

Reforming the Swiss Pension System: Understanding Public Opinion to Enable Targeted Communication Efforts

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Abstract

While generally well-run, the Swiss pension system is in need of reforms to be effective in the longer term. The first pillar, like that of many other countries, is facing demographic challenges undermining its effectiveness and support across generations, while the second pillar is plagued by structural inefficiencies and low returns on investment. Given the direct-democracy approach in Switzerland reforms need to be supported in detail by the broader population and not just by technocrats; this has made reforms slow. Understanding the profile of citizens not supporting reforms and focusing communication is therefore critical to accelerating the pace of technically necessary reforms. This research uses the data from an Raiffeisen Pension Barometer survey to identify such profiles. We find that the profiles are different among the three pillars, and that only a few factors play a significant role. High income and high-skill employment are the most sig-

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nificant indicators of a lower perceived need for reform, as is residency in Western Switzerland. While impacting confidence in the system, age at the granularity in the survey does not generally impact the perceived need for reform.

Zusammenfassung

Obwohl das Schweizer Rentensystem im Großen und Ganzen gut funktioniert, bedarf es Reformen, um längerfristig wirksam zu sein. Die erste Säule steht, wie in vielen anderen Ländern auch, vor demografischen Herausforderungen, die ihre Wirksamkeit und Unterstützung über Generationen hinweg untergraben, während die zweite Säule von strukturellen Ineffizienzen und geringen Kapitalrenditen geplagt ist. Angesichts des direkt-demokratischen Ansatzes in der Schweiz müssen Reformen im Detail von der breiten Bevölkerung und nicht nur von Technokraten unterstützt werden. Dieser Umstand hat die Reformen verlangsamt. Das Verständnis des Profils der Bürger, die Reformen nicht unterstützen, und die Fokussierung der Kommunikation sind daher von entscheidender Bedeutung, um das Tempo technisch notwendiger Reformen zu beschleunigen. Diese Studie nutzt die Daten einer Raiffeisen-Rentenbarometer-Umfrage, um solche Profile zu identifizieren. Wir werden sehen, dass die Profile der drei Säulen unterschiedlich sind und nur wenige Faktoren eine wesentliche Rolle spielen. Ein hohes Einkommen und eine hochqualifizierte Beschäftigung sind die wichtigsten Indikatoren für einen geringeren Reformbedarf, ebenso wie der Wohnsitz in der Westschweiz. Das Alter der Befragten Personen dieser Umfrage wirkt sich zwar auf das Vertrauen in das System aus, hat jedoch im Allgemeinen keinen Einfluss auf den wahrgenommenen Reformbedarf.

1. Introduction

The Swiss pension system is generally well-regarded. However, it is in need for reform to continue to fulfill its purpose in the future. These efforts have enjoyed mixed success and will need to continue in the future. Given the unique participatory democracy in Switzerland, it is imperative to communicate the need for this reform effectively to broad sections of the population. We leverage the data collected in the Raiffeisen Pension Barometer to identify key constituencies for this communication.

1.1 The Swiss Pension System

The purpose of the Swiss pension system is to ensure financial security for old age, in the event of disability and in case of death of a family member. The three-pillar pension system consists of the state, the occupational and the private pension provision. The purpose of pillar one is to secure livelihood. Pillar two – occupational benefits insurance – is intended to maintain the accustomed standard of living in old age. Both pillar one and pillar two are mandatory. Pillar three, which is voluntary, enables to build up private pension provision.

1.1.1 Scoring and International Comparison

Several analyses exist comparing the different retirement systems. The Mercer CFA Institute Global Pension Index started in 2008 and has grown to compare 44 national systems annually. In this index the Swiss system has scored consistently slightly above average as a “B.” In the last five years it has held 11th place, scoring well in Integrity and in the average for Adequacy and Sustainability (Mercer 2018, 2019, 2020, 2021, 2022, 2023). Adequacy represents the ability of the system to provide sufficient retirement income. Sustainability considers the system’s ability to provide income over time, especially in light of demographic changes, and is thus not related to environmental challenges. Integrity looks at the confidence in the system, especially in private sector-funded schemes. The overall index is a weighted average of these components. This data is shown in Figure 1, both in absolute terms and indexed to 2018.

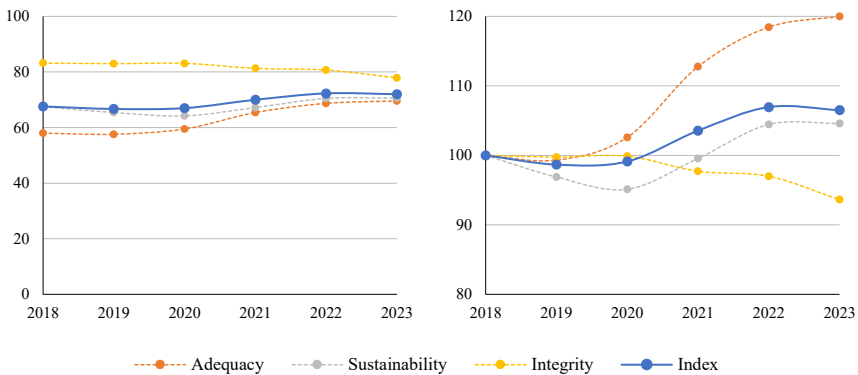


Fig. 1: Mercer CFA Global Pension Index for Switzerland 2018–2023 (actual values and indexed to 2018)

Thus, Switzerland’s score has improved slightly in the past five years, with the main driver coming from Adequacy and a rebound in sustainability. Integrity, on the other hand, has eroded significantly, albeit from a high level.

Raiffeisen¹ also conducts an analysis of the state of the Swiss Pension System along four dimensions, published annually as a barometer in German, French, and Italian (Raiffeisen 2018, 2019, 2020, 2021, 2022, 2023). The first three dimensions are based on a representative survey of Swiss citizens. Engagement measures the activities individuals undertake regarding their pension. Knowledge is a self-assessment of their proficiency regarding the pension system com-

¹ Disclosure: Several authors of this paper are also involved in the project.

bined with a scoring of own activities on pension-related matters. Trust is the confidence in the overall system, including the ability to manage long-term demographic challenges. The fourth dimension, Results, is a technical assessment of financial performance conducted by experts. The barometer is the weighted average of these four dimensions. Figure 2 displays the Raiffeisen barometer, both in absolute terms and indexed to 2018.

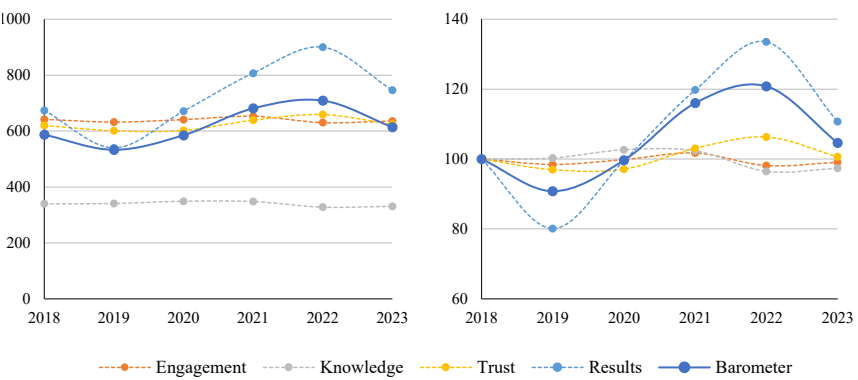


Fig. 2: Raiffeisen Pension Barometer for Switzerland 2018–2023 (actual values and indexed to 2018)

Thus, the barometer has rebounded since 2019 and dropped back to the 2018 level by 2023, driven almost exclusively by the financial results achieved. Trust and Engagement have remained generally constant, at a relatively high level. Knowledge has also remained generally constant, albeit at a considerably lower level.

The overall picture of the Swiss pension system emerging from these two studies is one of a relatively solid system, enjoying high trust and with a solid technical basis. However, there is also considerable room for improvement in the long-term stability of the system and in the engagement and knowledge of the population.

1.1.2 Attempts at Reforms

On September 25, 2022 the Swiss electorate said “yes” to the AHV 21 reform, which entered into effect by January 1, 2024. After decades of stalemate, this is the first major step toward the restructuring of the first pillar of the pension system.

The reference age for women is being raised to 65 years. It will be gradually increased by three months each year, with the first increase planned in 2025. The reference age of men and women will therefore not be fully aligned until 2028. Women who are on the verge of retirement are particularly affected by the transition period. Nine cohorts of the transition generation will receive lifelong pension supplements as compensation measure. All women born between 1961 and 1969 are entitled to supplements. The pension supplements vary depending on the year of birth.

There will be more flexibility in the choice of retirement date. Both men and women can draw their pension from the age of 63 at the earliest or defer it until they are 70 at the latest. Women of the transition generation can draw their pension from the age of 62 and receive lower reduction rates. In contrast, they cannot benefit from the pension supplement. In addition, the reform makes it possible to draw a pension in stages, either by reducing the level of employment and deferring or drawing only part of the pension early, or by taking retirement in monthly instead of annual stages.

Furthermore, there will be incentives to work beyond the reference age. Contribution gaps from earlier in life can be closed and the contributions made can increase the personal AHV pension further. An additional income for the AHV is generated by an increase in the value added tax of 0.4 percentage points on the normal rate.

As the second pillar has also fallen into imbalance in recent years, a further reform is essential to the Swiss pension system. The BVG reform is intended to secure current and future pensions, to strengthen funding and provide better protection for part-time workers. The reform of the second pillar is still under discussion. The main points include the reduction of the minimum conversion rate to 6 %, a reduction in the coordination deduction and an adjustment of age credits in order to better align the difference in contributions across various age groups.

The pressure on the Swiss three-pillar system is increasing and the question arises as to the extent of the need for reform in the individual pillars. According to the Raiffeisen Pension Barometer, the need for reform is greatest in the 1st pillar, the old-age survivors' and disability insurance. More than half of the Swiss population believe there is a great need for reform in the state pension system. In the 2nd pillar, the occupational benefits insurance, the majority of the population see a medium need for reform, while a low need for reform is stated for the 3rd pillar which enables to build up private pension provision.

Reform efforts in Switzerland have often failed in referendums. One example of this is the 2020 pension reform. According to the Raiffeisen Pension Barometer, the population sees the reasons for this as being that individual groups

such as people with part-time jobs or low wages and women would have been too badly off with the reform. The second most important reason given for rejecting reforms is that the reform proposals are incomprehensible or too complicated.

1.2 Research approach

This research leverages the existing 2022 survey underlying the Raiffeisen Pension Barometer to address the following question:

Research Question: What factors correlate with a lower perceived need for reform in the Swiss pension system, and how can they be used to target communication efforts to facilitate these reforms?

The potential factors for analysis were identified by the authors in a series of workshops, and the results of the analysis were discussed again in workshops to extract common themes and develop recommendations. The effort was focused on developing insights for practical political applications, rather than to contribute to the academic literature on this topic.

2. Literature Review

Pension systems worldwide have been evolving and adapting in order to retain fiscal stability in the face of a series of challenges. As early as 1994, the World provided a blueprint for how to respond to demographic, societal and financial challenges through a multi-pillar system and a shift to fully funded defined contribution schemes (World Bank, 1994). According to Holzmann (2013) these reform efforts have been focusing on five broad themes: a) refocusing on basic income protection for the elderly to ensure vulnerable elderly citizens remain covered as the reforms take hold; b) effectively responding to population ageing trends through higher contributions, lower benefits, later retirement or a combination thereof; c) absorbing the negative developments of the global financial markets, especially responding to budgetary consequences as government spending is curtailed; d) adapting to reduced rates of return on assets and volatility in the valuations; and finally e) reforms across pension pillars. These include means-tested zero pillar safety nets for the elderly, parametric changes to first pillars and the accompanying political deliberations, the broad introduction, albeit staggered over time, of second pillar schemes, and the establishment of third pillars. These reforms address but do not yet fully resolve the challenges of aging populations and lower rates of return on pension funds assets, and can thus be expected to continue on the future. In addition, the increasing complexity of multi-pillar systems and the shifts in benefits and contributions across age

groups require political intervention to adjust the changes and retain broad popular support for the reforms.

Hinrichs (2021) analyzes European pension systems to identify the reasons for, types and results of reforms. Pressure for reforms derives mostly from the combination of three factors: First, the ongoing and intensifying population aging increases the dependency ratio in most countries and puts pension systems in direct competition for financial resources with other elderly-heavy policy areas, such as long-term and health care. Second, the financial crisis of 2007–2008 triggered the need for financial support from supranational organization, which in turn requested changes to the government expenditures. In addition, the financial crisis changed the environment for defined contributions private pension schemes which had been the focus of previous reforms. Third, a changing labor market with declining full-time employment makes meeting the goals of preventing old-age poverty and ensure true wage replacement increasingly difficult to achieve. Thus, over the last 30 years all European Union member states have been reforming their pension schemes. Most of these reforms have been parametric, i. e., consisting of adjustment to different parameters within the existing system. However, systemic reforms, especially in a multi-pillar structure can improve the overall effectiveness of the system. The changes have focused on a) lowering the benefit ratio either for all pensioners by reducing or suspending indexing adjustments over several years or by changing the valorization method for newly awarded pensions; b) extending working lives by increasing retirement age or incentivizing youth, women and elderly participation in the workforce. Especially increasing retirement age seems like the most natural response to increasing longevity and health; however, it is also the most visible attempt at retrenchment, and it is widely disliked; and c) building multi-pillar pension systems to support PAYG state systems with more flexible privately funded methods. This has been accompanied by a shift towards defined-contributions schemes and participation has typically been voluntary. European reforms have mostly concentrated on containing the rise of public spending, resulting in lower benefits. The results have impaired future pensioners' income and over time may delegitimize the system if current contributions no longer seem to be worth the future benefits. Although generally loathed, increasing retirement age has been a part of the discussion and reform efforts in all European countries. Only a few have been able to achieve significant reforms, either by a series of incremental changes (e.g., Germany, Italy and Finland) or with one substantial reform (e.g., Sweden and Norway) but more reforms either on the benefits or financing side are necessary to ensure the overall stability of the system.

Carone et al. (2016) survey pension reforms in the European Union since 2000 and broadly agree with Hinrichs (2021) that broad and significant progress

has been made to enhance the financial sustainability of the system while maintaining adequate pension income. This has been usually achieved gradually and over a long time. However more systemic reforms have also been implemented, including the introduction of new pillars and automatically linking key pension parameters to life expectancy. The projections are promising, with public pension expenditures to be close to 11 % of GDP over the long term. However, the gradual phasing in of already legislated reforms will reduce the benefits for future generations of retirees. Therefore, other flanking measures are necessary to ease political resistance, including extending working lives and introducing additional means to generate retirement income.

The experience in Switzerland with a functioning multi-pillar pension system can provide valuable insights to guide these reforms. Switzerland was the first country to publicly articulate the benefits of a multi-pillar approach and the first OECD country to mandate occupational pension plans for employers. The current system is highly redistributive in the first pillar, a large and well-funded second pillar and a comparatively rather small third pillar. These positive traits are not due to a grand original design, but rather, are the results of a succession of revisions. This reflects the collective common sense of the Swiss people to vote for fiscally prudent reforms. However, the Swiss system also shows a number of weaknesses. The first pillar is facing a deteriorating dependency ratio due to demographic aging and the increase in disability pensions. The second pillar is fragmented, intransparent and financially underperforming (Queisser & Vitas, 2000). Thus, the Swiss pension system is also in need of reforms to remain effective.

Bütler (2016) concurs that Switzerland can serve as an important example of a functioning three-pillar system for other jurisdictions, especially because of its reliance on its second pillar for old-age income and the ability to draw on decades of experience for insights. However, the system also shows specific and significant challenges. First, is an overly rational behavior to decumulate assets at retirement rather than opting for annuities. While this is rational from an individual's point of view, it jeopardizes the adequacy of retirement income with increasing longevity and could become costly for the government. Second, the Swiss direct-democracy political culture gives a de-facto line-item veto power to the population. This makes reforms a broader political and communication challenge than in other countries, where the executive can take technocratic decisions within a wider set of policy decisions. In a previous analysis, for example, Bütler (2000) investigates the political feasibility of different reform options for an unsustainable PAYG system using Switzerland to calibrate the model and finds that a) preferences shift from reduction in benefits to increase in taxes between 35 and 50 years of age depending on whether payroll or consumption taxes are increased; b) increasing retirement age is always preferred to reducing benefits.

Thus, developing a fine-grained understanding of people's attitudes towards reform and accurately addressing their concerns in the development, proposal and discussion of potential reforms is critical to ensure the reforms are accepted in the referendum process and to ensure the system achieves its social goals while remaining fair as well as broadly supported and financially viable in the long term.

3. Results

We leverage the data from the 2022 and 2023 Pension Barometer to investigate sentiment for pension reform in Switzerland and identify key constituencies for targeted communication on pension system reform.

3.1 Methodology

Basis for the analysis is the data collected for the 2022 edition of the Raiffeisen Pension Barometer in Switzerland. The survey was conducted between June 13th and June 24th, 2022 and collected responses from 1,006 Swiss citizens. This sample aimed to be representative across several categories, including age, gender, education, and region. The 2022 edition was unique in that it introduced a specific question on the perceived need for reform for each of the pillars of the Swiss pension system. This paper analyzes how this perceived need for reform varies among respondents who are differentiated along other dimensions. The factors investigated are listed in Table 1, including the number of options and their description for each factor. The significance of this variation was investigated using one-way ANOVA. The results were compiled to identify the profile of people least supportive of pension system reforms so they can be addressed by focused communication campaigns. Given their higher granularity, data from the 2023 survey were used to enrich the analysis on the impact of age on the confidence in each pillar of the Swiss pension system.

Table 1
Factors for investigation

| Factor | Options | Description |
|---------------------------------|---------|---|
| Need for reform pillar I | 3 | high, medium, low. |
| Need for reform pillar II | 3 | high, medium, low. |
| Need for reform pil- lar III | 3 | high, medium, low. |
| Confidence in pillar I | 7 | very high to very low. |
| Confidence in pillar II | 7 | very high to very low. |
| Confidence in pillar III | 7 | very high to very low. |
| Gender | 2 | male, female. |
| Home ownership | 2 | yes, no. |
| Region | 3 | German-speaking, French-speaking, Ital- ian-speaking. |
| Age | 3 | 18 – 30, 31 – 50, 51 – 65 years old. |
| Income | 3 | up to 6,000, 6,001 – 10,000, above 10,000 CHF per month. |
| Responsibility for pen- sion | 3 | me, the state, my employer |
| Third pillar ownership | 4 | ownership of a 3rd pillar account: yes with a bank, yes with an insurer, yes with both banks and insurers, no. |
| Life stage | 5 | pre-family, new nesters, established, adult family, post family. |
| Knowledge | 5 | self-rating of own knowledge about pensions: from none to expert. |
| Risk seeking | 5 | I am ready to take any risks if I can increase my wealth: from fully applies to does not apply at all. |
| Risk aversion | 5 | uncertainty like price fluctuations keep me from investing in the stock market: from fully applies to does not apply at all. |
| Political leaning | 6 | left, center-left, center, center-right, right, neutral. |
| Retirement age prefer- ence | 6 | preference for mandatory retirement age in Swit- zerland: 64W/65M as before, 65 for both, 66 for both, 67 for both, 68 or later for both, there should be no fixed retirement age. |

| Factor | Options | Description |
|------------------------|---------|--|
| Risk to own retirement | 6 | need to work longer than planned, contributions cannot match expenditures due to demographic development, I will lose my job and will therefore have to accept financial losses, decreased benefits due to lower returns of pension funds, decreased benefits for me due to expenses for current retirees, I will not be allowed to work past the retirement age in spite of financial need. |
| Saving behavior | 6 | I need more money than I earn, I use the money I have – saving is not important to me, I will save in the future but I can't at the moment, I set money aside whenever possible, I save but not a fixed amount, I set aside a defined amount regularly. |
| Employment | 12 | company owner, liberal professions, self-employed, manager, employee, skilled worker, laborer, in training, homemaker, not working, unemployed, retired. |
| Education | 12 | none, compulsory education, 10th grade/pre-apprenticeship, technical secondary school, vocational training, high school diploma, vocational baccalaureate, federal vocational certificate, professional college, bachelor, master, doctorate. |

3.2 Analysis

The overall perceived need for reform is significantly different for the three pillars, as shown in Figure 3. On the given scale of 3 for high and 1 for low need for reform, the first pillar scores highest with 2.54, followed by the second pillar at 2.25. The third pillar scores lowest at 1.66. Thus, there seems to be significant overall support for system reforms especially for the first pillar. However, this result points to an overall awareness for the issues rather than support for individual solutions, perhaps in part explaining the slow pace of actual reforms through the political process. The second key message is the relatively low variance of these answers by age category and gender. While we will later investigate the statistical significance of these differences, on the graphs the results appear to be tightly grouped. Third, the perceived need for reform remains distinct among the categories.

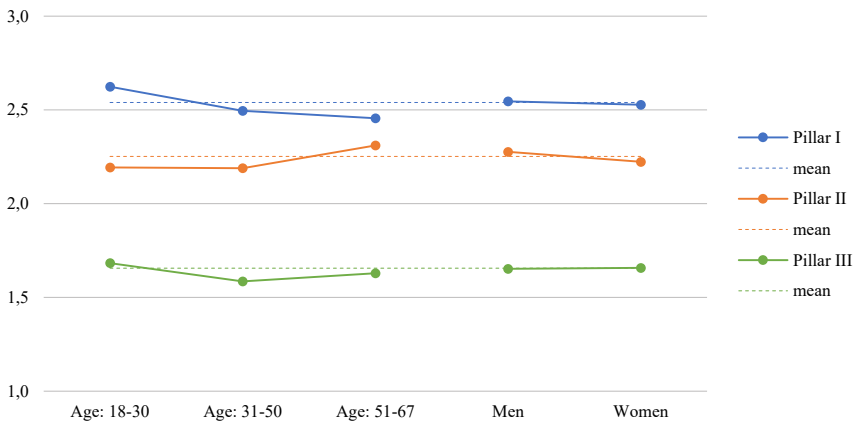


Fig. 3: Perceived need for reform for each pillar by age group and gender (High = 3, Medium = 2, Low = 1)

The need for reform is impacted by the confidence in the different components of the pension system, as shown in Table 2. The confidence in each pillar has a significant impact on the need for reform for that pillar. This result seems logical: respondents with lower confidence in a pillar see a higher need for reforming that pillar. Some other confidence levels link to the need for reform, raising the question whether some of these respondent groups may be linked.

Table 2
Significance on perceived need for reform by pillar (p-values)

| | Need for reform pillar I | Need for reform pillar II | Need for reform pillar III |
|--------------------------|-----------------------------|------------------------------|-------------------------------|
| Confidence in pillar I | <0.001*** | 0.74 | 0.051 |
| Confidence in pillar II | 0.73 | <0.001*** | <0.001*** |
| Confidence in pillar III | 0.014* | 0.003** | <0.001*** |

Legend: *** = 0.001; ** = 0.01; * = 0.05 significance

A view of the connection between these factors shed additional light on this potential relationship. Figure 4 shows the perceived need for reform for each pillar for the group of respondents expressing their confidence for each pillar on a scale of one (low) to seven (high). While some cross-pillar relationships are significant, they are not linear or reciprocal. This indicates that respondents differentiate between the three pillars and that overall different people see the need

for reform in each pillar. Thus, communicating the need for reform and the options for that needs to be targeted at different groups. This paper will thus focus the analysis separately on each pillar in the following sections.

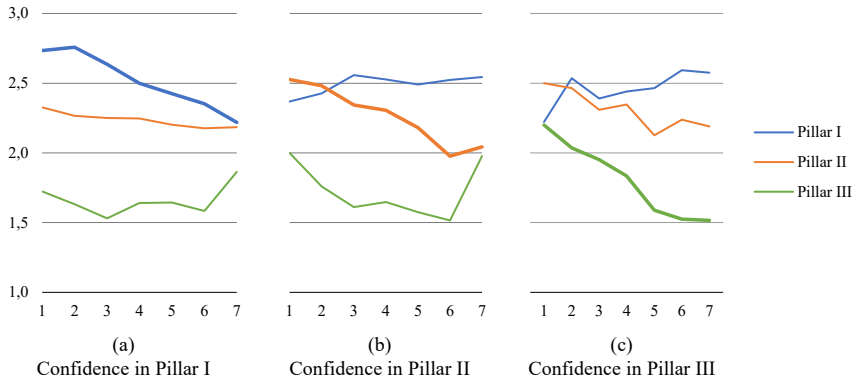


Fig. 4: Perceived need for reform for each pillar by confidence in each pillar (High = 3, Medium = 2, Low = 1)

One potential critique of the data set is the very large categories for respondents' age. The 2022 data set unfortunately does not provide additional granularity. However, the 2023 data set for the Pension Barometer collects the actual age of respondents, but not their perceived need for reform. As a proxy, given the proven relationship, we can plot confidence in each pillar vs. the age of the respondents, with a quadratic fit, as shown in Figure 5. Confidence in the first pillar lies below the midpoint of the scale for almost all ages below 45. Confidence rapidly rises for the older respondents. Thus, while older respondents who are in part already receiving these benefits show high confidence in the system, younger respondents are worrying about the stability of the first pillar and the availability or reliability of these benefits once they enter retirement. The dynamics for the second pillar are similar to those for the first pillar, starting with a comparatively lower confidence but ending higher. However, there are two significant differences: first the confidence is above the middle of the scale and mostly above that for the first pillar. Second, older respondents have higher confidence in the first pillar than in the second pillar. This can be explained with the fact that the first pillar is guaranteed by the state, whereas the second pillar as a defined contribution scheme has the risk of depleting in more advanced ages. The confidence in the third pillar is generally much higher, as we have already seen, and the shape of the curve is different from that of the other two pillars, generally rising with increasing age.

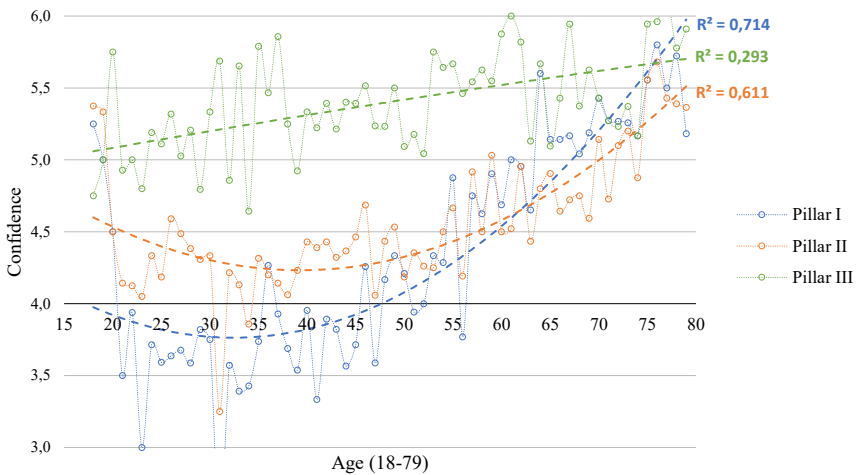


Fig. 5: Confidence in each pillar by age (2023 data)
(1 = Low, 7 = High)

Returning to the 2022 data set, we investigate the impact of 17 additional factors on the perceived need for reform for each pillar. The results are shown in Table 3. These results are the basis for the analysis in the following sections. Contrary to the authors’ hypotheses, several of these factors do not impact the need for reform. Gender, home ownership, responsibility for pensions, life stage and both risk preferences are not significant for any of the pillars. A further four factors: income, ownership of a third pillar product, knowledge of the pension system and education only impact the perceived need for reform for the third pillar.

Table 3
Significance on perceived need for reform by pillar (*p*-values)

| | Need for reform pillar I | Need for reform pillar II | Need for reform pillar III |
|----------------------------|-----------------------------|------------------------------|-------------------------------|
| Gender | 0.11 | 0.82 | 0.56 |
| Home ownership | 0.80 | 0.32 | 0.11 |
| Region | 0.011* | 0.005** | <0.001*** |
| Age | 0.005** | 0.014* | 0.12 |
| Income | 0.34 | 0.43 | 0.012* |
| Responsibility for pension | 0.77 | 0.52 | 0.069 |

| | Need for reform pillar I | Need for reform pillar II | Need for reform pillar III |
|---------------------------|-----------------------------|------------------------------|-------------------------------|
| Third pillar ownership | 0.19 | 0.21 | 0.015* |
| Life stage | 0.25 | 0.055 | 0.74 |
| Knowledge | 0.13 | 0.47 | <0.001*** |
| Risk seeking | 0.70 | 0.59 | 0.074 |
| Risk aversion | 0.38 | 0.24 | 0.21 |
| Political leaning | 0.023* | 0.12 | 0.006** |
| Retirement age preference | <0.001*** | <0.001*** | 0.033* |
| Risk to own retirement | <0.001*** | 0.35 | <0.001*** |
| Saving behavior | 0.006** | 0.036* | <0.001*** |
| Employment | <0.001*** | 0.28 | 0.042* |
| Education | 0.41 | 0.18 | <0.001*** |

Legend: *** = 0.001; ** = 0.01; * = 0.05 significance

3.2.1 First pillar

Of the 17 factors investigated, five have a significant impact on the perceived need for reforms in the first pillar and an additional two have a marginal impact. The perceived need for reform for each of the option of these seven factors is shown in Table 4. The results are ranked by the perceived need for reform and color coded in increments of value of 0.1 with respect to the average. This value was selected because it is close to the standard deviation of the sample means. The categories color-coded in green are more open to reforms in the first pillar. Those coded in red are less open, and will thus be discussed in more detail. Table 4 shows only factors scoring at least 0.1 points above or below the average value of 2.54. The complete list is available in the appendix.

Table 4
Ranked perceived need for reform of Pillar I (mean = 2.54)

| Category | Index | |
|---------------------------|--|------|
| Retirement age preference | 67 for both sexes | 2.70 |
| Employment | In training | 2.69 |
| Retirement age preference | 66 for both sexes | 2.67 |
| Risk to own retirement | Decreased benefits for me due to expenses for current retirees | 2.65 |
| ... | | |
| Political leaning | Center | 2.44 |
| Risk to own retirement | Decreased benefits due to lower returns of pension funds | 2.44 |
| Political leaning | Neutral | 2.43 |
| Risk to own retirement | Need to work longer than planned | 2.40 |
| Region | French-speaking | 2.39 |
| Retirement age preference | 64 for women/65 for men (as before) | 2.35 |
| Employment | Homemaker | 2.33 |
| Employment | Laborer | 2.32 |
| Employment | Company owner | 2.27 |
| Saving behavior | I use the money I have – saving is not important to me | 2.18 |
| Employment | Not working | 2.17 |
| Risk to own retirement | I will not be allowed to work past the retirement age in spite of financial need | 2.06 |
| Employment | Liberal professions | 2.06 |

The categories of respondents who do not support the reform of the first pillar seem heterogeneous. However, a few common threads can be observed. First, on the employment side, either particularly independent professional profiles or less skilled/less active profiles score low in need for reform. One potential interpretation is that company owners, lawyers and doctors are able to make other provisions for their retirement and are perhaps more used to rely on their own work rather than support from the state. For unskilled laborers, homemakers and people who have left the workforce the hypothesis is that they are more

willing to accept the benefits set in the system as it currently stands. Second, a number of different profiles regarding the main risk to own retirement situation are listed. Two relate to needing to work longer than planned and not being able to do so should this be necessary. The third pertains to lower-than-expected financial returns on the current portfolios. For the first two we can again identify a thread of personal responsibility, while the third points to a general trend which is not connected to the logic of the current system. Where that is the largest challenge, therefore, the solutions do not necessarily imply a reform to the system. Similarly, the respondents who would like to keep the retirement age as is, logically do not see a reform to the system as a necessity. It would also be interesting to understand the causality of this correlation. This is unfortunately not visible in the current data set. Respondents for whom saving is not important, but spend their money as they earn it, also do not see a reform of the first pillar as critical. Finally, people who see themselves in the center of the political spectrum or are neutral, as well as people living in the French-speaking part of Switzerland do not see first pillar reform as critical. Finally, although age is linked to the perceived need for the reform, the impact appears to be minimal as no category scores more than 0.1 above or below the overall average. This is potentially due to the low number of age categories. With more granularity in the analysis, significant age-related differences might emerge, as for example shown in Figure 5 with the 2023 survey data.

3.2.2 Second pillar

Four factors have an impact on the perceived need for reform in the second pillar of which two are major and two are minor. A few observations are consistent with the results for the first pillar. First, company owners and members of professions see a lower need for reform also in the second pillar. The potential explanation is likely similar to that for the first pillar: The people in these categories have likely made different provisions for their pensions, and do not rely on their employer's second pillar scheme. Western Switzerland also appears on this list, for reasons that are not immediately visible from the data set. The category with the lowest perceived need for reform of the second pillar, however, is people who would prefer to retire at 68 years of age or later. The potential logical connection may be that people who desire to work longer, for any reason, are potentially connected to the groupings for company owner and professionals.

Table 5
Ranked perceived need for reform of Pillar II (mean = 2.25)

| Category | Index | |
|---------------------------|-------------------------------------|------|
| Employment | Retired | 2.43 |
| Retirement age preference | 67 for both sexes | 2.38 |
| Employment | In training | 2.38 |
| Saving behavior | I need more money than I earn | 2.36 |
| Region | Italian-speaking | 2.35 |
| Saving behavior | I set money aside whenever possible | 2.35 |
| ... | | |
| Employment | Company owner | 2.15 |
| Employment | Liberal professions | 2.13 |
| Region | French-speaking | 2.13 |
| Retirement age preference | 68 or later for both sexes | 1.70 |

3.2.3 Third pillar

Six factors correlate significantly with the perceived need for reform in the third pillar, with another four correlated but with a lower significance. This result is somewhat unexpected, as the perceived need for reform for this pillar is overall comparatively small. Education plays an important role in this perception. Among the categories which least see a need for reform in the third pillar are the highly educated (both PhDs and Master) and those with no education and those with a high school diploma or a bachelor degree. The detectable trend is that people with an academically-oriented rather than vocational education tend to see a lower need for reform in the third pillar. Only three respondents indicated having no education at all, therefore this result should not yet be treated as credible. Respondents who would prefer to extend the retirement age to 66 and 68 years of age or more, equally for both men and women, also do not see a high need for reform in the third pillar. People who see the major risk for their retirement as posed by demographic development and those who lean to Center-left politically are also less enthusiastic about third pillar reforms. People earning more than 10,000 Francs per month and those who save, but not a fixed amount, also see a lower need for reform in the third pillar. These two categories may in fact be overlapping, and may have other, more flexible savings vehicles

open to them for their retirement planning. Finally, employees do not see a high need for reform, perhaps due to their reliance on the first and second pillar, perhaps matched with reasonable expectations for retirement income.

Table 6
Ranked perceived need for reform of Pillar III (mean = 1.66)

| Category | Index | |
|------------------------|--|------|
| Education | Technical secondary school | 2.07 |
| Education | Compulsory education | 2.04 |
| Knowledge | None | 1.96 |
| Risk to own retirement | I will not be allowed to work past the retirement age in spite of financial need | 1.94 |
| Education | 10th grade/pre-apprenticeship | 1.88 |
| Saving behavior | I will save in the future but I can't at the moment | 1.87 |
| Employment | Homemaker | 1.87 |
| Saving behavior | I use the money I have – saving is not important to me | 1.86 |
| Region | Italian-speaking | 1.86 |
| Employment | Laborer | 1.84 |
| Employment | Skilled worker | 1.81 |
| Education | Vocational baccalaureate | 1.80 |
| Employment | Liberal professions | 1.80 |
| Risk to own retirement | I will lose my job and will therefore have to accept financial losses | 1.80 |
| Risk to own retirement | Need to work longer than planned | 1.80 |
| ... | | |
| Education | Bachelor | 1.56 |
| Knowledge | Average | 1.56 |
| Third pillar ownership | Yes with a bank | 1.56 |
| Employment | Unemployed | 1.56 |
| Employment | Employee | 1.55 |
| Income | More than 10,000 CHF per month | 1.54 |
| Education | Master | 1.52 |

(continue next page)

(Table 6 continued)

| Category | Index | |
|---------------------------|--|------|
| Saving behavior | I save but not a fixed amount | 1.52 |
| Education | High school diploma | 1.52 |
| Risk to own retirement | Contributions cannot match expenditures due to demographic development | 1.52 |
| Retirement age preference | 68 or later for both sexes | 1.50 |
| Political leaning | Center-left | 1.47 |
| Retirement age preference | 66 for both sexes | 1.47 |
| Education | Doctorate | 1.35 |
| Education | None | 1.33 |

4. Conclusions

This paper aims at providing suggestions for better targeting communication efforts focused on driving necessary reform in the Swiss pension system. It does so by identifying groups of people who score particularly low in their perceived need for reforming the system. While limited to a survey design not developed to specifically address this question, the data collected for the Raiffeisen Pension Barometer provides some interesting insights, which in turn drive the authors' recommendations.

1. The three pillars are different from each other

The people thinking there is a low need for reform are separate and distinct from each other for the different pillars. First, the need for reform is very different for the three pillars. Second, it is correlated to the confidence in that pillar, but not to the confidence in other pillars. The practical implications of this are significant. Rather than creating one overall campaign discussing all three pillars, communication needs to be targeted independently for each one of the pillar and focus based on political and reform priorities. Thus, the discussion should not be of sweeping reform in all three pillars, but should concentrate on each pillar separately.

2. Several categories do not have an appreciable impact on the perceived need for reform

Several easily identifiable characteristics, like gender, life stage or home ownership, as well as some other logical ones like risk preference or responsibility for retirement financing have no impact in the perceived need to reform in this data set. Other characteristics like education or knowledge about the system have only a limited impact on the perception for the third pillar. The practical implications of this result is that the targeting and the message conveyed in the communication needs to be finely tuned to specific categories of receivers and special care needs to be paid that these messages do not become overly specific and off-putting for broader groups of people.

3. Age-dependent confidence in the system

While age divided in three categories is not an important driver of perceived need for reform, a more detailed look shows that there are significant differences in the degree of confidence in the system by age cohort. Once again, these differences are distinct for the three pillars. Overall confidence is lowest in the first pillar, with younger citizens particularly lacking confidence. This changes rapidly when they approach retirement age and moves to a high confidence for retirees. Thus, the communication needs to be squarely aimed at older cohorts to explain the longer-term impact of inaction, not on themselves but on their families. The dynamics of this perception for the second pillar is overall more positive and also flatter in the development over age cohorts, while for the third pillar there are only minor variations across respondents' ages.

4. Income and profession are key

For both first and second pillar, respondents who identify as company owners or as professionals (doctors, lawyers, etc.) are not keen on reforming the pension system. These two categories account for some 4% of respondents in the sample and therefore constitute a credible data point. They are joined in this view by people earning more than 10,000 Francs per month (about a third of the sample). The reasons for this view may lay with the expectations these respondents have to be successful on their own terms and thus not being too open to government handouts. Alternatively, they may have already saved sufficient funds for their own pension planning. Regardless, these groups can be politically influential, and it is necessary to address them specifically in the push for pension system reforms.

5. Lower skilled labor is also important

At the other end of the professional spectrum, unskilled laborers, homemakers and people who have left the workforce also do not perceive a high need for

reforming the first pillar. The reasons for this sentiment are likely to be very different from the previous group and are hypothesized to be more related to a lower set of expectations for the system. The need to address both this and the previous group makes communication challenging. Channel, framing and content of the messages are likely to be different and at the same time they need to be coherent with each other if they are part of a coordinated campaign.

6. French-speaking Switzerland should be in focus

One of the few aggregate categories which are consistently named is the French-speaking part of Switzerland. This region was particularly clear in the previous surveys (ref) in assigning the responsibility for old-age provision with the government, rather than with the employer or indeed the individual. This sentiment is thus coupled with a lower view that the system, both pillars I and II, need to be reformed. The interpretation is that a reform of the system necessarily implies higher contributions and/or lower benefits. It is postulated that the view is that the state should continue to provide the same guarantees for the same individual contributions and find another way to fund the plans. The communication in this case may be structurally easier as it can address recipients by geography in a common language. This is likely to require considerable political capital.

7. Political programs make a difference

In two cases political leaning are associated with a low need for reform: Center or Neutral for the first pillar, and Center-Left for the third pillar. The more Right or Left leaning voters are more amenable to reform. This creates an interesting targeting priority for reform communication in the middle of the political spectrum. It would be interesting to understand how this opinion may have evolved from specific political programs or from a more general view of the challenges and priorities of modern society.

These seven groups of citizens identified are key constituencies not yet convinced that the Swiss pension system needs to be reformed. Due to the nature of the data at our disposal we were not able to identify the reasons for this resistance. We have, however, generated hypotheses for this point of view based on the authors' own expert opinion. Thus, these groups need to be part of a targeted effort in the next reform discussions in order to a) understand the reasons for their point of view, b) draft appropriate reform proposals to address these concerns if possible, and c) draft appropriate messages and conduct a targeted communication campaign.

Two issues appear to be particularly significant to the authors. The first is the skepticism towards especially the first pillar among the younger age cohorts. This may be part of the transition towards middle age and may be normal. On

the other hand, there is the potential that this point of view is particular to the current situation and the current generational shift. Should this be the case, this would be a fundamental threat to the political support for the pension system. We therefore suggest that both, the reforms and the communication efforts focus on addressing the concerns of young adults and citizens in the early stages in their careers. The second is the consistent reluctance among the financially more successful citizens to support system reforms. This may be due to the fact that these citizens are not relying on the pension system for their old age provisions and are therefore both generally less interested in reforms and also not interested in increasing their contributions to the system. We suggest that this group also be specifically addressed by highlighting the interest they should have in a long-term stable and socially fair system. Not only is their current financial well-being rooted in a functioning society; their future well-being benefits from it as well. It is therefore in their best interest for the government to take early and decisive action to endure the stability of the pension system and of the social contract it embodies.

Appendix

Table A.1

Ranked perceived need for reform of Pillar I (mean = 2.54)

| Category | Index | |
|---------------------------|--|------|
| Retirement age preference | 67 for both sexes | 2.70 |
| Employment | In training | 2.69 |
| Retirement age preference | 66 for both sexes | 2.67 |
| Risk to own retirement | Decreased benefits for me due to expenses for current retirees | 2.65 |
| Age | 18–30 years old | 2.63 |
| Retirement age preference | There should be no fixed retirement age | 2.62 |
| Risk to own retirement | Contributions cannot match expenditures due to demographic development | 2.61 |
| Political leaning | Center-right | 2.60 |
| Employment | Retired | 2.59 |
| Political leaning | Center-left | 2.59 |
| Saving behavior | I set money aside whenever possible | 2.58 |
| Saving behavior | I set aside a defined amount regularly | 2.56 |
| Employment | Unemployed | 2.56 |

(continue next page)

(Table A1 continued)

| Category | Index | |
|---------------------------|--|------|
| Employment | Employee | 2.55 |
| Region | Italian-speaking | 2.55 |
| Employment | Manager | 2.55 |
| Region | German-speaking | 2.54 |
| Risk to own retirement | I will lose my job and will therefore have to accept financial losses | 2.54 |
| Political leaning | Right | 2.53 |
| Saving behavior | I save but not a fixed amount | 2.51 |
| Saving behavior | I will save in the future but I can't at the moment | 2.51 |
| Retirement age preference | 68 or later for both | 2.50 |
| Employment | Self-employed | 2.50 |
| Saving behavior | I need more money than I earn | 2.49 |
| Retirement age preference | 65 for both sexes | 2.49 |
| Age | 31 – 50 years old | 2.49 |
| Political leaning | Left | 2.47 |
| Age | 51 – 65 years old | 2.46 |
| Employment | Skilled worker | 2.46 |
| Political leaning | Center | 2.44 |
| Risk to own retirement | Decreased benefits due to lower returns of pension funds | 2.44 |
| Political leaning | Neutral | 2.43 |
| Risk to own retirement | Need to work longer than planned | 2.40 |
| Region | French-speaking | 2.39 |
| Retirement age preference | 64 for women/65 for men (as before) | 2.35 |
| Employment | Homemaker | 2.33 |
| Employment | Laborer | 2.32 |
| Employment | Company owner | 2.27 |
| Saving behavior | I use the money I have – saving is not important to me | 2.18 |
| Employment | Not working | 2.17 |
| Risk to own retirement | I will not be allowed to work past the retirement age in spite of financial need | 2.06 |
| Employment | Liberal professions | 2.06 |

Table A.2

Ranked perceived need for reform of Pillar II (mean = 2.25)

| Category | Index | |
|---------------------------|--|------|
| Employment | Retired | 2.43 |
| Retirement age preference | 67 for both sexes | 2.38 |
| Employment | In training | 2.38 |
| Saving behavior | I need more money than I earn | 2.36 |
| Region | Italian-speaking | 2.35 |
| Saving behavior | I set money aside whenever possible | 2.35 |
| Retirement age preference | There should be no fixed retirement age | 2.34 |
| Employment | Not working | 2.33 |
| Age | 51 – 65 years old | 2.32 |
| Retirement age preference | 66 for both sexes | 2.30 |
| Employment | Unemployed | 2.28 |
| Employment | Homemaker | 2.28 |
| Saving behavior | I will save in the future but I can't at the moment | 2.27 |
| Employment | Self-employed | 2.25 |
| Region | German-speaking | 2.24 |
| Employment | Manager | 2.23 |
| Age | 31 – 50 years old | 2.20 |
| Employment | Employee | 2.20 |
| Retirement age preference | 64 for women/65 for men (as before) | 2.19 |
| Age | 18 – 30 years old | 2.19 |
| Saving behavior | I save but not a fixed amount | 2.19 |
| Employment | Skilled worker | 2.19 |
| Employment | Laborer | 2.19 |
| Saving behavior | I set aside a defined amount regularly | 2.19 |
| Saving behavior | I use the money I have – saving is not important to me | 2.18 |
| Retirement age preference | 65 for both sexes | 2.16 |
| Employment | Company owner | 2.15 |
| Employment | Liberal professions | 2.13 |
| Region | French-speaking | 2.13 |
| Retirement age preference | 68 or later for both sexes | 1.70 |

Table A.3
Ranked perceived need for reform of Pillar III (mean = 1.66)

| Category | Index | |
|---------------------------|--|------|
| Education | Technical secondary school | 2.07 |
| Education | Compulsory education | 2.04 |
| Knowledge | None | 1.96 |
| Risk to own retirement | I will not be allowed to work past the retirement age in spite of financial need | 1.94 |
| Education | 10th grade/pre-apprenticeship | 1.88 |
| Saving behavior | I will save in the future but I can't at the moment | 1.87 |
| Employment | Homemaker | 1.87 |
| Saving behavior | I use the money I have – saving is not important to me | 1.86 |
| Region | Italian-speaking | 1.86 |
| Employment | Laborer | 1.84 |
| Employment | Skilled worker | 1.81 |
| Education | Vocational baccalaureate | 1.80 |
| Employment | Liberal professions | 1.80 |
| Risk to own retirement | I will lose my job and will therefore have to accept financial losses | 1.80 |
| Risk to own retirement | Need to work longer than planned | 1.80 |
| Political leaning | Neutral | 1.75 |
| Third pillar ownership | No | 1.74 |
| Saving behavior | I need more money than I earn | 1.73 |
| Income | Up to 6,000 CHF per month | 1.73 |
| Retirement age preference | 67 for both sexes | 1.72 |
| Retirement age preference | 64 for women/65 for men (as before) | 1.72 |
| Political leaning | Left | 1.71 |
| Education | Vocational training | 1.70 |
| Third pillar ownership | Yes with an insurer | 1.69 |
| Employment | Retired | 1.69 |
| Retirement age preference | There should be no fixed retirement age | 1.69 |
| Saving behavior | I set money aside whenever possible | 1.67 |
| Employment | Company owner | 1.67 |

| Category | Index | |
|---------------------------|--|------|
| Knowledge | Basic | 1.66 |
| Education | Professional college | 1.66 |
| Risk to own retirement | Decreased benefits for me due to expenses for current retirees | 1.66 |
| Employment | In training | 1.66 |
| Political leaning | Center-right | 1.64 |
| Region | French-speaking | 1.63 |
| Saving behavior | I set aside a defined amount regularly | 1.61 |
| Employment | Manager | 1.61 |
| Political leaning | Center | 1.61 |
| Knowledge | Above Average | 1.60 |
| Education | Federal vocational certificate | 1.60 |
| Political leaning | Right | 1.60 |
| Income | Between 6,001 and 10,000 CHF per month | 1.60 |
| Risk to own retirement | Decreased benefits due to lower returns of pension funds | 1.59 |
| Region | German-speaking | 1.59 |
| Employment | Not working | 1.58 |
| Third pillar ownership | Yes with both banks and insurers | 1.57 |
| Knowledge | Expert | 1.57 |
| Employment | Self-employed | 1.57 |
| Retirement age preference | 65 for both sexes | 1.57 |
| Education | Bachelor | 1.56 |
| Knowledge | Average | 1.56 |
| Third pillar ownership | Yes with a bank | 1.56 |
| Employment | Unemployed | 1.56 |
| Employment | Employee | 1.55 |
| Income | More than 10,000 CHF per month | 1.54 |
| Education | Master | 1.52 |
| Saving behavior | I save but not a fixed amount | 1.52 |
| Education | High school diploma | 1.52 |

(continue next page)

(Table A3 continued)

| Category | Index | |
|---------------------------|--|------|
| Risk to own retirement | Contributions cannot match expenditures due to demographic development | 1.52 |
| Retirement age preference | 68 or later for both sexes | 1.50 |
| Political leaning | Center-left | 1.47 |
| Retirement age preference | 66 for both sexes | 1.47 |
| Education | Doctorate | 1.35 |
| Education | None | 1.33 |

References

Bütler, M. (2000): The political feasibility of pension reform options: the case of Switzerland. In: *Journal of Public Economics*, 75(3), 389 – 416. [https://doi.org/10.1016/S0047-2727\(99\)00073-0](https://doi.org/10.1016/S0047-2727(99)00073-0).

Bütler, M. (2016): Insights from Switzerland’s pension system. In: Mitchell, O. S./Shea, R. C. (eds.), *Reimagining Pensions: The Next 40 Years*, Oxford: Oxford University Press, 247 – 273.

Carone, G./Eckefeldt, P./Giamboni, L./Laine, V./Pamies, S. (2016): Pension reforms in the EU since the early 2000’s: Achievements and challenges ahead. *European economy discussion paper*, 042.

Hinrichs, K. (2021): Recent pension reforms in Europe: More challenges, new directions. An overview. *Social Policy & Administration*, 55(3), 409 – 422. <https://doi.org/10.1111/spol.12712>.

Holzmann, R. (2013): Global pension systems and their reform: Worldwide drivers, trends and challenges. *International Social Security Review*, 66(2), 1 – 29. <https://doi.org/10.1111/issr.12007>.

Mercer (2018): *Melbourne Mercer Global Pension Index 2018*. Australian Centre for Financial Studies, Melbourne. Available at: <https://info.mercer.com/rs/521-DEV-513/images/Mercer%20-%20MMGPI%20Report%202018.pdf>.

Mercer (2019): *Melbourne Mercer Global Pension Index 2019*. Monash Centre for Financial Studies, Melbourne. Available at: <https://info.mercer.com/rs/521-DEV-513/images/MMGPI%202019%20Full%20Report.pdf>.

Mercer (2020): *Mercer CFA Institute Global Pension Index 2020*. Mercer, Melbourne. Available at: <https://cfasocietysingapore.org/wp-content/uploads/2020/12/MCGPI-2020-Full-Report.pdf>.

Mercer (2021): *Mercer CFA Institute Global Pension Index 2021*. Mercer, Melbourne. Available at: <https://www.mercer.com/en-ca/insights/retirement/defined-benefit/mercer-cfa-institute-global-pension-index/>.

- Mercer* (2022): Mercer CFA Institute Global Pension Index 2022. Available at: <https://www.mercer.com/our-thinking/global-pension-index-2022.html>.
- Mercer* (2023): Mercer CFA Institute Global Pension Index 2023. Available at <https://www.mercer.com/insights/investments/market-outlook-and-trends/mercercfa-global-pension-index/>.
- Queisser, M./Vittas, D.* (2000): *The Swiss Multi-Pillar Pension System: Triumph of Common Sense?*. Washington: World Bank.
- Raiffeisen* (2018): *Raiffeisen Vorsorgebarometer 2018*. Available at: <https://digitalcollection.zhaw.ch/handle/11475/27548>.
- Raiffeisen* (2019): *Raiffeisen Vorsorgebarometer 2019*. Available at: <https://digitalcollection.zhaw.ch/handle/11475/27549>.
- Raiffeisen* (2020): *Raiffeisen Vorsorgebarometer 2020*. Available at: <https://digitalcollection.zhaw.ch/handle/11475/20543>.
- Raiffeisen* (2021): *Raiffeisen Vorsorgebarometer 2021: So steht es um die Schweizer Altersvorsorge*. Available at: <https://digitalcollection.zhaw.ch/handle/11475/23586>.
- Raiffeisen* (2022): *Raiffeisen Vorsorgebarometer 2022: So steht es um die Schweizer Altersvorsorge*. Available at: <https://digitalcollection.zhaw.ch/handle/11475/27419>.
- Raiffeisen* (2023): *Raiffeisen Vorsorgebarometer 2023: So steht es um die Schweizer Altersvorsorge*. Available at: <https://www.zhaw.ch/de/sml/institute-zentren/iri/forschung-und-beratung/vorsorgebarometer>.
- World Bank* (1994): *Averting the old age crisis: Policies to protect the old and promote growth*. Washington, DC. Available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/973571468174557899/averting-the-old-age-crisis-policies-to-protect-the-old-and-promote-growth>.