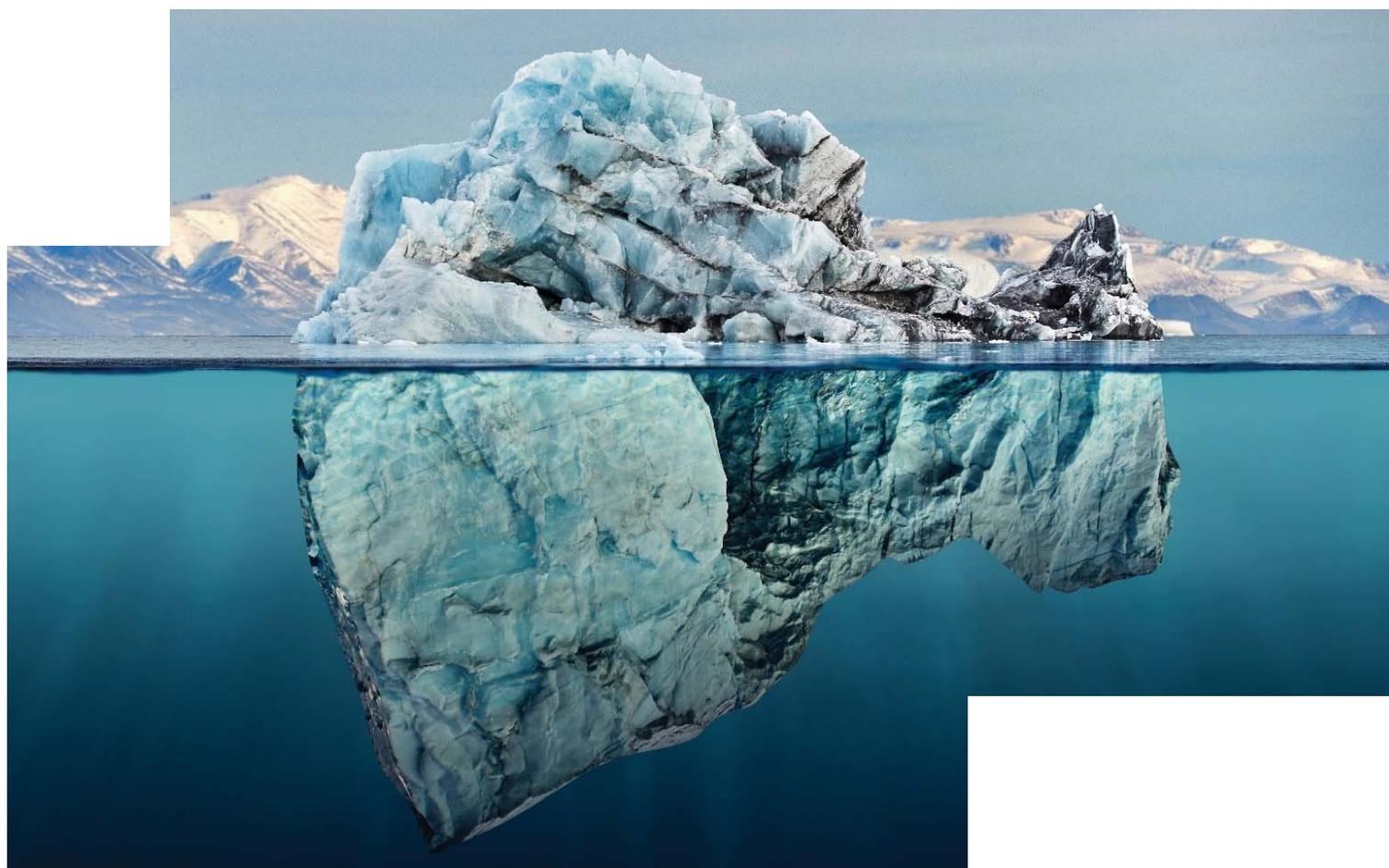


# Second pillar: a growing gap between generations

Occupational pensions | October 2019



Demographic impact  
on investment strategies  
**Diminishing risk capacity**

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Generational comparison  
of old-age pensions  
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# Impressum

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Dear Readers,

Swiss men and women are increasingly concerned about their pension. In the 2018 Credit Suisse Worry Barometer, OASI/pension schemes came top of the list: Some 45% of respondents point to this topic as their greatest concern, making pensions their number one priority. Old-age pensions are now also top of the list on the Youth Barometer. A sense of great disillusionment is spreading among those who are not set to retire until the coming decades. And for good reason.

The old-age and survivors' insurance (OASI), the first pillar of the Swiss old-age pension provision system, already spends more than it collects. And the problem will only be exacerbated with the retirement of the baby-boomer generation. Recently adopted by the Federal Council, the dispatch relating to OASI 21 aims to ensure social funding until 2030, primarily through a 0.7% sales tax hike. An increase of the OASI contributions by 0.3 percentage points has already been agreed in the Federal Law on tax reform and OASI financing (STAF). Despite a far higher life expectancy, politicians continue to shy away from a general increase in retirement age. For the time being, a mere harmonization of a retirement age of 65 for both men and women is planned.

To date, the pivotal factor of retirement age has also remained untouched in the second pillar. The Swiss old-age pension provision system therefore ignores demographic change, thereby causing a growing imbalance between the generations. By means of a pension comparison across four generations of workers and across different income levels, we show that the pensions of future generations are likely to be significantly lower than those of today's pensioners. First and foremost, today's pensioners benefit from decades of high yields and, from today's perspective, from excessive actuarial conversion rates. The asset accumulation of current workers, however, has been significantly curbed as a result of the low interest rate environment. What is more, a proportion of the returns must be used to finance the excessive pension payments pledged to current pensioners. Finally, conversion rates in the extra-mandatory portion are falling across the board – a trend that is likely to continue in the coming years. To maintain the performance level, the old-age pension provision system will require urgent reform while its long-term sustainability must be ensured. We show which reform measures would be effective as well as how current workers can improve their pension situation already today.

In the first part of this study, we analyze the key challenges in the second pillar from the standpoint of pension funds. Particular attention is placed on the effects of demographic change on pension institutions' investment strategies. The increasing proportion of pensioners in pension schemes has a negative impact on the schemes' risk capacity. Riskier investments, such as equities, should nevertheless remain a key component of the investment strategy to ensure that key contribution by the "third contributor".

We wish you an exciting read.



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## Management Summary

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### **Baby-boomers and low interest rates are taking their toll on pension funds** (P. 6 – 10)

The occupational pension system is currently facing two key challenges. On the one hand, life expectancy has increased significantly in Switzerland in recent decades. On the other, the low interest rate environment in fully funded occupational pension schemes has been a matter of concern for some years: Between 1987 and 2000, returns on investment made up an average of 46% of pension fund assets, with employee and employer contributions (retirement credits) accounting for the remaining 54%. From 2000 to 2017, the "third contributor" accounted for only 26%. In the near future, it will likely continue to prove difficult to achieve higher returns: In addition to the low interest rate environment, the increasing number of pensioners means will result in pension funds' investment profiles becoming more defensive.

### **Falling risk capacity in conflict with the third contributor** (P. 11 – 14)

Our projections up to the year 2065 show that expected population growth will reduce pension schemes' risk capacity. Whereas pensioners currently account for approximately 45% of pension capital (active insured and pensioners), this figure will rise to 57% as early as 2045. Cash flows are also changing: Taken across the pension fund market as a whole, net cash flow is still positive. From some time around 2043, it will become slightly negative. Ultimately, the restructuring capacity of many pension funds will diminish due to the falling proportion of active insured. Despite a falling risk capacity, forecasts also show that the effects are nevertheless manageable for most pension funds. High-yield investment categories, such as equities, can continue to be as integral a part of investment strategies as they are at present.

### **The pensions of future generations will fall significantly** (P. 15 – 19)

Comparing generations shows that, without countermeasures, the pension situation will deteriorate considerably in the future. The replacement rates – i.e. pension benefits from the first and second pillars in relation to past earnings – for people in the middle-income segment will fall from an estimated 57% in 2010 to approximately 45% from 2025. Without countermeasures, replacement rates in the low-income segment will fall by between 5 and 8 percentage points only because benefits from the second pillar account for a smaller proportion in relation to the OASI and also because of the stabilizing effect of the minimum conversion rate. In the high-income segment, however, benefits from occupational pensions account for the majority of revenue in old age. The decrease in replacement rates will be correspondingly significant, falling from 51% on retirement in 2010 to 37% in 2025. For those retiring in 2061 the replacement rate will decrease further to about 34%. Even corrected for purchasing power, pensions paid to future generations will most likely be much lower: assuming continuingly very low future inflation of about 0.5%, pensions in the middle- and high-income segments will fall by between 15% and 29% in relation to those enjoyed by workers who retired in 2010.

### **Maintaining performance levels will require reforms** (P. 20 – 25)

A series of different measures will be required to ensure future pensioners continue to enjoy a standard of living they have become accustomed to. On the one hand, the current proposals for the reform of the second pillar focus on the overdue reduction of the minimum conversion rate. On the other hand, there would be a slight increase in pension contributions by raising contribution rates or reducing coordination deductions. An analysis of the individual measures nevertheless shows that ensuring the long-term provision of occupational pensions also means addressing the age of retirement. This would also reduce the redistribution from the young to the old while strengthening the intergenerational contract.

### **Existing measures to improve the pension situation** (P. 20 – 25)

Future pensioners nevertheless already have access to various measures to safeguard their retirement. Some employers allow their employees to make higher voluntary savings contributions and to work beyond the retirement age. Private pension provision is becoming an increasingly important component of maintaining an acceptable standard of living after retirement. Depending on the risk profile, potential returns in pillar 3a and possibly in 1e pension plans can be increased by calling on securities solutions. Differences in returns significantly affect asset accumulation. With this in mind, pension funds are also required to exploit potential returns on capital markets in full when determining their investment strategy.

# Baby-boomers and low interest rates: Taking a toll on pension funds

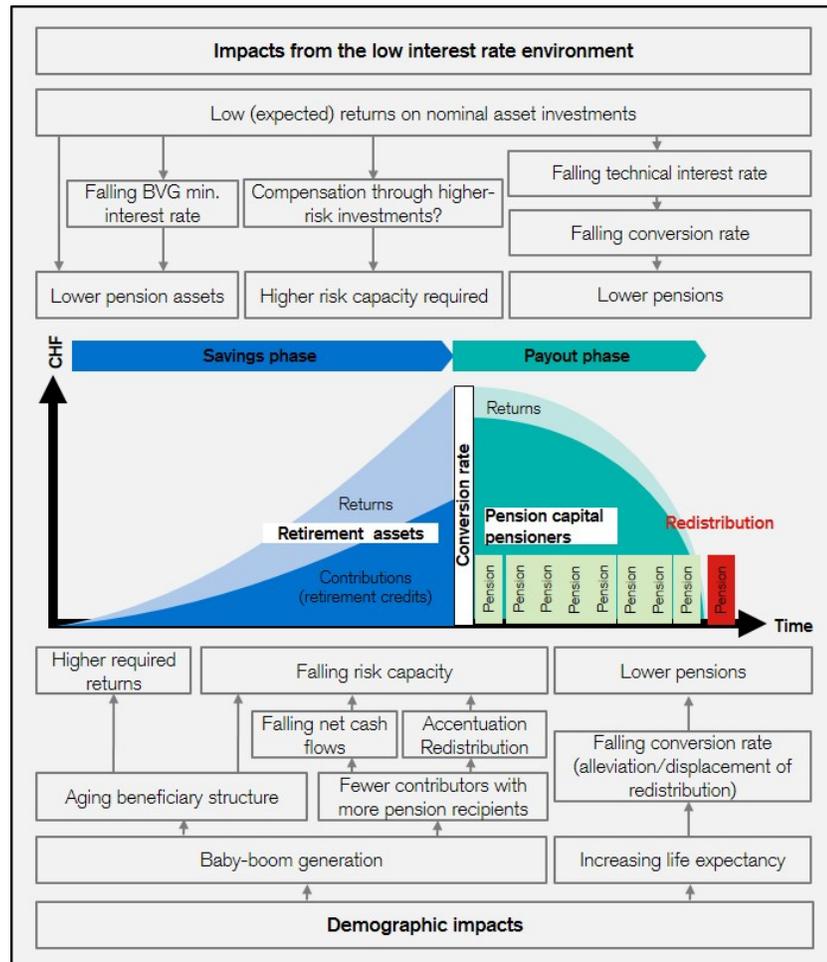
The occupational pension system is currently facing two key challenges: Demographic change and low interest rates. These two elements are having a profound impact on the second pillar and its underlying funding methods. Both the savings phase during working life and the payout phase during retirement are affected. Savings need to last longer with lower returns. In light of pension funds' changing investment profiles, these challenges are becoming even more demanding.

## Multi-faceted effects of demographics and low interest rate environment

Demographic aging and the current low interest rate environment pose major challenges to the occupational pension system. These two challenges affect the second pillar through a number of different channels. The chart below summarizes the impacts of demographics and the low interest rate environment. In the following explanations, the key concepts from the chart are written in *italics> to clarify the references in the text to the chart.*

### Impacts of demographic change and the low interest rate environment on the second pillar

The savings phase, conversion rate and payout phase are affected on several levels



Source: Credit Suisse

**"Swiss" full funding method with regulatory particularities**

To enjoy the best possible understanding of these often inter-related effects, it is helpful to take a closer look at the occupational pension scheme full funding method. The full funding method requires that every insured saves for themselves during their working life. The *retirement credits* provided by employees and employers are paid into the *retirement assets*, which are invested in capital markets, for example as equities or bonds. The returns on this capital represent a considerable proportion of the subsequent pensions. One particularity of the Swiss second pillar in the *savings phase* is that the *BVG minimum interest rate* ensures a minimum interest rate for mandatory *retirement assets* (currently set at 1% p.a.). This transfers a share of the savings risk from the insured to the fund.

The *savings phase* ends on retirement and the *payout phase* begins. The retirement assets saved are either paid out as capital or converted into a *pension with a conversion rate*. It is also possible to opt for a mix of the two options. The present value of future pension payments represents a liability on the pension fund's balance sheet, recorded as *pension capital*. Another particularity of Switzerland's full funding method is the minimum conversion rate which is determined by law for the mandatory portion of pension fund assets (currently set at 6.8% and 7.2% from 1985 to 2003). In the extra-mandatory segment, the pension funds are permitted to set interest and conversion rates at their own discretion. If pensioners receive more on average than they saved due to excessive conversion rates, a redistribution takes place to the detriment of the pension fund and thus to the active insured.

**Demographic impacts**

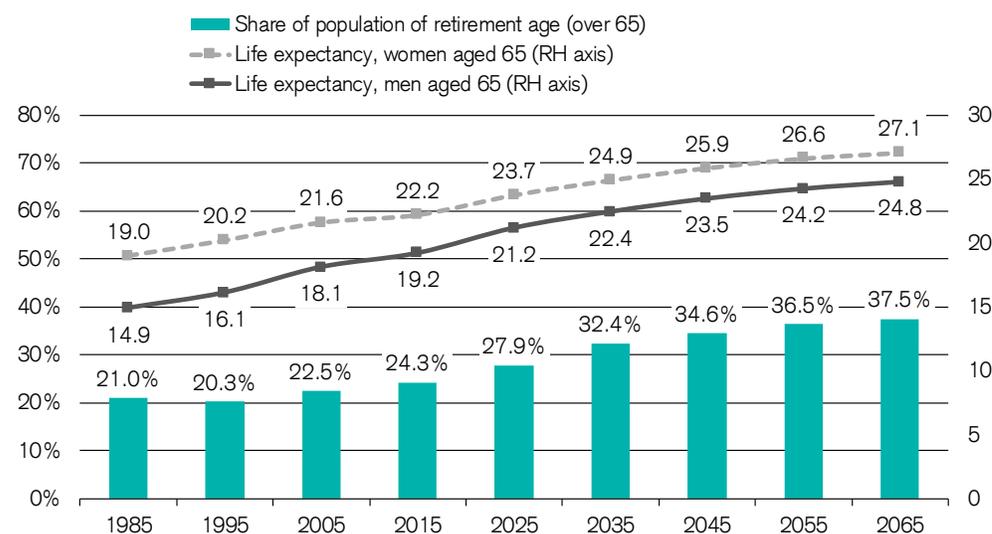
**Increasing life expectancy is leading to lower pensions**

Since the creation of mandatory occupational pensions in 1985, life expectancy has risen: By the end of 2018, it had increased by 5 years for 65-year-old men and by 3.7 years for 65-year-old women. This trend will continue in the future (see chart). While the population is living increasingly longer, the retirement age for men remains set at 65, having not changed since 1985. Women retire one year earlier at the age of 64, although as at the end of 2018, they live on average 2.8 years longer than men. The *retirement assets* must therefore last longer now than in the past.

In recent years, therefore, pension funds (without a government guarantee) have steadily decreased the so-called enveloping *conversion rates*<sup>1</sup>: At the end of 2018, pension schemes anticipated an average conversion rate of 5.40% in five years' time, while in 2014 the planned conversion rate was still at 6.05%.<sup>2</sup> In this way, pension funds legally reduce the *redistribution* from the active insured to pensioners. Their hands are nevertheless tied with regard to mandatory assets

**Swiss citizens are living longer and there is an increasing number of older Swiss citizens**

Increasing life expectancy in years and growing proportion (%) of people over the age of 64



Source: Swiss Federal Statistical Office, Credit Suisse

<sup>1</sup> The enveloping conversion rate corresponds to the weighted average of the mandatory and extra-mandatory conversion rate.  
<sup>2</sup> Occupational Pension Supervisory Commission (OAK BV): Report on the financial situation of pension schemes 2018.

for the insured, and the minimum conversion rate remains too high. Funds that also operate in the non-mandatory segment of occupational pensions can attempt to offset losses from the mandatory segment in the extra-mandatory segment. This nevertheless results in a new *redistribution* from pensioners in the extra-mandatory segment to those in the mandatory segment.

**Current redistributions are exacerbated by baby-boomers**

Thanks to the falling enveloping *conversion rates*, the *redistribution* of an estimated CHF 8.4 billion from the active insured to pensioners in 2016 was reduced to CHF 5.1 billion in 2018 (OAK BV). To further reduce the *redistribution* from young to old and from the insured in the extra-mandatory segment to the insured in the mandatory segment, the conversion rate must also be lowered in the mandatory segment. If these *redistributions* are not dismantled, they will be exacerbated in the coming years as the wave of *baby-boomers*<sup>3</sup> reach retirement age: In light of this, the proportion of the population eligible for retirement will increase considerably in the coming years compared to the total population over the age of 24 (see chart p. 7). Once the pension has been set, a subsequent reduction is only possible in very rare cases.

**Baby-boomers reduce the risk capacity of pension funds ...**

The wave of *baby-boomer* retirements impacts occupational pensions through another channel. The increased proportion of pensioners compared to the active insured also changes the investment profile of pension funds. Pensioners' assets have a shorter investment horizon than those of the active insured. As the proportion of pensioners is increasing, pension funds' investment horizon is falling. Furthermore, liquidity requirements are greater due to increasing pension benefits: Whereas cash outflows are increasing significantly, there is only a limited rise in cash inflows from retirement credits due to the stable future population aged between 25 and 64.

It must therefore also be assumed that pension funds' *net cash flow* will continue to fall in the coming years, thereby reducing the *risk capacity* further. Finally, it will also become more difficult for pension funds to resolve any difficulties they encounter, as restructuring measures must be implemented via the active insured or their retirement assets. The following section (p. 11) takes a more in-depth look at the impact of demographics on pension funds' investment profile. To this end, we project the distribution of actuarial reserves, the changes in net cash flows and the restructuring capacity of the Swiss pension fund market until 2065.

**... while increasing the required returns**

The aging *beneficiary structure* also affects the *required returns*: With lower interest on *retirement assets* than on *pension capital*, the *required returns* are constantly increasing as the proportion of pensioners rises.<sup>4</sup> In 2018, the average interest of 1.46% p.a. on the *retirement assets* of pension schemes without a government guarantee was lower than the technical interest rate applied of 2.1% p.a. Even in recent stock market years, which were very good in some cases such as 2017, interest on retirement assets was lower than the technical interest rate (2.09% p.a. compared to 2.22% p.a. in 2017). If this unequal interest continues to be observed in the future, the *baby-boomer* effect will result in a rise in required returns (increasing proportion of pensioners' *pension capital*). At the same time, as already explained, the risk capacity of pension funds is curbed due to the diminishing investment horizon and the retirement of baby-boomers.

<sup>3</sup> The baby-boomer generation refers to the large number of babies born between the end of the Second World War and the mid-1960s.

<sup>4</sup> Required returns correspond to the returns needed on pension assets to maintain the existing rate of cover. In simple terms, they comprise the weighted average interest on retirement assets and pensioners' pension capital (technical interest rate) as well as the expected costs.

## Impacts of the low interest rate environment

**The contribution of returns on retirement assets is falling and becoming more volatile**

On the one hand, *retirement assets* saved on retirement must last longer due to *increasing life expectancy*. On the other hand, returns on pension assets have fallen considerably since the turn of the new millennium and are subject to more marked fluctuations. The chart below shows the evolution of the three contributors (capital market, the insured and employers): Between 1987 and 2000, returns on investment represented an average of 46% of pension fund assets, with employee and employer contributions (*retirement credits*) accounting for the remaining 54%. From 2000 to 2017, the capital market accounted for only 26%.

**Falling returns due to stock markets**

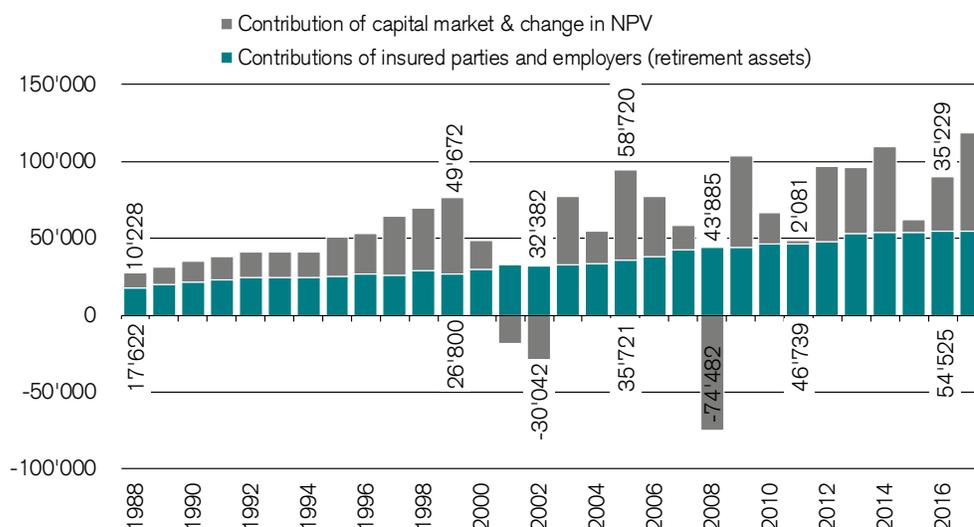
The main reason behind these falling returns lies in the globally poorer performance of the stock market between 2000 and 2010. During this period, Swiss shares yielded returns of -0.8% p.a. while global shares provided 1.2% p.a. in USD.<sup>5</sup> It is a well-known fact that conditions on share markets can change quickly and between 2010 and 2018, Swiss shares once again yielded returns in line with their long-term average of 6.5% p.a. Over the same period, global shares yielded 7.6% p.a. in USD (long-term average of 7.9% p.a.).

**Falling returns on investments in nominal assets expected**

The main challenge in the future nevertheless relates to expected returns on money market investments and bonds, and thus so-called nominal assets. Swiss franc interest rates have been falling for about 30 years while USD rates have been falling for almost 40 years. The now historically low level was initially concealed by the rising prices of bonds, in particular long-term bonds: Despite a persistently-low interest rate environment, Swiss-franc bonds continued to yield 2.4% p.a. between 2010 and 2018.<sup>6</sup> In contrast, in mid-August 2019, the yield to maturity of a 10-year Swiss-franc government bond was below -1% p.a. It is all a question of time until the low interest rate is transferred to the returns on investments in nominal assets. The key is the duration of the low-interest phase and whether it will rise again. The best-case scenario would be the quickest and strongest increase possible in interest rates. Despite intermediate value losses, this would be the quickest means for pension assets to return to a high-yield situation. This would nevertheless appear unlikely.

### Annual retirement credits and contributions of the capital market in the second pillar

In CHF million, 1988 – 2017



Source: Swiss Federal Statistical Office, Credit Suisse

<sup>5</sup> Credit Suisse Research Institute, Global Investment Returns Yearbook 2019.

<sup>6</sup> According to the Swiss Bond Index © TR (AAA-BBB).

**Lower returns reduce retirement assets ...**

Lower returns lead to slower asset accumulation during the *savings phase*. The falling contributions from returns are also reflected in the BVG minimum interest rate, which the Federal Council has reduced from 4% p.a. in 1985 to the present rate of 1%. The minimum interest rate dictates a minimum interest rate applied by pension funds to the mandatory *pension assets*.

Taking an example wage of CHF 50,000 and several different conversion rates, the following chart shows how important the interest rate on *retirement assets* is to the old-age pension drawn. At a conversion rate of 6.8% and an average interest rate on retirement assets of 1% p.a., the monthly pension comprises CHF 1,797 from the retirement credits and CHF 313 from the returns. The latter therefore accounts for approximately 15% of the pension. With the same conversion rate but an interest rate of 2%, the monthly pension increases by CHF 342. In this case, returns account for 27% of the pension.

**... and the conversion rate.**

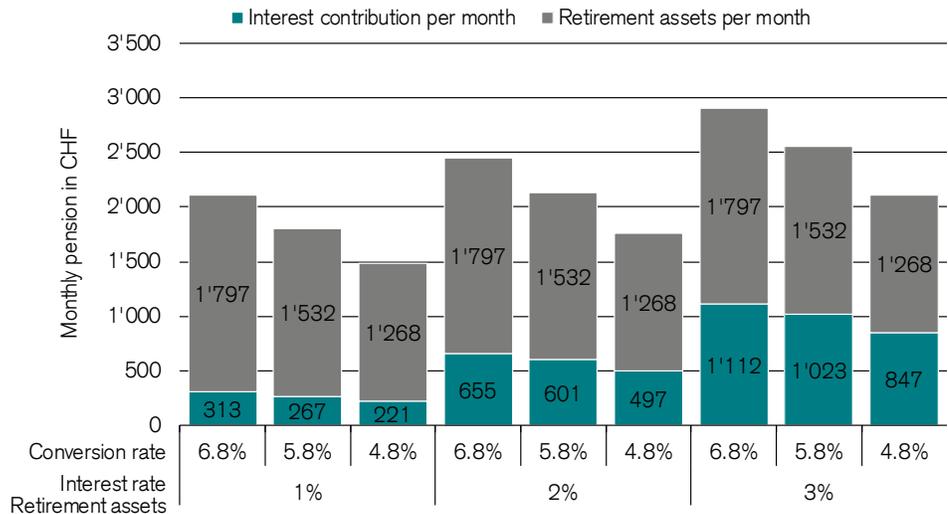
Lower returns not only affect the *savings phase*, and thus *retirement assets*, but also impact on the *payout phase*. This is because lower returns than expected on pensioners' *pension capital* are reflected in a lower technical interest rate. This underpins the calculation of the conversion rate and fell from 2.91% to 2.10% on average in pension funds (without a government guarantee) between 2014 and 2018. The persistent low interest rate phase therefore also impacts on future pensions through the technical interest rate and the conversion rate.<sup>7</sup>

**Compensation through higher-risk investments?**

The chart below also shows that higher returns can help offset falling conversion rates. A fall of 1% in the conversion rate can be offset by a 1% increase in the interest rate on retirement assets, regardless of the starting salary and the current interest rate. The level of returns is primarily determined by the investment strategy that is adjusted to the risk capacity of the relevant pension fund. In addition to the fluctuating returns observed in recent years, the risk capacity of the pension fund will increasingly be affected by the aging beneficiary structure. It will therefore become more difficult to offset low interest rates by *higher-risk investments*.

**A 1% increase in interest on retirement assets offsets a 1% reduction in the conversion rate**

Example based on 40 years of contributions, an insured salary from 25 at CHF 50,000, a salary growth rate of 1% p.a., retirement assets in accordance with the BVG and retirement at 65



Source: Credit Suisse

<sup>7</sup> Section 3 (p. 15) shows how pensions could evolve for future generations and what impact this could have on their pension situation.

# Diminishing risk capacity: The third contributor becomes a challenge

The risk capacity of pension funds is falling due to an aging population. The underlying reasons include the increasing proportion of actuarial reserves of pensioners, falling net cash flows and a diminishing restructuring capacity. Projections through to 2065 nevertheless also show that the effects of these changes are limited: The return potential on higher-risk investments can be used by pension funds in the same way as today in the future. Higher-risk investments, such as equities, should therefore remain a key component of the investment strategy.

## Decreasing risk capacity due to demographic change

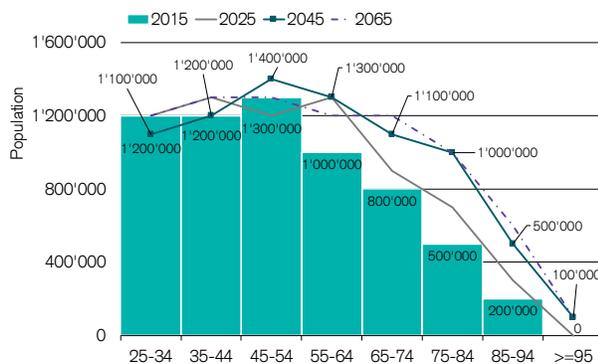
Swiss pension schemes will find it increasingly difficult to generate the necessary returns due to the low interest rate environment. In recent years already, the average nominal asset allocation has shifted toward tangible assets. In principle, absorbing the additional potential for returns is desirable, but could increasingly come into conflict with pension funds' falling risk capacity. This is because demographic change is altering the age structure (beneficiary structure), liquidity requirements and restructuring capacity of pension schemes.

## The distribution of actuarial reserves is changing

In Switzerland, the population nearing or having reached retirement age will increase over the coming decades (see bottom left chart). In addition to increasing life expectancy, the baby-boomer generation, in particular, will increase the proportion of older people. This development also affects the risk capacity of the pension funds, as it has a significant impact on the distribution of actuarial reserves<sup>8</sup>. Using different time frames, the chart at the bottom right shows how, across the entire pension fund market, the actuarial reserves of the active insured and pensioners is distributed as a percentage.<sup>9</sup> In 2015, the latter accounted for 45%, with this figure rising to 57% in 2045 and 60% in 2065. Hence the "aging push" of the actuarial reserves will primarily be observed in the next 20 years when the baby-boomers and numerous children born by the mid-1970s retire. It will subsequently fall sharply.

### The over-55 population is increasing

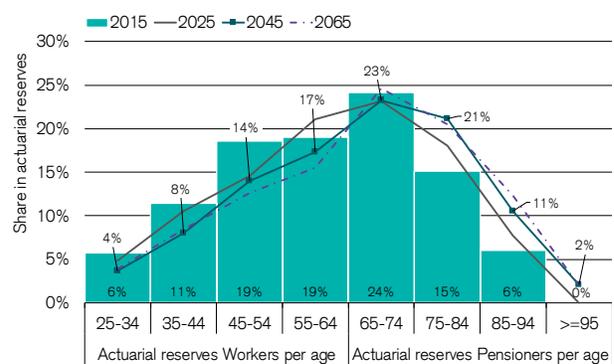
Current population and projections through to 2065 per age group



Source: Swiss Federal Statistical Office, Credit Suisse

### Increasing proportion of the actuarial reserves of beneficiaries over the age of 75

Current distribution of actuarial reserves as a % and projections through to 2065 per age group



Source: Swiss Federal Statistical Office, Credit Suisse

<sup>8</sup> The concept of actuarial reserves corresponds to the pension capital of the active insured and pensioners.

<sup>9</sup> The projected changes in actuarial reserves are based solely on population growth in accordance with the reference scenario determined by the Swiss Federal Statistical Office (2015). Political (e.g. reduction of the minimum conversion rate), economic (e.g. increasing employment rate) or pension fund-specific (e.g. reduction of the enveloping conversion rate) factors are not taken into consideration.

**The aging beneficiary structure is affecting the investment strategy**

Pensioners' actuarial reserves have a shorter investment horizon than those of the active insured. Shifting actuarial reserves in favor of pensions therefore tends to result in a more defensive investment strategy. The extent of a shift from higher-risk investment categories to lower-risk ones also depends on other risk factors or the overall risk capacity of the relevant pension fund. The following simplified rule of thumb illustrates the impact of the age structure, as a risk factor, on the investment strategy: The assets of 65- to 74-year-old pensioners are invested with a nominal asset share of 50%, while this proportion rises to 100% for pensioners over the age of 75. This is because lower-risk investments are chosen for the underlying assets in the event of a shorter remaining investment horizon. Based on the estimated actuarial reserves projections (see right-hand chart, p. 11), the nominal asset allocation in 2015 was 33%, rising to 46% in 2045. An increasing proportion of investments in nominal assets together with a persistent low interest rate environment would reduce the contribution of returns on investment, which are so important.

**The return potential of higher-risk investments can nevertheless be maintained at a similar level**

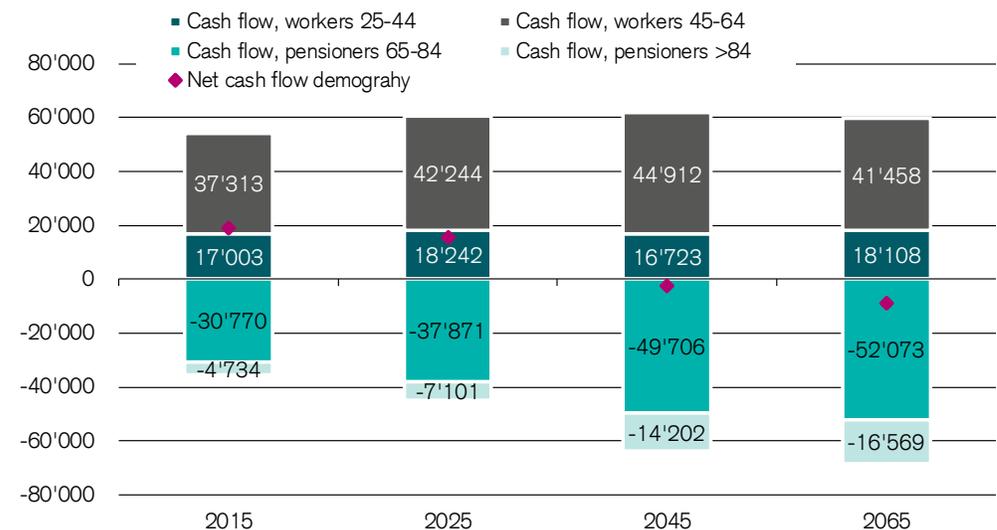
By implication, in light of the above rule of thumb, the pension fund will retain an estimated 54% of the assets in 2045 to be invested in higher-yield (and higher-risk) investment categories such as shares and real estate. As the proportion of shares and real estate in present-day pension funds is approximately 55%,<sup>10</sup> they can be expected to be maintained at a similar level in the future. In addition to the nominal asset allocations for 2015 and 2045 determined previously, it can also be seen that the current allocation in higher-risk investments can, in contrast to 2045, be increased even further (theoretically from the current rate of 55% to 67% [100% minus 33%]). Before determining the definitive investment strategy of any every pension fund, a comprehensive examination of the specific risk capacity must be conducted as part of an asset-liability analysis incorporating other risk factors in addition to the age structure.

**Increasing liquidity requirements reduce the risk capacity**

Another factor impacting on risk capacity is the pension fund's liquidity situation. As long as a pension scheme has higher cash inflows than outflows, it does not need to liquidate any existing assets. If, however, the probability that a proportion of the investments must be sold increases, this affects the investment horizon. If assets have to be sold at a loss, for example during a market crisis, the returns from the investment strategy initially expected can no longer be achieved. This primarily applies to higher-risk investments such as equities, as they not only generally suffer most during market crises but also benefit the most from the subsequent recovery phases.

**The net cash flow of all pension funds will decrease by about CHF 20 billion by 2045**

Cash flow projections (in CHF million) for the Swiss pension funds market until 2065



Source: Swiss Federal Statistical Office, Credit Suisse

<sup>10</sup> Credit Suisse Swiss pension funds index, Q2 2019.

**Baby-boomers are causing negative cash flows**

The net cash flows on the Swiss pension funds market are still positive at present. The chart on p. 12 nevertheless shows that demographic change over the next 25 years will affect this situation: The projection indicates that net cash flow will be negative from 2043.<sup>11</sup> On the one hand, inflows from retirement credits will continue to grow only slightly until 2045 due to the population increase of 300,000 people between the ages of 25 and 65 (see left-hand chart p. 11). Pension benefits, on the other hand, will increase significantly, as the number of people of retirement age will grow from 1.5 million to 2.7 million.

**The decreasing proportion of the active insured is limiting the restructuring capacity**

Demographic change also affects the restructuring capacity of a pension fund and thus the investment strategy. In the event of a shortfall, there are essentially two restructuring measures: On the one hand, lowering the interest rate on the actuarial reserves of the active insured and, on the other hand, additional contribution payments. As both measures are adopted at the expense of the active insured, a decreasing proportion of the active insured lowers the effectiveness of such measures and thereby the risk capacity. At present, 1% restructuring contributions on the wage bill increase the coverage rate by 0.30%.<sup>12</sup> Our projections indicate that the impact of this restructuring measure will be reduced to 0.22% due to the demographic effect until 2045 alone. In the event of a minimum interest rate of 1% on the pension capital of the active insured (in the non-mandatory segment), the coverage rate currently increases by approximately 0.30% (OAK BV). In 2045, it will be only 0.24%.

**Restructuring through the financial markets**

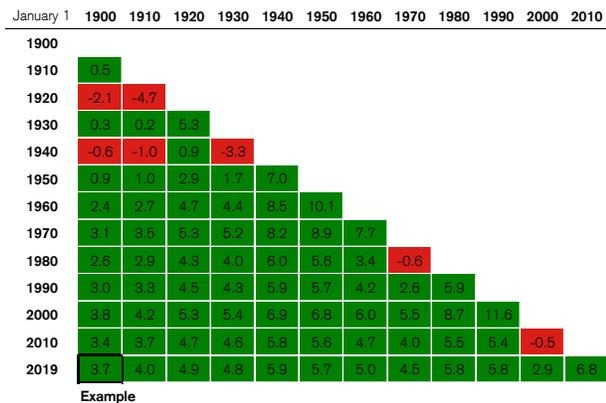
The effectiveness of the restructuring measure will decrease by 2045 due to the demographic effect by between 20% and 25%. Despite this expected decrease, it should be noted that even today, the usual restructuring measures have a greatly limited impact. To overcome shortfalls, the performance of capital markets is more decisive. Past experience shows that the market recovery after a crisis is often the most effective restructuring measure. To take advantage of a recovery, it is essential to maintain the investment strategy during a crisis. If the shortfall is nevertheless the result of deeper structural problems, further restructuring measures combined with a plan to ensure a sustained improvement in the financial situation are indispensable.

**Share risks have paid off over the past 100 years**

The risk capacity factors discussed will steadily reduce the investment horizon in the coming years. The results of the projections nevertheless also demonstrate that the average extent of the changes should be bearable. A similar level of high-yield investment categories as at present can be maintained in the investment strategy. This insight is important as, from a historical perspective over long investment periods, these investments – and in particular shares – have provided the highest return contributions. The following charts illustrate this using the example of Swiss shares compared to the Swiss franc money market and Swiss franc bonds across different investment periods.

**Dominance of equity investments over the money market**

Yield difference of Swiss shares compared to the money market (annualized, as a %)

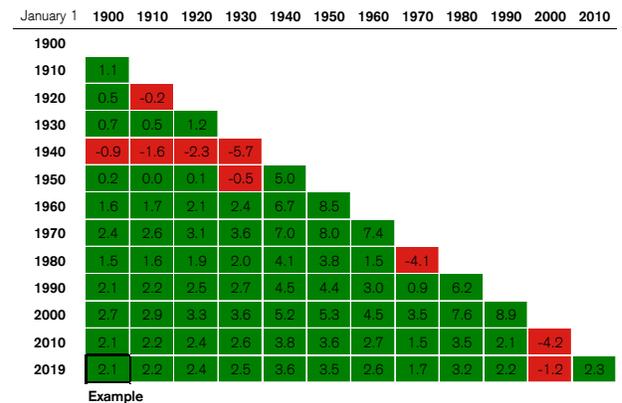


Past value performance or financial market scenarios are not reliable indicators of future performance.

Source: Credit Suisse Research Institute, Global Investment Returns Yearbook 2019

**Dominance of equity investments over bonds**

Yield difference of Swiss shares compared to bonds (annualized, as a %)



Past value performance or financial market scenarios are not reliable indicators of future performance.

Source: Credit Suisse Research Institute, Global Investment Returns Yearbook 2019

<sup>11</sup> The projected cash flows take account of the contributions of both employers and insured as well as pensions and capital benefits. The projections are based solely on population growth in accordance with the reference scenario determined by the Swiss Federal Statistical Office (2015). Political (e.g. reduction of the minimum conversion rate), economic (e.g. increasing employment rate) or pension fund-specific (e.g. reduction of the enveloping conversion rate) factors are not taken into consideration.

<sup>12</sup> OAK BV: Report on the financial situation of pension schemes 2018; only concerns pension schemes without a government guarantee.

From 1900 to 2019, Swiss shares yielded 3.7% p.a. more than Swiss franc money market investments and 2.1% more than Swiss franc bonds (see "Examples" in Fig.). Over the past 120 years, there have nevertheless been two periods during which the equities yielded less than bonds and the money market over relatively long periods of time. With hindsight, the number of such negative events (in particular the Great Depression at the end of the 1920s and the financial crisis which began in 2007) has nevertheless been relatively limited. Looking at the yields of Swiss equities (nominal) in absolute terms, it can also be seen that no negative yields at all have been recorded since 1930.

**Pension funds can also take advantage of returns contributions in the future**

Finally, the impact of demographic change on the investment strategy is therefore so important because it helps decide the level of returns contribution of higher-risk investments, primarily equities. Pension funds should take account of demographic impacts such as the rising proportion of pensioners in actuarial reserves, falling cash flows or a diminishing restructuring capacity when determining their investment strategy. On the one hand, in light of the overall market projections, the demographic component has a negative impact on risk capacity. On the other hand, it should still be possible for most funds to fund a substantial proportion of their pension benefits via the capital market. To ensure this is the case, a regular check of the individual investment situation, for example through an asset-liability analysis, is becoming increasingly important.

# The pensions of future generations will fall significantly

**Today's pensioners benefit from decades of high yields and, from the current perspective, from excessive conversion rates. The low interest rates currently observed however limit the asset accumulation of workers. Furthermore, workers' retirement assets have for years been subject to lower interest rates than those enjoyed by pensioners, as this is the only way the excessive pension guarantees made to pensioners can be funded. Finally, conversion rates are falling across the board. Comparing generations shows that, without countermeasures, the pension situation will deteriorate considerably in the future, especially for higher incomes.**

## View of the insured

In previous sections, the key challenges facing the second pillar have been presented from the point of view of pension schemes, focusing on the effects of demographic change on pension funds' investment strategies. We will now look at things from the perspective of the insured: What impact do the changes described have on the pension situation when compared between generations? And how can a suitable pension level be guaranteed for future generations?

## Pension comparison in the medium-income segment (teachers)

To illustrate this, we will first examine four generations of teachers as an example of the insured in the medium-income segment. The first generation began their professional life in 1970 and retired in 2010. The second generation works from 1985 (when the BVG was introduced) until 2025 and the third from 2000 to 2040. To illustrate the effects of a possible revision of the second pillar in the following section, we finally take a teacher working from 2021 to 2061 as an example – assuming that their saving process is entirely subject to the new system. To reflect reality as closely as possible, we assume a pay rise across their full working life: In 2010, the salary of a 25-year-old would be roughly CHF 70,000, rising to CHF 100,000 on retirement.<sup>13</sup> Using nominal salary growth, we then determined the nominal salary increase applicable to each of the generations indicated above (see black lines in the upper chart p. 16). In the different scenarios, we applied the usual age-dependent BVG contributions and the regular coordination deduction. To present a realistic income potential for an average pension scheme, we approximated the interest on retirement capital by means of the returns on the 10-year federal bond plus a surcharge of 1.5 percentage points.<sup>14</sup>

## A teacher who retired in 2010 receives approximately 57% of the final salary

Thanks to the high interest rate on their retirement capital (estimated at an average of 5.65% p.a.) with a nominal income of between CHF 16,359 and CHF 100,000, the teacher working from 1970 to 2010 achieved retirement assets of almost CHF 490,000 (see upper chart p. 16). At the current level of returns, the teacher who retires in 2010 would have achieved nominally much smaller retirement assets than the subsequent generation. Thanks to high returns clearly greater than salary growth, the impact of the low nominal salary was overcompensated. Upon retiring in 2010, the average encompassing conversion rate was still at 6.74% according to the Swisscanto pension fund study. The pension fund benefit therefore totals approximately CHF 33,019 and the OASI pension benefits approximately CHF 24,072. In total, the teacher receives a gross income of about CHF 57,000, corresponding to 57% of the last salary (see lower chart p. 16).<sup>15</sup> Accordingly, the performance target of the mandatory pension, that OASI and pension fund benefits together cover about 60% of the last salary (replacement rate), would almost be achieved.

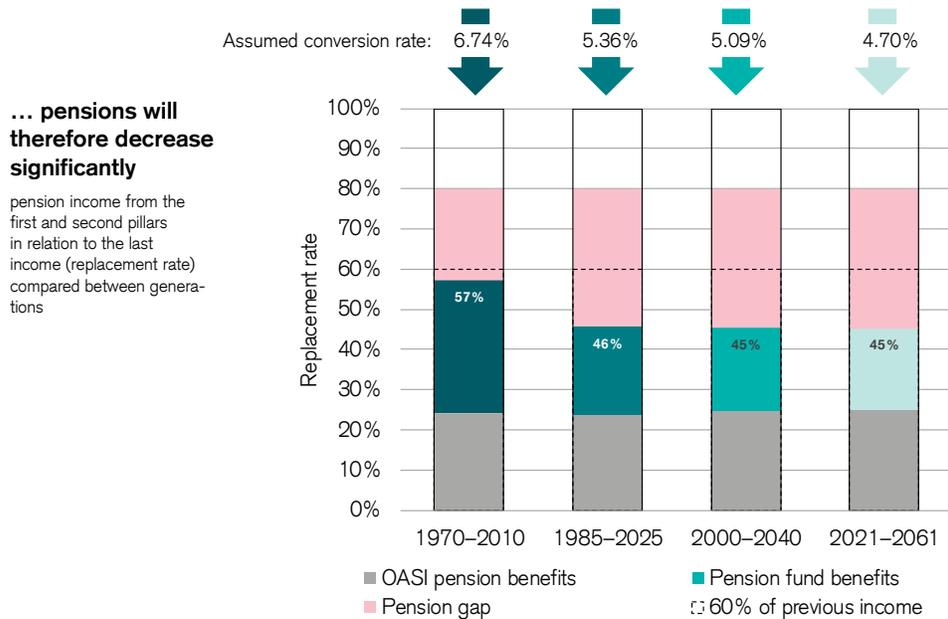
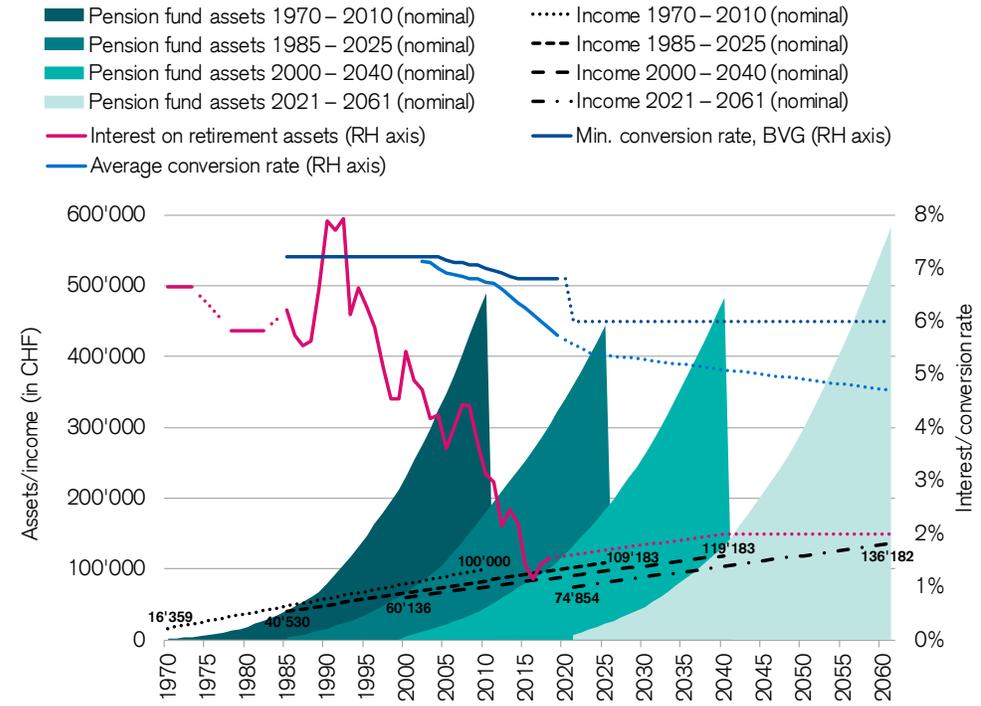
<sup>13</sup> Teacher with teaching certificate, without a management position (source: Salarium – Individual salary calculator 2016, Federal Statistical Office). Salary trends based on the Swiss salary index of the Federal Statistical Office.

<sup>14</sup> cf. Occupational Pension Supervisory Commission (OAK BV): Report on the financial situation of pension schemes 2017, p. 17.

<sup>15</sup> With the application of the BVG in 1985, approximately 80% of employees were already insured in the second pillar, albeit with only about half affiliated to well-developed pension schemes (see BVG dispatch of the Federal Council on 19.12.1975). If, however, the savings process in the second pillar was only initiated in 1985, the teacher working from 1970 to 2010 achieved a replacement rate of 48% instead of 57%. In the lower or higher income segments, the replacement rates fall to 51% or 42% (instead of 58% or 51%, cf. fig. p. 17).

## Despite higher nominal salaries, retirement assets today are growing much more slowly due to lower returns. Furthermore, the conversion rates are falling...

Asset development in the second pillar compared between generations, salary development of a teacher, annual interest rate on retirement assets = returns on the 10-year federal bond + 1.5 percentage points p.a., average conversion rate in pension funds that apply an encompassing conversion rate



Past value performance or financial market scenarios are not reliable indicators of future performance.

Source: SNB, Swisscanto, OAK BV, Credit Suisse

**In light of persistently low returns and falling conversion rates...**

Despite higher nominal salaries for subsequent generations, retirement assets are accumulating much more slowly due to falling returns. Between 1985 and 2018, the estimated interest rate on retirement capital was 4.5% on average. In 2019 it is a mere 1.5%. In the coming years, we calculate with a slight and gradual rise in the annual interest rate to 2% from 2040. With low expected returns and life expectancy continuing to increase, we also assume that conversion rates will continue to fall. They will gradually converge on the actuarially fair rates: In 2025, they would be at an average of 5.36%, falling to 4.70% in 2061.<sup>16</sup> With identical retirement assets, pensions in the second pillar decrease 20% or 30% compared to 2010 due to the fall in the conversion rates alone.

**... the replacement rate falls to about 46%**

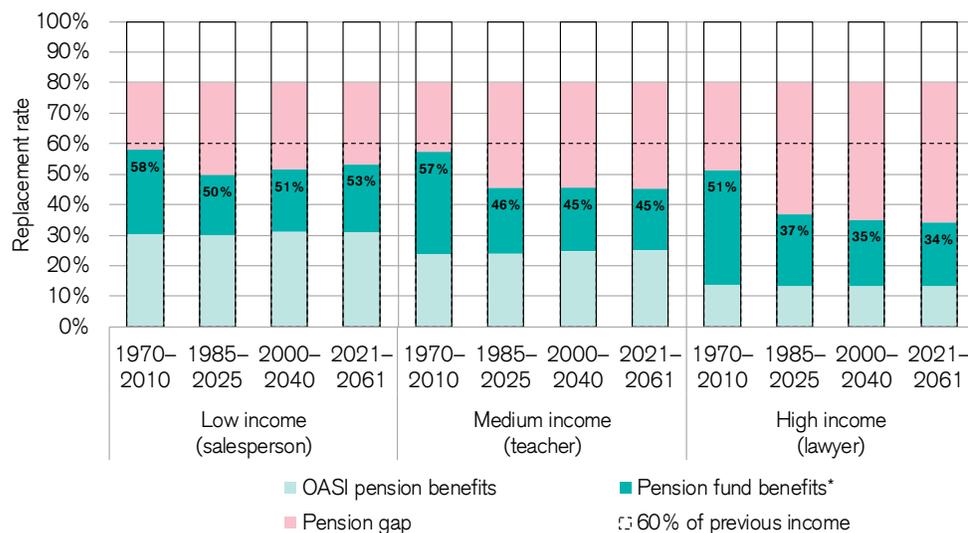
In this scenario, the teacher retiring in 2025 achieves much lower pension fund assets of CHF 443,000 than the teacher retiring in 2010, despite a higher nominal salary. An estimated conversion rate of 5.36% results in pension fund benefits of CHF 23,773, whereas the OASI pension benefits total CHF 26,051. The replacement rate would be only 46%. The teacher working from 2000 to 2040 achieves nominal pension fund assets of CHF 483,000 and, at a conversion rate of 5.09%, receives pension fund benefits of CHF 24,589. Combined with the OASI pension benefits, this teacher receives a total income of CHF 54,051, corresponding to about 45% of their last gross income. With an even lower conversion rate of 4.70%, the fourth-generation teacher (working from 2021 to 2061) also reaches a replacement rate of 45%.

**5 – 8 percentage points lower replacement rate for lower income segments**

So what does the comparison between generations look like in the lower and higher income segments? We examine the examples of a salesperson (whose salary development would nominally be between CHF 50,000 and 70,000 in 2010) and an attorney (salary development from CHF 95,000 to 200,000).<sup>17</sup> Once again, the nominal income development over time was taken into account. As the lower income falls completely within the BVG mandatory segment, we adopt the statutory minimum conversion rate when calculating the pension here, in contrast to the medium and higher income segments. In 2010, this was set at 7.0% for men. Assuming that the

**Without countermeasures, replacement rates will fall significantly**

Pension incomes from the first and second pillars in relation to the last income, compared between generations for different income segments, assumptions as per the comparison between generations described above for the medium-income segment



\* To calculate the pension fund benefits, a minimum conversion rate of 7.0% at retirement was assumed for the low-income segment in 2010 and 6.0% from 2021, while for the medium- and high-income segments, a conversion rate of 6.74% (2010), 5.36% (2025), 5.09% (2040) and 4.70% (2061) was adopted. Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

<sup>16</sup> In the different scenarios, we adopt the life expectancy predicted by the Federal Statistical Office, described on p. 7. According to OAK BV, the average planned conversion rate for 2023 is 5.40%. We then assume a steady reduction in the enveloping conversion rate to 4.70% in 2061.

<sup>17</sup> The low and high-income segments loosely correspond to the following examples: Retail salesperson with vocational training but no management position; legal counseling attorney with university degree and senior/middle management position toward the end of their career (source: Salarium – Individual salary calculator 2016, Federal Statistical Office).

present-day minimum conversion rate of 6.8% falls to 6.0% in 2021 (see proposals for the reform of the second pillar in the next section), we anticipate a minimum conversion rate of 6.0% for the salespersons retiring after 2021. For lower-income segments, the benefits from the second pillar account for a smaller proportion in relation to the OASI: Without countermeasures, the replacement rates therefore fall less dramatically by five to eight percentage points (see chart p. 17). Because retirement income is much lower anyway, this reduction must nevertheless not be neglected.

**Growing pension gaps – in particular for higher incomes**

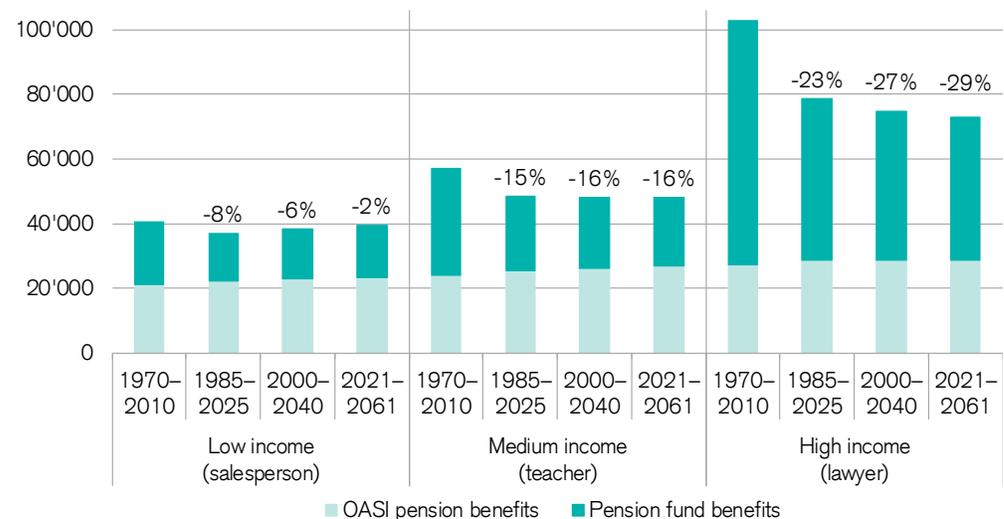
In the high-income segment, benefits from occupational pensions account for the majority of revenue in old age. Replacement rates therefore also fall equally significantly for higher incomes, from 51% when retiring in 2010 to about 34% for the last generation (retirement in 2061, cf. fig. p. 17). Financial requirements after retirement differ from one person to another and must be examined in detail for each individual case. As a general rule of thumb, it is often assumed in financial planning that 80% of the previous income is required after retirement. Even at current conversion rates, a pension gap exists, i.e. a difference between financial requirements and the benefits provided by state and occupational pensions. As income levels increase, the savings gaps are increasingly large. On the one hand, the OASI benefits do not vary too significantly due to the statutory minima and maxima, whereas on the other hand, the minimum conversion rates apply in the mandatory segment. In all income segments, an increase in the pension gaps is foreseeable if no countermeasures are taken. For the teacher who retired in 2010, the gap is around 23%, while for the subsequent generations of teachers, this figure rises to 34%. In the high-income segment, gaps of some 45% are conceivable.

**Real benefits also fall significantly**

Even corrected for purchasing power, pensions paid to future generations will most likely be much lower: Assuming very low future inflation of about 0.5%, pensions in the medium- and high-income segments will fall by between 15% and 29% in relation to those enjoyed by workers who retired in 2010 (see chart). In the low-income segment, real pension losses will be no more than 8% lower. OASI benefits are adapted to the wage and price index every two years. With regard to benefits from occupational pensions, inflation compensation lies at the discretion of the pension fund, depending on financial means – adjustments to price developments were nevertheless rare in the past. For today's pensioners, this is not too serious, as inflation has been low for years. With annual inflation of 0.5%, the purchasing power of pensioners falls by barely 5% over ten years. With an inflation rate of 2% p.a., purchasing power however falls by almost 18% over ten years. While today's pensioners benefit from falling inflation, future generations – in an unfavorable scenario – face the threat not only of a smaller pension compared to other generations as already shown, but also a greater loss of purchasing power.

**Real benefits fall in the medium and high-income segments by between 15% and 30%**

Pension incomes from the first and second pillars, compared between generations, expressed in real terms in 2010 CHF, assuming continued low inflation of approx. 0.5% p.a.



Source: Swiss Federal Statistical Office (LIK until 2019), Credit Suisse

**Compensation  
measures are  
necessary**

It goes without saying that the examples of people taking retirement in 2040 and 2061 are highly dependent on the underlying assumptions. The scenarios nevertheless make it clear that, without countermeasures, pension benefits for the coming generations of pensioners are likely to be much lower. To offset this, compensation measures are therefore necessary in every scenario. In the following section, we discuss the possible alternatives and analyze how higher interest rates on retirement assets, for example, would affect the future pension situation.

# Compensation measures to maintain performance levels

**Lower expected returns and falling conversion rates reduce retirement benefits. To maintain the performance level, the old-age pension provision system requires urgent reform while its long-term sustainability must be ensured. Future pensioners nevertheless already have access to various measures to safeguard their retirement.**

## Growing pension gaps: What can be done?

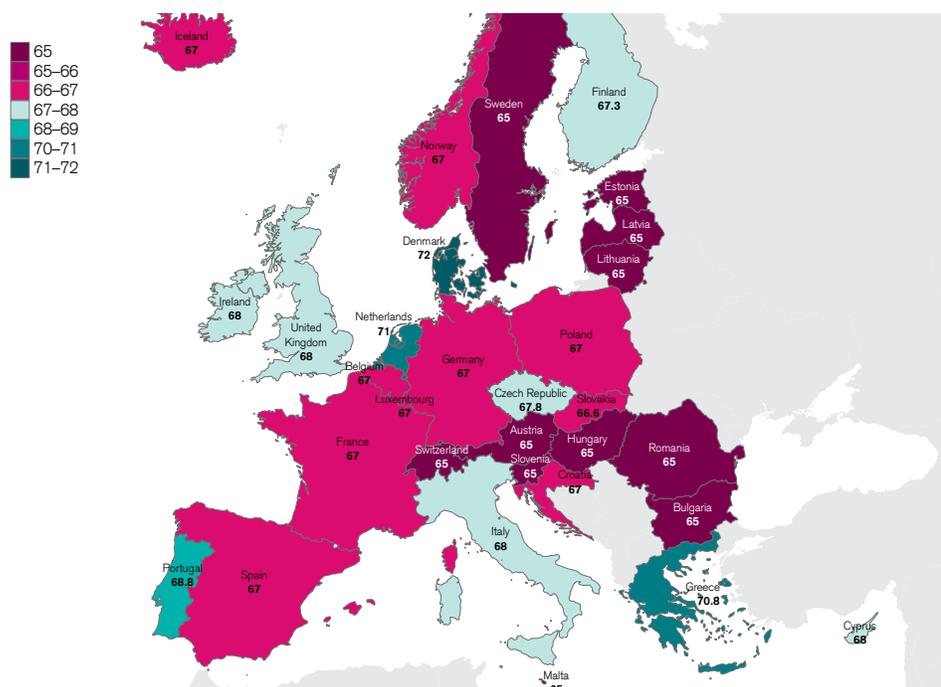
The previous section demonstrated that, without countermeasures, the performance level in the second pillar will likely decrease considerably for future generations of pensioners. Here, we will discuss different measures for improving the financial situation in old age (see table on the next page). Some of these measures presuppose a reform of the pension system and, in some cases, can be found in the current proposals for the reform of the second pillar (see box on p. 25).

## Save longer

One obvious approach to reducing funding gaps would be to raise the age of retirement. Numerous countries in Europe faced with similar demographic challenges have already introduced a higher retirement age than in Switzerland. Furthermore, most countries have already adopted a further increase in the retirement age or an automatic adjustment to changes in life expectancy (see chart). Switzerland, however, resolutely maintains the current retirement age. The Federal Council dispatch on OASI 21 merely provides for a harmonization of the retirement age at 65 for both men and women. At the very least, incentives are to be introduced to encourage people to work longer. The current proposals for the reform of the second pillar also fail to include a general increase in the retirement age.

## Despite a longer life expectancy, Swiss people retire early compared to other countries in Europe

Anticipated retirement age in 2050\*



\* Norway and Sweden have abolished the age of retirement; the age bracket varies between 62 and 75 in Norway and between 61 and 67 in Sweden (the reference value for a 100% pension is between 67 and 65 years of age).

Source: F.A.Z.(2016) based on the Finnish Center for Pensions, Credit Suisse

## Overview of possible measures designed to reduce the growing pension gaps

	Measures already possible today		Measures requiring a reform of the pension scheme
	on the part of the insured	on the part of the pension schemes	
<b>Save longer</b>	Work beyond retirement age	Begin the saving process earlier in the second pillar	Compulsorily begin the saving process earlier in the second pillar (adjustment to BVG)
		Raise the retirement age (provided it is currently below the official BVG retirement age)	Increase in the official retirement age
<b>Save more / reduce pension gaps</b>		Introduce incentives to work longer or correct disincentives	Introduce incentives to work longer or correct disincentives
	2nd pillar: - Voluntarily make higher savings contributions (if possible) - Buy into the second pillar	2nd pillar: - Offer employees a voluntary increase in the BVG contributions - Voluntarily increase employer contributions - Reduce the coordination deduction - Special contributions to savings capital by means of provisions or employer contributions	2nd pillar: - Increase in ordinary BVG contributions - Reduction or abolition of ordinary coordination deduction
	3rd pillar: - Use the savings potential of pillar 3a - Additional savings in pillar 3b		3rd pillar: - Create the option of retroactive deposits into pillar 3a
<b>Generate higher returns on retirement assets</b>	Adjust the investment strategies to own risk capacity and risk tolerance: - 2nd pillar: 1e plans for high earners (if possible) - 3rd pillar: Check securities solutions in pillars 3a and 3b	- Check the optimization of the pension scheme's investment strategy and make suitable use of the risk capacity - Check 1e plans for high earners	De-politicization of the BVG minimum interest rate in favor of a better utilization of the investment horizon
		Quickly reduce unintended redistribution from the active insured to pensioners in the 2nd pillar so that the interest rate on the retirement assets of active insured parties at least matches the technical interest rate	Reduce the minimum conversion rate or depoliticize its determination and adjust automatically to the changes in life expectancy and the technical interest rates

Source: Credit Suisse

### Raising the retirement age a possible solution

Raising the retirement age would extend the savings phase and thus favor the accumulation of individual retirement assets. The top left chart on p. 22 shows how a two-year increase in the retirement age would affect the replacement rates of the scenarios described in the previous section (see chart p. 17): by extending the savings process, the rates in our examples are increased by two percentage points. The effect should be even higher: As pension funds would have to pay benefits for a shorter time on average, this would enable them – all other things being equal – to increase the conversion rate or to reduce it by less. In particular in light of the upcoming wave of retirements of the baby-boomers, it is also advisable to involve them in bridging the funding gaps and to prevent an even greater redistribution to the detriment of young people (see section 1). In the event of a smaller redistribution; more returns on retirement assets can also be credited to the active insured – unlike in recent years when returns on the pension capital of pensioners were significantly higher than the interest on the retirement assets of workers.

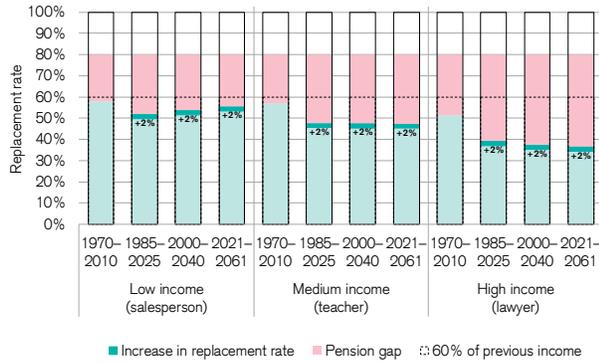
### Saving when young: Sensible, but with limited impact

A less effective solution than raising the retirement age by two years would be to start saving in the second pillar a whole five years earlier (from the age of 20 instead of 25), as proposed in the model of the Swiss Pension Fund Association (ASIP). In principle, it is sensible to initiate pension savings as early as possible, because this allows taking full advantage of the compound interest effect. Globally speaking, however, the impact of this measure is limited: The replacement rate rises by no more than two percentage points (see top right chart p. 22). On the one hand, this is because income during the early career phase is still relatively low. While even in the example of the salesperson, salaries are higher than the BVG entry level<sup>18</sup>, the coordination deduction – which is levied regardless of income – affects the insured with low incomes disproportionately as this significantly reduces the salary insured. On the other hand, both salaries and contribution rates increase with age: The later stages of working life are therefore important for the saving process. Particular attention must also be paid to the fact that a large proportion of under-25s are still at the training stage or work part-time, thereby further reducing the effectiveness of this measure.

<sup>18</sup> The entry threshold is the minimum annual salary that a person must be paid by an employer for insurance to become mandatory in accordance with the BVG (currently CHF 21,330).

### Raising the retirement age by two years ...

Replacement rates, compared between the generations, when raising the retirement age from 65 to 67

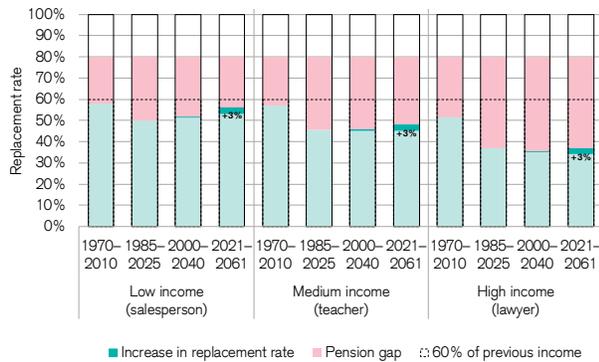


Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

### Increase in contribution rates for under-55s increase the replacement rate by about 3pp

Replacement rates, compared between the generations, when adjusting the contributions rates to 9% (age 25 – 34), 14% (35 – 44), 16% (45 – 54) and 18% (55+)

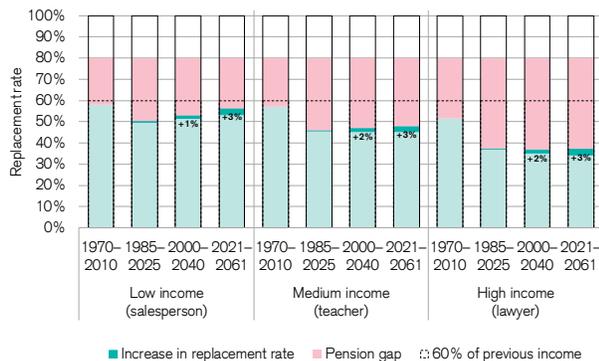


Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

### A long-term increase in returns of 1pp increases the replacement rate by more than 3pp

Replacement rates, compared between the generations, with an increase in annual returns to 3% by 2040 (instead of 2% as previously assumed)

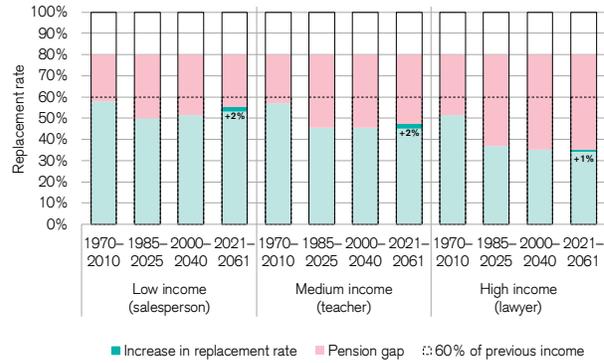


Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

### ... as effective as beginning saving five years earlier

Replacement rates, compared between the generations, when beginning savings in the second pillar at the age of 20 instead of 25 (assumption: last generation already paid in from 2016)

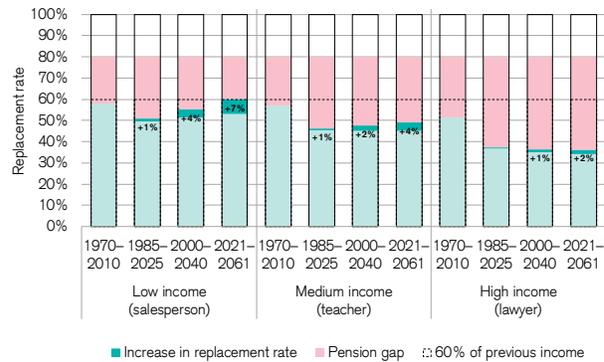


Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

### Halving the coordination deduction increases pension savings, in particular in the low-income segment

Replacement rates, compared between the generations, when halving the coordination deduction

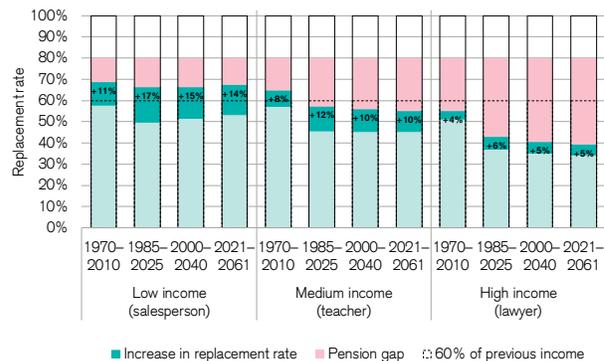


Past value performance or financial market scenarios is not a reliable indicator of future performance.

Source: Credit Suisse

### Even with maximum 3a deposits in pillar 3a, pension gaps generally remain

Replacement rates\*, compared between the generations, with regular deposits of maximum contributions permitted in a pillar 3a savings account



Past value performance or financial market scenarios is not a reliable indicator of future performance. \* The capital is used over 25 years. In the interests of simplicity, neither capital service taxes nor interest/returns are taken into account in the payout phase.

Source: Credit Suisse

Regardless of this, the considerable redistribution from workers to pensioners and the uncertainty over future pensions raises the question for young people of whether they really want to increase their retirement savings in the second pillar significantly. To this end, the system must quickly be given a sustainable basis.

### **Increase BVG contributions**

The statutory retirement credits determine what percentage of the coordinated salary must be paid into the occupational pension. The retirement credits rise with age, from 7% at the age of 25 to up to 18% after the age of 55. Among other measures, the current proposals for reform provide for an increase in retirement credits, in particular for younger insured parties, in order to offset the reduction of the minimum conversion rate. In reference to the reform proposal of the Swiss Federation of Small and Medium Enterprises (see box on p. 25), the left-hand chart in the middle of page 22 shows what the impact of a two to four percentage points increase in contribution rates for all under-55s from 2021 would be. The replacement rates would be slightly higher for people working from 2000 to 2040 – those who retire in 2025 are not affected as the rate for the over-55s does not change. For the generation employed between 2021 and 2061, the higher contribution rates would be fully applicable during their early years of employment, leading to a three percentage points rise in contribution rates in all income segments.

### **Reducing the coordination deduction is particularly favorable to low-income segments**

The coordination deduction is used to coordinate the OASI and the pension fund. The wage share already insured in the OASI need not be insured again in the pension fund. The coordination deduction totals seven-eighths of the maximum single OASI pension (currently CHF 24,885). Levied regardless of income, the fixed coordination deduction means that the pension fund benefits of individuals with low salaries (e.g. due to part-time work) decrease disproportionately. Reducing the coordination deduction would increase the salary insured and – keeping retirement credits unchanged – increase overall pension fund contributions. However, around half of all Swiss pension funds already today use either a flexible coordination deduction or none at all. Halving the coordination deduction from 2021 on would result in a significant increase in replacement rates, in particular among low-income earners (see right-hand chart, middle of p. 22). Even in the medium and high-income segments, the increased savings funded by employees and employers generate an increase of between 2% and 4%.

### **Differences in returns significantly affect asset accumulation**

For the calculations described above, we assumed a gradual upswing in annual returns from the current rate of about 1.5% (as at 2019) to 2% from 2040. If we assume an increase to 3% by 2040, the replacement rates for the last generations increase by three percentage points (see bottom left chart p. 22). Returns affect pension levels significantly, so that their impact on the replacement rate might appear moderate at first glance. However, even the last generation can only take full advantage of the final returns of 3% p.a. from the second half of their working life (from 2040). Part of the compound interest effect therefore fails to materialize. Furthermore, the effects on the conversion rate are not taken into account in this simulation: If the level of returns increases, it must be assumed that the technical interest rates will also increase, which may in turn drive the conversion rate up as a tendency. A negative scenario is, however, also conceivable: For a number of years, Japan has experienced a period of low growth, low inflation and low returns on all main investment categories (bonds, shares and real estate). If we assume a gradual reduction in annual returns to 0.5% from 2040, the replacement rate for the last generation falls by about three percentage points.

### **High returns also depend on the investment strategy of the pension funds**

What is necessary to increase returns? It is nearly impossible for insured parties to influence the returns contribution of their second pillar assets. The only exceptions to this are the 1e pension plans, if these are offered by the employer. They nevertheless only allow high earners to determine the investment strategy themselves for contributions on their wage share of more than CHF 127,980. In this case, however, the insured bears the investment risk themselves. The key factors influencing the returns contribution to retirement assets are the developments on capital markets and the investment strategy selected. The latter, in turn, still depends on and is determined by the desired returns and the risk capacity of the relevant pension fund (see sections 1 and 2). The investment strategy of the pension funds is thus a decisive element in determining the level of the returns. Section 2 states that demographic changes reduce risk capacity, albeit to an extent that should enable the same benefit to be derived from high-yield investment categories across the entire pension fund market over the next 20 years as at present.

**De-politicization of the BVG minimum interest rate in favor of a better utilization of the investment horizon**

Finally, an optimization of the investment strategy could also be promoted by means of a selective relaxation of the regulatory framework. Swiss particularities in the capital cover procedure, such as the BVG minimum interest rate and the strong orientation toward the coverage rate, restrict the risk capacity with regard to the investment: The long investment horizon for pension assets is becoming less effective as positive interest must (to date) be paid annually on the retirement assets, independent of market performance. Furthermore, temporary shortfalls (caused by market fluctuations) often accompany risk reductions in asset investments at unfavorable moments, to counteract the risk of further coverage rate reductions.

**Deposits in pillar 3a significantly reduce pension gaps**

To prevent pension gaps, the insured can make regular deposits in their private pension starting at an early point in time. The chart at the bottom right of page 22 shows how savings gaps can be reduced by annual payment of the maximum amount into a 3a savings account. As tax-privileged 3a savings have only been available since 1987, workers employed between 1970 and 2010 could only take advantage of them much later in their professional life. But the average interest rate, e.g. on a Credit Suisse 3a pension account, was over 3.5% p.a. from 1987 to 2010. Even if asset accumulation is much slower in the current low interest rate environment, the replacement rate increases significantly: In the low-income segment (salesperson) by between 14 and 17 percentage points and in the medium- and high-income segment by about 10 or 5 percentage points respectively. Regular maximum deposits in pillar 3a also have a big impact compared to other measures mentioned previously, in particular as the additional saving efforts is considerable.<sup>19</sup> However, average deposits in pillar 3a are currently well below the maximum amount permitted – and not only in the low-income segment.<sup>20</sup>

**Private pensions are becoming increasingly important**

The analysis also clearly shows that private pension schemes are becoming increasingly important in ensuring a standard of living in retirement that the person has become accustomed to – and not only to cover additional individual requirements. If 80% of the previous income is required after retirement, this must be complemented by decoupled, non-tax-privileged forms of savings (pillar 3b). Furthermore, depending on the risk profile, profit opportunities in pillar 3a can be increased by calling on securities solutions. If, instead of interest on a 3a savings account, a high-yield securities solution is taken (returns on the 10-year federal bonds plus a supplement of 2.5 percentage points per year, i.e. a higher equity ratio), the replacement rates increase even more markedly: In the low-income segment, the difference compared to the scenario without 3a provisions is +26 percentage points while in the medium and high-income segments, these figures are +18 and +9 percentage points respectively.

**Maintaining performance levels requires a range of different measures**

A series of different measures is required to ensure future pensioners continue to enjoy the standard of living they are accustomed to. On the one hand, the current proposals for the reform of the second pillar focus on the overdue reduction of the minimum conversion rate (see box p. 25). On the other hand, there would be a slight increase in pension contributions by raising contribution rates or reducing coordination deductions. For the insured retiring in the years following the revision, compensation measures are also planned. The "social partner compromise", for example, provides for a flat-rate monthly pension supplement paid out for the rest of their lives to people who retire in the first fifteen years after the reform takes effect – independent of income. This would be funded by an 0.5% increase in salary contributions on all income subject to OASI. The undesirable redistribution from workers to pensioners in the second pillar would thus be exacerbated.

**Purely income-related measures are not sufficient – retirement age must be raised**

The predominantly income-related measures would have to be funded by employees and employers, resulting in an increase in the salary costs that are already high in Switzerland. Furthermore, the contributions in favor of pension provision would have to increase constantly if the retirement age remained unchanged because the average life expectancy is continuing to rise.<sup>21</sup> In the meantime, the most expedient approach to increase the sustainability of pension provision is postponed: A prompt and gradual increase in the retirement age. This would simultaneously extend the savings phase and shorten average pension payments. This would also reduce the redistribution from the young to the old while strengthening the intergenerational contract.

<sup>19</sup> The maximum 3a amount is currently set at CHF 6,826. With a gross income of CHF 100,000 (after the coordination deduction, the insured income is approximately CHF 75,000), an increase in the contribution rates of two percentage points only leads to payments to the second pillar that are CHF 1,500 higher.

<sup>20</sup> For further information, see Credit Suisse (2019), Mind the Gap: part time, timeout, pension shortfalls.

<sup>21</sup> See, for example, Aymo Brunetti (2019): "Only by gradually raising the retirement age can the sustainability of Swiss pension provision be ensured", or Martin Eling (2018): "Reform options for Swiss pension provision: an analysis from an insurance-related economic standpoint."

## Proposals for the reform of occupational benefit provision

Following the rejection of the pension provision 2020 reform package in the referendum of 24 September 2017, the Federal Council decided to address the reform of the OASI and the BVG in two separate bills. The social partners were instructed to present a proposal for the reform of occupational benefit provision. On July 2, 2019, the three national employee and employer umbrella organizations (Swiss Employers' Association, Travail.Suisse and the Swiss Trade Union Confederation) presented their "social partner compromise". Also involved in the negotiations, the Swiss Federation of Small and Medium Enterprises (SGV) presented its own model. In May 2019, the Swiss Pension Fund Association (ASIP) had already presented a proposal for the BVG reform.

### Key figures for selected reform versions compared to the present day

	BVG (as at 2019)	Social partner compromise	SGV proposal	ASIP proposal
Start of savings	Age of 25	unchanged	unchanged	Age of 20
Contribution rates	25 – 34: 7%	25 – 44: 9%	25 – 34: 9%	20 – 34: 9%
per age group	35 – 44: 10%	45+: 14%	35 – 44: 14%, 45 – 54: 16%	35 – 44: 12% 45 – 54: 16%
	55+: 18%		55+: 18%	55+: 18%
Coordination deduction	CHF 24,885	CHF 12,443 (½ of current deduction)	unchanged	60% of salary subject to OASI (at most ¾ of the max. OASI pension, i.e. currently CHF 21,330)
Entry threshold	CHF 21,330	unchanged	unchanged	unchanged
Retirement age	Men 65, Women 64	65	65	65
Minimum conversion rate	6.8%	6% (immediate reduction)	6%	5.8% (immediate reduction)
Transition period		At least 15 years	10 years (Option: 15 – 20 years)	10 years
Compensation measures during transition period		Flat-rate monthly, life-long pension supplement for transi- tional generation: Year 1 – 5 / 6 – 10/11 – 15: CHF 200/150/100, from 16th year: Decision of Federal Council	Full compensation for transitional generation	Percentage increase in the BVG retirement assets for transitional generation (initially 13.5% then 1.5% less every year)
Funding for compensation measures		Allocation procedure: Salary contribution of 0.5% on all income subject to OASI	Central via BVG security fund	Decentralized via provisions of the relevant pension fund
Estimated reform costs per year (according to initiators)		CHF 2.7 billion: - Increase in savings contribu- tions: CHF 1.4 billion - Increases in salary contribu- tions for pension supplements: CHF 1.5 billion - Elimination of subsidies for unfavorable age structure: - CHF 0.2 billion	CHF 1.5 billion: - Increase in savings contribu- tions: CHF 1.1 billion - Compensation measures: CHF 400 million	CHF 2.1 billion: - Increase in savings contribu- tions: CHF 2.1 billion

An overview of other proposals for the reform of the second pillar can be found on the website of the Vorsorgeforum ([www.vorsorgeforum.ch](http://www.vorsorgeforum.ch)) under BVG reform 2022.

Source: Federal Social Insurance Office, Swiss Employers' Association, Swiss Federation of Small and Medium Enterprises, ASIP, Vorsorgeforum, Credit Suisse

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# Glossary

<b>All-inclusive pension fund</b>	Pension fund that insures benefits that exceed the minimum statutory requirements of the BVG and that apply a uniform conversion rate to the entire retirement assets (i.e. the mandatory and extra-mandatory component).
<b>BVG</b>	The Federal Act on Occupational Old Age, Survivors' and Invalidation Pension Provision (BVG is the German acronym) was established in 1985.
<b>Conversion rate</b>	Percentage used to calculate the annual, life-long old-age pension to be paid from the retirement assets upon retirement.
<b>Coordination deduction</b>	Amount deducted from the annual salary to determine the insured salary. It corresponds to 7/8 of the maximum OASI pension (currently set at CHF 24,885).
<b>Coverage ratio</b>	The coverage ratio is determined as the ratio between the pension assets and the actuarially required pension capital of a retirement benefits institution. If the coverage ratio is below 100%, a shortfall exists.
<b>Defined benefit plan</b>	In the case of a defined benefit plan, the type and amount of the retirement benefits is determined in the regulations (in fixed franc amounts or as a percentage of a reference value) and this is used to calculate the amount of the individual or collective pension contributions.
<b>Defined contribution plan</b>	In the case of a defined contribution plan, the amount of the contribution is determined in the regulations (in fixed franc amounts or as a percentage of a reference value) and this is used to calculate the amount of the individual retirement benefits.
<b>Entry threshold</b>	The lower income limit that determines whether or not occupational retirement benefits for an employee are mandatory (currently CHF 21,330).
<b>Fluctuation reserves</b>	Fluctuation reserves serve to absorb price fluctuations on asset investments in order to avoid a shortfall and any restructuring measures.
<b>Mandatory/extra-mandatory segment</b>	The minimum old-age, death and disability benefits defined in the BVG are referred to as the mandatory segment while any additional benefits are referred to as the extra-mandatory segment.
<b>Minimum conversion rate</b>	Minimum conversion rate to be applied by the retirement benefits institutions, upon normal retirement age, to the mandatory part of the pension capital (at present 6.8%).
<b>Minimum interest rate</b>	Minimum interest rate, determined by the Federal Council, that the pension schemes must apply to the retirement assets of the mandatory pension (BVG).
<b>Pension capital</b>	Pension scheme liability with regard to insured parties. The pension capital of active insured parties corresponds to the sum of insured parties' retirement assets indicated in the contribution plan. The pension capital of pensioners corresponds to the present value of all current pensions.
<b>Required returns</b>	Required returns on pension assets in order to maintain the existing coverage rates.
<b>Retirement assets</b>	Sum of retirement credits accrued, including vested benefits and interest.
<b>Retirement credits</b>	Amount that is credited to the retirement benefits of an insured person each year. The rates are set as a percentage of the coordinated annual salary and depend on the age of the insured person.

**Shortfall**

A shortfall exists if, on the balance sheet date, the necessary insurance related pension capital calculated by professional pension experts is not covered by the available pension assets.

**Technical interest rate**

Discount rate (or valuation interest rate) used to determine the pension capital or technical provisions as well as pension scheme funding.

**1e pension plans**

With 1e pension plans (named after Art. 1e BVV 2), retirement benefits institutions that exclusively insure salary segments above one and a half times the BVG upper salary limit (current set at CHF 127,980) can offer pension plans with different investment strategies.

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