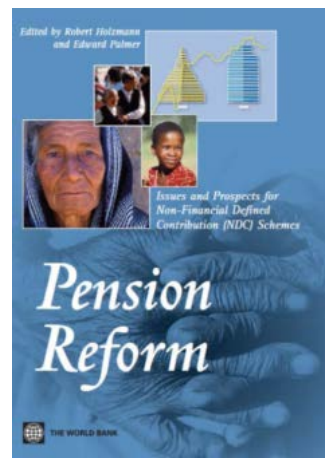


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The NDC Reform in Sweden: The 1994 Legislation to the Present

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THE SWEDISH PENSION REFORM DATES BACK TO THE SUMMER OF 1992 when the Parliamentary Working Group on Pensions published a “sketch” containing almost all the essential elements of the reform. The working group was formed at the end of 1991 as the new nonsocialist government took office, following the publication, debate, and official comments on a parliamentary pension commission’s final report on the problems of the old pension system that was published in 1990. The reform itself was passed by a large majority—around 85 percent—of parliament in June 1994. The 1994 parliamentary decision was much more than a decision “in principle”: all the main components of the reform were set out here except automatic balancing, which was developed after 1994. Implementation began in 1995, and moved forward in stages. This chapter discusses how the Swedish reform came about, what it is, its public image, and remaining issues.

Overview of the 1994 Reform

The 1994 legislation transformed Sweden’s public pension scheme from a pay-as-you-go (PAYG) defined benefit (DB) system into a defined contribution (DC) system that combined notional or non-financial defined contribution scheme (NDC)¹ and a financial defined contribution (FDC) scheme.² The public NDC and FDC schemes are mandatory for all persons working in Sweden and cover earnings up to a ceiling. The total contribution rate is 18.5 percent, with 16 percent going to NDC accounts and 2.5 percent going to FDC accounts. The public benefits are supplemented under the ceiling—which as a part of the reform is indexed to wage growth—by quasi-mandatory occupational benefits for over 90 percent of employees, and involves an additional contribution rate of around 3.5 percent, but with some variation between schemes. These schemes also provide coverage up to a higher ceiling for all white-collar workers.³

Occupational benefits supplementing pensions up to the ceiling in the public system were also transformed into FDC plans, as a result of the reform of the public system, with

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the exception—to date—of the plan for private white-collar employees. As a result, new rights earned in schemes for civil servants and other public sector workers are now being fully funded. With the transformation of the occupational schemes, most employees in Sweden now have a mixed pension portfolio, with a contribution rate of 16 percent for the NDC scheme and an additional some 6 percent for the public and occupational FDC schemes together. In the public and occupational schemes, employees can choose their own investments (in the former) and individual account managers (in the latter).

In Sweden, as in most countries up until the 1990s, the public PAYG old-age, survivors, and disability schemes were all part of the same package. In addition, noncontributory rights were implicitly a part of the old DB schemes. As a part of the Swedish reform, the public old-age scheme was separated from the PAYG disability and survivor schemes, which were moved over to the general budget. This enabled the old-age scheme to become a financially autonomous contribution based scheme. All noncontributory benefits, such as childcare rights and the minimum guarantee, were made explicitly. These benefits are noncontributory and thereby financed out of general tax revenues. Money is transferred to the NDC scheme and directly to private individual accounts in the FDC scheme.

Implementation took some time, first, because one party to the agreement—the Social Democrat Party—needed additional time to discuss the reform in 1995–96, and second, because many practical legislative issues had to be resolved. All the old legislation had to be replaced by new legislation, and related legislation had to be identified and adjusted. Income tax legislation had to be adjusted because the reform also abolished the special deduction for pensioners, putting all pension income on an equal basis with individual earnings. In addition, it was decided to use the pension reform as an opportunity to replace the National Social Insurance Board's outdated computer technology, and politicians were not willing to risk the potential repercussions of errors in either the legislation or hastily implemented computer technology.

One of the most arduous components of the reform in terms of writing new legislation was the decision to transform the combined flat rate benefit and a special tax deduction for pensioners into a taxed guarantee benefit—which meant coordinating taxation rules, both for persons not covered and persons covered by the new system. In addition, the legislation for the means-tested housing allowance for low-income pensioners had to be rewritten accordingly. Legislation was written and passed in parliament mainly in 1997–98.

The new pension system went into full effect in 1999. In January and February 1999, all participants received their first NDC and FDC account statements. Calculations of future individual pensions according to the new rules were made from the year 1995 for persons born 1938 or later. A transition rule means that individuals born between 1938 and 1953 will receive part of their pension from the new system—for example, half of the total pension for persons born in 1944 is calculated according to the new rules. For those born in 1954 the whole pension is calculated according to the new rules.

The FDC scheme started in practice in 1995, as contributions were paid and deposited in a blocked account held at the national debt office, earning a bond rate of return. The contributions were not distributed individually until all individual accounts were ready in January 1999, however.⁴ Individual investment choices in the FDC scheme were made for the first time in 2000.⁵ The first benefits determined according to the reform legislation (NDC and FDC) were paid out in 2001.⁶

The aim of this chapter is to provide an overview of pension reform in Sweden and describe how the Swedish NDC system works. The next section discusses the reasons for the 1994 reform. The following section discusses the reform process. The chapter then describes how the system works and the following section discusses whether the pension reform will achieve its goals. Conclusions are drawn in a final section.

The Need for Reform

The prereform public pension system in Sweden combined a flat-rate universal benefit, the *folkpension* (FP), with an earnings-related benefit (*allmänna tilläggs pension* or ATP). The ATP system had been introduced in 1960 after what may have been the toughest political fight in modern Swedish history.⁷ Benefits in the ATP system were based on an individual's 15 years of highest earnings, required 30 years of covered earnings for a full pension, and replaced 60 percent of average earnings—based on the highest 15 years—up to a ceiling. Individuals with no or very low ATP benefits received an additional benefit, the pension supplement, which was about 50 percent of the FP benefit, and, if they qualified for it, also a quasi-means-tested housing allowance.

An FP benefit of 1.5 times the flat rate plus the housing benefit were usually just enough to bring a pensioner's income up to and slightly above the minimum standard of living based on consumption needs. This idea has been retained after the reform, but the FP component, the pension supplement, and favorable tax rules have been replaced by a *minimum pension guarantee* plus the housing allowance. (See Palmer 2000 for a more extensive discussion of the minimum pension guarantee.) Pension rights, benefits, and the ceiling in the old system were indexed to the Consumer Price Index.

The FP and ATP benefits were financed primarily through payroll taxes levied on the employer. The system was PAYG with partial funding. In the prereform system, old-age, disability, and survivor (widows and children) pensions were all a part of the same system. The FP was financed by a contribution rate of about 6 percent *plus* the equivalent of an additional 2 percent contribution rate financed from general revenues. The ATP benefits were financed by a 13 percent contribution rate at the time of the reform in the mid-1990s. This was not enough to cover expenditures, however, and additional funds had to be drawn from the returns on the large reserve funds to cover remaining costs.

The cost of the old-age pension system *alone* in the old system corresponded to a contribution rate of about 20 percent in 1995, of which a little more than 17.6 percent was the cost of the pure earnings-related component and about 2.2 percent the cost of the non-earnings-related supplements.⁸ The total cost of around 20 percent also became a kind of benchmark for the new system, which has an earnings-related component of 18.5 percent (the NDC is 16 percent and the FDC is 2.5 percent) and non-earnings-related supplements financed through general revenues.⁹ An additional constraint on the new system in the political process was the fact that more than 90 percent of Swedish employees were also covered by negotiated quasi-mandatory private schemes associated with their occupation or branch.¹⁰

When the ATP system was introduced in 1960, the contribution rate was set so that the system would build up a surplus.¹¹ The surplus was funded in a set of buffer funds (the AP funds in the ATP system), and at the time of the reform the net assets in the buffer funds were equal to approximately five years of benefit payments. As it turned out, these funds were crucial in helping to phase in the NDC scheme, as the Swedish baby boomers were to become pensioners beginning around 2010. Without these funds, and given the demographic picture, the Swedish NDC scheme would have faced a growing financial deficit soon after its outset.¹²

The prereform pension system had several problems:

- *The development of costs was inversely related to economic growth.* Pension benefits and rights were indexed to prices rather than wages. The absence of a link between benefits and the real wage growth of the working population made the system sensitive to changes in productivity growth. The absence of a link to the labor force meant that

the system was exposed to the risk of a declining labor force. Lower real growth of the contribution base, regardless of the cause, created higher costs.

- *No response to demographic change.* As in most of the world, Sweden's population is aging. Sweden's mortality rate is among the lowest in the world and is expected to continue to improve dramatically over coming decades. At the time of the reform, the share of individuals 65 years and older in the population was expected to be 20 percent in 2025, an increase by almost 25 percent since the turn of the century.¹³
- *The principle of earnings-related benefits was weak and becoming weaker.* To begin with, the link between contributions and benefits was weak because of the FP and ATP benefit formulas. The situation became even worse through reforms during the period up to the middle of the 1980s, however. Only earnings up to a ceiling counted toward pension rights, and the ceiling, which was high compared with an average wage when introduced in 1960, had not changed in real terms since then. Because the ceiling was indexed to consumer prices, more than 30 years of real wage growth since the introduction of the ATP scheme in 1960 meant that successively larger proportions of the population earned wages above the ceiling, eroding the ATP system as a source for income replacement. This process would continue indefinitely and was soon to become a serious problem for the large group of blue-collar workers with average full-time wages approaching the ceiling, and with no organized compensation above the ceiling.
- *Perverse redistribution.* The connection between contributions and benefits was weak. Contributions were paid on all earnings from age 16 until retirement, while benefits were based only on the 15 years with highest earnings. Thus the formula redistributed income from those with long working lives and a flat life-cycle income (typically low-income workers) to those with shorter work histories and rising earnings profiles (typically high-income workers).¹⁴ In fact, studies showed that blue-collar workers, with relatively flat earnings profiles and long working careers (contribution years), and especially blue-collar women, were the losers in the old system.¹⁵
- *Labor market distortions.* The combination of the benefit formula and the fact that contributions were paid on all earnings meant that reducing labor force participation did not necessarily translate into lower pension benefits.
- *Weak incentives to save.* A PAYG system may reduce national savings, although this is an empirical question. Studies for Sweden suggest that the ATP pension system indeed had a negative effect on the personal savings rate.¹⁶

In sum, there were many reasons for reform. The driving force was nevertheless the threat that the prereform system would be unaffordable in the future. In addition, the vulnerability of relative costs to changes in the contribution base was emphasized in the short-term perspective as Sweden went into a deep recession from the autumn/fall of 1992. By 1994, the contribution base had fallen by 10 percent, and the contribution rate needed to finance old-age pensions had increased accordingly. As will be discussed below, these recessionary years emphasized the overall need for structural reform of systems—including the welfare system.

The Reform Process

In 1984, the government had already appointed a commission to study the pension system. The commission completed its report in 1990, and concluded that the Swedish pension system was bound to run into serious financial difficulties at latest around 2020. The

report discussed indexing the system to economic growth and increasing the normal retirement age as well as the number of years required for a full pension as solutions to the long-term financial deficit.

In the end, the politicians in the commission could not agree on a reform proposal.¹⁷ The commission's report nevertheless revealed all the weaknesses and problems of the old system. During the late 1980s, public trust in the pension system had begun to erode and the view that the system would not be able to meet its promises started to become widespread, in particular among young entrants into the workforce.¹⁸

The public review process for the pension commission's final report—a usual process in Sweden where organizations, government agencies, and representatives in the field from universities are requested to express their opinions about a government commission report—was extended past the elections in the fall of 1991. In the elections, the Social Democratic government was defeated and replaced by a four-party center-right government. Pension reform became a top priority for the new government, and a parliamentary group with representatives of all seven parties then in the parliament was appointed.

This group, the Working Group on Pensions, was organized along rather unconventional lines for a Swedish national commission. It was chaired by the minister for health and social insurance,¹⁹ and included high-ranking members of the parties represented in parliament.²⁰ However, membership was confined to the parliamentary political parties. No representatives of labor, employer, or pensioner organizations were included.²¹

The success of the group would depend on the members' willingness to share the *direction* for reform. It was important that the group be comprised of individuals with leading positions in their parties who could bring with them the trust that leadership entails. The group, including a group of experts, also had to be small and, maybe most important of all, everyone in the group had to participate in the discussions, as opposed to the "typical" commission where representatives of various interest groups often participate as observers whose main purpose is to defend their group's specific interests.

At the outset, the seven political parties in the working group had considerably different views on what reform should entail. To begin with, the ATP system was viewed as the cornerstone of Social-Democratic welfare policy, "the jewel in the crown" as it was often stated, and the party was strongly opposed to introducing financial accounts in the public system. The second largest party, the Conservatives, argued to reduce the scope of the public scheme and introduce privatized individual financial accounts. The Liberal Party was also in favor of introducing financial accounts, and, generally, favored strengthening the link between benefits and contributions. The Center Party supported financial individual accounts but had long advocated a flat-rate pension benefit. The latter view was also to some extent shared by the Christian Democratic Party. The group also included representatives of a right-wing populist party and of the Left Party, although these two parties were soon to reveal that they did not share the goal of the other five parties to create a new pension system, based on a shared set of principles—albeit for very different reasons.

The terms of reference for the group were extremely short: the pension system should be financially sustainable, the link between contributions and benefits should be strengthened, and the pension system should encourage private saving. The group began by reviewing the problems of the prereform pension system. They decided not to argue their political convictions during this initial phase but instead to listen and talk to the country's leading pension experts. Only after this preliminary stage did the discussions between the representatives from the parties begin in earnest.

The analysis of the pension system showed that the problems were severe—the projections indicated that with a future real wage growth of 1.5 percent, increasing longevity,

and unchanged contribution rates, the buffer funds would be exhausted sometime between 2010 and 2015. In order to maintain financial stability, total contribution rates would have to be increased to about 24 percent by 2015 (from slightly under 20 percent at the time of the reform and continue to increase thereafter). In fact, projections showed that the system would be sustainable only at future real wage growth of at least 2 percent or more and then only because an increasing share of workers would have a portion of their earnings above the ceiling (Ministry of Health and Social Affairs 1994a). The latter would be a gradual process, moving the system further and further away from the goal of creating a stronger link between benefits and contributions, and in an ad hoc manner. Maintaining the status quo would only increase individual uncertainty about the future framework of the public system.

Because of the increasing financial burden and eroding public trust in the existing public system, the group rejected the alternative of making piecemeal changes along the lines suggested by the previous pension commission. Their conclusion was that such changes would be only a temporary fix, implying continued uncertainty about the system—one important objective was to propose a system that was robust and stable in the face of changes in political majorities—and that a fundamental reform of the system was necessary.

The government's goal was to propose a reform that had broad parliamentary support, and the Working Group on Pensions faced strong pressures to find a political compromise. The question of financial individual accounts was not in focus in the group's early discussion because it was viewed as too controversial and would have to be negotiated if and when an agreement was in sight.

One of the main points in the terms of reference for the working group was that the system should have a strong link between contributions and benefits. Following rather short discussions, the group agreed that the principle that "every *krona* counts" should apply. Thus, without much struggle, the group had decided that the *life income principle* should govern the system, and, consequently, that the system would be a defined contribution scheme and also that benefits should be based on life expectancy. They also agreed that the overall public system would continue to be based mainly on the PAYG principle.²² Furthermore, there was agreement that earned pension rights should be indexed to wages instead of prices, while pension benefits could continue to be price indexed (this later was changed—see below). There was also agreement that the benefit reflect mortality changes and that the retirement age should be flexible. Thereby—in retrospect—the NDC system had its political birth with the working group's publication of the sketch in the late summer of 1992.

The principles behind the reform and a more detailed outline of what a pension system following these principles would look like were presented in the sketch. The report also included a discussion of replacing part of the PAYG system with a financial individual accounts component, but mentioned explicitly that this was an issue on which the group had not agreed.²³

The group continued its work and reached a five-party agreement in January 1994. This proposal was passed in parliament in June of 1994. The reform was supported by more than 85 percent of parliament, with members representing the five parties supporting the reform. The reform still maintains about this level of parliamentary support. Two parties, the Left Party, which was represented in the working group, and the Green Party, which at the time had too few votes to be in parliament, but which since then has been in parliament, still opposed the reform a decade later. However, those two parties differ considerably in their critique of the reform. The former wanted only minor revisions in the old ATP system, and still maintains this position; the latter supports a flat-rate system.

The 1994 proposal differed in some respects from the 1992 sketch. In the legislation passed in 1994, both earned pension rights and benefits were to be indexed with wage growth. However, the calculation of the initial annual pension would be accomplished by computing an annuity with a presumed real rate of return of 1.6 percent, and then adjusting yearly indexation for deviations from this rate. The system would have no upper limit on the accumulation period: Individuals should be able to earn pension rights as long as they worked and paid contributions. In the political discussions in the autumn of 1993, the group eventually agreed that the mandatory pension system should also include a financial individual account component, which in the original agreement was given a contribution rate of 2 percent. This rate was later increased to 2.5 percent (under the Social Democratic government that replaced the center-right coalition in the autumn of 1994).

Between 1994 and 1998, an implementation group consisting of representatives of those political parties from the working group that supported the reform, and assisted by experts, was appointed to create legislation and resolve remaining issues. (This implementation group still exists.) Implementation came to a standstill in 1995. The reform proposal met serious opposition within the Social Democratic Party when some of the local labor unions began to speak out against it. The leadership of the Social Democratic Party resolved this by calling a "time out" of about two years, during which reform proponents within the party could discuss and debate with the opposition. With this impasse, little happened until 1997 when the Social Democratic Party again was fully on board, and lawyers began to draw up the final legislation. The implementation group presented the final legislation in the spring of 1998, and it was passed by parliament in June 1998.

As the implementation group was working on finalizing the legislation, the National Social Insurance Board worked on an overall business plan, including construction of a Web site for individuals to obtain individual information and perform their own personal calculations, and training of local office staff. A three-year information campaign was designed and launched, and a new IT platform and technology were constructed. Finally, in mid-1998, the PPM (*Premiumpensionsmyndighet*), the public clearinghouse for the new FDC scheme, was created.

How Does the New Swedish Pension System Work?

In the new public pension system, the earnings-related scheme consists of two components: the nonfinancial (notional) defined contribution scheme (NDC) and the premium pension (FDC) scheme. The contribution rate is 18.5 percent of earnings: 16 percent is credited to toward the notional account and 2.5 percent is contributed to the FDC scheme, called the "premium pension" in Sweden. Contributions are intended to be split equally between employees and employers, and contributions to the two schemes are paid on earnings up to the ceiling.²⁴

Individuals earn pension rights from labor income and income from unemployment, sickness, disability, and other social insurance programs, as well as from years at home taking care of children, time in military service, and in education.²⁵ Note that the latter noncontributory rights and rights earned during periods covered by other forms of social insurance are financed with general tax revenues. For individuals with no or low earnings-related benefits, the system will provide a guaranteed benefit to ensure a minimum standard of living in retirement. The guaranteed benefit is means-tested against public pension rights and supplements the NDC and FDC benefits, for those who qualify. It is financed by general tax revenues. It is payable from age 65 and it provides a benefit of approximately 30 percent of the wage of an average worker. Currently, approximately 30 percent of new

retirees collect at least some pension income from the guaranteed benefit. The benefit is indexed to prices, and with real wage growth, the share of the guaranteed benefit in total retirement income will decrease over time.

The NDC Component

The main part of the new pension system is the NDC component. The basic idea of a PAYG system based on defined contributions, NDC, is the same as in a conventional financial defined contribution (FDC) scheme. Contributions are recorded on individual accounts and the account values represent individuals' claims on future pension benefits. But contrary to an FDC scheme, annual contributions are used to finance current pension benefit obligations as in any PAYG system. Hence, the individual accounts are nonfinancial or notional.

Individual account balances grow with annual contributions and the rate of return on the account. The rate of return in the Swedish NDC scheme is determined by the per capita wage growth. Initially, the policy makers considered using the change in the contribution wage sum (total wage growth) as the measure of the rate of return, since this reflects changes in contributors (labor supply) and, as it is the relevant measure of the system's contribution base and financial capacity, it would come closer to achieving the goal of system financial stability. However, a competing political goal of the reform was to ensure that earned pension rights and benefits followed the growth in living standards for the working population and that individuals' relative income had the same effect on their pension income irrespective of when they earned it during their lifetime. It was decided that this goal is best achieved by tying the rate of return on per capita wage growth.

The disadvantage with an index based on wage growth per capita, however, is that when the workforce decreases, benefits and pension rights will grow faster than the contribution base from which benefits are paid. To ensure financial stability, an automatic mechanism that temporarily abandons indexation by average wage growth if the stability of the system is threatened has been introduced. This is discussed further below.

The retirement age benefits can be drawn at any time from age 61. (In the previous legislation the early retirement age was 60). At retirement, annual benefits are calculated by dividing the balance in the notional account by an annuity divisor. The divisor is determined by average life expectancy at retirement for a given cohort at age 65 and an imputed real rate of return of 1.6 percent (an "expected" long-term real growth rate of the economy assumed by the policy makers).²⁶

Since the annual pension benefit is equal to the net present value of benefits using a real rate of return of 1.6 percent, the initial benefit at retirement is higher than it would have been if instead benefits had been adjusted annually for per capita wage. The reason for this construction was to provide a relatively high initial benefit rather than having a high benefit at the end of life. The alternative would of course have given an increasing benefit profile from a lower initial level. The method also provided a smooth transition from the ATP system that was price indexed.²⁷ The divisor is the same for men and women. It is fixed at age 65 for a given birth cohort. No adjustments are made for changes in life expectancy after age 65.

Benefits are adjusted each year for inflation. Since the initial benefit calculation already includes an implicit real rate of return (1.6 percent), pension benefits are also wage indexed, but only with the difference between the "advance return" of 1.6 percent and the *actual* outcome for per capita real wages. For example, if real per capita wage growth is 2 percent and consumer prices change by 1 percent, benefits will be adjusted by 1.4 percent. On the other hand, if real wage growth falls below the norm, benefits will be adjusted by

less than inflation. Over an average worker's lifetime this type of indexation gives the same result as regular wage indexation.²⁸

Financial Stability

One of the most important objectives of the pension reform was to design a financially stable system that would remain stable when faced with adverse demographic and economic developments. However, the system is still a PAYG system; the government has to cover its pension liability through annual contributions. Increasing the contribution rate is of course possible, but is not a viable option in the NDC framework for permanently solving an imbalance since it automatically increases liabilities. Therefore, the automatic balancing mechanism and the buffer funds are crucial for securing the system's financial stability.

AUTOMATIC BALANCING

Five features in the design of the system could introduce financial instability. The first is the indexation of benefits to the average wage chosen rather than to the growth in the wage sum. If the labor force (and contributors) declines, this creates instability since the wage rate and, hence, the rate of return accredited to the accounts, will grow faster than the contribution wage base. The second is the use of cross-section estimates of cohort life expectancy based on the actual outcome in the immediate past in the annuity calculations, rather than on either a cohort projection or a rate that is allowed to change with changing life expectancy as it becomes known.²⁹ Third, funded reserves must generate a financial rate of return at least as high as the rate of return accredited accounts.³⁰ Fourth, the system's financial balance is a function of work earnings and payment profiles. Finally, since in practice indexation is on the basis of historical data, the system will lag behind an instantaneous index.

In order to deal with these sources of financial instability, an automatic balancing mechanism has been introduced in the Swedish NDC system.³¹ When the automatic balancing mechanism is applied, per capita wage indexation will temporarily be abandoned and the indexation will be reduced to bring the system back in balance. As indicated by its name, the mechanism works automatically and does not require any political decisions. An important aspect of the pension reform was that the pension system should be autonomous from discretionary changes and the risk of manipulation for political gain should be minimized.

The automatic balancing mechanism is based on a financial balance sheet constructed specifically for the NDC system. The balance sheet makes it possible to produce a measure that summarizes the financial stability, the balance ratio. The balance ratio that relates the pension system's assets to its liabilities and is defined as follows:

$$\text{Balance Ratio} = (\text{Capitalized Value of Contributions} + \text{Buffer Funds}) / \text{Pension Liability}$$

The 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 liability 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.³² The current turnover duration is about 32.5 years.³³ The pension liability is the current vested liability.³⁴ A balance ratio of one means that the NDC system is in financial balance—that is, assets and liabilities are equal. If the balance ratio is below one, the system is in imbalance and liabilities exceed assets. If the balance ratio exceeds one, the sys-

tem has an accumulated surplus. Table 17.1 shows the financial balance of the NDC for the period 2001–4.

The change in the balance ratio is due both to technical changes and also to the very positive indexation of the pension rights and outgoing pensions that have been the result of the fairly good increase in real wages. The increase has been some 3 percent in real value. During the former system, the ATP-system, no such change occurred.

The automatic balance mechanism is activated as soon as the balance ratio falls below one and the indexation of earned pension rights and current benefits are reduced accordingly. Balancing will continue as long as the balance ratio is less than one.³⁵

Currently, the automatic balance mechanism is applied only in the event that system liabilities exceed assets. However, it is possible that the system builds up a permanent surplus under certain economic and demographic conditions. For this reason the policy makers in the implementation group have agreed that if the surplus becomes “so large that the risk for a future deficit is negligible,” the unnecessary reserves should be distributed to the participants. The question is of course what is meant by “so large that the risk for a future deficit is negligible.” A government inquiry has examined the level of the balance ratio at which a distribution can be made without threatening the system’s financial stability and has proposed that the level shall be set to 1.10.³⁶

THE BUFFER FUNDS

The buffer funds are important in their own right as an integral component of the NDC scheme, but in the Swedish reform the already-existing funds also played an important role in the implementation of the new pension system. In the short term, the funds alleviate the pressures from the demographic hangover of the old system.

As mentioned above, two programs (the disability pension and survivor pension) that previously were integrated with the old-age pension system and financed through payroll taxes are now detached from the old-age system and, in addition, are financed through general tax revenues. This freed a portion of the existing employer payroll taxes for the new contribution-based old-age pension system. The short-term total cost to the general budget of the commitments created through the reform was greater than the contribution of general tax revenues to financing the pension commitments prior to the reform. To help offset the increased financial burden on the general budget, money was transferred from the buffer funds in 1999, 2000, and 2001 to the general budget. The amount was equal to a one-time transfer of about one-third of the total assets in the funds.³⁷ An additional and final transfer from the buffer funds to the general budget was discussed during the spring of 2004, but the decision was postponed, possibly for a couple of years.

Table 17.1. Assets and Liabilities NDC 2001–4 (Swedish kronor, billions)

	2004	2003	2002	2001
Contribution asset	5,607	5,465	5,293	5,085
Buffer funds	646	577	488	565
Total assets	6,253	6,042	5,780	5,650
Pension liability	6,244	5,984	5,729	5,432
Assets – Liabilities	9	58	52	218
Balance ratio	1,0014	1,0097	1,0090	1,0402

Source: Social Insurance Agency (2005).

Note: 1 US dollar = 7.5 Swedish kronor.

In the long run, the buffer funds are needed to cover projected deficits in the financing of benefits when the large 1940s cohorts start to retire. Thus, although the pension reform creates a pension system that is financially stable in the long run, it was important that money had been funded before the economic strains to help finance the benefits of these cohorts. Note that had the NDC scheme been implemented around 1960, just prior to the entrance of these large birth cohorts into the labor force, the NDC rules themselves would have created an NDC demographic fund. For this reason, it was fortunate that Sweden had such a high degree of funding in its PAYG system prior to the reform. In fact, an explicit goal of the legislation setting up the ATP scheme introduced in 1960 was to create a demographic reserve, and this was honored right up until the reform in the mid-1990s.

Given the importance of the buffer funds for the financial stability of the system, the governance and investment rules of the funds have been reassessed. Prior to the pension reform agreement in 1997–98, the buffer funds had been criticized for sacrificing returns in order to achieve political goals, in particular for subsidizing government and the mortgage market with artificially low interest rates. The new investment rules require that investments are made on risk and return considerations and economically targeted investments are not allowed. The guidelines also allow a larger share to be invested in equities (up to 70 percent of the portfolio) and international assets (up to 40 percent of the portfolio can be exposed to currency risk).

Transition

The transition to the new system will be implemented over 16 years.³⁸ The first to participate in the new system are persons born in 1938, and they will receive one-fifth of their benefit from the new system and four-fifths from the old system. Each cohort will then increase its participation in the new system with 1/20 so that, as mentioned, those born in 1944 will receive half of their benefit from the new system and half from the old system. Those born in 1954 and later will participate only in the new system.³⁹ Benefits will not be paid completely from the new system until persons born 1937 and earlier have reached the age of around 100 around the year 2040. Nevertheless, the implementation of the new rules can be considered to be fast, especially when compared with pension reforms in other countries, since all the rights acquired by persons born 1938 and later—almost the entire workforce at the time of the reform—were converted in part or fully into NDC rights.

Individual Financial Accounts: The Premium Pension

In addition to contributions to the NDC, 2.5 percent of earnings will be contributed to a mandatory funded individual account. One of the main motives behind the introduction of funded individual accounts was to help increase savings in Sweden.⁴⁰ The financial account component is a carve-out: of the 18.5 percent total contribution rate, 2.5 percentage points are allocated to individual financial accounts in the FDC scheme. A new government agency, the *Premiumpensionsmyndigheten* (Premium Pension Agency, or PPM), was established to administer the FDC scheme and will act as a clearinghouse. The PPM will also be the sole provider of annuities. The investments in the accounts are self-directed, and participants can choose up to five funds from among domestic and international funds registered (in 2004).⁴¹ Any fund that is licensed to do business in Sweden is allowed to participate in the system, as long as they fulfill certain criteria established by the PPM. Since the inception of the program, the number of participating funds has increased from about 450 to roughly 700 funds.⁴² For individuals who do not make a choice, a default fund managed by the government has been set up. The default option is mainly invested in global equities. In 2004, this fund held around 65 percent of its assets in global equities and 17 percent in Swedish equities (the remainder is mostly invested in interest-earning assets).

Contributions (and fund switches) are transferred to the individual by the PPM in lump sums in daily transactions. As a result, the fund companies receive only aggregate figures and do not know who the individual participants are. The first individual investment choices in the premium pension scheme took place in 2000. Roughly two-thirds of participants made an investment decision at that time, and the assets for the remaining one-third were invested in the default fund. Among those who decided how to allocate their funds, almost 75 percent invested in equity funds and on average chose 3.4 funds.⁴³ The participant is free to claim an annuity at any time after age 61, independently from or in conjunction with claiming (a partial or whole) NDC annuity. Annuitization is mandatory and the account balance at retirement is, subject to individual choice, converted to either a fixed or variable annuity.

Information Needs

The NDC reform increases the need for information about the system, and it also places additional requirements on the availability of high-quality statistics. High quality is important from the perspectives both of managing the system through automatic balancing and of the individual who needs to be informed about the status of his or her account to make private decisions about saving.

From the perspective of a well-functioning system, a well-developed infrastructure is crucial for administering an account-based system. Furthermore, for transparency and for the construction of a financial balance sheet, high-quality data are needed to compute reliable estimates of the system's assets and liabilities.

The need for information for participants has also increased (Sundén 2006). The reform completely changed the principles and structure of the pension system and the shift to a defined contribution plan put increased responsibility on individuals. Therefore, information for participants was a crucial component in the implementation of the reform. In 1998, the year before the new system went into effect, a broad three-year information campaign was launched to educate participants about the new system. The campaign included a detailed brochure that described the new pension system; a series of public television programs; public service announcements on radio, television, and in newspapers; seminars open to the public that discussed the new pension system; and a Web site. During the campaign, participants also received their first annual account statement for the pension scheme, the "orange envelope," together with a brochure explaining the system. The orange envelope is sent out annually and includes account information and a projection of benefits for the NDC as well as the premium pension, for the hypothetical retirement ages of 61, 65, and 67—although participants can continue to postpone claiming a benefit to any age after 61.

Following this initial campaign, the orange envelope has been the primary source of information to participants about the pension scheme. In addition to providing information about expected benefits, the orange envelope summarizes how the new pension system works and promotes the main message that lifetime earnings determine benefits. For the FDC component, the PPM also sends out annual information on fund choices, investment risk and fees, and the agency has its own Web site where participants can review and manage their accounts.

Will the Reform Achieve Its Goals?

One of the most important objectives of the reform was to design a pension system that would be financially stable over time, even when faced with adverse demographic and economic developments. Other important goals were to provide increased work incen-

tives and give participants the possibility of controlling some of their pension funds. Will the reform achieve its goals, and what are the challenges for the future?

Financial Stability

The Swedish reform has introduced several features to ensure financial stability. However, the system is still a PAYG system; the government has to cover its pension liability through annual contributions. Because the contribution rate in an NDC scheme is fixed by the design of the system, the system maintains long-term stability through the rate of return accredited to the accounts—which determines benefits in the future. This means that the system shifts the risk of financing benefits from future generations to current generations.⁴⁴

Furthermore, the automatic balancing mechanism adjusts the indexation of benefits immediately when the system is in financial imbalance. Activation of this mechanism does not distinguish between financial imbalances caused by temporary downturns and those caused by more serious economic and demographic developments, however. Thus it is possible to trigger the balancing mechanism unnecessarily. In terms of benefit levels, the effects of such an event will be small, but it could have repercussions on the political stability of the system. When the automatic balancing mechanism was introduced, it was often described as an “emergency brake” that would be used only rarely and only in situations when the system was in crisis. Thus, if automatic balancing occurs, there is a clear risk that this will signal to the public that the system is in crisis and that their benefits are threatened, even if the present value of benefits have increased in real value over time due to steady indexation commensurate with the real per capita wage growth in the economy. The challenge is to modify this image of the automatic balancing, and instead characterize the mechanism as a component of the indexation of earned pension rights and benefits. In general, benefits will grow with average earnings but the return can vary the same way the rate of return on financial capital varies.

Fairness and Redistribution

The new system creates a close link between contributions and benefits. However, for workers in the lower part (presently approximately the lower one-third) of the wage distribution, this link is blurred because of the offset between the benefit from the NDC and the guaranteed pension. For these individuals, additional work does not (necessarily) increase pension benefits (one-for-one). The choice of retirement age is also less flexible for the group who are dependent on the guaranteed pension, since it is payable only from age 65. But a high guaranteed pension was important to ensure sufficient income security for individuals with no or low earnings.

Choosing to index the system with the change in average wages supplemented by an automatic balancing mechanism has implications for the distribution of benefits between cohorts. The activation of the automatic balancing mechanism reduces the indexation of account values of workers and current benefits of pensioners by the same amount. Participants in the beginning of their careers have longer horizons in which to recoup the loss in benefits compared with retirees who already have started to collect their benefits. The expected size of this type redistribution has not yet been fully examined, but some cohorts are likely to bear a larger share of the burden of adjustment.

Incentives to Work

In order to provide stronger work incentives, the retirement age in the new pension is flexible and the increase in benefits from an additional year's work is actuarially fair. For most, the effect of retiring at 66 instead of at 65 will be an increase of the monthly pensions

of some 9 percent, and the effect of retiring at 67 instead of 65 results in an increase of almost 20 percent. The system does not have an age limit for covered earnings: participants earn pension credits for as long as they work. For example, a worker could start collecting benefits and then return to work and continue earning pension credits after any age. However, collective labor market agreements and the unwillingness of employers make it difficult for workers to continue working past age 67.

Most workers in Sweden exit the labor market earlier than age 67, normally with either private occupational early retirement or public disability benefit—the average retirement age is approximately 62 (National Social Insurance Board 2000). Several of the occupational schemes provide early retirement incentives, and sickness and disability insurance is frequently used as a path to retirement (Palme and Svensson 1999). However, as the working capacity of older workers—and the demand for their services—improves and life expectancy continues to increase, the relationship between the pension system and labor legislation must be revisited. Also, given that disability insurance is available for those whose work capacity is seriously reduced, both the minimum pension age and the minimum age for claiming the guarantee should be adjusted with increasing life expectancy.

Conclusion

The Swedish pension reform gave NDC an institutional context by 1992, although without the label “NDC” at the outset. The reform as it came to be implemented was already specified in legislation in 1994. What came later in terms of developing the concept further was the methodology behind automatic balancing. The overriding political goal of the reform was to create broad political support for the reform, with the support of parties both on the right and left of the political spectrum. The reform was successful in this respect, gaining around 85 percent of the votes in parliament.

However, following the passage of legislation in 1994, it proved necessary to devote additional time for public debate—in spite of the open public discussion of proposals between the summer of 1992, when the initial reform sketch was presented, and the presentation of a legislative package in February 1994 by the working group. Implementation was gradual, because of the arduous work of changing a large amount of legislation and the goal of implementing new computer technology into the administration of the system.

The first lesson from the reform is that—in spite of the extensive period of debate in the initial years and an expensive information campaign that ran over three years (1998–2000)—the level of the population’s knowledge about the reform is still too low, ten years after the passage of the first legislation. The need to reduce information to essential messages has become clearer now than it was in the initial years of implementation. The three most essential messages are, first, that all the years one works and contributes are important in determining the size of a pension. The second is that with increasing longevity, people will have to work longer to receive a given replacement rate. There is some evidence that these two messages have begun to take hold.

The third message is that the NDC rate of return should be expected to fluctuate and, although it should generally be expected to be positive, it can even be negative under some circumstances. This is similar to the financial rate of return, but variation in the rate of return on the NDC accounts will be much more modest. What the NDC pension system can afford to pay is determined by the internal rate of return, which in an economy with positive economic growth will be positive in the long run.

With regard to the possibilities of introducing NDC in other countries, mimicking exactly the Swedish NDC reform, it is important to keep in mind that the transition to the new system was easier because Sweden had already accumulated large reserves in the old system to meet the demographic burden of the postwar baby boomers. Similarly, the present reserve fund will help to provide payments when the next boomer generation retires—the children of the postwar boomers. Calculations show that this will stress finances in the 2040s, and this will be taken into consideration in solving the remaining problem of “balancing”—a method of determining when reserves are large enough to allow them to be distributed to the then-living participants. What still needs to be studied are the implications of the construction of the balancing mechanism for intergenerational distribution of resources.

It is not possible to form a view of the new system without taking into account the fact that over 90 percent of the wage earners in Sweden also participate in one of the occupational pension schemes, which probably will give at least a 10 percent in replacement rate. This also means that an average Swede pays some 22 percent of his or her income in order to receive pension benefits. On top of this come the costs (financed through general tax revenues) of the guaranteed pension; the pension rights for those who receive unemployment, sickness, and disability insurance; and also noncontributory rights for newly born children under four years. Altogether, the system should give adequate pension benefits for the vast majority of persons living and working in Sweden during a normal working career. What’s more, the system is now transparent—all commitments are accounted for in the balance sheet—and financially sustainable.

Finally, it is important what we do with our pension systems, but it is even more important what our pension systems do with us. On top of giving good pensions, systems must be designed so that they include the incentives to do what is good for society’s general welfare, such as working and saving. In our definite opinion, the new Swedish model includes such positive incentives.

Notes

1. “Notional defined contribution” and “non-financial defined contribution” should be understood to have the same definition.

2. We use the terminology introduced in Góra and Palmer (2004). NDC and FDC are both individual account schemes based on defined contribution (DC), the difference being the determinant(s) of the rate of return and the presence of funding in FDC.

3. See Palmer and Wadensjö (2004) for a discussion of public pension reform and occupational pensions.

4. An example of the tasks that needed to be accomplished was the establishment of child rights retroactively from 1960, with three alternative rules. This involved combining information from a large number of sources, covering almost 40 years.

5. Implementation was delayed a year due to a procurement problem with the international supplier contracted to deliver the IT system.

6. The reform brought not only new legislation, it also brought a complete renewal of the National Social Insurance Board’s information technology.

7. The introduction of the ATP system required one referendum, one extra-parliamentary election, and finally a decision with one vote majority—and that by one abstaining vote!

8. Ministry of Health and Social Affairs (1994b, p. 74).

9. It is noteworthy that the major “unexpected” cost since the reform was proposed is the cost of financing rights accrued under the disability scheme, which together with dis-

ability take up, have skyrocketed. These figures can be found in the pension system's annual report (National Social Insurance Board 2003).

10. There are four major occupational schemes: one for blue-collar workers in the private sector, one for white-collar workers in the private sector, one for local government workers, and one for central government workers. With the exception of the scheme for white-collar private workers, these schemes were converted into DC schemes up to the ceiling in the mandatory system following the announcement of the reform of the public system in 1994. See Palmer and Wadensjö (2004) for a discussion of how this has affected overall benefits.

11. The reasons for building up a buffer fund were to create a demographic buffer and offset an expected decrease in savings following the introduction of a universal earnings-related benefit.

12. Such deficits would have implied either identifying and financing the "tax" with an amount of money labeled a tax, or waiting for the "balancing mechanism," to be described below, to balance assets and liabilities.

13. See Palmer (2002).

14. See Ståhlberg (1990).

15. See Ståhlberg (1988).

16. See Markowski and Palmer (1979) and Ståhlberg (1988).

17. A proposal to increase the 30/15 rule in the ATP system to 40/20 was withdrawn in response to a public protest from the white-collar workers' central union, whose members benefited by the short 30-year full-benefit qualification period and even shorter 15-year period for calculating a benefit. The only legislation proposed by the commission and passed by parliament was replacement of the benefits for widows with a temporary survivor's benefit for either surviving spouse.

18. See Palmer (2002).

19. Bo Könberg, coauthor of this chapter, was then the Minister for Health and Social Insurance.

20. The Social Democrats were represented by the outgoing Minister for Social Affairs and the outgoing Under-Secretary of State.

21. Although the labor market parties were not included in the group, a "reference group" consisting of the unions was continuously briefed on the progress of the group.

22. Although the group had different opinions on the fundamental question of whether PAYG systems or funded systems were preferable, there was general agreement that the reform could not convert the entire PAYG system to a fully funded system because of the transition costs from an almost mature PAYG system.

23. See Working Group on Pensions (1992).

24. The ceiling is approximately 1.5 times the average wage.

25. Credits for child rearing are earned for all years until a child is four years old, and although both men and women are entitled to claim them, in practice women by and large claim the benefit.

26. Another decision of the reformers was that pre- and postreform pensioners should have the same indexation of benefits. Since the difference between the norm and the actual (average) rate of change in the per capita wage would constitute real indexation of benefits even for prereform pensioners, it was important to set the norm at what was calculated to be an affordable level. However, an additional consideration was to restrict the level of the norm to one that was reasonably achievable in practice, since benefits would have to be adjusted downward for real growth under the norm—which in practice could be politically sensitive.

27. See Palmer (2002).

28. See Palmer (2002).

29. With continuously increasing longevity, the latter involves continually adjusting annual pension benefits downward. Compared with a fixed annuity, this is much less appealing.

30. The reserves are necessary to fund the benefits of relatively large birth cohorts. The postwar baby boomers, and their children, and so on are examples.

31. See Settergren (2001) and Settergren and Mikula (2006).

32. The inverse of the turnover duration is the discount rate of the flow of contributions.

33. See Social Insurance Agency (2005).

34. The calculation of the balance ratio involves only current values and no projections are employed for assets and liabilities. Traditional projections of the financial status of the pension system are presented in an appendix to the annual report of the pension system.

35. To smooth out the effects of temporary downturns, a three-year moving average is used in the calculation of the balance ratio.

36. See Swedish Government Official Reports Series.

37. At the time of the reform, the funds could cover more than five years of benefit payments; currently, after the transfers, but also after taking into consideration the funds' yields during the period, assets in the buffer funds were some 3.7 times annual benefit payments at the end of 2003.

38. The transition period was originally 20 years, but it was shortened because the reform was delayed.

39. Although individuals born from 1938 to 1954 will get increasingly more of their pension benefits from the new system, their decisions about labor supply (these cohorts would normally have had already been in the work force for 20 years or more, with a 30-year rule for coverage in the old system) and savings were made under the old regime. For this reason, the pension rights for the transition cohorts earned in the old system until 1994 are guaranteed in the event their benefits with the new rules are lower. However, practically all will do better under the new rules.

40. The introduction of individual accounts will only increase savings if it constitutes new savings. It is likely that there will be an offset between pension and nonpension savings. For example, see Gale (1999) for an overview.

41. Contributions to the funded pillar are invested in low-risk government bonds until individual pension rights have been established. This occurs when employer and employee tax statements have been reconciled, which takes an average of 18 months.

42. Funds that wish to participate must sign a contract with the PPM. The contract governs the fee structure for the fund (see Palmer 2000 for a description and discussion of how fees are determined) and reporting requirements, which among other things must occur daily and electronically.

43. See Sundén (2004).

44. See Palmer (2002).

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