	90.0% based on recent experience
Lapse probability of retirees per year	0%	1% based on recent experience
Medical assumptions		
Medical inflation—initial	3.5%	2.5% based on favorable claims experience 2018-2019
Medical inflation—ultimate	2.5%	2.5%

6.2.2. Optimistic Contributions and expenditure

USD x 1,000

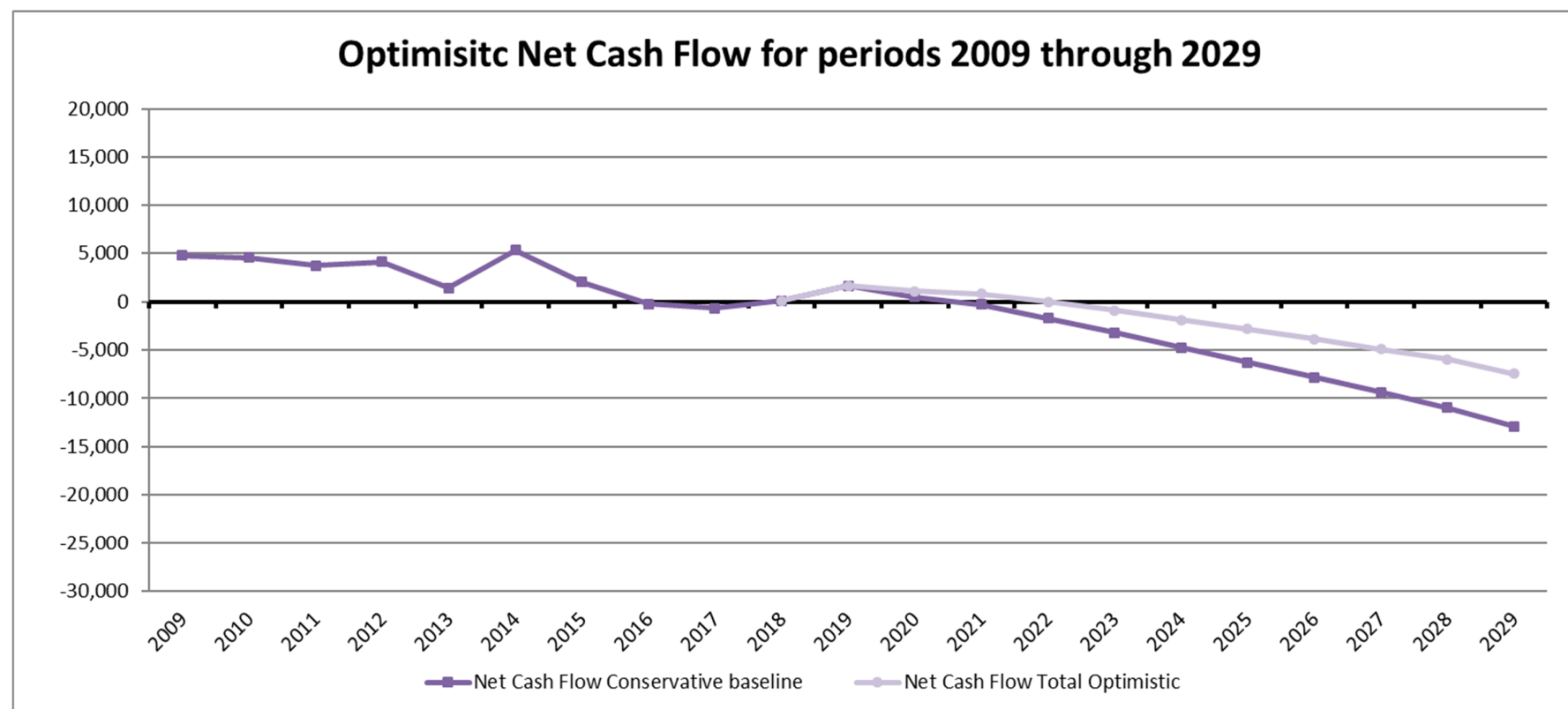


The graph above shows the projection of claims and contributions under the optimistic set of assumptions (light blue/red lines) compared to the base-line projections (dark blue/red lines).

In the optimistic scenario, the claims and contributions are lower due to the assumed 1% lapse rate of retirees and fewer new retirees who are assumed to elect retiree medical coverage from the SHIF.

6.2.3. Optimistic Net cash flow

USD x 1,000

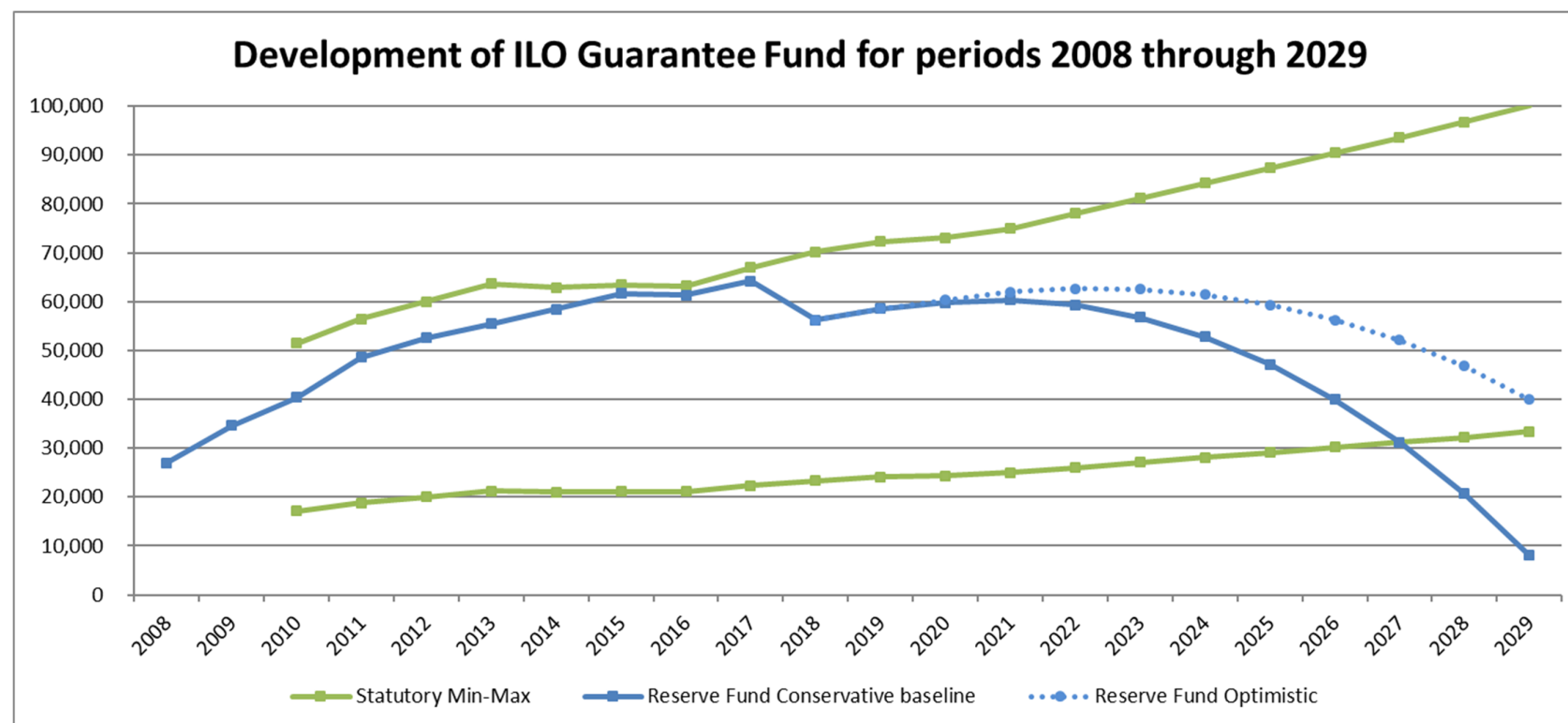


The graph above shows the net cash flow in the optimistic scenarios compared against the base-line.

The optimistic scenario is projected to have annual cash flows deficits (i.e., claims reimbursements greater than contribution receipts) as there still is an ageing effect of the demographics which is stronger than the projected salary increase rate.

6.2.4. Optimistic Projection of Guarantee Fund

USD x 1,000



The dotted blue line shows the optimistic scenario that is projected to remain above the statutory minimum threshold during the entire projection period until 2029. This is primarily because the projected annual cash flows deficits grow less quickly under the conservative scenario.

The statutory thresholds are lower under the optimistic scenario as this is dependent on the projected claims, which are lower than under the base-line scenario.

The solid blue line shows the conservative base-line projection for comparison.

6.2.5. Demographic Projections – Base-line & Optimistic

	Actual 2019	Projected 2029 (Base-Line)		Projected 2029 (Optimistic)	
Headcount					
- Active Staff	3,265	3,265	0%	3,265	0%
- Retirees / Beneficiaries	2,358	2,684	14%	2,454	4%
- Total	5,623	5,949		5,719	
Average Age					
- Active Staff	45.4	45.8	+ 0.4	45.8	+ 0.4
- Retirees / Beneficiaries	74.2	76.6	+ 2.4	76.5	+ 2.3
- Total	57.5	59.7	+ 2.2	59.0	+ 1.5
Ratio Inactives / actives	72%	82%		75%	

The chart above shows the projected demographics of the base-line and, separately, the optimistic scenarios if all assumptions are fully realized. The percentage increase in headcount and average age changes are compared against the 2019 actual demographics.

The optimistic scenario projects fewer retiree members in 2029 compared to the base-line primarily due to introduction of a 1% lapse rate and reduction of the rate that active members are assumed to elect retiree coverage.

6.3. Contribution Rate Increase

6.3.1. Description of scenario

The scenario considers a contribution rate increase for staff, family members and ILO of 2% per year starting in 2022.

Contribution Rates	2019-2021	2022	2023	2024	2025	2026	2027	2028	2029
Staff, Former Staff, Surviving Beneficiaries	3.55%	3.62%	3.69%	3.77%	3.84%	3.92%	4.00%	4.08%	4.16%
Dependent Spouses	1.07%	1.09%	1.11%	1.13%	1.15%	1.18%	1.20%	1.22%	1.25%
Dependent Children	0.36%	0.36%	0.37%	0.38%	0.38%	0.39%	0.40%	0.41%	0.42%

In the above schedule of contribution rate increases, the burden is spread among members, dependents and ILO, and the results have been projected with the global 2% increase. The ILO contribution is determined same as currently (ILO contributes same as active members and twice the amount for retirees members).

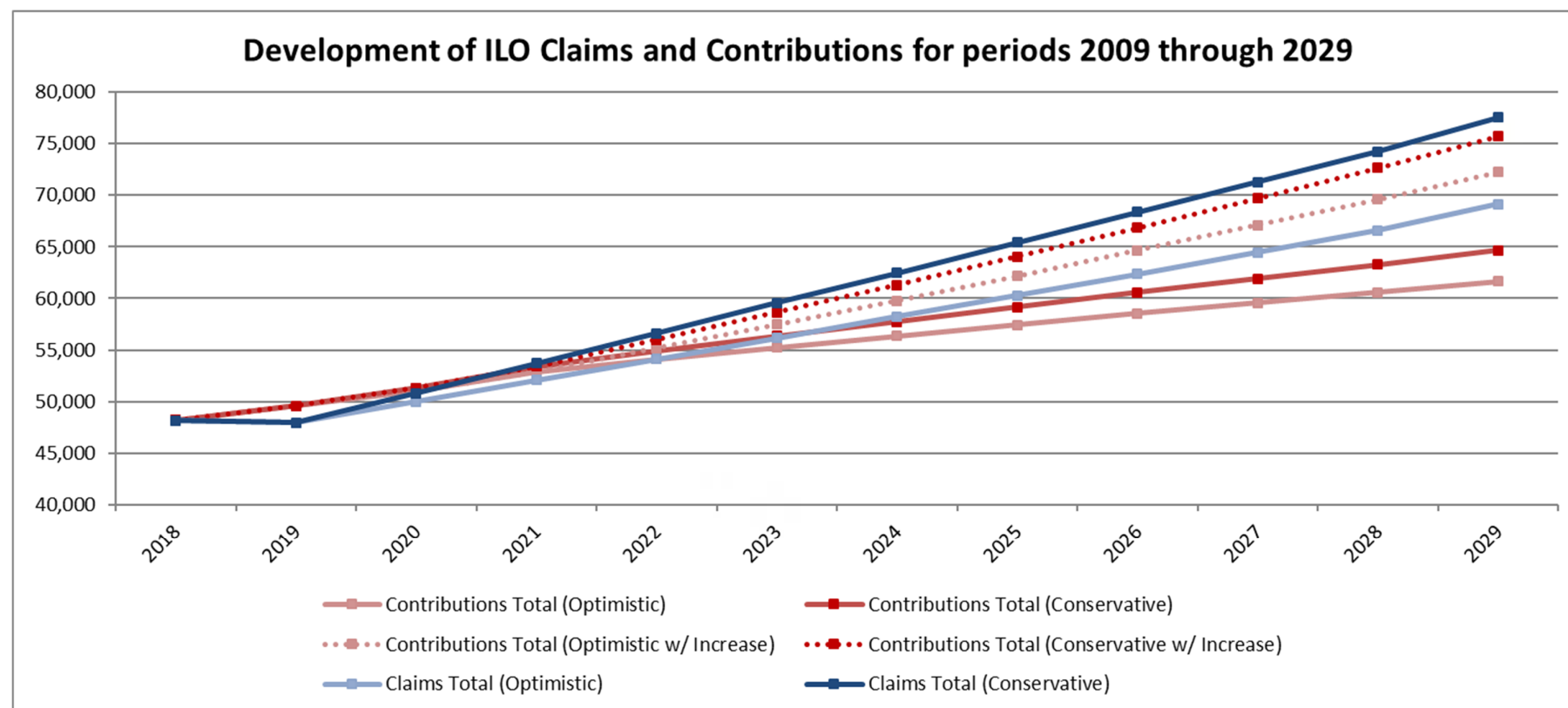
Projected Contribution Amounts in USD millions (Member + ILO)	2021	2022	2023	2024	2025	2026	2027	2028	2029
Base-line - Current Contribution Rate	53.4	54.9	56.3	57.7	59.1	60.6	61.9	63.3	64.6
Base-line - Increase Rate +2% after 2022	53.4	56.0	58.6	61.3	64.0	66.9	69.7	72.7	75.7
Optimistic - Current Contribution Rate	52.9	54.1	55.2	56.3	57.4	58.5	59.6	60.6	61.7
Optimistic - Increase Rate +2% after 2022	52.9	55.2	57.5	59.8	62.2	64.6	67.1	69.6	72.2

For information purposes, we have separately calculated the approximate equivalent increase on dependent spouse contribution rate (with matching ILO contributions) to equal the global 2% increase from the above table.

Contribution Rates	2019-2021	2022	2023	2024	2025	2026	2027	2028	2029
Dependent Spouses	1.07%	1.24%	1.43%	1.62%	1.80%	2.00%	2.19%	2.39%	2.59%
as percentage of 3.55% member rate	30%	35%	40%	46%	51%	56%	62%	67%	73%

6.3.2. Contributions and expenditure after contribution increase

USD x 1,000

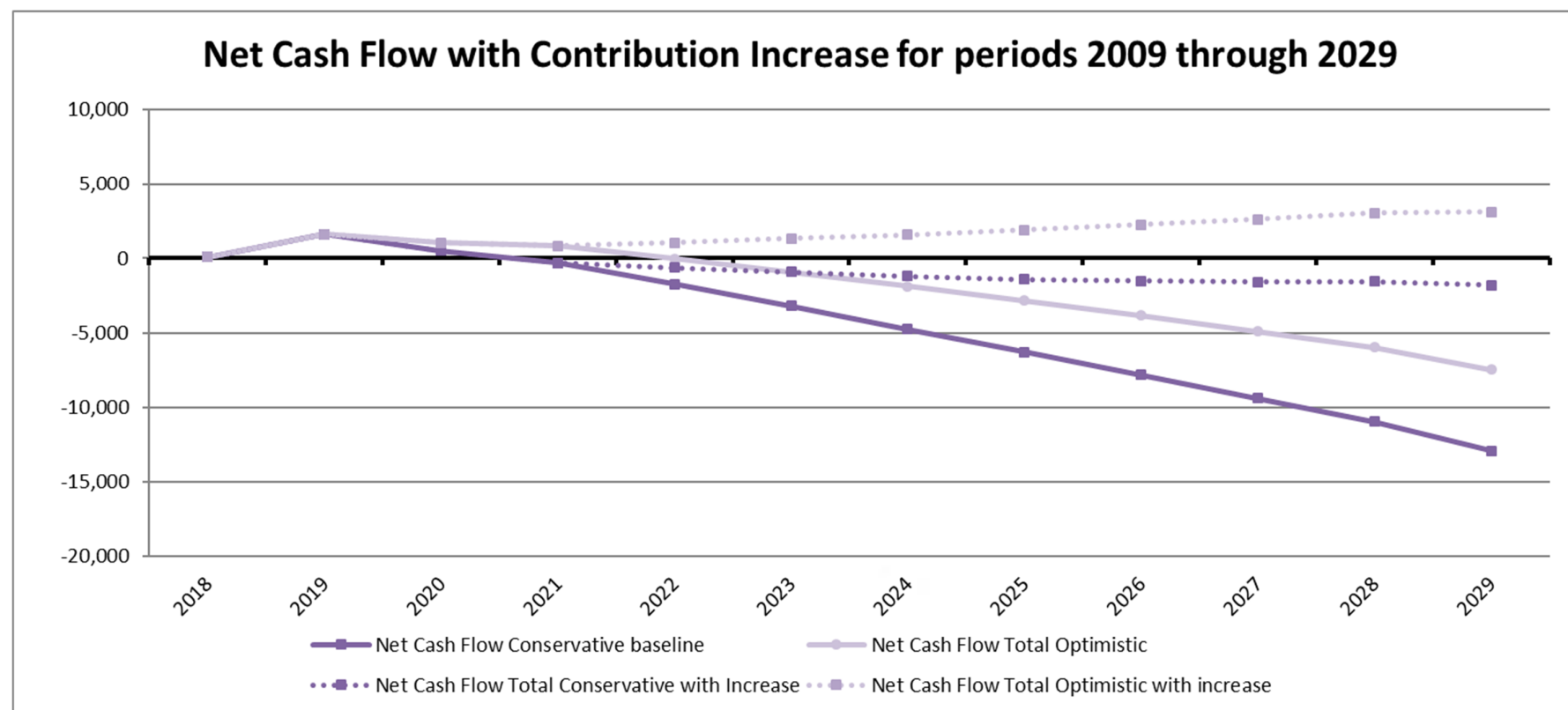


The graph above shows the projection of claims and contributions under the optimistic set of assumptions (light blue/red lines) compared to the base-line projections (dark blue/red lines). The projection of contribution increase is shown with the dotted red lines for optimistic (light red) and conservative base-line (dark red).

By 2029, annual contributions have grown to be about USD 10 million more per year by following the +2% contribution increase rate schedule.

6.3.3. Net cash flow after contribution increase

USD x 1,000

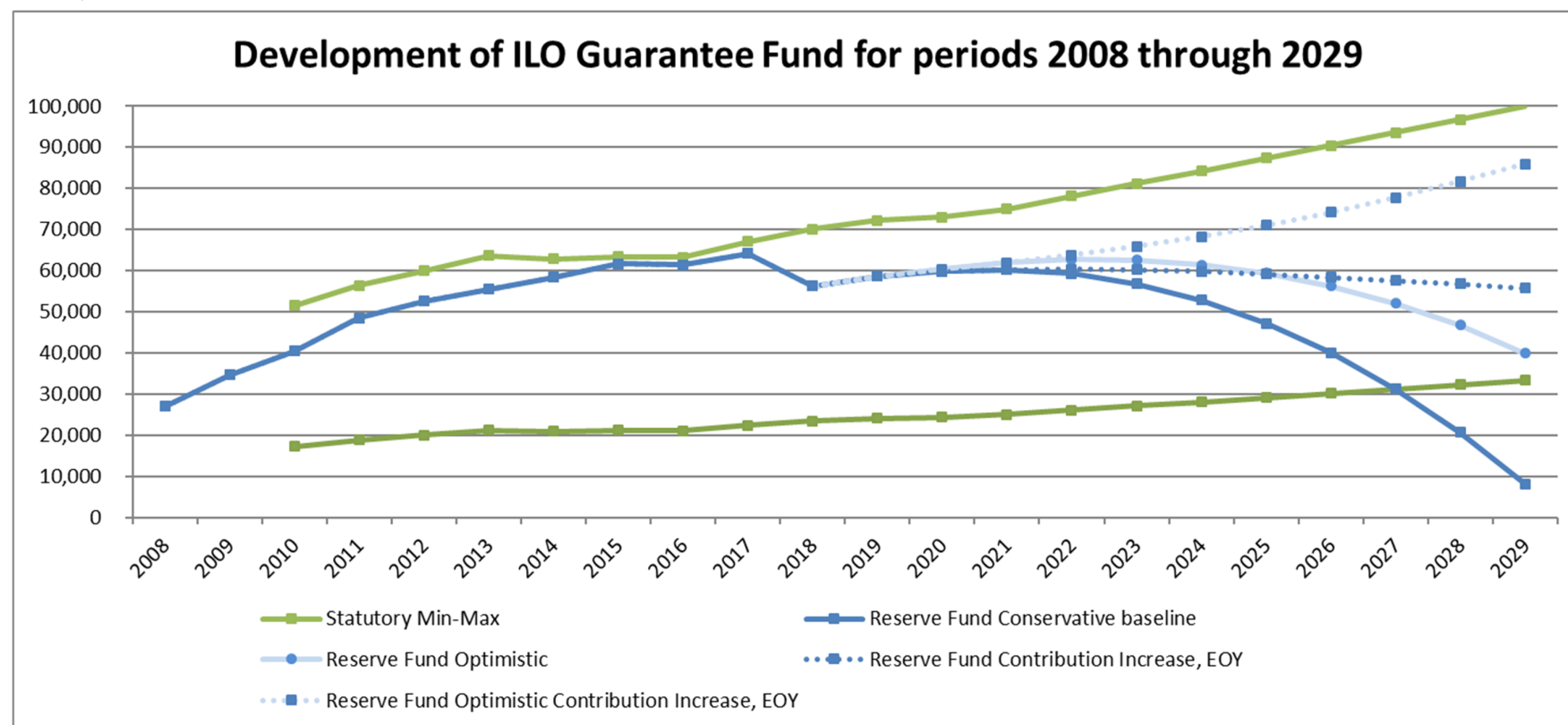


The graph above shows the net cash flow in the optimistic scenarios compared against the base-line. The projected net cash flows with contribution increase is shown as dotted lines.

The conservative projection scenario with contribution increase schedule still has an annual deficit of about USD 1-2 million per year, however under the optimistic scenario there is projected to be an annual surplus of more than USD 3 million by 2029.

6.3.4. Projection of Guarantee Fund after contribution increase

USD x 1,000



The Guarantee Fund is projected to fall below the statutory threshold either during or shortly after the projection period under the base-line conservative and optimistic projection scenarios with a level contribution rate.

With a +2% contribution increase, the Guarantee Fund is projected to remain within the statutory threshold during the projection period due to projected net cash flows close to zero.

6.4. Scenario 1—Exchange rate variations

6.4.1. Description of scenario

The only difference between this scenario and the base-line scenario is in the assumed future exchange rate development of USD relative to global currencies.

The USD “steady” depreciation scenario assumes the value of USD relative to all currencies falls by 2% p.a. over the projected period. The USD “shock” depreciation scenario assumes the value of USD relative to all currencies falls by 20% in 2021 and continues at that level thereafter.

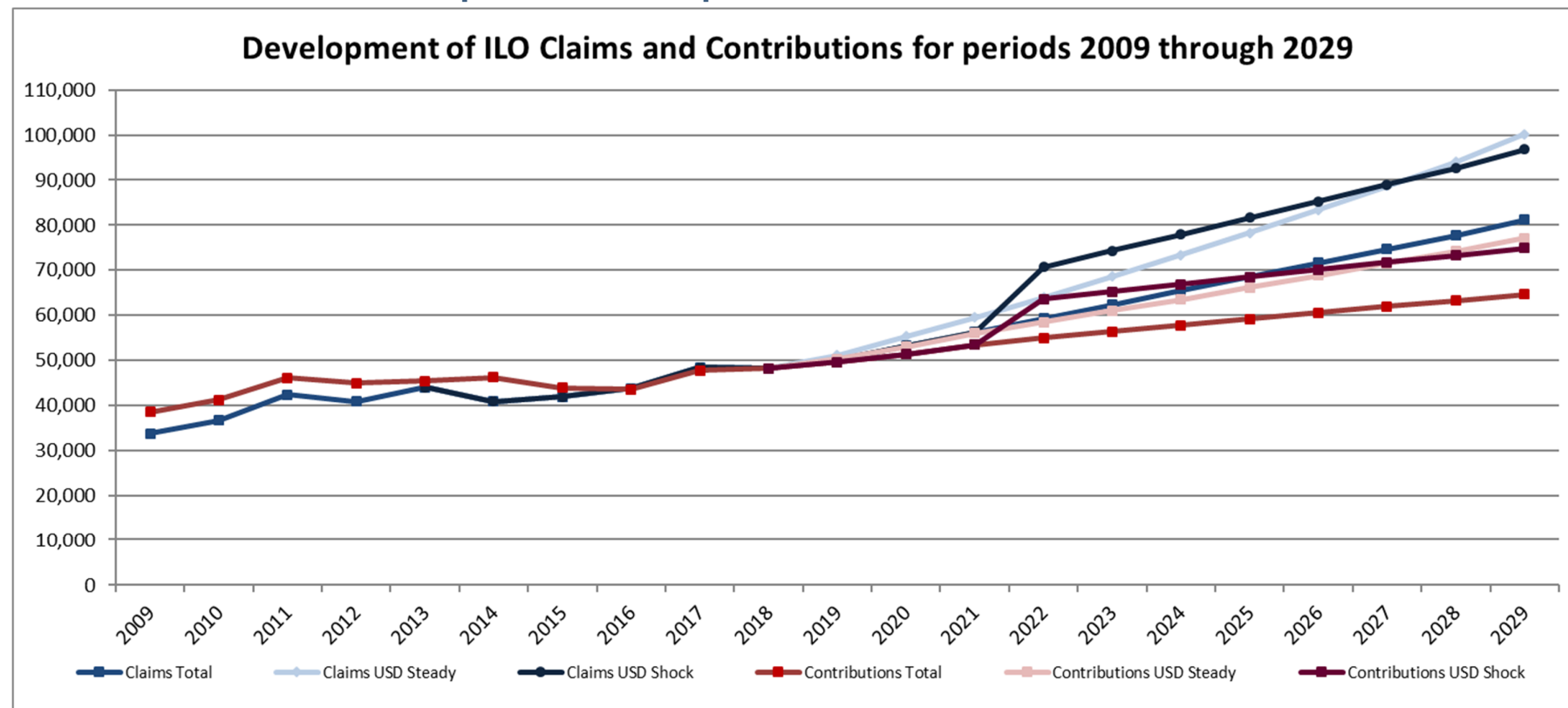
The adjusted exchange rates are applied against the portion of claims and contributions assumed to be payable in currencies other than USD. The distribution of claims and contributions payable by currency is based on actual claims paid 2015-2019 and actual contributions from 2017-2018 census data.

	Claims	Contributions
CHF	67%	44%
EUR	16%	14%
USD	4%	21%
Other currencies	13%	21%
Non-USD portion	96%	79%

The portion of the Guarantee Fund invested in CHF is adjusted using the alternate exchange rate in order to calculate the currency revaluation impact. The asset allocation is assumed to remain constant at 65% CHF / 35% USD.

Exchange rate variations have not been updated for actual 2019 claims. These scenarios are same as in September.

6.4.2. Contributions and expenditure compared to Conservative baseline

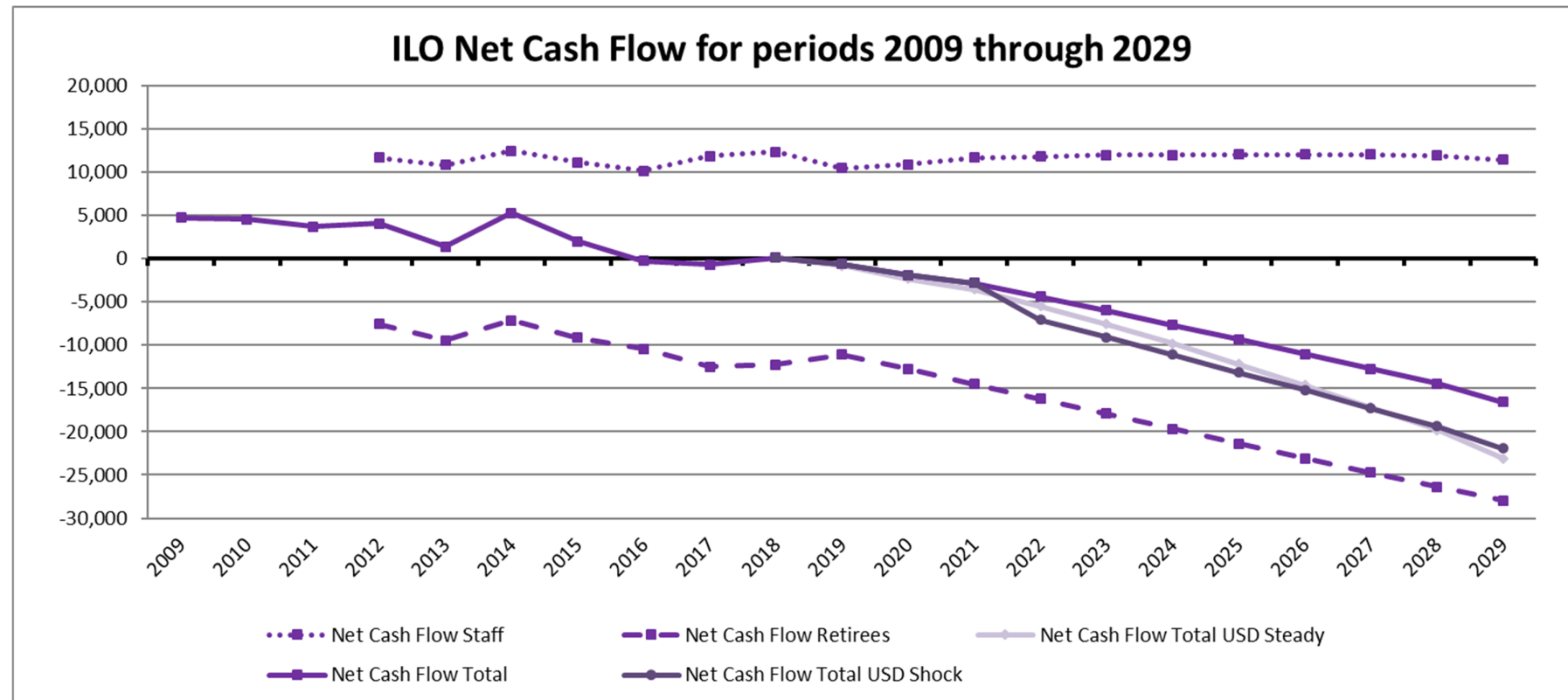


The graph above shows the projection of claims and contributions. The claims are assumed to increase rapidly, mainly because of the ageing of the inactive population combined with the rapid progression of claims cost as the age increases.

The portion of claims and contributions paid outside USD are subject to exchange rate risk. The USD value of the cash flows would increase if the USD were to depreciate in the future.

6.4.3. Net cash flow compared to conservative baseline

USD x 1,000

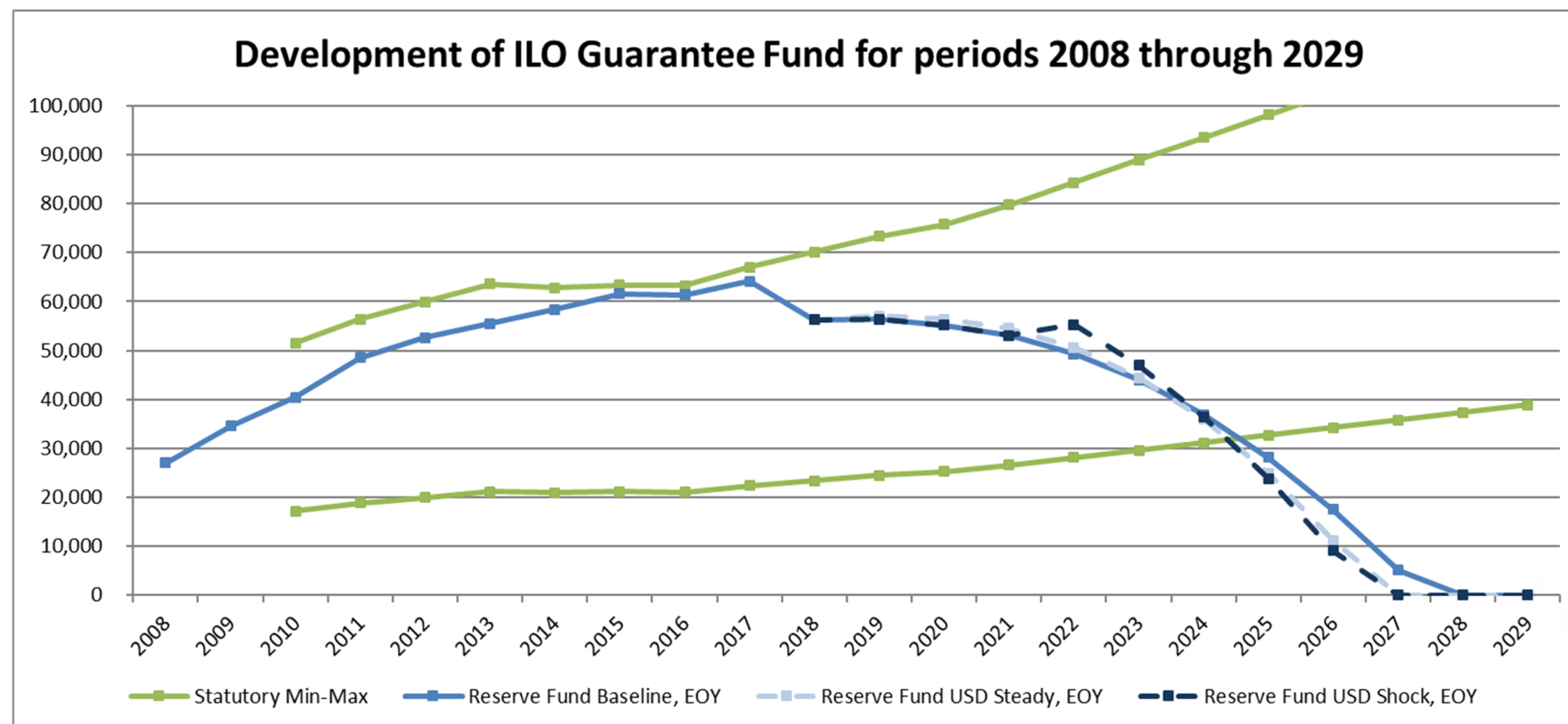


The graph above shows the net cash flow (active staff, retirees and total), which is the difference between the contributions and the claims, for the period from 2009 to 2018 (history) and from 2019 to 2029 (projection).

Exchange rate variance effects both contributions and claims, however a smaller portion of claims is paid in USD (compared to contributions), so there is downside risk if the USD depreciates.

6.4.4. Projection of Guarantee Fund compared to conservative baseline

USD x 1,000



The graph above shows the development of the Guarantee Fund if the assumptions are fully realized. Under the base-line scenario, the Guarantee Fund is projected to reduce below this limit around 2025.

Even though the annual deficit would increase if USD were to depreciate, the projected Guarantee Fund value would not be significantly different due to the 65% asset value in CHF denominated investments.

6.5. Scenario 2—Include Interns and Short-Term staff

6.5.1. Description of scenario

The only difference between this scenario and the base-line scenario is adding interns and short-term staff to be covered by the SHIF based on assumed headcount and profile:

	Staff count per year	Average Age	Average Tenure at ILO	Average member SHIF contribution (matched by ILO)
Interns	200	28 years	5 months	USD 100 / month
Short-Term Staff	450	38 years	80 days	USD 425 / contract

Based on the demographics and assumed member contribution amounts provided, there is projected to be a small annual surplus of about USD 190,000 from allowing interns and short-term staff participate in SHIF during their tenure at ILO.

USD x 1000	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Contributions	581	592	604	616	628	641	654	667	680	694
Claims reimbursements	(389)	(402)	(415)	(428)	(440)	(453)	(466)	(478)	(491)	(503)
Surplus / (Deficit)	192	190	189	189	188	188	188	189	189	191

Compared to the projected contributions and claims reimbursements for the existing population in excess of USD 50 million and based on the given demographics and short duration of the contracts, there would be no noticeable impact from admitting Interns and/or Short-Term staff into the SHIF.

6.6. Scenario 3—Exclude LTC Reimbursement from Supplementary Benefits

6.6.1. Description of scenario

The only difference between this scenario and the base-line scenario is adjusting the projected medical claims to exclude LTC reimbursement from supplemental benefits.

The LTC reimbursement from supplementary benefits has ranged from USD 0.5 – 1.0 million per year since 2016.

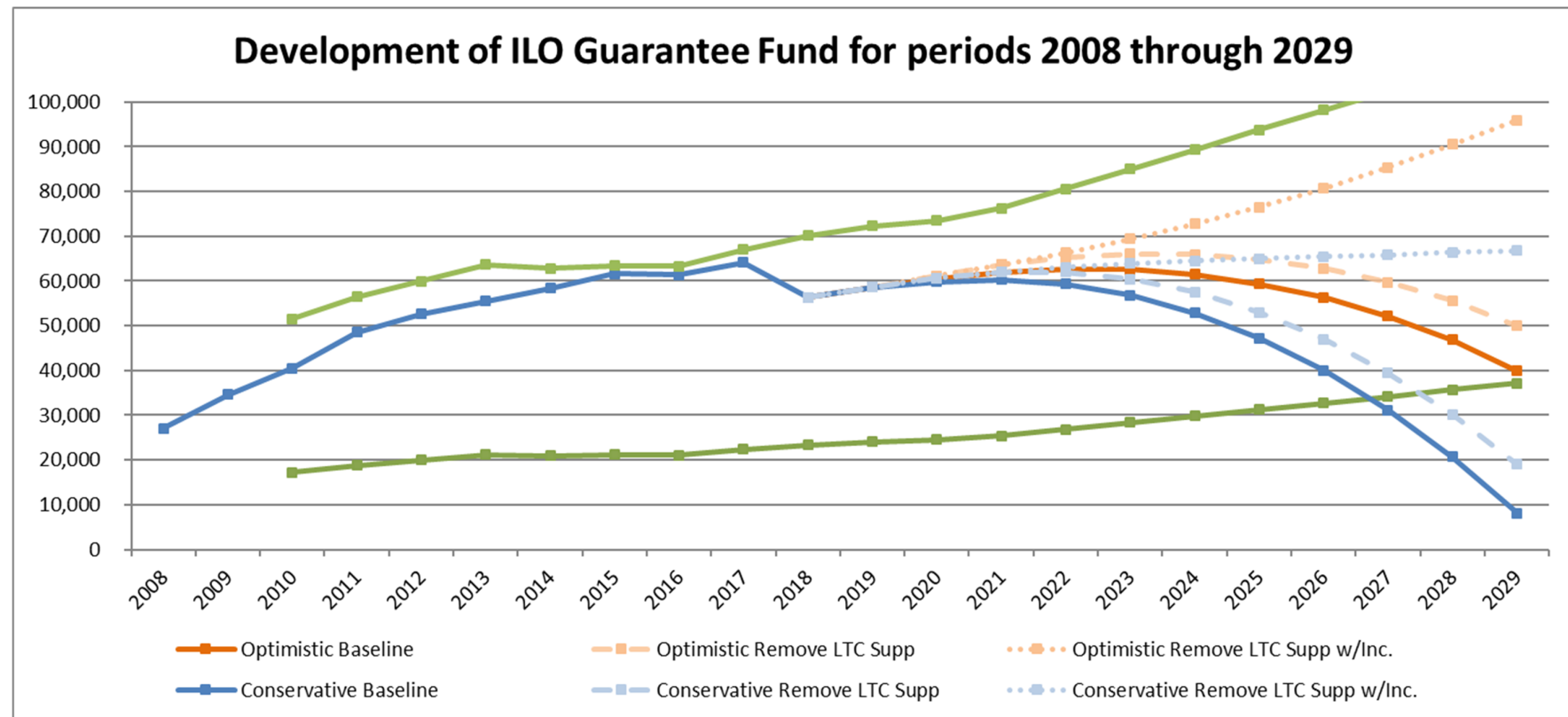
	2016	2017	2018	2019
Headcount of Primary Inactive Members, beginning of year				
Retirees	1,911	1,960	1,971	1,946
Surviving spouses	406	412	412	412
Total	2,317	2,372	2,383	2,358
LTC Cost in Supplementary Benefits (USD x 1)				
In an Institution	480,356	666,092	746,917	578,918
At Home	101,308	148,553	140,805	144,517
Total	581,664	814,645	887,722	723,435
Total (with inflation to 2019)	599,289	831,019	896,599	723,435
Average Cost per Family	259	350	376	307

Considering the historical average cost, projected claims reimbursements are reduced by the average cost of USD 320 per retiree family per year starting in 2020, which then increases with assumed medical inflation.

Cost related to LTC supplemental benefits are assumed to be removed from January 1, 2020.

6.6.2. Projection of Guarantee Fund compared to conservative and optimistic baselines

USD x 1,000



The graph above shows six sets of projected results. Base-line results (both conservative and optimistic) are shown as solid lines, after removal of LTC supplement cost is shown as dotted lines, and the combined effected of LTC exclusions with the contribution rate increase described in the previous section is shown as dotted lines.

Removing LTC reimbursements from supplemental benefit coverage is projected to reduce total claims reimbursements for retirees by about USD 0.7 – 1.3 million per year during the projection period. Due to the volatile nature of LTC benefits, actual cost savings will depend on number of actual LTC cases.

6.7. Scenario 4—Part-time Salary

6.7.1. Description of scenario

The only difference between this scenario and the base-line scenario is that part-time member contributions and supplementary threshold are based on the actual part-time salary rather than on the theoretical full-time equivalent salary as is done currently.

The average working over all staff members in November 2019 is about 99%.

as at November 2019	
Effective Working Percentage	
Members at 100%	3,315
Members at 80%	73
Members at 50%	35
Active Members	3,423

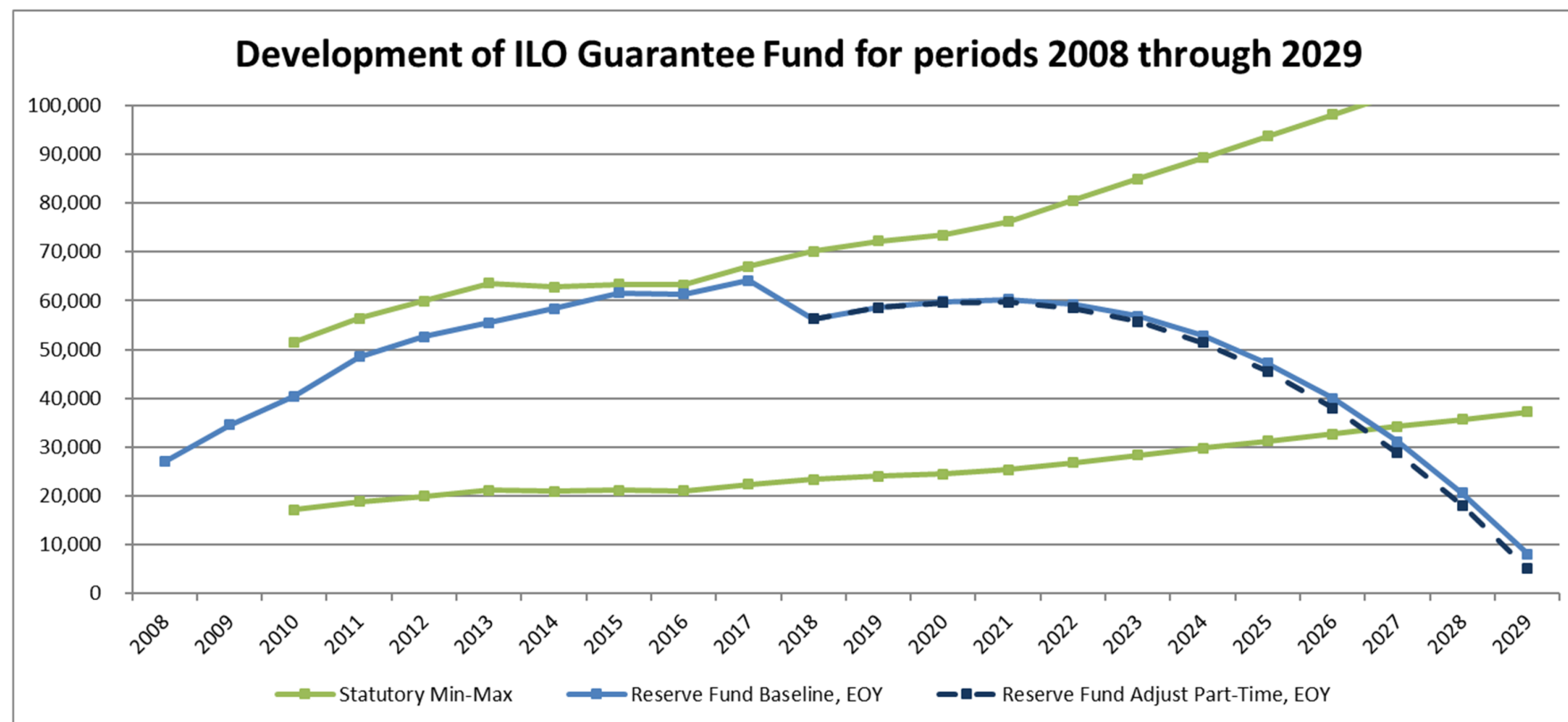
It is assumed that active medical claims reimbursements could be increased up to 0.1% by reducing the supplemental threshold for part-time members. This is based on the limited number of active families above their existing supplemental thresholds. As a result, making this would increase the annual deficit.

Projected impact on contributions and claims reimbursements relative to base-line from reducing contributions and the supplemental threshold for part-time members:

USD x 1000	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Contributions	(233)	(245)	(251)	(256)	(261)	(266)	(271)	(276)	(280)	(285)
Claims reimbursements	17	17	18	19	19	20	20	21	22	23
Impact on Surplus / (Deficit)	(250)	(262)	(269)	(275)	(280)	(286)	(291)	(297)	(302)	(308)

6.7.2. Projection of Guarantee Fund compared to baseline

USD x 1,000



The graph above shows the development of the Guarantee Fund if the assumptions are fully realized. Under the base-line scenario, the Guarantee Fund is projected to reduce below this limit around 2027.

There is projected to be an increase in the annual deficit if part-time contributions are reduced to be based on part-time salaries, so there is a small impact on the Guarantees Fund, however it is still projected to reduce below this limit around 2027.

7. Next steps



7.1. Description of next steps

- Determine whether any additional scenarios to consider:
 - Alternate assumptions
 - Other contribution rate changes
 - Other benefit reimbursement changes

8. Appendices



8.1. Appendix 1—Development of claims and contributions

History of contributions and claims reimbursements

All amounts are in USD x 1,000	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Contributions	38,485	41,207	46,118	44,881	45,429	46,151	43,877	43,489	47,748	48,219
Claims reimbursements	33,748	36,684	42,408	40,794	44,037	40,861	41,452	43,752	48,414	48,132
Ratio claims / contributions	87.7%	89.0%	92.0%	90.9%	96.9%	88.5%	94.5%	100.6%	101.4%	99.8%

8.2. Appendix 2—Development of Guarantee Fund

History of Guarantee Fund

In US\$ x 1,000 at year-end	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
SHIF Guarantee Fund	26,991	34,621	40,438	48,541	52,621	55,454	58,401	61,652	61,364	64,167	56,273
Statutory minimum			17,169	18,807	19,981	21,207	20,949	21,058	21,011	22,270	23,383
Statutory maximum			51,506	56,420	59,943	63,620	62,846	63,175	63,033	66,809	70,149

8.3. Appendix 3— Demographic Projections Base-line

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Active staff members											
Headcount											
- Existing staff members	3,265	2,741	2,362	2,066	1,824	1,625	1,451	1,292	1,160	1,033	919
- New entrants during projection period		524	903	1,199	1,441	1,640	1,814	1,973	2,105	2,232	2,346
- Total	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265	3,265
Average Age											
- Existing staff members	45.4	46.9	48.1	49.2	50.0	50.8	51.5	52.1	52.7	53.2	53.7
- New entrants during projection period		37.3	38.0	38.7	39.4	40.0	40.6	41.2	41.7	42.3	42.8
- Total	45.4	45.4	45.3	45.3	45.3	45.4	45.4	45.5	45.6	45.7	45.8
Retirees, disabled and surviving spouses											
Headcount											
- Existing retired members	2,358	2,322	2,283	2,241	2,197	2,150	2,100	2,048	1,994	1,938	1,879
- New retirees during projection period		88	169	251	334	411	491	575	647	726	805
- Total	2,358	2,409	2,452	2,492	2,530	2,561	2,592	2,624	2,641	2,664	2,684
Average Age											
- Existing retired members	74.2	75.0	75.7	76.5	77.2	77.9	78.6	79.3	79.9	80.6	81.3
- New retirees during projection period		61.5	61.9	62.3	62.8	63.3	63.7	64.2	64.7	65.2	65.6
- Total	74.2	74.5	74.8	75.0	75.3	75.5	75.8	76.0	76.2	76.4	76.6
Ratio Inactives / actives	72%	74%	75%	76%	78%	78%	79%	80%	81%	82%	82%

8.4. Appendix 4— Claims cost—results of experience study

Comparison of medical claims assumptions by age

USD x 1	1. Old claims based on 2016 Study	2. Old claims w/ expected trend	3. New claims based on 2019 Study	Percentage increase 1. Old to 3. New	Percentage increase 2. Old with trend to 3. New
Age					
30	1,697	1,881	1,358	-20%	-28%
35	2,382	2,642	2,095	-12%	-21%
40	3,106	3,445	2,834	-9%	-18%
45	3,856	4,277	3,595	-7%	-16%
50	4,572	5,070	4,449	-3%	-12%
55	5,575	6,182	5,501	-1%	-11%
60	6,877	7,626	6,885	0%	-10%
65	8,305	9,210	8,555	3%	-7%
70	10,023	11,115	10,734	7%	-3%
75	12,146	13,470	13,778	13%	2%
80	15,264	16,928	17,010	11%	0%
85	19,579	21,713	20,998	7%	-3%
90	24,272	26,918	26,353	9%	-2%
95	29,123	32,297	32,601	12%	1%
100	34,021	37,729	36,251	7%	-4%
Averages :					
57.5	7,869	8,727	8,238	5%	-6%

Note that the medical claims table is not linear, so the average claims are more heavily weighted towards older ages than suggested by the average age of the population.

New claims based on 2019 study have been adjusted based on actual 2019 reimbursements

8.5. Appendix 5— Detailed Projections of Guarantee Fund

Projection of Guarantee Fund - Baseline (Conservative)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
A - Gross assets as of 01.01.	70,286	72,761	74,797	76,057	75,896	74,248	71,038	66,261	59,874	51,845	42,273
B - Claims incurred but not received	(14,013)	(14,166)	(14,972)	(15,785)	(16,602)	(17,419)	(18,239)	(19,064)	(19,877)	(20,692)	(21,619)
C - Net assets as of 01.01.	56,273	58,595	59,825	60,272	59,294	56,829	52,799	47,197	39,997	31,153	20,654
D - Contributions	49,553	51,315	53,409	54,894	56,347	57,736	59,147	60,561	61,908	63,262	64,634
E - Investment income	710	730	746	751	742	718	678	623	551	463	358
F - Claims reimbursements	(47,941)	(50,816)	(53,708)	(56,623)	(59,554)	(62,485)	(65,427)	(68,385)	(71,303)	(74,224)	(77,552)
G - Net assets as of 31.12.	58,595	59,825	60,272	59,294	56,829	52,799	47,197	39,997	31,153	20,654	8,094
H - Statutory minimum reserve as of 31.12.	24,081	24,482	25,411	26,858	28,314	29,777	31,244	32,716	34,186	35,652	37,180
I - Statutory maximum reserve as of 31.12.	72,244	73,445	76,232	80,573	84,942	89,331	93,733	98,148	102,557	106,956	111,540
J - Surplus / (deficit) outside corridor 31.12.	0	0	0	0	0	0	0	0	(3,032)	(14,998)	(29,086)

Projection of Guarantee Fund - Optimistic

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
A - Gross assets as of 01.01.	70,286	72,535	74,890	77,042	78,360	78,790	78,258	76,758	74,241	70,652	66,058
B - Claims incurred but not received	(14,013)	(13,940)	(14,513)	(15,085)	(15,659)	(16,232)	(16,808)	(17,391)	(17,973)	(18,562)	(19,272)
C - Net assets as of 01.01.	56,273	58,595	60,377	61,956	62,701	62,558	61,450	59,367	56,269	52,090	46,787
D - Contributions	49,553	51,056	52,885	54,089	55,250	56,340	57,442	58,539	59,575	60,606	61,657
E - Investment income	710	730	753	770	778	778	768	748	717	676	623
F - Claims reimbursements	(47,941)	(50,004)	(52,059)	(54,114)	(56,170)	(58,226)	(60,293)	(62,386)	(64,471)	(66,585)	(69,130)
G - Net assets as of 31.12.	58,595	60,377	61,956	62,701	62,558	61,450	59,367	56,269	52,090	46,787	39,936
H - Statutory minimum reserve as of 31.12.	24,081	24,346	25,001	26,029	27,057	28,085	29,115	30,151	31,192	32,240	33,364
I - Statutory maximum reserve as of 31.12.	72,244	73,038	75,002	78,088	81,171	84,255	87,345	90,452	93,575	96,721	100,093
J - Surplus / (deficit) outside corridor 31.12.	0	0	0	0	0	0	0	0	0	0	0

Projection of Guarantee Fund - Baseline (Conservative) with +2% increase contribution 2022+

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
A - Gross assets as of 01.01.	70,286	72,761	74,797	76,057	77,000	77,652	78,027	78,221	78,288	78,292	78,439
B - Claims incurred but not received	(14,013)	(14,166)	(14,972)	(15,785)	(16,602)	(17,419)	(18,239)	(19,064)	(19,877)	(20,692)	(21,619)
C - Net assets as of 01.01.	56,273	58,595	59,825	60,272	60,398	60,232	59,788	59,157	58,411	57,601	56,820
D - Contributions	49,553	51,315	53,409	55,992	58,623	61,270	64,023	66,864	69,719	72,668	75,729
E - Investment income	710	730	746	757	765	770	773	774	774	775	775
F - Claims reimbursements	(47,941)	(50,816)	(53,708)	(56,623)	(59,554)	(62,485)	(65,427)	(68,385)	(71,303)	(74,224)	(77,552)
G - Net assets as of 31.12.	58,595	59,825	60,272	60,398	60,232	59,788	59,157	58,411	57,601	56,820	55,771
H - Statutory minimum reserve as of 31.12.	24,081	24,482	25,411	26,858	28,314	29,777	31,244	32,716	34,186	35,652	37,180
I - Statutory maximum reserve as of 31.12.	72,244	73,445	76,232	80,573	84,942	89,331	93,733	98,148	102,557	106,956	111,540
J - Surplus / (deficit) outside corridor 31.12.	0	0	0	0	0	0	0	0	0	0	0

Projection of Guarantee Fund - Optimistic with +2% increase contribution 2022+

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
A - Gross assets as of 01.01.	70,286	72,535	74,890	77,042	79,446	82,132	85,099	88,427	92,149	96,293	101,013
B - Claims incurred but not received	(14,013)	(13,940)	(14,513)	(15,085)	(15,659)	(16,232)	(16,808)	(17,391)	(17,973)	(18,562)	(19,272)
C - Net assets as of 01.01.	56,273	58,595	60,377	61,956	63,788	65,900	68,291	71,035	74,177	77,731	81,741
D - Contributions	49,553	51,056	52,885	55,170	57,482	59,788	62,177	64,632	67,091	69,617	72,241
E - Investment income	710	730	753	775	801	829	860	895	934	978	1,025
F - Claims reimbursements	(47,941)	(50,004)	(52,059)	(54,114)	(56,170)	(58,226)	(60,293)	(62,386)	(64,471)	(66,585)	(69,130)
G - Net assets as of 31.12.	58,595	60,377	61,956	63,788	65,900	68,291	71,035	74,177	77,731	81,741	85,876
H - Statutory minimum reserve as of 31.12.	24,081	24,346	25,001	26,029	27,057	28,085	29,115	30,151	31,192	32,240	33,364
I - Statutory maximum reserve as of 31.12.	72,244	73,038	75,002	78,088	81,171	84,255	87,345	90,452	93,575	96,721	100,093
J - Surplus / (deficit) outside corridor 31.12.	0	0	0	0	0	0	0	0	0	0	0

8.6. Appendix 6— SHIF projection assumptions

The process for developing each assumption is described in a previous section of this report. The resulting age-related assumption tables used in the SHIF base-line projections are detailed in this appendix.

8.6.1. Table 1 - Turnover rates

Age	ILO	TC	Age	ILO	TC	Age	ILO	TC
20	10.0%	55.0%	35	6.5%	35.8%	50	2.8%	15.1%
21	9.8%	53.9%	36	6.2%	34.1%	51	2.8%	15.1%
22	9.6%	52.8%	37	5.9%	32.5%	52	2.8%	15.1%
23	9.4%	51.7%	38	5.6%	30.8%	53	2.8%	15.1%
24	9.2%	50.6%	39	5.3%	29.2%	54	2.8%	15.1%
25	9.0%	49.5%	40	5.0%	27.5%	55	2.8%	15.1%
26	8.8%	48.4%	41	4.7%	25.9%	56	2.8%	15.1%
27	8.6%	47.3%	42	4.4%	24.2%	57	2.8%	15.1%
28	8.4%	46.2%	43	4.1%	22.6%	58	2.8%	15.1%
29	8.2%	45.1%	44	3.8%	20.9%	59	2.8%	15.1%
30	8.0%	44.0%	45	3.5%	19.3%	60	2.8%	15.1%
31	7.7%	42.4%	46	3.4%	18.4%	61	2.8%	15.1%
32	7.4%	40.7%	47	3.2%	17.6%	62	2.8%	15.1%
33	7.1%	39.1%	48	3.1%	16.8%	63	2.8%	15.1%
34	6.8%	37.4%	49	2.9%	16.0%	64	2.8%	15.1%

8.6.2. Table 2 - Disability rates

Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.007%	0.020%	35	0.030%	0.020%	50	0.082%	0.060%
21	0.007%	0.020%	36	0.030%	0.030%	51	0.082%	0.070%
22	0.007%	0.020%	37	0.023%	0.030%	52	0.097%	0.090%
23	0.007%	0.020%	38	0.023%	0.030%	53	0.097%	0.100%
24	0.007%	0.020%	39	0.023%	0.030%	54	0.105%	0.110%
25	0.007%	0.020%	40	0.023%	0.030%	55	0.112%	0.120%
26	0.007%	0.020%	41	0.023%	0.030%	56	0.128%	0.130%
27	0.007%	0.020%	42	0.030%	0.030%	57	0.128%	0.150%
28	0.007%	0.020%	43	0.030%	0.030%	58	0.135%	0.160%
29	0.015%	0.020%	44	0.030%	0.040%	59	0.143%	0.170%
30	0.015%	0.020%	45	0.038%	0.040%	60	0.150%	0.190%
31	0.015%	0.020%	46	0.045%	0.040%	61	0.157%	0.210%
32	0.015%	0.020%	47	0.052%	0.050%	62	0.165%	0.230%
33	0.015%	0.020%	48	0.060%	0.050%	63	0.187%	0.250%
34	0.023%	0.020%	49	0.075%	0.050%	64	0.203%	0.270%

8.6.3. Table 3 - Retirement rates

Age	Male	Female
55	5%	5%
56	4%	4%
57	4%	4%
58	5%	5%
59	5%	5%
60	8%	11%
61	8%	9%
62	75%	85%
63	45%	65%
64	45%	70%
65	50%	100%
66	50%	100%
67	50%	100%
68	50%	100%
69	50%	100%
70	100%	100%

8.6.4. Table 4 - Mortality rates

Mortality Rates - Active Staff Members

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.056%	0.031%	35	0.069%	0.045%	50	0.193%	0.079%	65	0.450%	0.239%
21	0.056%	0.031%	36	0.074%	0.047%	51	0.204%	0.082%	66	0.500%	0.278%
22	0.056%	0.031%	37	0.079%	0.048%	52	0.216%	0.085%	67	0.559%	0.323%
23	0.056%	0.031%	38	0.084%	0.050%	53	0.228%	0.088%	68	0.631%	0.375%
24	0.056%	0.031%	39	0.091%	0.052%	54	0.239%	0.091%	69	0.718%	0.435%
25	0.056%	0.031%	40	0.097%	0.054%	55	0.250%	0.094%	70	N/A	N/A
26	0.055%	0.032%	41	0.105%	0.057%	56	0.260%	0.097%			
27	0.055%	0.033%	42	0.113%	0.059%	57	0.270%	0.101%			
28	0.055%	0.035%	43	0.122%	0.061%	58	0.279%	0.104%			
29	0.055%	0.036%	44	0.131%	0.064%	59	0.288%	0.107%			
30	0.056%	0.037%	45	0.140%	0.066%	60	0.297%	0.111%			
31	0.057%	0.038%	46	0.150%	0.069%	61	0.318%	0.129%			
32	0.059%	0.040%	47	0.160%	0.071%	62	0.344%	0.151%			
33	0.062%	0.042%	48	0.171%	0.074%	63	0.373%	0.176%			
34	0.065%	0.043%	49	0.182%	0.076%	64	0.408%	0.205%			

Mortality Rates - Pensioners and Survivors

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.058%	0.030%	35	0.072%	0.043%	50	0.222%	0.073%	65	0.501%	0.252%	80	3.234%	1.911%	95	16.014%	12.325%
21	0.058%	0.030%	36	0.076%	0.045%	51	0.240%	0.075%	66	0.540%	0.288%	81	3.683%	2.179%	96	17.335%	13.816%
22	0.058%	0.030%	37	0.082%	0.047%	52	0.259%	0.076%	67	0.588%	0.329%	82	4.180%	2.481%	97	18.753%	15.499%
23	0.058%	0.030%	38	0.088%	0.049%	53	0.279%	0.077%	68	0.645%	0.375%	83	4.724%	2.819%	98	20.281%	17.403%
24	0.058%	0.030%	39	0.094%	0.050%	54	0.298%	0.079%	69	0.713%	0.427%	84	5.319%	3.200%	99	21.931%	19.560%
25	0.058%	0.030%	40	0.101%	0.052%	55	0.319%	0.081%	70	0.793%	0.487%	85	5.965%	3.627%	100	23.720%	22.005%
26	0.057%	0.031%	41	0.109%	0.055%	56	0.326%	0.083%	71	0.907%	0.560%	86	6.666%	4.106%	101	25.374%	23.989%
27	0.057%	0.032%	42	0.117%	0.057%	57	0.337%	0.084%	72	1.043%	0.644%	87	7.425%	4.645%	102	27.258%	26.172%
28	0.057%	0.033%	43	0.126%	0.059%	58	0.349%	0.097%	73	1.203%	0.739%	88	8.242%	5.249%	103	29.424%	28.591%
29	0.057%	0.035%	44	0.135%	0.062%	59	0.364%	0.111%	74	1.390%	0.849%	89	9.123%	5.929%	104	31.925%	31.295%
30	0.058%	0.036%	45	0.145%	0.064%	60	0.381%	0.128%	75	1.607%	0.975%	90	10.071%	6.695%	105	34.806%	34.349%
31	0.060%	0.037%	46	0.159%	0.067%	61	0.397%	0.147%	76	1.857%	1.118%	91	11.089%	7.559%	106	38.784%	37.847%
32	0.062%	0.038%	47	0.172%	0.069%	62	0.417%	0.168%	77	2.142%	1.280%	92	12.186%	8.536%	107	43.357%	41.856%
33	0.064%	0.040%	48	0.188%	0.070%	63	0.440%	0.193%	78	2.465%	1.465%	93	13.366%	9.643%	108	48.588%	46.452%
34	0.068%	0.042%	49	0.204%	0.071%	64	0.468%	0.221%	79	2.828%	1.675%	94	14.640%	10.899%	109	54.529%	51.705%

Mortality Rates - Disableds

Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female	Age	Male	Female
20	0.062%	0.035%	35	0.108%	0.060%	50	0.342%	0.093%	65	0.913%	0.561%	80	6.310%	3.837%	95	23.720%	22.005%
21	0.061%	0.036%	36	0.117%	0.063%	51	0.350%	0.095%	66	1.039%	0.641%	81	7.012%	4.319%	96	25.374%	23.989%
22	0.061%	0.037%	37	0.126%	0.066%	52	0.361%	0.097%	67	1.188%	0.733%	82	7.766%	4.858%	97	27.258%	26.172%
23	0.061%	0.038%	38	0.135%	0.068%	53	0.374%	0.112%	68	1.362%	0.837%	83	8.572%	5.459%	98	29.424%	28.591%
24	0.061%	0.040%	39	0.145%	0.071%	54	0.390%	0.128%	69	1.565%	0.956%	84	9.435%	6.132%	99	31.925%	31.295%
25	0.062%	0.041%	40	0.156%	0.074%	55	0.409%	0.147%	70	1.799%	1.091%	85	10.357%	6.885%	100	34.806%	34.349%
26	0.064%	0.043%	41	0.170%	0.077%	56	0.429%	0.169%	71	2.067%	1.244%	86	11.341%	7.730%	101	38.784%	37.847%
27	0.066%	0.044%	42	0.185%	0.079%	57	0.454%	0.194%	72	2.371%	1.417%	87	12.393%	8.681%	102	43.357%	41.856%
28	0.069%	0.046%	43	0.202%	0.081%	58	0.482%	0.222%	73	2.713%	1.612%	88	13.517%	9.752%	103	48.588%	46.452%
29	0.073%	0.048%	44	0.219%	0.082%	59	0.516%	0.254%	74	3.095%	1.833%	89	14.722%	10.960%	104	54.529%	51.705%
30	0.077%	0.050%	45	0.238%	0.084%	60	0.557%	0.290%	75	3.519%	2.080%	90	16.014%	12.325%	105	61.226%	57.673%
31	0.082%	0.052%	46	0.257%	0.086%	61	0.605%	0.332%	76	3.985%	2.358%	91	17.335%	13.816%	106	67.353%	64.160%
32	0.088%	0.054%	47	0.278%	0.087%	62	0.663%	0.379%	77	4.497%	2.669%	92	18.753%	15.499%	107	73.994%	71.346%
33	0.094%	0.056%	48	0.299%	0.089%	63	0.732%	0.432%	78	5.054%	3.016%	93	20.281%	17.403%	108	81.109%	79.190%
34	0.101%	0.058%	49	0.320%	0.091%	64	0.815%	0.492%	79	5.658%	3.404%	94	21.931%	19.560%	109	88.639%	87.612%

Table 5 - Age-related salary increase rate

Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	4.181%	35	2.384%	50	1.142%	65	0.470%
21	4.099%	36	2.234%	51	1.117%	66	0.408%
22	4.017%	37	2.089%	52	1.092%	67	0.346%
23	3.941%	38	1.951%	53	1.030%	68	0.284%
24	3.852%	39	1.820%	54	1.005%	69	0.222%
25	3.764%	40	1.770%	55	0.980%	70	0.160%
26	3.676%	41	1.707%	56	0.955%		
27	3.575%	42	1.644%	57	0.930%		
28	3.462%	43	1.582%	58	0.868%		
29	3.336%	44	1.519%	59	0.843%		
30	3.198%	45	1.456%	60	0.780%		
31	3.048%	46	1.393%	61	0.718%		
32	2.891%	47	1.330%	62	0.656%		
33	2.716%	48	1.268%	63	0.594%		
34	2.547%	49	1.205%	64	0.532%		

The total rate of increase on active salaries and pensionable remuneration also includes a salary inflation component in addition to the above age-related rate table.

Table 6 – New Entrant Profile

Age	Sex	Active Salary	Pensionable Salary	Weighting
27	M	48,000	57,000	6%
32	M	48,000	57,000	10%
37	M	55,000	68,000	9%
42	M	61,000	69,000	11%
47	M	94,000	115,000	6%
52	M	94,000	115,000	5%
27	F	57,000	69,000	10%
32	F	57,000	69,000	16%
37	F	65,000	80,000	11%
42	F	72,000	89,000	9%
47	F	76,000	97,000	4%
52	F	76,000	97,000	3%

Average statistics of new entrants

Age	Sex	Active Salary	Pensionable Salary	Weighting
39	M	63,100	75,500	47%
36	F	63,700	78,400	53%
37	ALL	63,500	77,000	100%

8.7. Appendix 7— Summary of benefit provisions and contribution rates

Below is a summary of the main benefit provisions of the Staff Health Insurance Fund. For a complete description of the plan provisions, reference should be made to the Regulations and Administrative Rules of the Staff Health Insurance Fund.

Eligibility	<p>Eligible retirees may elect to participate in the Staff Health Insurance Fund (SHIF). Retirees are eligible for after-service medical benefit if, upon retirement, they are:</p> <ul style="list-style-type: none">• Staff members age 55 and older who have had at least ten years of service with the United Nations or a specialized agency and have been, during the five years immediately preceding cessation of service, either insured persons of the SHIF or otherwise protected against health risks by the organization employing them.• Disabled members, regardless of age, who are receiving a disability pension from the United Nations Joint Staff Pension Fund (UNJSPF) or other ILO (including TC, ISSA and ITC) pension scheme. <p>The spouse and children of an eligible retiree are also eligible to participate providing they would have qualified for automatic coverage under the SHIF had the retiree continued in active service. The spouse and children are eligible for automatic coverage if:</p> <ul style="list-style-type: none">• A family allowance is paid in respect of the spouse and children under the Staff Regulations of the ILO (including TC, ISSA and ITC), or would be paid if the conditions of employment applicable to the staff member included provisions for family allowances corresponding to those contained in the respective Staff Regulations applicable to headquarters' staff.• Under the respective Staff Regulations, staff assessment is applied to the salary of the staff member at the family rate by reason of the spouse or children in question.• In the case of a child who is not automatically covered by another health insurance scheme or medical care service, if a family allowance would be payable under the applicable Staff Regulations but is not paid only because of the receipt by the staff member or the staff member's spouse of an allowance of equal or greater amount.
--------------------	--

	<p>Upon the death of an eligible retiree, the retiree's spouse and children may continue to participate in the SHIF if: (1) they were automatically covered dependents at the time of death; (2) they receive a survivor's benefit from the UNJSPF or other ILO (incl. TC, ISSA and ITC) pension scheme; and (3) application for voluntary coverage was made and authorization to deduct contributions from the pension signed within three months of notification to the survivor of these provisions.</p>
Member Contributions	<p>Contributions for a member are equal to 3.55% of the "base amount" plus any earnings derived from work for the ILO (including TC, ISSA and ITC) by the member (or the member's spouse if the spouse is automatically covered by the SHIF).</p> <p>The base amount for an active member is defined as base salary.</p> <p>The base amount for a retiree is defined as the greater of:</p> <ol style="list-style-type: none"> 1) the full retirement benefit including cost of living adjustments from the UNJSPF or other ILO (including TC, ISSA and ITC) pension scheme received by the retiree (or the retiree's spouse if the spouse is automatically covered by the SHIF) before reduction for any partial lump sum payment; and 2) the amount of the retirement benefit which would have been received if the individual had contributed to the applicable pension scheme for 25 years. <p>Contributions for the surviving spouse of a retiree are equal to 3.55% of the survivor benefit the spouse would receive from the base amount defined above, plus any earnings derived from work for the ILO (including TC, ISSA and ITC).</p> <p>Spouses covered pay 30% of the retiree's contribution as from January 1, 2008.</p> <p>The first child covered contributes 10% of the retiree's contribution. An extra flat rate of 10% of the retiree's contribution will need to be contributed for all other children covered.</p> <p>Certain voluntary members who do not qualify for dependent status are also allowed to be covered by the SHIF, and the member pays the full cost of coverage.</p>
Organization Contributions	<p>Contributions paid by the organization on behalf of actives are equal to the member contributions (except zero for voluntary members).</p> <p>Contributions paid by the organization on behalf of retiree are two times the member contributions (except zero for voluntary members).</p>

Treatment	Coverage
Maximum benefit/participant/year	US\$150,000
Consultations with a physician (general practitioner or specialist), treatment given by a physician (excluding treatment for aesthetic purposes) and visits to a home or institution by a physician	80%
Surgical operations, including surgeon's and anesthetic services	80%
Medical imagery (X-rays, MRI, CT-scan, mammograms, etc.) made or prescribed by a physician	80%
Laboratory tests and other services made or prescribed by a physician	80%
Functional rehabilitation treatment prescribed by a physician and provided by a person authorized in the country concerned	80%, subject to a maximum and other conditions
Outpatient medical nursing services for an acute condition prescribed by a physician (other than non-medical care)	80%, subject to a maximum and other conditions
Psychiatry, psychoanalysis, or psychotherapy consultations or sessions given or prescribed by a physician	80%, subject to maximums and other conditions
Stays in a public ward in a public hospital for examination, diagnosis, or curative treatment where the institution makes a global charge for accommodation and care	100%, limited to 45 days per year
Accommodation in a recognized hospital or clinic for examination, diagnosis, or curative treatment	80%, limited to 45 days per year
Accommodation in a hospital or clinic for follow-up care, including cardiovascular re-education or convalescence after hospitalization	80%, subject to a maximum per day and limited to 45 days per year

Treatment	Coverage
Long-term nursing services in an institution	80%, subject to a maximum per day and other conditions
Stays in a hospital, nursing home, rest home, thermal center, etc. for cures or other convalescence	80%, subject to a maximum per day and other conditions
Prescription drugs, subject to prescription prior to purchase	80%
Dental care including odonto-stomatological treatment and laboratory charges for dentures; orthodontic treatment including apparatus	80%, subject to a maximum and other conditions
Optical appliances (including contact lenses)	80%, subject to a maximum and other conditions
Hearing aids	80%, subject to a maximum and other conditions
Prosthetic appliances prescribed by a physician (except dentures)	80%
Wheelchairs and similar equipment prescribed by a physician	80%
Immunizations (both adults and children) – preventative inoculations and vaccinations are covered when prescribed and given by a physician, except that there is no coverage for those required by national and international health authorities (e.g. in connection with schooling or travel).	80%
Emergency transportation to nearest place of treatment	80%
Transportation from one institution to another when hospitalized	80%
Other medical transportation within the area of the duty station or area of residence	80%, subject to prior approval
Funeral costs (including cremation)	100%, subject to a maximum

8.8. Contact details



Empower Results®

Geert Coene

Aon Hewitt | International Retirement and Investment
Avenue Edouard Rod 4
1260 Nyon | Switzerland
T +41 (0)58 266 85 31
geert.coene@aon.com



Empower Results®

Russell Berns

Aon Hewitt | International Retirement and Investment
Avenue Edouard Rod 4
1260 Nyon | Switzerland
T +41 (0)58 266 85 35
russell.berns@aon.com