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Committee on Budget, Finance and Administration

Original: English

WTO PENSION PLAN 2021 INTERIM ACTUARIAL VALUATION

NOTE BY THE CHAIRMAN OF THE WTOPP MANAGEMENT BOARD

The WTO Pension Plan undergoes a full actuarial valuation every three years and interim valuations in the years between full valuations. The attached interim actuarial valuation is based on 2021 data and is the latest actuarial report to be issued by the WTOPP. The last full actuarial valuation was completed earlier this year using 2020 data.

The 2021 interim valuation report confirms the important actuarial deficit identified in the 2020 full valuation.

Following the identification of an actuarial deficit, the WTOPP Management Board is responsible for recommending corrective actions to the General Council (through the Committee on Budget, Finance and Administration) to restore an actuarial balance.

The Management Board has started this process and looks forward to engaging further with all stakeholders following the presentation of this report and subsequently when elaborating corrective actions.

Jean-Marc Van Dril, Chair of the Management Board



Interim Actuarial Valuation Report as at 31. December 2021

World Trade Organization – WTO Pension Plan

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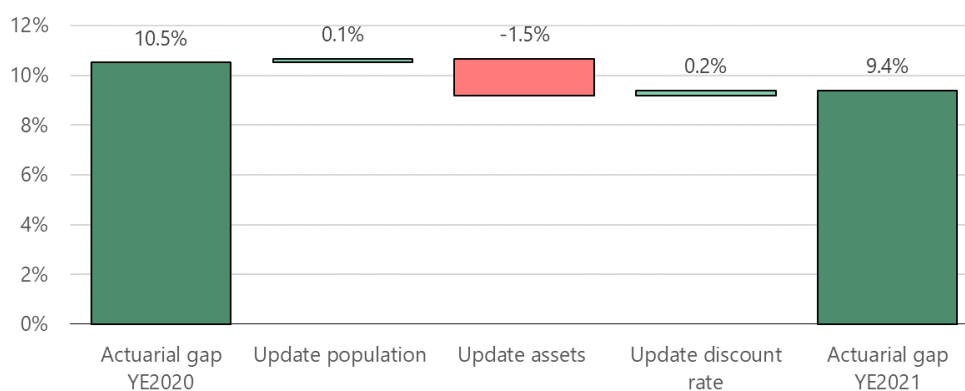
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1 Executive Summary

- 1) This report sets out the results of the interim actuarial valuation completed as at 31. December 2021 for the World Trade Organization Pension Plan (WTOPP). **Present report**
- 2) The last actuarial report is the full actuarial valuation report as at 31 December 2020. **Last report**
- 3) As usual with an interim valuation all methods and assumptions are kept unchanged. **Methods and assumptions**
- 4) Hence, the differences to the mentioned last full actuarial valuation report are the scope (limited scope in the present interim report) and the due date of the assets and insured population data. **Differences to last report**
- 5) The funding principle of WTOPP is that the existing assets together with the future contributions and the future investment incomes need to finance all the future benefits and administrative costs. This funding principle is checked in the open-group valuation (ongoing perspective). **Funding principle: open-group**
- 6) The long-term cost (required contribution rate) of the pension plan has decreased from 34.2% at year-end 2020 to 33.1% at year-end 2021. **Required contribution rate**
- 7) As the actual contribution rate has been kept unchanged at 23.7%, there is an actuarial gap of 9.4% at year-end 2021. **Actuarial gap: YE2021**
- 8) The following plot shows the development of the actuarial gap from year-end 2020 till year-end 2021. **Actuarial gap: YE2020 -> YE2021**

Plot 1: Development of the actuarial gap: YE2020 -> YE2021



-
- 9) As the above plot shows, the actuarial gap decreased from 10.5% at year-end 2020 to 9.4% at year-end 2021. The major reason for this development is the higher than expected investment return in the year 2021. **Discussion**
- 10) Since the actuarial gap is large, we strongly recommend that the WTOPP Management Board considers how to bring the required contribution rate of the plan into balance with the actual contribution rate paid to the plan. Moreover, we recommend to closely monitor the further development of the actuarial gap. **Recommendations / actions**
- 11) This should be done taking into account the long-term nature of the pension fund and the corresponding sake of continuity in contributions and benefits. **Sake of continuity**
- 12) However, it has to be noted that from one valuation to the next, the actuarially calculated required contribution rate may vary due to changes in asset values and the insured population, changes in the benefit provisions, changes in demographic and financial assumptions, etc. **But: volatility**
- 13) Principally, the necessary reform can be carried out by decreasing certain benefits and/or by increasing the actual contribution rate. However, there are many details regarding the necessary reform that need to be analysed and discussed. For instance, there are several different benefit types that can be reduced, benefits can be reduced for certain groups of participants and beneficiaries only and lastly, any actions on the benefits and/or the contributions can be carried out immediately or step-wise over time. We will gladly assist the WTOPP in any work regarding this necessary reform. **Reform variants**
- 14) We are available to answer any questions on the material contained in this report and to provide explanations or further details, as may be appropriate. **Availability**
- 15) Readers interested in the disclaimer to the present report are referred to appendix A3. **Disclaimer**
- 16) Lastly, the glossary given in Appendix A2 contains an explanation of the most important (technical) terms used in the present report. **Glossary**

Respectfully submitted,

St. Gallen, April 25, 2022

A handwritten signature in blue ink, appearing to read 'D. Schiess', on a light blue background.

Dr. David Schiess, M.Sc.

Lead actuary

Senior Actuary

Fully qualified actuary SAA

Federally certified pension fund actuary (SCPFA)

A handwritten signature in blue ink, appearing to read 'Livio Forlin', on a light blue background.

Livio Forlin

Actuary

Consultant

Actuary

2 Data

17) All data was provided directly by WTOPP staff. **Data provider**

18) Unless stated otherwise all figures are in CHF. **Currency**

2.1 Liability Side

19) In this chapter we present tables and plots to get a grasp on the characteristics of the insured population (plan participants and beneficiaries). **Insured population**

20) A summary of the insured population data used for the present interim valuation at 31 December 2021 and the previous full valuation at 31 December 2020 is set out below. **Headcount**

Table 1: Insured population: Headcount

Headcount	31.12.2021			31.12.2020	Change	
	Male	Female	Total		absolut	in %
Participants	312	404	716	709	7	1.0%
Beneficiaries	191	211	402	384	18	4.7%
Retirement	164	168	332	318	14	4.4%
Disability	11	11	22	22	-	0.0%
Spouses	6	23	29	26	3	11.5%
Children	10	9	19	18	1	5.6%
Total	503	615	1'118	1'093	25	2.3%
Share of beneficiaries	38.0%	34.3%	36.0%	35.1%		

21) The following table summarises the most important statistics of the insured population including the comparison to the previous year. **Statistics**

Table 2: Insured population: Statistics¹

Amounts in CHF	31.12.2021			31.12.2020	Change	
	Male	Female	Total		absolut	in %
Participants						
Σ FAR	58'151'966	63'934'835	122'086'801	121'603'943	482'858	0.4%
Ø FAR	186'385	158'255	170'512	171'515	-1'002	-0.6%
Σ Pensionable Renumeration	59'334'777	65'297'065	124'631'842	123'972'864	658'978	0.5%
Ø Pensionable Renumeration	190'176	161'626	174'067	174'856	-789	-0.5%
Ø YoS	13.7	13.1	13.1	13.1	-	0.0%
Ø Age	47.3	46.0	46.6	46.4	0.2	0.4%
Beneficiaries						
Σ Benefits	14'195'780	13'394'480	27'590'260	26'481'523	1'108'737	4.2%
Retirement	13'088'075	11'452'772	24'540'847	23'618'167	922'680	3.9%
Disability	708'852	767'912	1'476'764	1'489'921	-13'157	-0.9%
Spouses	347'532	1'125'370	1'472'902	1'277'697	195'205	15.3%
Children	51'322	48'425	99'746	95'738	4'008	4.2%
Ø Benefits						
Retirement	79'805	68'171	73'918	74'271	-353	-0.5%
Disability	64'441	69'810	67'126	67'724	-598	-0.9%
Spouses	57'922	48'929	50'790	49'142	1'648	3.4%
Children	5'132	5'381	5'250	5'319	-69	-1.3%
Ø Age						
Retirement	70.3	69.0	69.6	68.9	0.7	1.1%
Disability	63.5	56.6	60.1	59.1	1.0	1.7%
Spouses	59.8	69.7	67.7	66.8	0.8	1.2%

FAR: final average remuneration; YoS: years of service

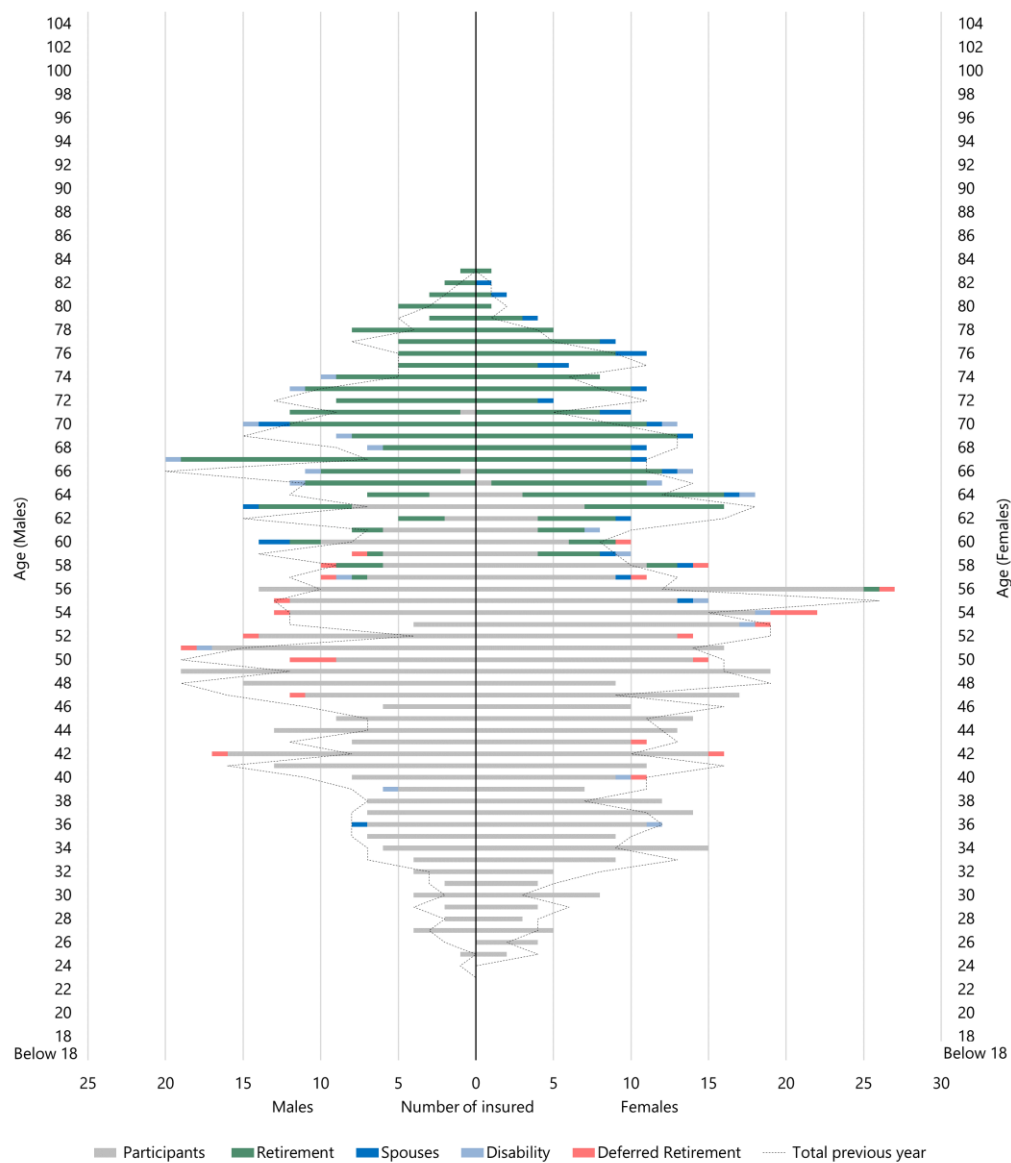
22) The two tables above show that the population of plan participants has changed only slightly. However, the population of beneficiaries has increased by 4.7%. This explains the fact that the share of beneficiaries has increased as well. This is only natural as the pensioner population is still quite small and young at the moment and thus, it will gain in significance in the future.

Discussion

23) Finally, the following diagram displays the age structure of the insured population.

Ages structure

¹ Note that all information given in this table is «stock»-information at the mentioned due dates. Hence, there are naturally (moderate) differences to the «flow»-information given in the income and expenditure statement (WTOPP's financial statement). For instance, the benefits presented in the income and expenditure statement are the benefits actually paid in a certain year. In contrast to this, the benefits given in this table are the benefits of all beneficiaries at the mentioned due dates. In this table we deliberately present «stock»-information only, as the insured population at year-end 2021 serves as the basis for all actuarial projections.

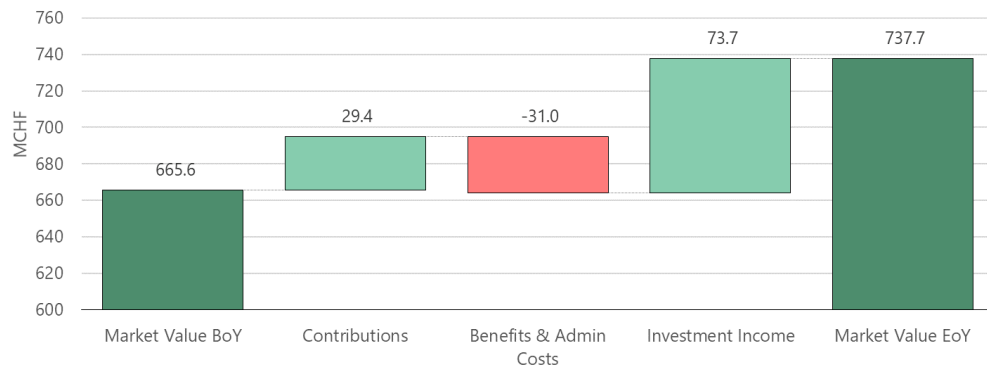
Plot 2: Insured population: age structure

- 24) The above plot shows that the ages around 45 till 55 years are the most dominant ones what regards the population of plan participants. The population of pensioners is clearly small and young (all beneficiaries are below life expectancy) at the moment. This will change in the future as the pension fund matures in age structure. Discussion

2.2 Asset Side

- 25) The waterfall chart below provides a reconciliation of the market value of assets (all amounts are shown in MCHF) from year-end 2020 till year-end 2021. Reconciliation

Plot 3: Reconciliation of market value of assets: YE2020 -> YE2021



- 26) The following table displays some information on the investment return in the reporting year 2021. Investment return

Table 3: Investment Return in 2021

	Nominal Return	Inflation Rate	Real Return
Year	A	B	C=A-B
2021	11.1%	1.5%	9.6%

Source: Inflation rate according to Swiss National Bank (SNB)

- 27) As stated in Plot 3 the nominal investment income in the year 2021 amounts to 73.7 MCHF. This corresponds to a nominal investment return of 11.1%. With the inflation of 1.5% this implies a real investment return in the year 2021 of 9.6% Discussion

3 Assumptions

28) As usual with an interim valuation all assumptions are kept unchanged relative to the last full actuarial valuation as of year-end 2020. Hence, the interested reader is referred to that report.

Everything
unchanged...

29) The only exception to this rule is the discount rate for the next 10 years, since this parameter should reflect the current market conditions such that consistency to the used market value of assets (starting value for the cash-flow projections) is achieved. However, the change in the discount rate over the next 10 years is very small (-0.1%-points).

... only one
exception

30) The following table provides a summary of the assumptions used in the open-group valuation.

Assumption
overview

Table 4: Summary of assumptions²

	31.12.2021	31.12.2020
Financial		
Asset Value	Market	Market
Discount Rate	3.7% for the first 10 years, 4.5% thereafter	3.8% for the first 10 years, 4.5% thereafter
General Salary Increase	1.0% until 2029, and 1.5% thereafter	1.0% until 2029, and 1.5% thereafter
Pension Increase	1.0%	1.0%
Inflation Rate	1.0%	1.0%
Administrative Costs	0.2%	0.2%
Demographic		
Mortality	BVG 2020 cohort table	BVG 2020 cohort table
Disability	70% of BVG 2020	70% of BVG 2020
Termination	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Early Retirement	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Individual Salary Increase	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Withdrawal vs. Deferred	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Lump Sum Probability	50%	50%
Lump Sum Share	25%	25%
Proportion Married on Death	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Age Difference	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)
Active Head Count	700	700
New entrants	WTO Specific (rates in Section 3)	WTO Specific (rates in Section 3)

The changed assumptions are highlighted in red font. The references to certain sections regard the last full actuarial valuation report at year-end 2020.

² Since the number of plan participants is assumed to be constant at 700 and as there are 716 plan participants at year-end 2021 (see Table 1), there are no entries modelled until the number of 700 is obtained (after exits and retirements, mainly).

4 Methods

- | | |
|---|------------------------------|
| 31) As usual with an interim valuation all methods are kept unchanged relative to the last full actuarial valuation as of year-end 2020. Hence, the interested reader is referred to that report. | Everything unchanged... |
| 32) However, the present interim actuarial valuation report contains the results of the open-group valuation only, as the closed-group valuation is performed in the full actuarial valuation solely. | Only open-group valuation... |

5 Results

- 33) Note that the present interim actuarial valuation report contains the results of the open-group valuation (ongoing perspective) only, as the closed-group valuation is performed in a full actuarial valuation solely. **Open-group only**
- 34) We first analyse the sustainability of the WTOPP with the present values of the various cash flows and the current level of assets in chapter 5.1. Afterwards, we consider the development of the assets and the various cash flows over time in chapter 5.2. **Outlook**

5.1 Required Contribution Rate

5.1.1 Derivation

- 35) The following table contains the derivation of the required contribution rate (RCR). **Derivation of RCR**

Table 5: Derivation of the required contribution rate

in MCHF		31.12.2021	31.12.2020
A	Assets	738	666
B	PV Benefits		
	a) Current beneficiaries	453	439
	b) Current participants	871	848
	c) Future participants (new entrants)	621	613
	Total [a+b+c]	1'945	1'899
C	PV Pensionable remuneration		
	a) Current participants	1'165	1'156
	b) Future participants (new entrants)	2'501	2'471
	Total [a+b]	3'666	3'627
D	Calculated contribution rate (CCR) [(B-A)/C]	32.9%	34.0%
E	Administrative costs	0.2%	0.2%
F	Required contribution rate (RCR) [D+E]	33.1%	34.2%

PV: present value

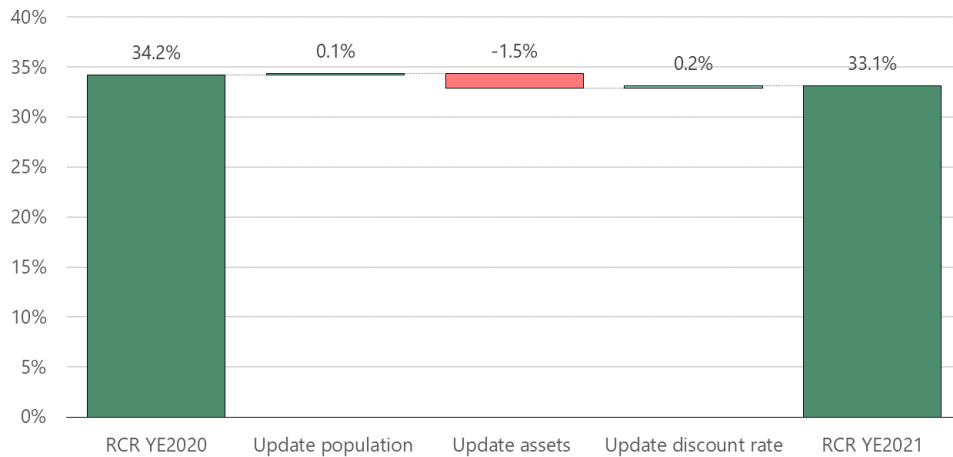
- 36) The required contribution rate (RCR) decreases from 34.2% at year-end 2020 to 33.1% at year-end 2021. In the following, all changes are explained step-by-step. **Discussion**

5.1.2 Reconciliation

- 37) The following plot shows the change of the required contribution rate (RCR) from year-end 2020 till year-end 2021.

Change RCR:
YE2020 -> YE2021

Plot 4: Reconciliation of the required contribution rate: YE2020 -> YE2021



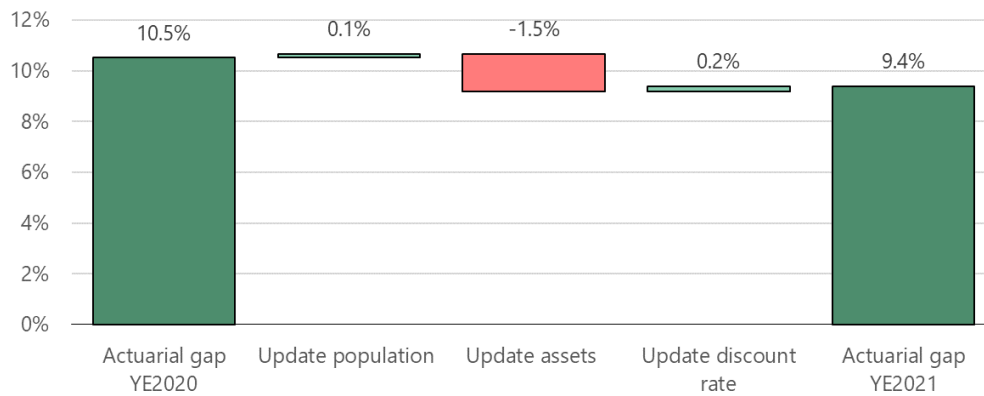
- 38) The starting point is the required contribution rate (RCR) at year-end 2020 given in Table 5. RCR at YE2020
- 39) As already shown in Chapter 2.1, the insured population has changed compared to the previous year. The number of plan participants has increased slightly whereas the number of beneficiaries has grown moderately. This leads to increase in the RCR of 0.1%-points. Update population
- 40) Based on last year's projection, the market value of assets was expected to be ca. 686 MCHF at year-end 2021. However, the actual market value of assets at the year-end 2021 amounts to ca. 738 MCHF. There are two main reasons for the higher than expected market value of assets and thus, the correspondingly lower RCR. The net return on the assets was not 3.8% as assumed in the projection model, but 11.1% (see also section 2.2). In addition, the (liability driven) net cash flow in 2021 was higher in reality according to WTOPP's income statement (-1.6 MCHF) than expected by the projection model (-5.2 MCHF). The much higher than expected investment return and the slightly higher than expected net cash flow lead to a decrease in the required contribution rate of 1.5%-points. Update assets
- 41) Lastly, as mentioned all assumptions are kept unchanged relative to the previous year. The only exception to this rule is the discount rate for the next 10 years, since this parameter should reflect the current market conditions such that consistency to the used market value of assets (starting value for the cash-flow projections) is achieved. However, the decrease in the discount rate over Update discount rate

the next 10 years amounts to 0.1% only and hence, the corresponding increase in the RCR of 0.2%-points is quite small.

- 42) Starting with the required contribution rate at year-end 2020 of 34.2% and adding up all the above-mentioned changes leads to the required contribution rate at year-end 2021 of 33.1%. RCR at YE2021

5.1.3 Actuarial Gap

- 43) Clearly, the required contribution rate at year-end 2021 of 33.1% (see Plot 4) is much greater than the actual contribution rate of 23.7%. The actuarial gap in terms of contribution rate amounts to 9.4%. Result:
Big gap...
- 44) This large gap shows that a reform is absolutely necessary. Principally, the pension fund can be put back into a reasonable actuarial position by decreasing certain benefits and/or by increasing the actual contribution rate. ...Reform
necessary!
- 45) However, there are many details regarding the necessary reform that need to be analysed and discussed. For instance, there are several different benefit types that can be reduced, benefits can be reduced for certain groups of participants and beneficiaries only and lastly, any actions on the benefit and/or the contribution side can be carried out immediately or step-wise over time. We will gladly assist the WTOPP in any work regarding this necessary reform. Reform:
many details...
- 46) The reason for the high required contribution rate of 33.1% and hence, the large actuarial gap of 9.4% is that the current level of assets has to be judged as clearly insufficient after the assumption revisions implemented at year-end 2019 and at year-end 2020. Put more precisely, the current level of assets is insufficient given the acquired benefits of the current plan participants and the current beneficiaries. Insufficient assets
given the acquired
benefits
- 47) With the reconciliation of the required contribution rate from year-end 2020 till year-end 2021 given in Plot 4, the development of the actuarial gap can easily be derived, since the actual contribution rate has been kept unchanged over the entire time period at 23.7%. The following plot shows the corresponding development of the actuarial gap. Development

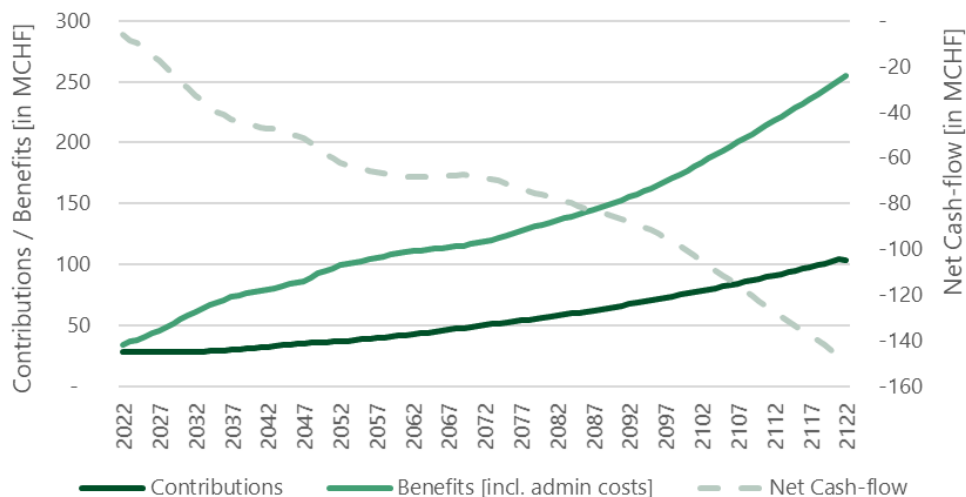
Plot 5: Development of the actuarial gap: YE2020 -> YE2021

- 48) As the above plot shows, the actuarial gap has moderately decreased from [Discussion](#) 10.5% at year-end 2020 to 9.4% at year-end 2021.

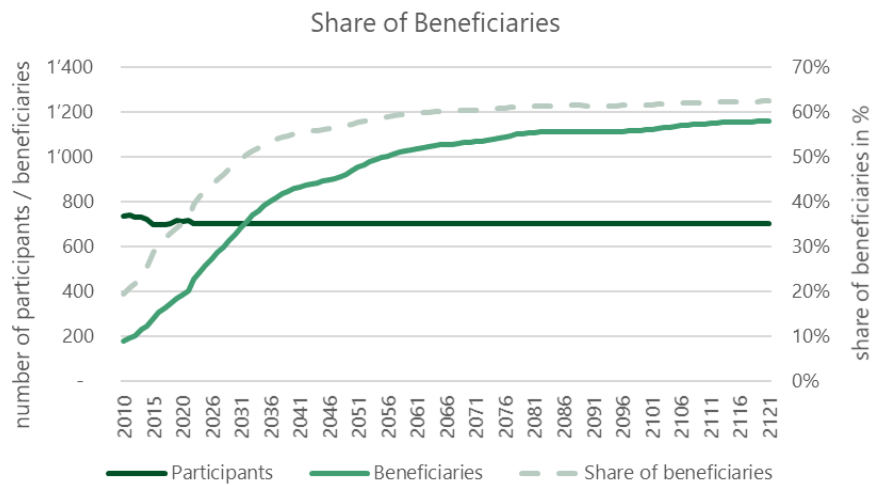
5.2 Cash-Flow Analysis

- 49) After having compared the present value of the various cash flows to the current level of assets in the previous chapter, we now analyse the development of the assets and the various cash flows over time. Development over time
- 50) We start by first comparing the liability-driven cash flows: Liability-driven cash flows
- Contributions
 - Benefits
 - Administrative costs
- 51) The asset-driven cash flows will be analysed later when we add the investment income³ to the above-mentioned cash flows. Asset-driven cash flows: later...
- 52) The following plot shows the expected development of the above-mentioned liability-driven cash flows. Development: liability-driven CFs

Plot 6: Development of liability-driven cash flows



- 53) The above plot shows that contributions (liability-driven cash-in) are already in 2022 (first projection year) not sufficient anymore to finance the benefits and administrative costs (liability-driven cash-out). This means that the pension fund has recently started to consume (rely on) its investment income. Discussion: 1. Pivotal time point
- 54) This is no news as the full actuarial valuation report at year-end 2020 has already presented similar findings. Change to previous year
- 55) The development of the liability-driven cash flows depicted in Plot 6 can be explained by the development of the insured population given in the following plot. Insured population

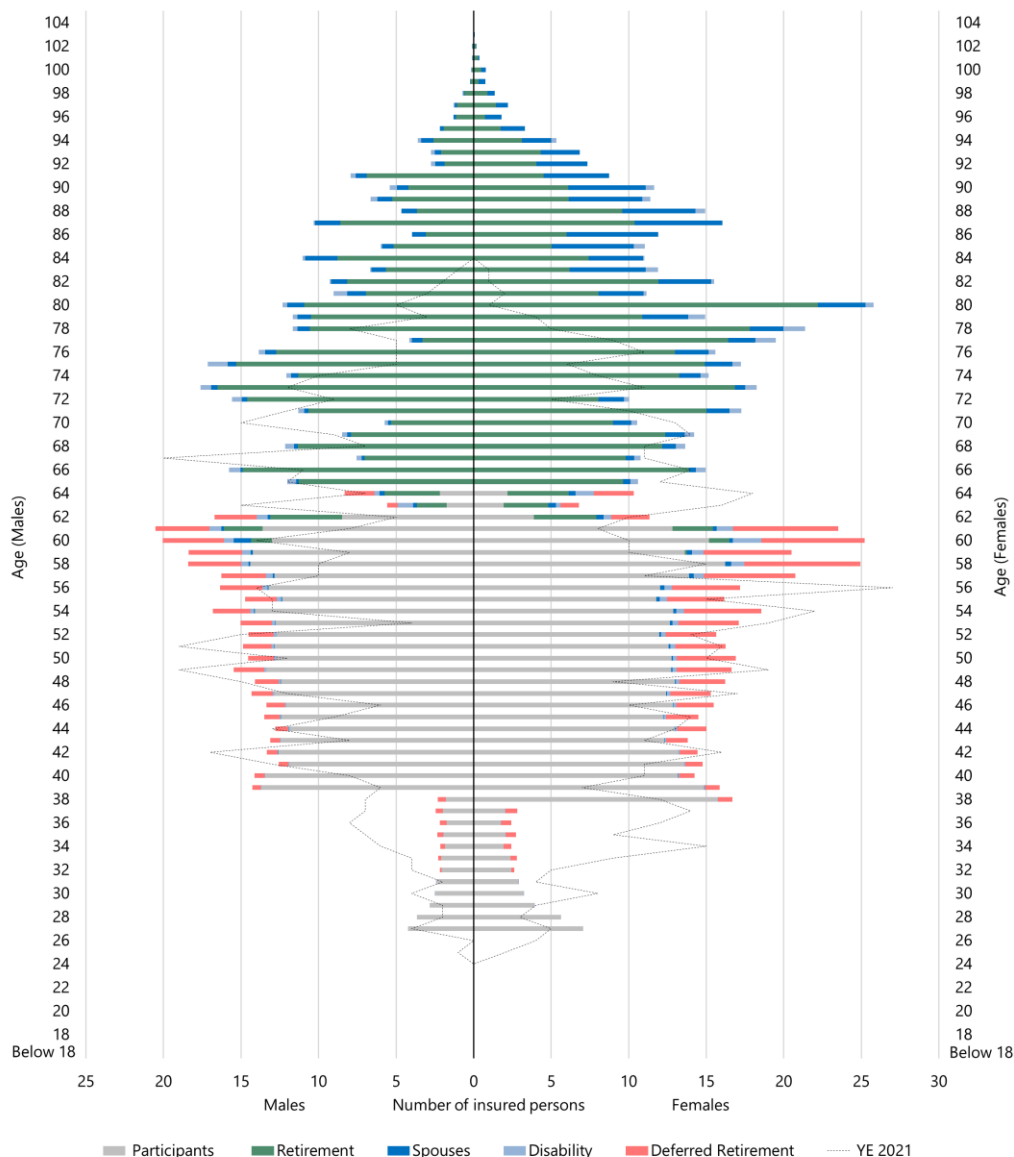
Plot 7: Development of the insured population

- 56) The above plot shows that the number of plan participants has decreased a bit in the entire past (since 2010) and that the number of beneficiaries has strongly increased. Hence, the share of beneficiaries has continuously risen in the past of WTOPP. As the population of beneficiaries at year-end 2021 is still quite small and young, the number of beneficiaries will further grow. In contrast to this, the number of plan participants is assumed to be constant at 700. Thus, the share of beneficiaries is clearly expected to increase further. This naturally explains the reduction of the liability-driven net cash flow over time shown in Plot 6.
- 57) It is interesting to further analyse the development of the insured population as this is the main driver of the pension fund. The following plot shows the expected development of the age structure over time.

Discussion

Age structure

³ Strictly speaking investment income is not only a cash flow since it contains also unrealized capital gains.

Plot 8: Development of the age structure at year-end 2046

Expected age structure in 25 years

- 58) As already stated above the population of the beneficiaries at year-end 2021 is still quite small and young. Over the next 25 years the existing beneficiaries will mainly get older (only a moderate number of deaths are expected over this time horizon) and there will continually emerge many new young beneficiaries particularly through (early) retirements. This can be seen very well by comparing the above plot with Plot 2.
- 59) Now we add the asset-driven investment income to the above discussed liability-driven cash flows. This completes the picture as the current level of assets, the future investment incomes and the future contributions need to finance the future benefits and administrative costs.

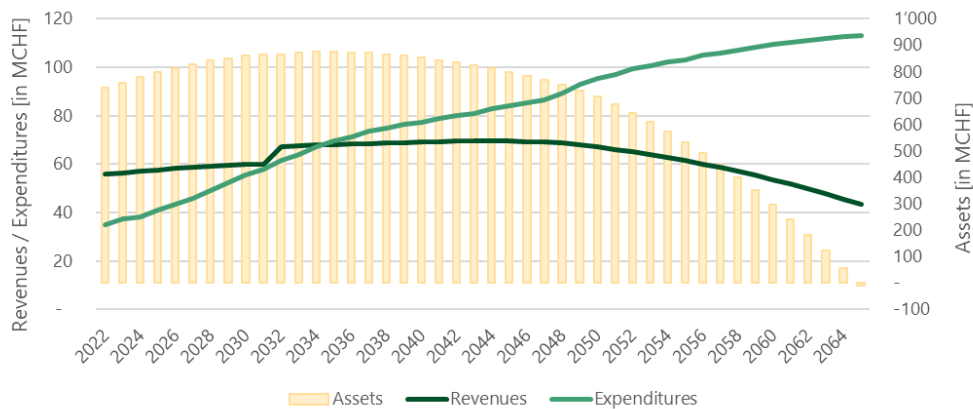
Discussion

Adding
investment
income

- 60) The following plot shows the development of the revenues (contributions and investment incomes) and the expenditures (benefits and administrative costs) over time. Furthermore, it contains the expected path of the assets.

Revenues
and expenditures

Plot 9: Development of revenues and expenditures



- 61) The second pivotal time point occurs when the revenues (contributions and investment income) are not sufficient anymore to cover the expenditures (benefits and administrative costs). This is the point in time when the pension plans' assets start to decrease. As can be seen from the above plot this second pivotal time point occurs after 14 years (in the year 2035).

Discussion:
2. Pivotal
time point

Taking into account the investment income, the WTOPP currently displays a positive net cash flow and hence, the assets are expected to increase further in the near future. However, after 14 years the projections show that the assets start to decrease.

- 62) This finding is similar to the results in the last year's actuarial report where the second pivotal time point occurs in the year 2033.
- 63) The third and final pivotal time point is when the assets are exhausted and there are no assets left to pay the plan's expenditures (benefits and administrative costs). On expectation this happens in the WTOPP after 44 years (in the year 2065).
- 64) This finding is similar to the results in the last year's actuarial report where the third pivotal time point occurs in the year 2061.
- 65) Clearly, the exhaustion of the assets after 44 years given in Plot 9 shows the necessity of sufficient reforms.

Change to
previous year

Discussion:
3. Pivotal
time point

Change to
previous year

Reform necessary!

A1. Cash-Flow Projections

- 66) The following table shows the expected cash flows of the WTOPP in the open- **OGV: Cash flows** group valuation over the next 100 years based on the assumptions set out in Section 3. Note that these cash flows were calculated with the current actual contribution rate of 23.7%.

Table 6: Cash flows in the open-group valuation

Year	Contributions	Investment income	Benefits [incl. Admin costs]
2022	28.90	27.20	34.80
2023	28.50	27.90	37.20
2024	28.40	28.60	38.20
2025	28.40	29.30	40.90
2026	28.50	29.80	43.60
2027	28.50	30.30	46.00
2028	28.50	30.80	49.00
2029	28.60	31.10	52.20
2030	28.60	31.30	55.60
2031	28.70	31.40	58.10
2032	28.90	38.20	61.60
2033	29.10	38.40	64.20
2034	29.30	38.50	67.10
2035	29.60	38.50	69.50
2036	29.90	38.40	71.20
2037	30.40	38.20	73.70
2038	30.80	38.00	74.80
2039	31.30	37.70	76.50
2040	31.80	37.30	77.40
2041	32.40	36.90	78.90
2042	32.90	36.50	80.20
2043	33.50	36.00	80.80
2044	34.10	35.50	83.00
2045	34.60	34.80	84.10
2046	35.10	34.20	85.40
2047	35.60	33.40	86.70
2048	36.00	32.60	89.30
2049	36.40	31.60	93.10
2050	36.60	30.40	95.40
2051	37.00	29.10	97.10
2052	37.40	27.60	99.60
2053	37.80	26.10	100.70
2054	38.30	24.40	102.00
2055	38.80	22.60	103.20
2056	39.40	20.70	105.00
2057	39.90	18.70	105.90
2058	40.50	16.50	107.10
2059	41.10	14.30	108.40
2060	41.70	11.90	109.30
2061	42.40	9.40	110.40
2062	43.00	6.70	111.10
2063	43.70	4.00	111.90
2064	44.50	1.10	112.50
2065	45.20	-1.90	113.20
2066	46.00	-5.10	113.70
2067	46.70	-8.40	114.40

Year	Contributions	Investment income	Benefits [incl. Admin costs]
2068	47.50	-11.80	115.20
2069	48.30	-15.40	115.70
2070	49.10	-19.10	116.80
2071	49.90	-23.00	117.80
2072	50.60	-27.10	119.20
2073	51.40	-31.40	120.40
2074	52.10	-36.00	122.20
2075	52.90	-40.70	124.00
2076	53.60	-45.80	126.20
2077	54.30	-51.20	127.90
2078	55.00	-56.80	129.50
2079	55.80	-62.70	131.20
2080	56.60	-69.00	132.60
2081	57.40	-75.50	134.50
2082	58.30	-82.40	136.10
2083	59.10	-89.60	138.00
2084	60.00	-97.20	139.70
2085	60.90	-105.20	141.70
2086	61.80	-113.60	143.60
2087	62.70	-122.40	145.50
2088	63.70	-131.70	147.40
2089	64.70	-141.40	149.30
2090	65.70	-151.60	151.30
2091	66.70	-162.30	153.20
2092	67.80	-173.50	155.30
2093	68.80	-185.30	157.60
2094	69.90	-197.60	160.10
2095	71.00	-210.60	162.50
2096	72.10	-224.20	165.10
2097	73.20	-238.50	168.00
2098	74.30	-253.60	170.70
2099	75.40	-269.40	173.80
2100	76.60	-286.00	176.90
2101	77.70	-303.40	180.40
2102	78.80	-321.70	183.70
2103	79.90	-341.00	187.10
2104	81.10	-361.20	190.40
2105	82.30	-382.40	193.60
2106	83.50	-404.70	197.00
2107	84.70	-428.00	200.60
2108	86.00	-452.60	203.80
2109	87.30	-478.30	207.10
2110	88.60	-505.20	211.00
2111	89.90	-533.50	214.70
2112	91.20	-563.20	218.20
2113	92.60	-594.30	221.60
2114	93.90	-626.90	225.20
2115	95.40	-661.10	228.60
2116	96.80	-696.90	232.20
2117	98.30	-734.40	235.50
2118	99.80	-773.60	239.30
2119	101.30	-814.80	242.90
2120	102.90	-857.90	246.80
2121	104.40	-903.00	250.80

Contributions, investment income and benefits (including administrative costs) in MCHF

A2. Glossary

- 67) **Accrued benefits** include benefits incurred but not paid in the current valuation year. In the case of WTOPP the accrued benefits are calculated with the current final average remuneration and the so far acquired years of service of a plan participant. The actual benefits to be paid out in the future however, will depend on the final average remuneration and the acquired years of service at the commencement of the benefit. **Accrued benefits**
- 68) **Actuarial assumptions** basically are all parameters needed for the actuarial projections. These include financial assumptions (i.e. discount rate, inflation rate, etc.) as well as demographic assumptions (i.e. growth of plan participant population, mortality rates, etc.). **Actuarial assumptions**
- 69) **Actuarial surplus or deficit** is the actuarial position of the pension plan. This can be measured by the difference between the pension fund's assets and the liabilities or by the comparison of the required contribution rate to the actual contribution rate. **Actuarial surplus (deficit)**
- 70) **Administrative costs** include the costs incurred in the general administration of the Pension Plan. They do not include the costs for the Plan's Secretariat, which are borne by the WTO (Article 5(f) of the Plan Regulations) and also not the investment-related administrative costs, since these costs are already considered in the determination of the expected net portfolio return (discount rate). **Administrative costs**
- 71) **Best estimate** stands for expected value. What regards the assumptions this means that they are chosen as realistically as possible. The chance that reality will show a higher or a lower value than the best estimate assumption is fifty-fifty. **Best estimate**
- 72) **Cash-flow projections** include all future contributions, investment incomes, benefits and administrative costs. These future cash-flows are basically computed using the current insured population, the pension plan's Regulations and various actuarial assumptions. They are important for understanding the actuarial position of the pension plan. **Cash-flow projections**
- 73) **Closed-group valuation** determines the actuarial position of a pension fund by immediately closing the fund which means that no future entrants are taken into account. In the case of WTOPP this is done by modelling the accrued benefits of plan participants and beneficiaries only. **Closed-group valuation**

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- 74) **Commutation** refers to retirement benefits, early retirement benefits and deferred retirement benefits commuted at the request of the participant into a lump sum not exceeding 1/2 of the actuarial equivalent of the benefit or the amount of the participant's own contributions, whichever is the larger. **Commutation**
- 75) **Discount rate** is the interest rate used in calculating the present value of future cash flows. In an actuarial context, the discount rate is often assumed to be the expected net return of the investment portfolio. **Discount rate**
- 76) **Final average remuneration** (FAR) is the remuneration during the last years or months of service that serves as a basis for calculating any benefit payable under the WTOPP. **Final average remuneration**
- 77) **Mortality rate** is the probability that a person of a given sex and age dies within one year. **Mortality rate**
- 78) **Open-group valuation** determines the actuarial position of a pension fund by considering a given future time horizon where the fund is modelled as an open fund which means that future entrants are taken into account. After that time horizon the fund is closed (no further entrants) and the run-off is modelled. **Open-group valuation**
- 79) In economics and finance, a **present value** (PV) stands for a discounted value. Often not just a single future cash-flow is discounted to the date of valuation but an entire cash-flow stream. In this latter case, the present value is the sum of all discounted future cash-flows. **Present value**
- 80) **Rate of return** is the relative change (measured as a percentage; also called growth rate) in the value of the portfolio over a specified period, taking into account both the investment income (cash-flows like dividends) and the change in the market value of the portfolio (capital gain). It is usually expressed as an annual rate. The **nominal rate of return** is the rate of return before subtracting the inflation rate (measured on the basis of the annual movement of the consumer price index in Switzerland). The **real rate of return** is calculated by subtracting the inflation rate from the nominal rate of return. The term gross means that the return is calculated before the deduction of investment-related costs while the term net refers to the return including all investment-related expenses. The **target real rate of return** is the long-term real rate of return (typically, this is the same as the real discount rate) that the Pension Plan needs to achieve in order to meet its liabilities. **Rate of return**

- 81) **Regulations and Administrative Rules** refer to the Regulations and Administrative Rules adopted by the General Council on 16 October 1998, as amended by the General Council on 1 December 2005, on 28 July 2009, on 26 October 2011, on 30 November 2015, on 7 December 2016 and on 26 July 2017.

**Regulations and
Administrative
Rules**

A3. Disclaimer

82) This Report is confidential information and intended for the exclusive use of the WTO staff members, beneficiaries and WTO Members on a need-to-know basis only, in the context of the work/services which are the subject of this Contract, and only with the explicit authorization of the Chair of the WTOPP Management Board or the Secretary to the WTOPP in his/her absence. It was produced by c-alm AG exclusively for use by the World Trade Organization Pension Plan for the specific purpose as well as in the specific environment and context indicated to c-alm AG at the time of its preparation. Its content is based on the information made available to c-alm AG by the WTO Pension Plan or at its request. Its conclusions and recommendations are valid only for the specific purpose for which it was prepared, in relation to the information made available to c-alm AG and to the extent that the form in which this Report was issued by c-alm AG was not subsequently altered, edited or modified.

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