

Pension reform in Sweden

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Abstract

In 1998, Sweden's public pension scheme was transformed from a pay-as-you-go defined benefit plan to a Notional Defined Contribution Plan (NDC). In addition, a second-tier defined contribution individual accounts plan was introduced. The reform fundamentally changed the provision of public pension benefits and redefined the benefit promise. Under the new system, government-provided benefits are closely linked to contributions and lifetime earnings determine benefits. The reform also built in an automatic benefit adjustment process that responds to changes in longevity.

Introduction: history and political background

In 1998, Sweden's public pension scheme was transformed from a pay-as-you-go defined benefit plan to a Notional Defined Contribution Plan (NDC). In addition, a second-tier defined contribution individual accounts plan was introduced. The reform fundamentally changed the provision of public pension benefits and redefined the benefit promise. Under the new system, government-provided benefits are closely linked to contributions and lifetime earnings determine benefits. The reform also built in an automatic benefit adjustment process that responds to changes in longevity.

Sweden first introduced a flat-rate public pension in 1913, when old-age poverty was widespread. Earnings-related pensions (ATP) were not introduced in the public scheme until 1963 after a lengthy and infected political debate that included two referendums. The ATP-scheme was a defined benefit plan where the level of benefits were determined by the 15 years with highest earnings and required 30 years for full benefits. The replacement rate was around 60 percent. When the system was introduced, the contribution rate was set so that the system would build up a surplus to act as a buffer against cyclical contribution changes and offset an expected decrease in private saving following the introduction of a universal earnings-related scheme. The earnings-related scheme became the jewel in the crown for the Social-democratic party (Sundén 2006).

Already in the mid-1980s, it became clear that the ATP system was not financially sustainable. A generous benefit formula combined with population aging and slowing productivity growth produced large projected system deficits. Pension benefits as well as earned pension rights were indexed to prices rather than wages; the lack of a link between benefits and real wage growth meant that earned pension rights and benefits rose faster than wages and contributions in times of low or negative productivity growth. The system also exhibited other problems, including unsystematic and inequitable relationships between contributions and benefits. The benefit formula redistributed income from people with long working lives and a flat lifecycle income (typically low-income workers), to those with shorter work histories and rising earnings profiles (typically high-income workers). Finally, the benefit formula coupled with contributions were levied on all earnings produced little incentive to delay retirement. The poor economic status of the pension system started reform discussions in the 1980s but no changes were made.

Pension reform in Sweden

The early 1990s were characterized by a deep economic recession in Sweden. During the 1980s, capital markets were deregulated, spurring excessive commercial property lending. In 1990-91 several finance and property companies failed and property values fell sharply. An exchange-rate and interest-rate crisis followed, GDP fell and unemployment rates soared. The government had to issue guarantees to save the banking sector. As a result, Sweden's public finances came under pressure and the government launched a program to tighten expenditures and fiscal policy. Cutbacks were made in many social insurance programs. The poor economic situation put further pressure on pension reform but also became a window of opportunity.

The pension problem in Sweden was severe. Projections showed that, with a future real wage growth of 1.5 percent and unchanged contribution rates, the buffer funds would be exhausted sometime between 2010 and 2015. To maintain financial stability, contribution rates would have to rise by 5 percentage points to about 24 percent by 2015, and continue to rise thereafter. Indeed, the system was thought to be sustainable only with a real wage growth of 2 percent (Ministry of Health and Social Affairs 1994).

In the wake of the financial and fiscal crisis in Sweden, pension reform became a top priority. A group of politicians was formed to propose changes to the pension system in 1991. The initiative came from the leaders of the government parties and the group included high-ranking party members across the political spectrum to ensure broad support. The group was small and tight-knitted and the members were described as "social engineers". The gradualist changes suggested by the previous pension commissions in the 1980s were rejected by this new group, which instead recommended a complete overhaul of the system. As a starting point, the group agreed on some of the main features of the reform:

- Long-term sustainability and financial balance
- Strong link between contributions and benefits
- Incentives to work and for later retirement
- Protection against old-age poverty
- Gender equality

Broad political consensus was important and policymakers faced strong pressures to find a compromise. The group were negotiating all aspects of the pension system, which left lots of room for give and take. For example, the right-wing parties favored funded individual accounts, something the Social-democrats were opposed to. The Social-democrats, on the other and argued for a higher contribution rate than the right-wing parties. By compromising, the group could agree on a system with a small funded component and a somewhat higher contribution rate. Another aspect of the reform process was that it was closed off from open political debate. The five political parties in the group comprised more than 75 percent of parliament and all discussions were kept within the group.

In 1994, the group presented the key principles that would govern the new pension system: benefits would be determined by contributions from lifetime earnings, indexation would be based on the growth of the contribution base, i.e. wages; and benefits at retirement would incorporate changes in life expectancy. Overall, the outcome was a compromise, in that it included both pay-as-you-go and funded elements. A defined contribution plan was favored because it made it established a close link between contributions and benefits, and it also implied a contribution rate that would remain unchanged in the future. Since payroll taxes were high in Sweden, it was widely believed that future financial imbalances could not be resolved by additional increases in contribution rates but rather on the benefit side. The outline of the system was put to a vote in parliament in June 1994 and was accepted. The group continued working out the details of the reform and the final law was passed in 1998, five of the seven parties in parliament, representing 75 percent of the the vote, supporting the reform.

The 1990s reform

The key concept in the new Swedish pension system is the NDC. Under this framework, contributions are recorded in each worker's individual record, and the resulting account values represent that individual's claims to future pension benefits. But contrary to a conventional funded DC scheme, annual contributions in the NDC plan are used to finance current pension benefit obligations as in any pay-as-you-go system. Hence, the individual accounts are "notional".

To link earned pension rights to workers' earnings, the rate of return on the accounts and benefits is set equal to national per capita real wage growth. Formulating the rate of return on the individual accounts was a sticking point in the reform discussions. Initially, policymakers considered using the change in the total wage bill as the measure of the rate of return, to ensure the system's financial stability. However, a competing reform goal was to ensure that earned pension rights and benefits followed the average wage growth among the working population, so that relative income growth would boost pension income irrespective of when people earned their pay during their lifetimes. It was agreed that these goals were best achieved by using per capita wage growth.

The total mandatory contribution rate is 18.5 percent of earnings, 16 percentage points credited to the notional account, and 2.5 to the Premium Pension. Participants earn pension rights from labor income, benefits from unemployment insurance, and other social insurance programs, as well as from years spent at home taking care of children, time in the military service and in education. The inclusion of all types of income as well as from years taking care of small children was intended to strengthen gender equality. The replacement rate was estimated to approximately the same as in the ATP system, given that participants delayed retirement in response to increased longevity. The system also provided a guaranteed basic benefit, to ensure a minimum standard of living in retirement. This guaranteed benefit is means-tested and offset by the income from the NDC component; it is financed by general tax revenues. The guarantee was initially payable from age 65 and the benefit was worth approximately 35 percent of the average wage of a blue-collar worker. At the time of the reform, around 30 percent of retirees collect at least some pension income from the guarantee benefit. The benefit amount is indexed

to prices, so real wage growth will over time reduce the importance of this guarantee in total retirement income.

The premium pensions accounts are self-directed and participants may invest in domestic and international mutual funds. A new and separate government agency, the Premium Pension Agency (PPM), was established to administer the funded pillar and acts as a clearing-house. The clearing-house model was chosen to keep administrative costs down by drawing on economies of scale in administration.

Policymakers decided to offer investors broad choice in the Premium Pension, so initially any fund company licensed to do business in Sweden was allowed to participate in the system. The fund companies had to rebate part of their fees since the PPM handled the account administration. At the start of the system approximately 460 funds participated but the number quickly grew to over 800 in the first few years. The government established a default fund for participants who did not choose a fund. In initial discussions, reformers suggested that the default would be a low-risk fund mostly invested in interest-earning assets. But policymakers then worried that such a strategy would have a negative effect on the distribution of benefits, if low-income workers were more likely to take the default. Consequently, the default fund's investment strategy was initially reformulated to mirror the asset allocation of an average investor in the system.

The first investment election for the Premium Pension was in 2000, and the objective was to induce as many participants as possible to make an active choice. Accordingly, the agency launched a large advertisement campaign and actively encouraged participants to select their own portfolios. Private fund managers also offered ad campaigns to attract investors. At that time, some two-thirds of participants made an active investment choice, selecting 3.4 funds on average. The bulk of the contributions were invested in equities: 74 percent of the portfolios for men and 69 percent of the portfolios for women were placed in equity funds. Of course, since lifecycle and balanced funds also include equities, the total share in equities was higher (Säve-Söderbergh 2003). After the initial choices, the share of participants actively selecting their portfolio allocations fell sharply among new system entrants (Palme et al 2007).

Under the NDC, retirement ages are flexible: at time of the reform benefits could be drawn as early as age 61. Annual benefits are calculated by dividing the notional account balance by an annuity divisor. The divisor is determined by the cohort's age 65 life expectancy at retirement (adjusted to target retirement age), and an imputed real rate of return of 1.6 percent (the expected long-term real growth rate of the economy assumed by the reformers). The indexation to life expectancy means that an individual has to work 2/3 of the longer life span. Since the annual pension benefit is equal to the net present value of benefits using a real interest rate of 1.6, the initial benefit at retirement is higher than if benefits were adjusted fully for economic growth each year (as long as growth rates exceed 1.6 percent). The rationale was to provide a relatively high initial benefit, rather than having an increasing benefit profile after retirement. The divisor is the same for men and women, which implies that a unisex

mortality table is used. Benefits are also adjusted each year for inflation. Since the initial benefit calculation already includes an implicit rate of return (1.6 percent), the post-retirement indexation takes this into account. For example, if real wage growth were 2 percent and consumer prices changed by 1 percent, benefits would be adjusted by 1.4 percent. On the other hand, if real wage growth fell below the norm, benefits would be adjusted by less than inflation. Over a worker's lifetime, this type of indexation produces the same result as regular wage indexation (Barr 2013). In the premium pension, the account balance can be converted to a traditional insurance policy at retirement or kept invested in funds and paid out using an annuity divisor.

A key goal of the pension reform was to ensure that the system would be financially stable, even if the system faced adverse demographic and economic developments. On the other hand, the system is still a pay-as-you-go program; pension payments are financed by annual contributions. Increasing the contribution rate is not a viable option in the NDC framework, since higher payments automatically boost benefit promises. Therefore, the buffer funds and the introduction of an automatic balancing mechanism are crucial for the system's financial stability. In particular, two features in the design of the system were expected to introduce financial instability: the indexation of benefits to average wage growth rather than to the growth in the total wage bill, and the use of fixed divisors in annuity calculations.

The automatic balancing mechanism means that if shortfalls occur, per capita wage indexation will be reduced, to bring the system back in balance. The idea is that this mechanism will work automatically, so it does not require an explicit action by politicians. The hope was that protecting the pension system from discretionary changes would minimize the risk of manipulation for political gain. The automatic balancing mechanism requires that system financial stability measures can be calculated. Prior to the reform, the National Social Insurance Board traditionally undertook system projections to set contribution rates. The new pension system also specified the financial information that must be reported, including a system income statement and balance sheet. A balance ratio relating the pension system's assets to its liabilities and summarizes its financial status must also be calculated annually. The balance ratio is defined as follows:

Balance ratio = (Capitalized Value of Contributions + Buffer Funds) / Pension Liability

System "assets" consist of the capitalized value of contributions and the current value of the buffer funds. The capitalized value of contributions is equal to the pension benefits that the annual contributions could finance in the long run. It is derived by multiplying annual contributions by the turnover duration, which is the expected average time between when a contribution is made to the system and when the benefit based on that contribution is paid out. The pension liability is thus the system's current vested liability (that is the value of NDC accounts and benefits in payment). A balance ratio of one means that the NDC system is in financial balance (i.e. assets and liabilities are equal). When the balance ratio is below one, the system is in imbalance and liabilities exceed assets. If the balance ratio exceeds one, the system has an accumulated surplus. The automatic balance mechanism is intended to be activated as soon as the balance ratio falls below one. When the balancing is activated,

the indexation of benefits and accounts is reduced by multiplying the change in average wage growth by the balance ratio. The reduced indexation continues as long as the balance ratio is less than one. If the deficit is large, the balancing can mean a cut in benefits.

The buffer funds played an additional important role in the implementation of the new pension system. Several programs that previously were financed through payroll taxes (the guarantee pension, disability pension, and survivor pension) were after the reform financed through general tax revenues. In order to offset this change, about one-third of the balance in the funds was transferred to the general budget from the buffer funds between 1999 and 2001.

The transition to the new system took place over 16 years. The first cohort that participated in the system was the 1938 cohort; they received one-fifth of its benefit from the new system, and four-fifths from the old system. Each succeeding cohort then increased its participation in the new system by 1/20. Workers born in 1954 or later will participate only in the new system, but not until 2040 will benefits be paid fully by the new system. In other words, soon after the baby boom generation begun to retire in 2015, a large share of benefits was still be paid by the old system.

Since the reform completely changed the pension scheme, it was crucial to provide information to participants during the implementation period. The new system puts more of the risk and responsibility on individuals to plan for retirement, so in 1998 a broad information campaign was launched to educate participants about the new system. Participants received a detailed brochure describing the new system, numerous public service announcements appeared on radio and television, and a website on the reforms. During the campaign, participants also received their first annual account statement for the pension scheme, the “Orange Envelope.” This orange envelope is sent out annually and includes account information as well as a projection of benefits for the NDC as well as the premium pension.

After implementation

The first years after implementation

The new pension system went into effect in 1999 with the first benefit payments in 2001. As part of the reform, the Pension Group, the politicians from the five parties that supported the reform, became permanent. The objective was to guard the new system from changes — any change had to pass the Pension Group and the five parties had to agree. The construction meant that pension issues continued to be kept out of the public debate and only discussed in the Pension Group rather than in parliament.

The information campaign about the new system continued during the first few years after the reform. The focus was on the Orange Envelope and making participants understand the features of the new system. To evaluate the success of information efforts and participant knowledge about the new pension system, the National Social Insurance Board fielded an annual survey (National Social Insurance Board 2003). A few years after the reform, 93 percent of respondents knew the public pension had been reformed. Furthermore, about two-thirds of participants say they read at least part of the orange

envelope. Yet, when respondents were asked to rate how they perceived their knowledge about the system, fewer than 40 percent indicated that they had a good understanding of the new system. Men viewed themselves as more knowledgeable than women, and formal education was positively correlated with system knowledge.

During the first few years, the premium pension received most attention, although it is only a small part of the overall system. The reason was that the financial sector continued to encourage participants to make an active choice among the several hundred funds and to offer services to assist participant for a fee. In particular, new companies were established with the sole objective to manage participants' accounts, often at a high cost. After the initial choices in 2000, the majority of new participants' funds went into the default fund. Almost immediately, a government commission was appointed to investigate how the design of the premium pension could be improved and the ability among participants to make a choice strengthen. During the early 2000s, research started to show that participants in pension plans generally make poor investment choices (e.g Benartzi and Thaler 2002). The results pointed to the importance of well-designed defaults and a limited choice set. In spite of the increased knowledge, no changes were made to the premium pension.

The fall in equity prices following the financial crisis in 2008 affected the buffer funds and the funds lost 30 percent of their value. The large fall meant that total assets in the pension system fell below the liabilities and balancing was activated. The balance ratio was well below 1 and pension benefits were reduced by 3.5 percent in 2010. The outcome started a debate about the construction of the balance ratio. The balancing as such was not questioned, all politicians agreed that the mechanism was needed, but most agreed that the cut in benefits was too large. To soften the balancing, a three-year moving average of the buffer fund values were introduced in the calculation of the balance ratio.

In 2010, a new pension agency was formed by merging part of the National Insurance Board with the Premium Pension Agency. The objective was to establish one single agency for pensions that could focus on the whole system and thereby make it easier for participants. An important task for the new agency was to provide information to participants about their expected benefits and in particular the relative importance of the different components in the system.

The system after 10-15 years

Retirement age is flexible and initially benefits could be withdrawn at fixed age limits: from age 61 in the income and premium pension and at age 65 in the guarantee pension. The distribution of retirement ages following the reform changed, and the share that retired before the age of 65 increased, that is in the opposite direction of what a longer life span required. Over time, this retirement behavior implied that that replacement rates would decrease. In particular, pension benefits risked being too low for individuals with low lifetime earnings that retired early. It also became clear that people with long working lives and physically strenuous jobs, had difficulty extending their working lives.

The distribution of health and thereby the possibilities for different groups to extend their work lives had been discussed since the beginning of the reform. The Pension Group appointed an inquiry to analyze how retirement ages could be adjusted to promote later retirement. In 2020, a target retirement age was introduced for each cohort: with longer life expectancy, each cohort has a later target retirement age. The target retirement age applies to the income and premium pension as well as the guarantee pension. It means that the earliest age to claim benefits and to qualify for the guaranteed benefit will no longer be fixed but adjusted upward to follow life expectancy. For individuals dependent on the guarantee benefit, it currently means they have to work until age 67 to claim their benefit.

Also in 2021, a supplement to income pension was introduced. The supplement is paid out to individuals with a long working life and a low income pension and the amount depends on the income pension. Thus, by paying a fixed amount to individuals with low income pension, the supplement is a break from the core principle of a close link between contributions and income pension benefits. In that way, the income pension supplement is an expansion of the guaranteed level of benefits. The balancing mechanism was further redesigned in 2017 so that benefits only were affected by 1/3 of the deficit.

Around 2012, two fund companies committed major fraud in the premium pension. First, Falcon Funds, used aggressive telemarketing and forged documentation to move participants' premium pension assets into their own funds without participants' consent. About 22,000 Swedish savers were affected, and lost an estimated hundreds of millions to around two billion SEK. Second, the company Allra aggressively marketed and "advised" participants to move their premium pension funds to Allra's funds. The company then managed the funds to benefit Allra's owners at the expense of participants. A criminal investigation followed and executives of the fund companies were sentenced. As a consequence of the fraud, the procurement of funds in the premium pension system has been changed and the requirements for fund companies to participate has become stricter. The number of funds has decreased dramatically but still comprise over 400 funds.

Today

In 2023, the Pension Group was expanded to include all the parties in parliament, adding three parties. All adjustments to the pension system is still a question for the pension group which to some extent still limits the public debate.

The introduction of a target retirement age strengthen the link to life expectancy but it is too early to say how it will affect retirement behavior. The distributional consequences need to be analyzed, in particularly for workers in physically demanding occupations.

To further boost benefits, the Pension Group has agreed in 2025 to introduce positive balancing. After years of strong returns, the buffer funds have accumulated substantial surpluses and the positive balancing will occur when the balance ration exceeds 1.15. In 2026, the balance ratio is 1,1695, that is

system "assets" exceed liabilities by almost 17 percent. During the public review, many experts criticized the proposal and argued for further analysis about the distributional effects, how the surplus can be used and what positive balancing means for a pay-as-you-go system.

The combination of the guarantee pension, housing supplement and income pension supplement has created a complex web of basic protection for low earners and blurs the original transparent design of the system. There is a need to analyze how the protection against poverty can be simplified to improve transparency and work incentives.

Finally, continued oversight of the premium pension fund platform is essential to prevent new scandals and to ensure better returns and stronger consumer protection.

Conclusions

One of the major strengths of the Swedish pension reform is the political consensus and the fact that the reform was successfully implemented. The Pension Group now consists of all parties in parliament and support for the system is thereby strong. But although the reform can be seen as successful it has also generated new tensions.

Making the Pension Group permanent implies risks. In Sweden, debate on pensions after the reform has mostly taken place behind closed doors before a ready proposal has been presented. One example is the introduction of positive balancing in the income pension. The adjustment of the balancing builds on a 25-year old government inquiry. Many experts worry that distributing the surplus in the buffer funds will have negative consequences for the system and for the distribution of benefits. With an open process, a new analysis could have been produced and different options for the surplus been discussed.

In its first 25 years, the system has also been subject to political pressure to compensate for some outcomes. When negative balancing was activated in 2010, the decrease in pension benefits was offset by reduced taxes for retirees. The introduction of the income pension supplement was a political response to the perception that benefits were too low although studies from the Swedish Pension Agency show that overall benefit levels are adequate.

The system for poverty reduction has become increasingly complicated with several different benefits and burdensome administration. Later retirement is still an issue, as well as the possibility for all groups to extend their work lives. It will be important to follow the distribution of retirement ages and the adequacy of benefits. The design of the premium pension has been modified but no change that reflects the research evidence of participant behavior has been implemented. The system is relatively expansive given that few participants make an active choice and could be described as a behavioral weak point.

So even though the initial design was successful, the outcomes during the first 25 years raises questions about adequacy, distribution, retirement behavior and transparency.

Declarations

Author Contribution

Annika Sundén is the sole contribution to the paper.

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