

# 5.

## PENSION REFORM IN SWEDEN

*Annika Sundén*

### INTRODUCTION

Population aging has put increasing pressures on public pension systems around the world. As a result, many countries are discussing how to reform their public pension systems in order to meet the demands of an aging society and preserve fiscal balance. A trend in the reforms that have already taken place is the shift from defined benefit plans to defined contribution plans. Compared to defined benefit plans, defined contribution plans place more of the risk and responsibility to plan for retirement on individuals.

Sweden was an early mover in the reform process. It is interesting to look at Sweden because the reform that was implemented fundamentally changed its public pension system. Furthermore, it recognized that pension systems are dynamic institutions and incorporated automatic adjustments to ensure financial stability. The Swedish reform therefore provides some important lessons for other countries.

In 1994, the Swedish parliament passed legislation that transformed the nation's public pension system from a pay-as-you-go, defined benefit plan to a Notional Defined Contribution plan (NDC).

In addition, the reform introduced a second tier of funded benefits. The 1994 decision was taken in principle, and many issues remained to be solved. Between 1994 and the spring of 1998 the details of the reform were worked out, and the proposal was written into law. The reformed pension system went into effect in 1999. An important goal of the Swedish reform was to design a system that was fiscally as well as politically sustainable in the long run. In particular, the reformers wanted to create a system in which adjustments to maintain financial stability were made automatically. They concluded that it was possible to achieve this goal only by overhauling the system rather than changing its parameters.

## THE NEED FOR REFORM

In the mid-1980s, actuarial projections began to show that the Swedish public pension system would eventually face considerable financial shortfalls. Several characteristics contributed to the troubles: the system was sensitive to economic growth because it was indexed to prices rather than wages; the population was aging; and the maturity of the system was placing increasing pressures on it because benefit levels were increasing. The benefit formula implied an inequitable and unsystematic relationship between benefits and contributions.

The prereform public pension system in Sweden combined a flat-rate universal benefit (Folkpension, or FP) with an earnings-related benefit (Allmän Tjänstepension, or ATP). The ATP system had been introduced in 1960, and the FP benefit went back as far as 1913. The ATP was based on an individual's fifteen years of highest earnings, required thirty years of covered earnings for a full pension, and replaced 60 percent of earnings up to a ceiling. Individuals with no or very low ATP benefits received an additional benefit, the pension supplement, which was equivalent to about 50 percent of the FP benefit. Earned pension rights and benefits as well as the system's ceiling on benefits were indexed to prices.

The FP and ATP benefits were financed primarily through payroll taxes levied on the employer. The system was pay-as-you-go with partial funding. The payroll taxes for the FP and ATP systems were 5.86 percent and 13 percent respectively in 1997, so that the total

**TABLE 5.1. OLD-AGE PENSION SPENDING IN EIGHT COUNTRIES  
IN 2000 AND PROJECTED CHANGE, 2000–2050**

	<b>Percentage of GDP in 2000</b>	<b>Projected Change 2000–2050 (percentage points)</b>
Canada	5.1	5.8
Germany	11.8	5.0
Italy	14.2	-0.3
Japan	7.9	0.6
Netherlands	6.4	4.8
Sweden	11.1	1.6
United Kingdom	4.3	-0.7
United States	4.4	1.8

*Source: Ageing and Income: Financial Resources and Retirement in Nine OECD Countries, Organization for Economic Cooperation and Development, Paris, 2001.*

contribution rate was close to 19 percent. The financing for the FP benefit was supplemented by general tax revenues. When the system was introduced in 1960, the contribution rate was set so that a surplus would build up. This was done to create a demographic buffer and to offset an expected decrease in personal saving following the introduction of a universal, earnings-related benefit. The surplus was funneled into a set of buffer funds that initially were equal to approximately five years' worth of benefits.

In addition to the public system, almost all workers in Sweden receive benefits from occupational pensions. On average these plans replace an additional 10 percent of earnings.<sup>1</sup>

Before discussing the reform process, it is useful to contrast expenditures on old-age pensions and demographic developments in Sweden with those of some other countries to get a sense of the magnitude of the problem. The Swedish public pension system is sizable, and public expenditures on old-age pensions amounted to 11.1 percent of GDP in 2000 (see Table 5.1). This compared to 4.4 percent of GDP in the United States and 4.3 percent in the United Kingdom.

Public expenditure is projected to increase in almost all of the advanced industrial countries between 2000 and 2050, with the

**TABLE 5.2. SHARE OF POPULATION AGED 65 AND OVER AND DEPENDENCY RATIO IN EIGHT COUNTRIES, 2000 AND 2030**

	Share of Population Aged 65 and Over (percent)		Dependency Ratio: Ratio of Population Aged 65 and Over to Population 16–64 (percent)	
	2000	2030	2000	2030
Canada	12.8	22.6	18.7	37.3
Germany	16.4	26.1	24.0	43.3
Italy	18.2	29.1	26.9	49.1
Japan	17.1	27.3	25.0	46.0
Netherlands	13.8	25.6	20.2	43.0
Sweden	17.4	25.5	27.1	43.4
United Kingdom	16.0	23.1	24.6	38.3
United States	12.5	20.6	19.0	33.6

*Source: Ageing and Income: Financial Resources and Retirement in Nine OECD Countries, Organization for Economic Cooperation and Development, Paris, 2001.*

largest increases in Canada and Germany; most of the increase can be explained by population aging.<sup>2</sup> By the time of the reform, Sweden was already beginning to take on the characteristics of an aging society. In 2000, 17.4 percent of the population in Sweden was over sixty-five, while in the United States the comparable proportion was 12.5 percent (see Table 5.2). By 2030, these respective shares are estimated to increase to 25.5 percent and 20.5 percent. Overall, population aging is less severe in North America than in Europe and Japan largely because of greater immigration. In 2003 the dependency ratio is estimated to be 33.6 percent in the United States, as opposed to 43.3 percent in Sweden and 46 percent in Japan.

The combination of the generous pension system and population aging made the Swedish problem severe. At the time of the reform, projections showed that with future real wage growth of 1.5 percent and unchanged contribution rates, the buffer funds would be exhausted sometime between 2010 and 2015. In order to maintain fiscal stability, total contribution rates would have to be boosted to about 24 percent by 2015 and would need to increase further

subsequently. In fact, projections showed that the system would be sustainable only at future real wage growth of 2 percent, and then merely because an increasing share of workers would have earned pensions above the ceiling and therefore they would not collect. In the United States, by contrast, the 2003 Social Security trustees' report showed that the projected long-term financial deficit was 1.92 percent of taxable payroll in 2002, and the combined Old-Age and Survivors Insurance and Disability Insurance trust funds were projected to be exhausted by 2042.<sup>3</sup>

Public trust in the pension system also was eroding in Sweden. The view that the system would not be able to meet its promises had started to become widespread, in particular among young entrants to the labor force.<sup>4</sup>

## THE REFORM PROCESS

By the early 1990s it was clear something had to be done with the Swedish pension system. The government had appointed a commission to study the pension system in 1984. The commission completed its report in 1990 and concluded that the Swedish pension system was bound to run into serious financial difficulties around 2020. It proposed dealing with the long-term deficit by indexing the system to economic growth instead of consumer prices and increasing the normal retirement age as well as the number of years of work required for a full pension. In elections in 1991 the Social Democratic Party was defeated and replaced by a four-party liberal/conservative coalition government. Pension reform became a top priority, and the new government appointed a special group to consider the issue, with representatives of all seven parties then in the parliament. The group, which was headed by the minister for social policy, was organized along unconventional lines for a Swedish commission. Membership was confined to the parliamentarians; no representatives of labor market organizations or retired peoples' associations were included.<sup>5</sup>

The group began with a thorough analysis of the pension system and extended the projections done by the original pension commission. It reached a broad agreement on the problems with the old pension system:

- Sensitive to economic growth. Pension benefits as well as earned pension rights were indexed to prices rather than wages. The absence of a link between benefits and the real wage growth of the working population imperiled the system's solvency in times of low or negative productivity growth. Projections done in the early 1990s indicated that with real wage growth of 1.5 percent and unchanged rules, payroll taxes would need to be 30 percent of wages in 2025 in order for the system to meet its obligations.
- Vulnerable to demographic change. Like other industrialized countries, Sweden is experiencing a rise in the average age of its population. As a result, the number of individuals between twenty and sixty-four relative to the number of individuals sixty-five and older will decrease from 3.2 percent in the early 1990s to 2.4 in 2025.
- The principle of compensation for work effort had eroded. Only income up to a ceiling counted toward pension rights. Because the ceiling was indexed to follow consumer prices, real wage growth meant that successively larger proportions of the population earned wages above the ceiling, eroding income replacement under the ATP arrangement.
- The connection between contributions and benefits was tenuous. Contributions were paid on all earnings from age sixteen until retirement, while benefits were based only on the fifteen years with highest earnings. Thus, the formula redistributed income from those with long working lives and relatively flat earnings growth across the life cycle (typically low-income workers) to those with shorter work histories and rising earnings profiles (typically high-income workers).
- Labor market distortions. The way the benefit formula was applied, considering the payment of contributions on all earnings, reduced incentives for labor force participation.
- Weak incentives to save. Studies suggested that the pay-as-you-go pension system had a negative effect on the national saving rate, even though the system was only partially funded.<sup>6</sup>

The pension group considered several alternatives for reform. One suggestion was to make changes along the lines proposed by the

original pension commission. This path was rejected because the group concluded that it would constitute just a temporary fix and would not resolve uncertainty about the system; one important objective was to have a system that was robust and resistant to political risk. The conservative parties argued for a funded and privatized setup, but this was rejected by the Social Democrats, who strongly argued to keep the system public and pay-as-you-go. Because an important goal of the reform process was to design a program that all parties could support, the group faced strong pressure to find a compromise that had broad appeal. The nonsocialist parties also were anxious to avoid an argument over pension reform that could threaten the stability of the government.

The mission was to design a fiscally sustainable system tied to economic growth and with a clear link between contributions and benefits. To achieve this, the following principles guided the reform discussions: benefits should be determined by contributions from lifetime earnings, indexation should be based on the growth of the contribution base, and benefits at retirement should incorporate changes in life expectancy.<sup>7</sup> It was equally important that the contribution rate should remain unchanged in the future. Total payroll taxes are high in Sweden, and the common view was that it was not possible to introduce a system in which the contribution rate would drift upward. Because of the desire to create a close link between contributions and benefits while holding contribution rates steady, the group favored the introduction of a defined contribution plan but within a primarily pay-as-you-go system. The group also agreed that some of the large public buffer funds should be moved into the private financial markets. The result was the NDC plan, with a funded component that includes individual accounts.<sup>8</sup>

## HOW DOES THE REFORMED SWEDISH PENSION SYSTEM WORK?

In the reformed public pension system, earnings-related benefits come from two components: the NDC pay-as-you-go plan and the Premium Pension plan of funded individual accounts. The overall contribution rate is 18.5 percent of earnings up to a ceiling; 16 percent is credited toward the NDC, and 2.5 percent is channeled to the

Premium Pension. Contributions are split equally between employees and employers. Employees' contributions are limited by a ceiling, while the employer's share is levied on all earnings. Individuals also earn credits for child care years and time in military service and in education, as well as for sickness insurance benefits and unemployment insurance.

For individuals with no or low earnings-related benefits, the system provides a guaranteed pension to ensure a minimum standard of living in retirement. The guaranteed benefit is means-tested and offset by whatever income is generated through the NDC component. It is financed by general tax revenues and is in that way separated from the earnings-related system.<sup>9</sup> The guaranteed pension is the main tool for redistribution in the new system. The benefit is quite generous; approximately 40 percent of retirees will collect at least some pension income via this safeguard.<sup>10</sup>

## THE NDC COMPONENT

The main part of the reformed pension system is the NDC. The essential idea of a pay-as-you-go system based on defined contributions is the same as in a conventional defined contribution system. Contributions are recorded in individual accounts, and the account values represent individuals' claims on future pension benefits. But, unlike in a conventional defined contribution system, annual contributions are used to finance current pension benefit obligations as in any pay-as-you-go system.<sup>11</sup> Hence, the individual accounts are notional.

The account balance grows with annual contributions and the rate of return on the account. In order to link earned pension rights to the income of the active population, the rate of return is set to equal the per capita wage growth. Alternatively, the rate of return could have been determined by total wage growth. However, an important goal of the reform was to ensure that earned pension rights and benefits followed the growth in average wages for the active population and that individuals' earnings had the same effect on their pension incomes whenever they were earned in the course of their lifetime. It was deemed that this would best be achieved by using per capita wage growth.

**TABLE 5.3. INDEXATION OF PENSION BENEFITS AFTER RETIREMENT**

	<b>Wage Growth</b>		
	<b>Equal to Norm</b>	<b>Less than Norm</b>	<b>Greater than Norm</b>
Real wage growth	1.6%	0.5%	2.5%
Deviation from 1.6% growth norm	0.0	-1.1	0.9
Inflation	2.0%	2.0%	2.0%
Pension benefits changed by:	2.0%	0.9%	2.9%

*Source:* Author's calculations.

Retirement age is flexible, and benefits can be withdrawn from age sixty-one onward. At retirement, initial 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 men and women together for a given cohort at age sixty-five and an imputed annual real rate of return of 1.6 percent. Thus, the divisor is the same for men and women. Since the annual pension benefit is equal to the net present value of future benefits using a real interest rate of 1.6, the initial benefit at retirement is higher than if benefits based on the current value of the account were adjusted for economic growth each year. The reasoning behind providing a substantial initial benefit rather than having an increasing benefit profile was to meet the relatively higher consumption needs at the beginning of the retirement period. The divisor is fixed at retirement and will not be adjusted for later changes in life expectancy for a given cohort.

Benefits are then indexed annually to consumer prices. The fact that the initial benefit includes an implicit real rate of return means that retirees have received an advance tied to projected 1.6 percent real long-term growth. What happens if long-term growth falls short of 1.6 percent? To maintain financial stability and to avoid over-compensating retirees relative to the working population, the price indexing of benefits is adjusted to reflect the deviation from this growth norm. Table 5.3 provides an example of the indexation of postretirement benefits.

If real wage growth in the economy is equal to 1.6 percent, pension benefits will be adjusted by the full price increase (Table 5.3, column 1). However, if growth falls below the norm, pensioners will not be compensated fully for price increases (column 2). Over a worker's lifetime this type of indexation gives the same result as straight-forward wage indexation.<sup>12</sup>

## THE INDIVIDUAL ACCOUNT: THE PREMIUM PENSION

One of the main objectives of funded individual accounts was to help increase saving in Sweden.<sup>13</sup> The individual account component is a "carve-out": of the 18.5 percent total contribution rate, 2.5 percentage points go to the individual accounts.<sup>14</sup> A new government agency, the Premium Pension Agency (Premiepensionsmyndigheten, or PPM), has been established to administer the funded accounts and will serve as a clearinghouse. The PPM also acts as the sole provider of annuities in the funded system. The accounts are self-directed; participants can choose among several hundred domestic and international funds and are allowed to invest in up to five funds.<sup>15</sup> Any fund that is licensed to do business in Sweden is allowed to participate in the system, and since inception the number of funds has increased from about 450 to about 600.<sup>16</sup> 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 (currently the fund holds 65 percent in international equities and 17 percent in Swedish equities). Contributions are invested by the PPM in lump sums; hence the fund companies will know only the total investment of pension contributions, not who the individual investors are. The first investments in the Premium Pension took place in 2000, and roughly two-thirds of participants made an investment decision; 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.

At retirement, any time after age sixty-one, the account balance will be converted to a mandatory fixed or variable annuity. The introduction of an individual account component means that part of the pension benefit will depend on participants' investment behavior.<sup>17</sup> Because portfolios will have different returns, a consequence might be that pension benefits will be more unequally distributed.

## THE TRANSITION

The transition to the new system will be implemented over sixteen years.<sup>18</sup> The first to participate in the system are those born in 1938; they will receive one-fifth of their benefit from the new system and four-fifths from the old system. Each annual cohort will then increase its participation in the new system by five percentage points, so that those born in 1944 will receive half of their benefit from the reformed system and half from the old system. Those born in 1954 or later will participate only in the new system.<sup>19</sup>

Benefits will not be paid completely from the new system until 2040. This means that in 2015, soon after the baby-boom generation has begun to retire, even though new retirees will get most of their benefits under the reformed system, a large share of total benefits will still be paid from the old system. Financial pressures will remain in the pension system because of the large relative size of the baby-boom generation.

## FINANCIAL STABILITY

One of the critical challenges of the pension reform was to design a system that would be financially stable over time, even when faced with adverse demographic and economic developments. However, since the system is still pay-as-you-go, the government has to cover its pension liability through annual contributions. Increasing the contribution rate is not a workable option in the NDC framework since it automatically increases benefit promises. Therefore, the buffer funds and the introduction of an automatic balancing mechanism are essential for financial stability.

## THE BUFFER FUNDS

The buffer funds play an important role in the implementation of the new pension system. In the short term, the funds will alleviate the pressures on the general budget brought to bear by the reform. Some programs—the disability pension and survivor pension—that previously were financed through payroll taxes will now be financed

through general tax revenues. In order to offset this burden, about one-third of the balance in the buffer funds was transferred in 1999, 2000, and 2001 to the general budget.<sup>20</sup>

In the long run, the buffer funds are needed to cover projected deficits in the financing of benefits when the large baby-boom generation starts to retire. Although the pension reform creates a system that is fiscally stable in the long run, it cannot by itself accommodate the retirement of the baby-boom cohorts.

Given the importance of the buffer funds for supporting the new pension scheme, the governance and investment rules of the funds have been reevaluated. In the past, the buffer funds have been criticized for sacrificing returns in order to achieve political goals, in particular the subsidization of housing. The new investment rules require that investments be made on risk and return considerations only. The guidelines also allow a larger share to be invested in equities and international assets.

## AUTOMATIC BALANCING

Because the system remains pay-as-you-go, it is still sensitive to demographic change. Two particular features in the design of the system could introduce financial instability. The first is the indexation of benefits to average wage growth rather than to the growth in total wages. The second is the use of fixed divisors in the NDC annuity calculations.

Earned pension rights and current benefits are indexed to follow the growth in the per capita wage, while contributions are determined by the growth in total wages. A decline in the size of the workforce means that average wages outpace total wages, so that benefit claims grow faster than the contributions that are financing them. While the growth of total wages might have been used for indexing instead, as noted above, the reform aimed to ensure that earned pension rights followed the growth in average wages for the active population and that individuals' benefits were not affected by when they were earned.

The retirement annuity is based on the current longevity of a cohort when it reaches age sixty-five rather than on a projection of that cohort's life expectancy. The divisors are fixed and not adjusted to take into account changes in life span. If it turns out that actual

longevity for a given cohort is greater than that used to calculate the divisor, their total benefit payments will exceed their total contributions.

In order to deal with these two sources of financial instability, an automatic balancing mechanism has been introduced. When automatic balancing is applied to deal with a deficit, per capita wage indexation is reduced to bring the system back into balance. As indicated by its name, the mechanism does not require any action by politicians. Those who devised the pension reform felt it was important that the system be shielded from discretionary changes and that the risk of manipulation for political gain be minimized. An autonomous system was deemed necessary to maintain credibility and for the system to survive in the long run.

The introduction of automatic balancing requires that a measure of financial stability be calculated. Prior to the reform, the National Social Insurance Board undertook traditional projections in order to set the contribution rate. The new pension system included provisions for the kind of information about financial status needed, to be made public in an annual report that includes an income statement as well as a balance sheet. A balance ratio that relates the pension system's assets to its liabilities also is calculated annually. The balance ratio 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 derived by multiplying annual contributions by the turnover duration. The turnover duration is the expected average time between when a contribution is made to the system and when the benefit payment based on that contribution is made. (The inverse of the turnover duration is the discount rate of the flow of contributions.) The current turnover duration is approximately thirty-two years.<sup>21</sup> On the opposite side of the ledger is the current vested liability for pension claims.<sup>22</sup> A balance ratio of one, with assets equal to liabilities, means that the NDC system is in financial balance. If the balance ratio is below one, liabilities exceed assets and the system is in imbalance; if the balance ratio exceeds one, the system has an accumulated surplus. Table 5.4 (see page 78) shows the financial balance of the NDC in 2001 and 2002.

**TABLE 5.4. ASSETS AND LIABILITIES, NOTIONAL DEFINED CONTRIBUTION, 2001 AND 2002 (MILLIONS OF SWEDISH CROWNS)**

	2001	2002	Change	Percentage Change
Contribution assets	5,085,252	5,292,764	207,512	-13.7
Buffer funds	56,171	487,539	-77,632	4.1
Total assets	5,650,423	5,780,303	129,880	2.3
Pension liability	5,423,016	5,728,658	296,642	5.5
Assets minus liabilities	218,407	51,645	-166,762	-76.4
Balance ratio	1.04	1.01	-0.03	-2.9

*Note:* At the time of this study, one U.S. dollar was equal to approximately seven Swedish crowns.

*Source:* Swedish Pension System, Annual Report 2002.

The automatic balance mechanism is activated as soon as the balance ratio falls below one, at which point the indexation of earned pension rights and current benefits is reduced below average wage growth. The reduction is calculated by multiplying the change in average wage growth by the balance ratio. (To smooth out the effects of temporary downturns, a three-year moving average is used in the calculation of the balance ratio.) The reduced indexation will continue as long as the balance ratio is less than one.

Currently the automatic balancing mechanism is applied only in the event of a deficit. However, it is possible that the system would build up a permanent (and substantial) surplus under certain economic and demographic conditions. The policymakers in the pension group have agreed that if the surplus becomes “larger than what is motivated,” the excess should be distributed to the participants. The question is, naturally, what is meant by “larger than what is motivated.” A government inquiry is now analyzing the issue. Its task is to determine the balance ratio at which a distribution could be made without threatening the system’s financial stability. Of course, it is not likely that a surplus distribution will occur anytime soon. However, the issue is being worked through now so as to maintain an autonomous system—future governments should not be tempted to use the buffer funds for purposes other than to pay pension benefits.

## IMPLICATIONS OF THE AUTOMATIC ADJUSTMENTS

The benefits of a financially stable system as well as the advantages of a system where all adjustments are made automatically are clear. But what are the implications of the Swedish design for individuals' retirement income and the distribution of income within and between generations?

Because the contribution rate in an NDC is fixed by definition, all adjustments to ensure the system's financial stability are made on the benefit side. This means that the system shifts the risk of financing benefits from future generations to the current one.

The activation of the automatic balancing mechanism reduces the indexation of earned pension rights and current benefits by the same amount. This has implications for the distribution of benefits between cohorts since a person in the beginning of his or her career has a longer horizon to recoup the loss in benefits than does a retiree who has started to collect benefits.

The calculation of benefits is indexed to life expectancy through the annuity divisor. When average life expectancy increases, individuals will have to work longer to reach a given replacement rate (replacing a percentage of prior earnings). For some groups, such as those with physically demanding jobs, this may be difficult, and they may end up with lower replacement rates than in a system that adjusted both contributions and benefits.

## CONCLUSION

The Swedish public pension reform took almost a decade. The new system generally puts more responsibility on the individual to plan and prepare for retirement. The benefits in the NDC are determined by lifetime contributions, and the system also includes a funded individual account. However, the focus on contributions makes benefits less transparent. In the old defined benefit system, the benefit formula clearly indicated the replacement rate, and it was relatively easy for workers to estimate expected benefits at retirement. Because benefits in the new system are not defined but depend on contributions, it is difficult to express the expected benefit in terms of a replacement rate. It is difficult as well to estimate future benefits because

they vary with the rate of return and life expectancy. An additional complexity stems from the way benefits are indexed after retirement. A major challenge in the coming years will be to provide information and education to help participants make sound decisions about retirement, savings, and work.

The Swedish experience with pension reform provides some important lessons for other countries considering reform. In particular, the Swedish policymakers recognized that pension systems are dynamic institutions and must adjust to changing demographic and economic circumstances. They also recognized that it may be politically difficult to make the necessary adjustments. They therefore “tied their hands” by introducing a set of automatic stabilizers. If the system comes under financial pressure, this automatic adjustment could lead to benefit cuts. Because the Swedish system provides a minimum guaranteed benefit that is well above the poverty level, responding to hard times only through trimming benefits may be less of a problem than in countries with lower benefit floors. For such countries, pension schemes in which adjustment takes place both on the benefit and the contribution side may be preferable.

The introduction of funded individual accounts was one area of much disagreement in the reform process. In the end, a small funded pillar with very broad investment choice was introduced. However, the investment experiences during the first three years underscore the importance of a well-designed default fund. Another topic of interest to countries considering the introduction of individual accounts is whether the clearinghouse model will be cost-effective in the long run. Plan administration of the Swedish individual account component requires a well-developed infrastructure, and plan implementation has been more costly and complicated than anticipated.