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

Switzerland

January 2024

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1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Such a scheme doesn't exist in Switzerland	
b. Institutional set-up	
Data sources/ suppliers	
Which institution is running/managing the calculations?	
2. Any other comments	

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
This column concerns only the Swiss second pillar managed by private pension funds and some public pension funds. Public pension funds, for which the pension manager is the general government, are recorded under column E. The Swiss second pillar is a compulsory occupational old-age benefit scheme, which also insures invalidity and death risks. It covers workers of resident employers and is administered by provident institutions called pension funds. Every resident employer has to join a pension fund. , which is an autonomous unit distinguished from the employer. The employer may create its own pension fund or he can join a multi-employer pension fund. The legislation on the second pillar sets the minimum protection that must be served to insured persons, but pension funds are free to establish in their regulations better conditions going beyond the statutory minimum (lower minimum/higher maximum insured salary, higher conversion and interest rates, higher benefits).	
b. Institutional set-up	
Data sources/ suppliers	*Statistics on pension funds*, Federal Statistical Office (FSO) *Group life reporting for occupational pension schemes*, Swiss financial-markets regulator (FINMA) *Pension funds' annual reports*, when available
Which institution is running/managing the calculations?	FSO
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	In the majority of pension funds, pension entitlements of active members correspond to the accumulated savings including an accrued guaranteed interest (defined contribution scheme with capital protection and a minimum return element). Only a minority of pension funds uses à projected benefit obligation method, but the formulas used are unknown. The formula use to estimate the pension entitlements of retiree is also unknown.
Indexation of benefits	no legal obligation to adjust the pension benefit
d. Type and structure of the calculation model	
We use estimations made by the pension funds and insurers themselves.	
2. Assumptions and methodologies applied	

a. Discount rate	

a. Discount rate
Each pension fund is free to choose the discount rate. It varies between 1% and 4.5% (weighted average discount rate in 2015: 2.8%)
b. Wage growth
none
c. Valuation method: ABO/PBO
ABO: entitlements correspond to the pension benefit accrued to date, without considering future wage growth
3. Data used to run the model
a. Mortality tables
Each PF is free to choose the table that better suites its needs. Normally they use tables set up by a group of PF (common mortality tables). Some PF use period life tables, other generation life tables.
b. Entitlement statistics; other relevant statistics
Statistics on pension funds, Federal Statistical Office (FSO) *Group life reporting for occupational pension schemes*, Swiss financial-markets regulator (FINMA) *Pension funds' annual reports*, when available
4. Reforms incorporated in the model
So far, the legislation does not allow changes in pension entitlements of retirees. In case of change of the formula used to assess the annuity, the employer may decide to safeguard the projected benefit of certain cohort of employees. In this case, pension entitlements of this cohort increase due to the reform.
5. Specific assumptions
a. How are careers modelled?
As long as the employee who changes job takes his vested benefits to the pension fund of his new employer, pension entitlements are estimated without taking into account possible career path.
b. How are survivor pensions calculated?
unknown
c. How is the retirement age modelled over time?
unknown
d. Other specific features of the model
6. Any other comments
The use of data directly estimated by the schemes' managers and the great freedom for them to choose the actuarial parameters and models makes it impossible to know precisely how pension entitlements are met. Therefore, one must be aware that pension funds entitlements stocks are not necessarily comparable within the PF and with those of the other columns of the Supplementary table. Concerning the comparison between the flows recorded in the core accounts and those of the supplementary table, there are differences because in Switzerland we have entitlements to non-pension benefits whose annual change is recorded under D.8. Pension funds themselves have different kind of non-actuarial provisions (other technical reserves such as reserve against increasing life expectancy, reserves in case of decease and invalidity, reserves against actuarial losses on pension, reserve for bonuses and rebates, reserves for cost-of-living increase, etc.) which we record also under AF.65.

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Such a scheme doesn't exist in Switzerland	
b. Institutional set-up	
Data sources/ suppliers	
Which institution is running/managing the calculations?	
2. Any other comments	

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Second pillar managed by public pension funds where the general/regional/local governments are the pension managers. For the description of the second pillar scheme, see explanations for column B.	
b. Institutional set-up	
Data sources/ suppliers	*Statistics on pension funds*, Federal Statistical Office (FSO) *Pension funds' annual reports*, when available
Which institution is running/managing the calculations?	FSO
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	In the majority of pension funds, pension entitlements of active members correspond to the accumulated savings including an accrued guaranteed interest (defined contribution scheme with capital protection and a minimum return element). Only a minority of pension funds uses à projected benefit obligation method, but the formulas used are unknown. The formula use to estimate the pension entitlements of retiree is also unknown.
Indexation of benefits	no legal obligation to adjust the pension benefit
d. Type and structure of the calculation model	
We use estimations made by the pension funds and insurers themselves.	
2. Assumptions and methodologies applied	
a. Discount rate	
Each pension fund is free to choose the discount rate. It varies between 1% and 4.5% (weighted average discount rate in 2015: 2.8%)	
b. Wage growth	
none	
c. Valuation method: ABO/PBO	
ABO: entitlements correspond to the pension benefit accrued to date, without considering future wage growth	
3. Data used to run the model	
a. Mortality tables	
Each PF is free to choose the table that better suites its needs. Normally they use tables set up by a group of PF (common mortality tables). Some PF use period life tables, other generation life tables.	
b. Entitlement statistics; other relevant statistics	
Statistics on pension funds, Federal Statistical Office (FSO) *Pension funds' annual reports*, when available	

4. Reforms incorporated in the model
So far, the legislation does not allow changes in pension entitlements of retirees. In case of change of the formula used to assess the annuity, the employer may decide to safeguard the projected benefit of certain cohort of employees. In this case, pension entitlements of this cohort increase due to the reform.
5. Specific assumptions
a. How are careers modelled?
As long as the employee who changes job takes his vested benefits to the pension fund of his new employer, pension entitlements are estimated without taking into account possible career path.
b. How are survivor pensions calculated?
unknown
c. How is the retirement age modelled over time?
unknown
d. Other specific features of the model
6. Any other comments
The use of data directly estimated by the schemes' managers and the great freedom for them to choose the actuarial parameters and models makes it impossible to know precisely how pension entitlements are met. Therefore, one must be aware that pension funds entitlements stocks are not necessarily comparable within the PF and with those of the other columns of the Supplementary table.

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Such a scheme doesn't exist in Switzerland	
b. Institutional set-up	
Data sources/ suppliers	
Which institution is running/managing the calculations?	
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	
Indexation of benefits	
d. Type and structure of the calculation model	
2. Assumptions and methodologies applied	
a. Discount rate	
b. Wage growth	
c. Valuation method: ABO/PBO	
3. Data used to run the model	
a. Mortality tables	
b. Entitlement statistics; other relevant statistics	
[Please list other relevant data inputs used]	
4. Reforms incorporated in the model	
5. Specific assumptions	

a. How are careers modelled?
b. How are survivor pensions calculated?
c. How is the retirement age modelled over time?
d. Other specific features of the model
6. Any other comments

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Such a scheme doesn't exist in Switzerland	
b. Institutional set-up	
Data sources/ suppliers	
Which institution is running/managing the calculations?	
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	
Indexation of benefits	
d. Type and structure of the calculation model	
2. Assumptions and methodologies applied	
a. Discount rate	
b. Wage growth	
c. Valuation method: ABO/PBO	
3. Data used to run the model	
a. Mortality tables	
b. Entitlement statistics; other relevant statistics	
[Please list other relevant data inputs used]	
4. Reforms incorporated in the model	
5. Specific assumptions	
a. How are careers modelled?	
b. How are survivor pensions calculated?	
c. How is the retirement age modelled over time?	
d. Other specific features of the model	
6. Any other comments	

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

1. General description of the scheme and the calculation model	
a. Coverage of the scheme	
Swiss old age and survivor (AHV) and disability (IV) pension scheme. Both are mandatory and cover all persons residing in Switzerland, regardless of if they are employed or not. It covers also frontier workers and some persons domiciled abroad who work in Switzerland. Swiss nationals working abroad for the federal government, for international organizations with whom the Federal Council has concluded a headquarter agreement, or for private volunteer organizations that receive substantial support from the government are also insured.	
b. Institutional set-up	
Data sources/ suppliers	The Central Compensation Office CCO
Which institution is running/managing the calculations?	Federal Statistical Office (FSO)
c. Major formulas: Benefit formula; Indexation of benefits	
Benefit formula	defined benefit (with guaranteed minimum pension but also with max pension), PAYG
Indexation of benefits	guaranteed minimum pension but also with max pension
d. Type and structure of the calculation model	
Accrued to date liabilities ADL, Projected benefits obligation PBO (but ABO would also be possible in the Model)	
2. Assumptions and methodologies applied	
a. Discount rate	
2% (real) from 2016 on, 3% real for earlier years.	
b. Wage growth	
Effective amount (1.2% for the future years from 2018 on, 1% for earlier base years)	
c. Valuation method: ABO/PBO	
PBO	
3. Data used to run the model	
a. Mortality tables	
FSO average mortality (prospective Sterbewahrscheinlichkeit). The mortality can either be taken from the FSO population projection or can be estimated based on the Eurostat data on deaths and population size by age and gender. We choose the mortality from the FSO population projection for one simple reason. Due to a very limited number of persons aged 100 and above the mortality over this age differs significantly between different years and is therefore not reliable enough to project it over the complete projection period.	
b. Entitlement statistics; other relevant statistics	
The income, the contribution periods as well as the assistance bonuses, on which the calculation of an old-age and survivors' insurance or disability insurance pension is based, are recorded on the individual account (IA). For actual pensioners data source is actual pensioners register (Rentenregister).	
4. Reforms incorporated in the model	
None	
5. Specific assumptions	
a. How are careers modelled?	
Heterogeneous contribution careers approach (reflect individual specific contribution career) // Future promotions are reflected by application of gender and age specific wage profiles (we assume a constant ratio of the individual's salary to the median salary of his/her age group).	
b. How are survivor pensions calculated?	

Widows pension are calculated like current old age pensioners. No calculation of widowers pension neither orphan
c. How is the retirement age modelled over time?
d. Other specific features of the model
6. Any other comments

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

[to be completed only if data are transmitted for column K]

<table>
<tr><th colspan="2">1. General description and the calculation model</th></tr>
<tr><td colspan="2">a. Coverage of the scheme</td></tr>
<tr><td colspan="2">Both the first (AHV/IV) and second pillars cover non-resident employees working for employers in Switzerland. They also pay benefits (lump sums or annuities) to non-resident pensioners if these latter have accrued pension entitlements during their active life or as Swiss resident before the retirement age.</td></tr>
<tr><td colspan="2">b. Institutional set-up</td></tr>
<tr><td>Data sources/methods</td><td>The Central Compensation Office CCO
National accounts estimations on second pillar contributions and benefits paid by/to non-residents
<u>First pillar</u>: Contributions and benefits paid by/to non-residents are taken from the balance of payment data.
Pension entitlements for non-residents are calculated as follows:
- For workers by multiplying the ratio of pension entitlements to contributions of resident workers by non-resident contributions
- For the retirees by multiplying the ratio of pension entitlements to benefits of the pensioners by the non-resident benefits
The part of non-residents of “changes in entitlements due to other changes in volume” is calculated by using the ratio of pension entitlements to contributions of resident workers by non-resident contributions. Line three is the balancing item.
<u>Second pillar</u>: There is no administrative data concerning contributions and benefits paid by/to non-resident people as well as their pension entitlements. Contributions are estimated using information on non-resident annual payroll, benefits using ratios derived from the first pillar’s data. Non-resident’s pension entitlements are then calculated, for the workers, by multiplying the ratio pension entitlements to contributions of the residents workers by the non-residents contributions, and for the retirees, by multiplying the ratio pension entitlements to benefits of the pensioners by the non-resident benefits. Changes in pension entitlements due to negotiated changes in scheme structure, to revaluations and to other changes in volume are derived by using the percentage of non-resident pension entitlements to those of residents. The line “Transfers of pension entitlements between schemes” is the balance item. This line records among other things the transfers from pension entitlements when an insured person leaves Switzerland after the retirement.</td></tr>
<tr><td>Which institution is running/managing the calculations?</td><td>Federal Statistical Office (FSO)</td></tr>
<tr><th colspan="2">2. Any other comments</th></tr>
<tr><td colspan="2">Since pension entitlements of non-resident households are estimated using ratios, these numbers are not for publication and restricted for internal use only.</td></tr>
</table>

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

Overview of Swiss Social Security: https://www.bsv.admin.ch/bsv/en/home/social-insurance/ueberblick.html, see the document “Overview of Swiss Social Security”, in the downloadable documents part

Second pillar: https://www.bsv.admin.ch/bsv/en/home/social-insurance/bv.html https://www.finma.ch/en/supervision/insurers/sector-specific-tools/occupational-pension-schemes/#:~:text=The%20rules%20on%20group%20life,reporting%20for%20occupational%20pension%20schemes.

First pillar: https://www.bsv.admin.ch/bsv/en/home/social-insurance/ahv.html
https://www.bsv.admin.ch/bsv/en/home/social-insurance/iv.html

FSO publication: https://www.bfs.admin.ch/bfs/en/home/statistics/catalogues-databases/publications.assetdetail.350050.html

https://www.bfs.admin.ch/bfs/en/home/statistics/national-economy/national-accounts/pension-entitlements.html

ANNEX

Somme details concerning the Second pillar:

The legislation on the Second pillar sets the minimum protection that must be served to insured persons, but pension funds are free to establish in their regulations better conditions going beyond the statutory minimum (lower minimum/higher maximum insured salary, higher conversion and interest rates, higher benefits).

Legislation sets that:

- every employee over the age of 17 receiving from the same employer an annual salary of more than a threshold (21,150 Swiss francs in 2017) has to be insured for the risks invalidity and death and also, if he is over 24, for the risk old-age. The unemployed are also covered against invalidity and death.
- the amount of pension benefits is estimated by applying a percentage (conversion rate) to the accumulated capital (accumulated savings including an accrued guaranteed interest and any capital injection) at the retirement age. The conversion rate is since 2014 of 6.8% while the minimum guaranteed annual interest rate in 2017 is of 1%. This latter is fixed annually by the government: before 2001 it was of 4%, since then it has been fluctuating and most of the time reduced).
- the sum of the contributions of the employer should be at least equal to the sum of the contributions of his employees. The contribution rates are fixed in the legislation and depend on the worker's age.
- When a worker changes employer, its vested benefit has to be transferred to the pension funds of the new employer.
- There are different situations in which the pension funds has to pay/transfer the vested benefits before an insured event occurs:
  a) the worker changes employer. Its vested benefit has to be transferred to the pension funds of the new employer.
  b) in case of divorce, any occupational pension assets accrued during the marriage are divided, in principle in half, between the spouses
  c) in the event of cessation of paid employment (including unemployment), the accumulated capital has to be moved to a bank (blocked saving account) or a life-insurer (blocked insurance policy), the so-called *third pillar a* scheme. These amounts are blocked until an event insured by the second pillar occurs. In case the person works again as an employee, the amount managed by the bank or the insurance has to be transferred to the pension fund of the new employer.
  d) the rightful claimant leaves Switzerland permanently or becomes self-employed. In those cases the vested benefit may be paid in cash
  e) in order to finance a principal home property for his/her personal use or to amortize a mortgage on such home property, the insured person may pledge or receive an advance payment up to the amount of his/her vested benefits (on certain conditions). In the case of advance payment, providence benefits are

consequently reduced. If such home property is sold, the insured person must in principle repay the amount to the provident institution.

As said, the pension funds regulation may set different rules, as long as benefits exceed the statutory minimum. For instance, it may choose to calculate the amount of the annual pension benefit by using a pure defined benefit method (e.i. a certain percentage of the last insured salary).

For the part exceeding the minimum legal benefits, pension funds are also free to fix different parameters.